CITY OF OAKLAND

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September 30, 2016

Mr. Ken Greenberg
Chief, Clean Water Act
Water Section I, (ENF 3-1)
Enforcement Division
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Mr. Patricia Hurst
Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-09361/2

Mr. Thomas Howard
Executive Director
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Mr. Bruce Wolfe
Executive Officer
San Francisco Bay Regional
Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Marnie Ajello
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San Francisco Bay Regional
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Mr. Daniel S. Harris
Deputy Attorney General
455 Golden Gate Avenue, Suite 11000
San Francisco, CA 94102

RE: Consent Decree--City of Oakland Annual Report

Dear Mr. Greenberg, et al.:

In accordance with the 2014 Consent Decree, enclosed is the City of Oakland's Annual Report for the period from July 1, 2015 to June 30, 2016.

If you have any questions about this report, please contact Mr. Gus Amirzehni, Principal Civil Engineer, at 510-238-6601.

Sincerely,

Brooke A. Levin
Director, Public Works

cc: Nicole C. Sasaki (Bay Keeper)
Christopher A. Sproul (Environmental Advocates)
Christopher Dinsmore (EBMUD)
Chris Chan (Port of Oakland)

Attachments: 2015-16 Annual Report

CITY OF OAKLAND

Sanitary Sewer Collection System

Annual Report

July 1, 2015 to June 30, 2016

Consent Decree, Consolidated Case Nos. C 09-00186-RS and C 09-05684-RS

Certification

I certify under penalty of law that this document and its attachments were prepared either by me personally or under my direction or supervision in a manner designed to assure that qualified and knowledgeable personnel properly gathered and presented the information contained herein. I further certify, based on my personnel knowledge or on my inquiry of the individuals immediately responsible for obtaining the information, that to the best of my knowledge and belief the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing and willful submission of a materially false statement.

Reviewed by:

Jason Mitchell
Assistant Director
Bureau of Infrastructure & Operations

for Michael Neary
Assistant Director
Bureau of Engineering & Construction

Brooke A. Levin
Director of Public Works

9/30/16
Date

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Executive Summary

The City of Oakland's Consent Decree for operation and maintenance of its Sewer Collection System was approved by state and federal regulatory agencies with an Effective Date of September 22, 2014. The City is pleased to submit this Annual Report as required by the Consent Decree (CD) for Fiscal Year 2015-16 (July 1, 2015 to June 30, 2016).

Sanitary Sewer Overflows (SSO). The City of Oakland's Sewer Collection System had 88 SSO events during FY 2015-16. This is an 18% reduction compared to the 104 SSO events in FY 2014-15.

Asset Management Implementation Program (AMIP). The City is implementing its revised AMIP dated October 31, 2014.

Sewer Main and Maintenance Hole Rehabilitation. As of June 30, 2016, the City of Oakland has Rehabilitated 261,704 feet (50 miles) of Sewer Main. This exceeds the Consent Decree requirement to rehabilitate 158,400 feet (30 miles) by June 30, 2016. An additional 10,963 feet (2.1 miles) of Sewer Main was Rehabilitated which meets the Consent Decree requirement to rehabilitate 10,560 feet (2.0 miles) by June 30, 2016. The City's Sewer Main Rehabilitation Program is ahead of schedule.

7 maintenance holes were found to be in poor condition in the FY 2015-16. All manholes will be replaced by end of calendar year 2016.

Sewer Main and Maintenance Hole Inspection. As of June 30, 2016, 1,408,769 feet (267 miles) of sewer mains in the City of Oakland have been inspected and assessed using CCTV inspection. This exceeds the Consent Decree requirement to inspect 1,214,400 feet (230 miles) by June 30, 2016. The City of Oakland is in full compliance in regards to maintenance hole inspections. Between July 1, 2015 and June 30, 2016, 2,318 maintenance hole inspections were performed. The City's Sewer Main Rehabilitation Program is ahead of schedule.

Development of Regional Standards. The City bases its construction plans and specifications on The "Greenbook": Standard Specifications for Public Works Construction, a statewide standard for the municipal construction industry. The Greenbook is updated every three years.

A Regional Standards committee (RSC) was formed in May 2015 by all Defendants for the review and development of Regional Standards regarding the work on sewer mains, manholes, and sewer laterals. In April 2015 a consultant (Humphrey Consulting) was contracted to assist the Defendants and the RSC in the development of standards. The City has assigned a representative to the RSC and has actively participated in the meetings of the RSC, held throughout the fiscal year. On June 30, 2016, Humphrey Consulting on behalf of all Defendants submitted to EPA the Regional Standards, as required in the Consent Decree.

EBMUD's Sewer Lateral education and Outreach Program. The City assisted EBMUD in the development of the Sewer Lateral education and outreach program. The City participated in a meeting with EBMUD in January 2015, when the development of the program and educational materials was reviewed and discussed. Additional review and comments occurred in February 2015, prior to EBMUD's submittal of the plan to EPA for review and comment in March 2015. The City continues to work with EBMUD in implementation of the program.

Sewer Lateral Inspection and Repair. In FY 2015-16, the City finalized 249 building permits which required certificates of occupancy for construction or remodeling permits in excess of $100,000. 245 building permits received Compliance Certificates issued by EBMUD and 4 have not. This met the Consent Decree requirement to limit the number of building permits issued without Compliance Certificates to less than 25 per Fiscal Year.

Inflow and Rapid Infiltration Identification and Elimination. By a letter dated January 20, 2015, EBMUD provided a draft of its Regional Technical Support program (RTSP) plan to the East Bay Collection System Advisory Committee (EBCSAC) for review and comment. EBCSAC's comments on the EBMUD draft RTSP were provided to EBMUD by letter dated February 19, 2015. EBMUD submitted the RTSP Plan to EPA, RWQCB, SWRCB, and DOJ on March 23, 2015. Based on comments from EPA received on May 19, 2015, EBMUD resubmitted a revised RTSP Plan on July 20, 2015. The revised RTSP Plan received a condition of approval by EPA on April 14, 2016. EBCSAC agencies have also discussed RTSP issues with EBMUD at monthly meetings from January 2015 to the present time. The City will continue to work with EBMUD in implementation of the program.

On September 29, 2016, EBMUD submitted to the City FY 2015-16 Annual Satellite Notification. The City will review the Notification and continue to participate with EBMUD on the RTSP inspections performed.

Capacity Assurance. The Consent Decree requires the City to increase sewer capacity in certain locations when sewer flows reach within one foot of the Maintenance Hole rim. In FY 2015-16 the City experienced a total of ten locations that reached within one foot of the Maintenance Hole rim. All flows were contained within the system and no SSO event occurred at any of these ten locations. Four locations were suspected to be capacity related. Four locations were non-capacity related. Two were triggered by maintenance staff during CCTV operations.

The December 11, 2014 rain event triggered a high sewer level alarm at six locations. Analysis showed this event was greater than the December 5, 1952 storm, with a full classification of a 10-year, 21-hour storm. Although this event exceeds the December 5, 1952 storm, the City plans improvements at these locations in a good-faith effort to improve the robustness of the sewer system.

Acute Defects. In FY 2015-16, 25 Acute Defects were Identified. The City has repaired 12 Acute Defects. Remaining 13 Acute Defects will be repaired within One Year of Identification. All 25 Acute Defects Identified in FY 2014-15 met the one year requirement. It should be noted that no Sanitary Sewer Overflows occurred because of delays in Repair of Acute Defects.

Sewer Main Cleaning. As of June 30, 2016, 3,777,533 unique feet (715 miles) of sewer mains in the City of Oakland have been cleaned. This exceeds the Consent Decree requirement of 3,379,200 feet (640 miles).

Root Cleaning (Foaming). As of June 30, 2016, the City had root foamed 803,771 feet (152.2 miles) of Sewer Mains, which exceeds the Consent Decree requirement of 792,000 feet (150 miles).

Hot Spot Cleaning. As of June 30, 2016, 134 locations were identified as hot spots by staff. Each of these locations was cleaned at least once in FY 2015-16.

Fats, Oil and Grease (FOG) Control. In FY 2015-16, 39 SSOs were thought to be associated with FOG. These locations were referred to EBMUD for investigation.

Pump Station Renovation. The City is significantly ahead of schedule with its Pump Station Improvement Program. One pump station was completed in 2012. Three pump stations are scheduled to begin construction in October 2016. Three more pump stations, in which design has been completed, are scheduled to begin in 2018. The completion of all pump stations will be completed by 2019, three years ahead of schedule.

Known Noncompliance with Consent Decree. The City is well ahead of schedule in sewer rehabilitation, sewer cleaning, root control, CCTV inspection, and pump station rehabilitation and is compliant with the Consent Decree. The City has increased its sewer service budget, staffing, and equipment and intends to continue to meet its obligations under the Consent Decree. The City sent out defective lateral notices to properties in accordance with the requirement described in Paragraph 85a of the Consent Decree. This section states that "*Within 90 Days of identifying a Sewer Lateral as defective the City of Oakland shall notify the affected owner in writing."* The City sent out defective lateral notices to properties in accordance with the requirement described on Paragraph 85a of the Consent Decree. The City is currently aggregating all lateral related reports and complaints in one database. The City sent out notices to property owners including those with lateral defects and those with only temporary blockages. Of the 62 defective sewer laterals identified, 16 notices were sent within the 90-day requirement. 36 notices were sent beyond the 90-day requirement, and 10 have not been sent notices. 10 of the defective sewer laterals were protruding laterals. Of these, all were sent a notice. The City is adding additional staff to handle and follow up on defective laterals within the 90 days of identification in order to be compliant.

The City believes that it is compliant with the Consent Decree and that no penalties should be assessed for the City's Collection System. If Plaintiffs disagree with this position, the City would appreciate the opportunity to discuss potential penalties and provide additional explanations of its position.

Assessment of Stipulated Penalties. In FY 2015-2016, The City augmented its equipment resources through the acquisition of nine additional equipment which will be utilized to increase collection maintenance efficiency. Budgetary allocation to facilitate this augmentation was $ 1,180,444.07 clearing the way to acquire the following: 1 Vactor 2100 Plus combo Flusher w/Excavator (SEofA) CCTV Flusher, 1 Catch Basin Cleaner, 1 Construction Truck, 1 Backhoe compactor attachment for JD 710 & 310, 1 Auto Rewind for our Vactor contingent, 20 Ton Heavy Transport Trailer, 1 6x10 Cargo Trailer, and 1 5x8 ATV Transport Trailer.

The City has also instituted supplementary funding for Contractors in the amount of $ 2,000.000.00 per year to perform Closed Circuit Television (CCTV) as well as trunk line and easement maintenance.

Recommended Changes to Required Work. The City has no recommendations for changes to this Consent Decree.

Section 1. Introduction

Paragraph 139 of the Consent Decree (Case Nos. C09-00186 and C09-05684) requires:

"By September 30th of each Fiscal Year…each Defendant shall submit to Plaintiffs, with a copy to Intervenors, an annual progress report ("Annual Report") covering the period July 1st through June 30th of the prior Fiscal Year."

This Annual Report has been prepared pursuant to the requirements of the Consent Decree. The following sections of this report present the required information for Fiscal Year 2015-16 (July 1, 2015 to June 30, 2016):

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Section 2. Annual Report of Sanitary Sewer Overflows

Paragraph 144 of the Consent Decree requires:

"A Sanitary Sewer Overflow Report that includes the location of SSOs; the start and end date and time of each SSO; the SSO volume including gross volume, amount recovered, and amount not recovered; the destination of each SSO; the probable cause(s) of the SSOs; the location(s) of repeat SSOs; a list of any SSOs at locations where the Sewer Main had been Rehabilitated in the previous ten (10) Fiscal Years; and a description of measures taken to help prevent these SSOs in the future."

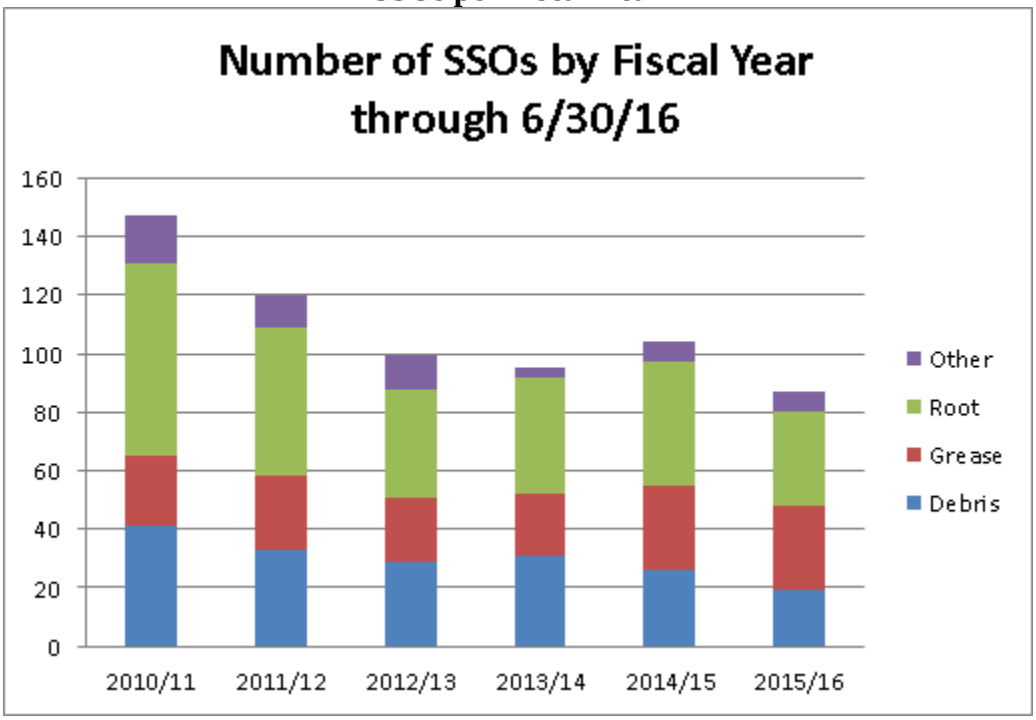
Number of SSOs

The City of Oakland's Sewer Collection System had 88 SSO events during FY 2015-16. This is an 18% reduction compared to the 104 SSO events in FY 2014-15.

The total volume spilled in FY 2015-16 was 28,343 gallons, representing a 75% decrease in volume compared to the previous Fiscal Year. Of the total amount spilled, 58% was contained and returned to the system.

Figure 2-1 shows the number of SSO events by Fiscal Year for the last 6 Fiscal Years, as well as the primary cause of the SSO.

Figure 2-1.
SSOs per Fiscal Year



A detailed list of SSOs is shown in Table 2-1 of **Appendix A**.

The City has made many improvements to its sewer program in order to continue reducing sanitary sewer overflows.

In FY 2015-2016, The City augmented its equipment resources through the acquisition of nine additional equipment which will be utilized to increase collection maintenance efficiency. Budgetary allocation to facilitate this augmentation was $ 1,180,444.07 clearing the way to acquire the following: 1 Vactor 2100 Plus combo Flusher w/Excavator (SEofA) CCTV Flusher, 1 Catch Basin Cleaner, 1 Construction Truck, 1 Backhoe compactor attachment for JD 710 & 310, 1 Auto Rewind for our Vactor contingent, 20 Ton Heavy Transport Trailer, 1 6x10 Cargo Trailer, and 1 5x8 ATV Transport Trailer.

The City has also instituted supplementary funding for Contractors in the amount of $2,000.000.00 per year to perform Closed Circuit Television (CCTV) as well as trunk line and easement maintenance.

Number and Location of Repeat Overflows

In Fiscal Year 2015-16, the City had 16 locations (18 SSO's) in which a second sewer overflow occurred within a three year period. Table 2-2 below lists the number and location of overflows occurring at repeat locations along with a description of measures taken to prevent future SSO's at these locations. All locations below have been added to the High Frequency Cleaning List 'Hot Spots".

Table 2-2 Repeat SSO Locations, FY 2015-16

SSO Location	CIWQS #	Cause	Date	Measure(s) to prevent SSO	Pipe ID
3628 Loma Vista Av (3712 Loma Vista Av, 3624 Loma Vista Av) (all same pipe)	821269, 814362, 807715	Protruding Tap	1/18/16, 4/2/15, 7/7/14	Added to High Frequency PM list on 1/13/2016. Contractor upsized 6 inch pipe to 8 inch on 3/30/16. Removed from High Frequency list on 4/25/2016	11995
1225 Fallon St	821377, 809333	Grease	1/20/16, 8/25/14	Added to High Frequency PM List 12 month on 2/16/2016	13107
297 Rishell Dr	820979, 805359	Roots and Grease	1/8/16, 3/23/14	On High Frequency List changing from 12 Month to 6 Month on 3/19/2015, Root foaming 3/20/15	14338
3228 Guido St	820124, 794304	Roots	12/5/15, 5/18/13	Added to High Frequency PM list. 3/17/2016, Root foaming 6/9/16	16131

SSO Location	CIWQS #	Cause	Date	Measure(s) to prevent SSO	Pipe ID
102 Crest Rd	821379, 817782	Roots	1/18/16, 8/31/15	Added to High Frequency PM List 6 Month on 1/18/2016	23085
895 47th St	818777, 793721	Sag in Pipe	10/1/15, 4/26/13	Added to High Frequency PM List 6 Month on 10/09/2015 Pipe has been lined	25585
6861 Saroni Dr	819411, 793432	Roots	11/6/15, 4/15/13	Added to High Frequency PM List 6 Month on 4/15/2013, Root foaming 3/20/15	26690
6205 Westwood Way	819559, 812284	Roots	11/15/15, 1/7/15	Added to High Frequency PM List 12 Month on 2/17/2016	28737
171 Roble Rd (2 pipes)	821746, 822213, 814026	Roots	2/3/16, 2/2/16, 3/20/15	Added to High Frequency PM List 6 Month on 3/7/2016	30415, 30480
7401 Claremont Av (also 2646 Claremont Av) (2 pipes)	818644, 818151	Roots	10/2/15, 9/15/15	Spot repair scheduled also added to High Frequency PM List on 2/10/2016	31208, 31209
7283 Claremont Av	819439, 798678	Roots	11/7/15, 9/10/13	Added to High Frequency PM List 12 Month on 2/10/2016	31311
1902 90th Ave (1818 90th Ave) (same pipe)	818775, 810561	Grease	10/1/15, 11/5/14	Added to High Frequency PM List 6 Month on 3/7/2016	3199
6205 Westwood WY	819559, 812284	Roots	11/15/15, 1/7/15	Added to High Frequency PM List 12 Month on 2/17/2016	32368
6401 Eastlawn St (1280 64th Av) (same pipe)	825641, 796416	Grease	5/20/16, 6/30/13	Added to High Frequency PM List 12 Month on 6/20/2016	3854

SSO Location	CIWQS #	Cause	Date	Measure(s) to prevent SSO	Pipe ID
2058 Rosedale Av	821398, 735435, 812884, 792740	Grease and Roots	1/23/16, 1/19/16, 1/31/15, 3/18/13	Added to High Frequency PM List 6 Month on 1/31/2015	8986

Sewer Overflows in Rehabilitated Areas

In FY 2015-16, 3 SSOs occurred in areas rehabilitated since July 1, 2005 (within the last ten years) as shown in Table 2-3 below. Of these locations, all 3 SSO's were FOG related problems. Corrective actions, as detailed below, include cleaning, CCTV inspection, and addition to the "Hot Spot" list.

Table 2-3
SSO Locations within Rehabilitated Areas, FY 2015-16

SSO Location	CIWQS #	Cause	Date	Measure(s) to prevent SSO	Rehab Year	Pipe ID
308 Jackson St	821721	Grease	2/1/16	Added to High Frequency List 12 Month on 2/1/2016 used grease dissolving chemical when serviced.	2010	12921
1225 Fallon St	821377	Grease	1/20/16	Added to High Frequency List 12 Month on 2/16/2016	2010	13107
6401 Eastlawn St	TBD	Grease	5/20/16	Added to High Frequency PM List on 6/20/2016	2011	3851, 3854, 3880

Section 3. Implementation of Asset Management Implementation Plan (AMIP)

Paragraph 165 of the Consent Decree requires:

"The City shall summarize implementation of each element of its AMIP. The summary shall include any proposed revisions to the AMIP, including, but not limited to, revisions to maintenance, construction, and Rehabilitation schedules, along with any associated changes to its financial plan, and an explanation of how those revisions are consistent with its obligations under the Consent Decree."

On October 31, 2014, the City submitted a new AMIP which had been revised to comply with the new Consent Decree. The AMIP provided new maintenance, construction and rehabilitation schedules, as well as a revised financial plan. The City is implementing both the new AMIP and the Consent Decree.

Chapter 1, Introduction, of the new AMIP presented revised goals, organization and responsibilities for implementation of the AMIP and CD.

Chapter 2, Condition Assessment, revised Sewer Main and Maintenance Hole inspection, Sewer Lateral inspection and capacity monitoring. Sections 4.2, 4.4 and 5.1 of this Annual Report describe work in these areas implemented during FY 2015-16.

Chapter 3, Operations and Maintenance, revised sewer maintenance, hot spot cleaning, root control, and FOG control. Sections 5.4, 5.5, 5.6 and 5.7 of this report describe work in these areas implemented during FY 2015-16.

Chapter 4, Capital Improvements, described revision of design and construction standards, Sewer Main Rehabilitation, elimination of Acute Defects, pump station and capacity improvements, Rehabilitation of City owned Sewer Laterals, and provided a ten year CIP and financial plan. Sections 4.1, 4.3, 5.3 and 5.8 of this report describe work implemented during FY 2015-16.

Section 4. Infiltration and Inflow Reduction Work

4.1 Sewer Main and Maintenance Hole Rehabilitation

Paragraph 166.a.i. of the Consent Decree requires that the Annual Report contain:

"Rehabilitation: all Sewer Main and Maintenance Hole Repair and Rehabilitation activities completed…"

Paragraph 83.a. of the Consent Decree requires:

"Between January 1, 2014 and June 30, 2016, the City of Oakland shall rehabilitate 158,400 feet [30 miles] *of Sewer Main.…When the City rehabilitates a Sewer Main, it shall also Rehabilitate, as needed, all Maintenance Holes associated with the Sewer Main and ensure that abandoned Sewer Laterals are not connected to that Sewer Main."*

Sewer Mains Rehabilitated

As of June 30, 2016, the City of Oakland had Rehabilitated 261,704 feet (50 miles) of Sewer Main as shown in Table 4-1. This exceeds the Consent Decree requirement to rehabilitate 158,400 feet (30 miles) by June 30, 2016. The City's Sewer Main Rehabilitation Program is ahead of schedule.

Table 4-1
Length of Rehabilitated Sewer Mains

Fiscal Year	Mains Rehabilitated	Cumulative Total	CD Requirement **
1/11/14-6/30/14	131,653' (24.9 miles)*	131,653' (24.9 miles)*	-----
FY 2014-15	60,546' (11.5 miles)	192,199' (36.4 miles)	-----
FY 2015-16	71,751' (13.6 miles)	263,950' (50.0 miles)	158,400' (30 miles)

* From previous Annual Report

**Cumulative total beginning 01/01/14

Table 4-2 provides details of projects completed in FY 2015-16.

Table 4-2
Sewer Main Rehabilitation Projects Completed in FY 2015-16

Project Number	Description	SubBasin Number	Lateral Connections	Structure	Length (Feet)	Length (Miles)	Construction Costs
C329145	21st Avenue, 17th St, 24th Ave, and 27th Ave	60-06	215	62	8,510	1.61	$ 1,002,775
C329151	24th St, 19th Ave, Beaumont Ave, and 33rd St	58-02	194	52	10,465	1.98	$ 1,094,519
C329144	REHAB SS MNTN, JOAQ	56-06, 50-18, 52-04, 85-501	435	296	33,104	6.27	$ 4,240,620
C329142	REHAB SS in West Grand Ave between Wood St and San Pablo Ave, and in 20th St between Broadway and Harrison St	52-05, 52-04, 52-03, 52-01	33	48	7,481	1.41	$ 5,927,577
C329149	Campus Dr, Mountain Blvd, Knoll Ave, and Access	83-502	100	67	6,767	1.28	$ 545,365
C329143	REHAB SS bounded by Park Blvd, Hollywood Ave, Sunnyhills Rd, and Brighton Ave	54-16	0	29	3,178	1.00	$644,013
	Total		977	525	69,505	**13.56**	$ 13,454,869

Proposed projects C228920, C228930, and C228940 listed from last year's Annual Report has been combined to next year's project to C329136 listed on Table 4-6.

Additional Sewer Mains Rehabilitated

Paragraph 83.b. of the Consent Decree requires:

"…In addition to the Work required under paragraph 83(a), beginning on July 1, 2014, the City shall complete, by the end of each Fiscal Year, Rehabilitation of no less than 5,280 feet of Sewer Main, anywhere within the City's Collection System, based on a cumulative total (i.e., 5280 feet by June 30, 2015; 10,560 feet by June 30, 2016; 15,840 feet by June 30, 2017; etc.) for the duration of the Consent Decree."

The City rehabilitated an additional 5,424 feet of Sewer Main under Paragraph 83.b. as shown in Tables 4-3 and 4-4.

Table 4-3
Length of Additional Sewer Mains Rehabilitated

Fiscal Year	Mains Rehabilitated	Cumulative Total	CD Requirement
FY 2014-15	5,539’ (1.0 mile)	5,539’ (1.0 mile)	5280’ (1 mile)
FY 2015-16	5,424’ (1.0 mile)	10,963’ (2.1 miles)	10,560’ (2 miles)

Table 4-4
Additional Sewer Mains Rehabilitated in FY 2015-16

Project No	Description	Completion Date	SubBasin No	Lateral Connections	Structure	Length (feet)	Length (Miles)	Construction Cost
C455620	On-Call Sanitary Sewer	6/30/2016	80-001, 50-19, 85-401, 84-002, 52-01, 83-521, 83-402	71	54	5,277	1.0	$ 1,285,825
C461810	SS Rehab 57th Ave	6/30/2016	83-001	0	2	147	0.03	$45,536
		Total		71	56	5,424	**1.03**	$ 1,331,361

Maintenance Holes

Paragraph 166.a.i.C. of the Consent Decree requires that the Annual Report contain:

“…the number of Maintenance Holes associated with Rehabilitated Sewer Mains and the number of Maintenance Holes Rehabilitated;”

As shown in Tables 4-2 and 4-4, as part of its Sewer Main Rehabilitation Program in FY 2015-16 the City Repaired or Rehabilitated 581 Maintenance Holes.

Abandoned Sewer Laterals

Paragraph 166.a.i.D. of the Consent Decree requires that the Annual Report contain:

“…a statement that the City did not reconnect any abandoned Sewer Laterals that the City found to be connected to the Sewer Main;”

The City sealed off any abandoned sewer laterals which were encountered during construction. No abandoned laterals were reconnected to Sewer Mains. Abandoned or inactive house connection sewers shall be cut back

two feet from the main and plugged with Class C mortar, at least six inches into the abandoned/inactive house connection sewer.

Sewer Main Rehabilitation Budget and Expenditures

Paragraph 166.a.i.F. of the Consent Decree requires that the Annual Report contain:

"…the Rehabilitation budget and dollars spent on Sewer Main Rehabilitation;"

During FY 2015-16, the City budgeted $17,873,000 for capital improvements of the sewer collection system. Improvements include rehabilitating or replacing sewer mains, lower laterals, and associated sewer structures. This budgeted amount is intended to cover hard construction costs and soft costs associated with design and construction management. It must be noted that capital budget is not typically spent in one fiscal year as project activities and expenditures span over 2 to 3 years.

2015-16 Proposed Sewer Main Rehabilitation Projects

Paragraph 166.a.i.G of the Consent Decree requires that the Annual Report contain:

"…the Sewer Mains targeted to be Rehabilitated in the next Fiscal Year;"

In FY 2015-16, the City plans to complete 5 Sewer Main Rehabilitation projects as listed in Table 4-6 below. These projects will rehabilitate approximately 12.8 miles of sewer mains. All appurtenant sewer structures will also be rehabilitated as needed as part of these projects. The locations of these projects are selected from Appendix H of the Consent Decree and various locations for the 1 additional mile of sewer main rehabilitation required under Paragraph 83.b. The locations for the 1 mile will be developed in response to complaints and requests from the acute defect list. Appendix H lists Oakland's Collection System sub-basin priorities.

Table 4-6
FY 2016-17 Proposed Sewer Main Rehabilitation Projects

No.	Project No.	Description	Length (Miles)
1	C329147	Rehabilitation of Sanitary Sewer in the Area bounded by Campus Drive, Mountain Boulevard, Knoll Avenue, and Access (83-013)	3.71
2	C329148	Rehabilitation of Sanitary Sewer In the Area bounded by Hwy 13, Reinhardt Dr, 39th Ave, and Aliso Ave (83-501)`	2.88
3	C482960	Rehabilitation of Sanitary Sewer in the Area bounded by 14th Avenue, MacArthur Boulevard, Ardley Avenue, and E 31st Street (58-04)	1.52
4	C329155	Various Locations SS Rehab: Auseon Ave (Plymouth & Birch), 85th Ave (Plymouth & Birch), 83rd Ave (Holly & Plymouth)	0.33
5	C329136	SS Rehab Renwick and Potter bet. Fairfas & Brookdale Ave. Alerado Rd and Silver Pl and Easement of off Seqouyah Rd	0.82
6	C482940	Rehabilitation of Sanitary Sewer in the Area bounded by Mountain View Avenue, Leona Street, Sunnymere Avenue, and Seminary Avenue (83-402)	1.42
7	C482950	Rehabilitation of Sanitary Sewer in the Area bounded by 23rd Avenue, International Boulevard, 26th Avenue, and E 12th Street(60-04)	2.14
8	C329136	SS Rehab Renwick and Potter bet. Fairfax & Brookdale Ave. Alvarado Rd and Silver Pl and Easement of off Sequoyah Rd	0.82

Revisions to Appendix H

Paragraph 166.a.i.H. of the Consent Decree requires that the Annual Report contain:

"…an explanation of any revisions that were made to Appendix H, or the financial plan associated with future Sewer Main Repair and Rehabilitation…"

In FY 2015-16, no revisions were made to Appendix H. A new financial plan was developed and included in the City's AMIP as described in Section 2 of this report.

4.2 Sewer Main and Maintenance Hole Inspection

Paragraph 83.c. of the Consent Decree requires:

"For the duration of this Consent Decree, the City of Oakland shall inspect, using CCTV or other equally effective methods, and document condition assessment of, its Collection System at an annual rate of no less than 10 percent of its Sewer Mains per Fiscal year (at least 485,760 feet of Sewer Mains per Fiscal Year) on a cumulative basis (i.e., 242,880 feet by June 30, 2014; 728,640 feet by June 30, 2015; 1,214,400 feet by June 30, 2016; etc.)."

Paragraph 166.a.ii. of the Consent Decree requires the Annual Report to contain:
"Inspections: inspections and condition assessment completed…"

Sewer Main Condition Assessment

As shown in Table 4-7, 1,408,769 feet (267 miles) of sewer mains have been inspected and assessed using CCTV inspection. This exceeds the Consent Decree requirement to inspect 1,214,400 feet (230 miles) by June 30, 2016.

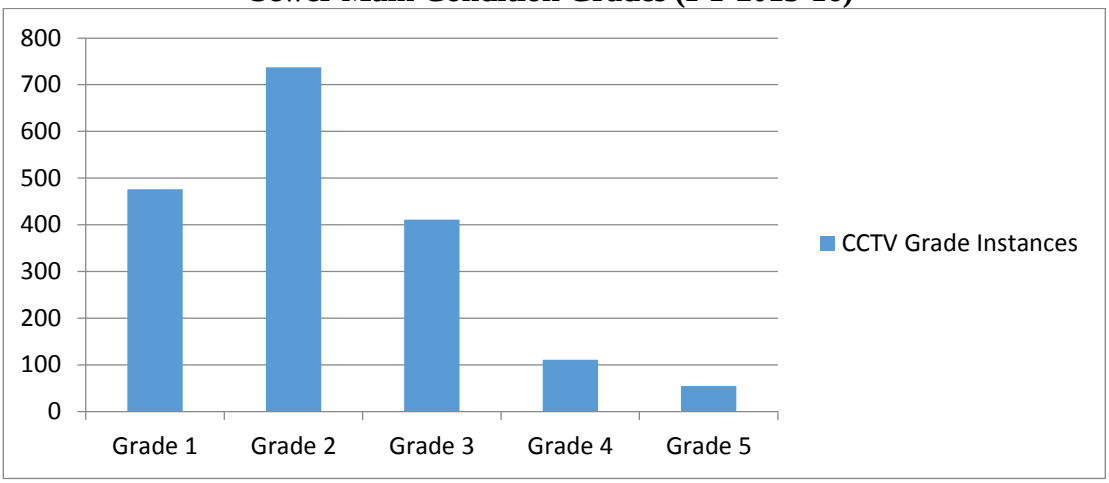
Table 4-7
Length of Sewer Mains Inspected and Assessed

Fiscal Year	Mains Assessed **	Cumulative Total ***	CD Requirement
FY 2013-14*	182,935' (35 miles)	182,935' (35 miles)	242,880' (46 miles)
FY 2014-15	618,991' (117 miles)	801,926' (152 miles)	728,640' (138 miles)
FY 2015-16****	619,913' (117 miles)	1,408,769' (267 miles)	1,214,400' (230 miles)

*Six months, January 1, 2014 – June 30, 2014
**Newly-unique feet assessed during the FY (feet that had no previous assessment between January 1, 2014 and the start of the FY)
***Cumulatively-unique feet starting January 1, 2014
****Numbers reflect updates to sewer GIS data, the updates were done in FY 2015-16. Totals for prior fiscal years were not re-calculated based on the newer updates to sewer GIS data; therefore the current cumulative total may not equal the prior cumulative total plus the total for the current fiscal year.

Results of the inspections are summarized in Figure 4-1.

Figure 4-1
Sewer Main Condition Grades (FY 2015-16)



From a total of 1,790 pipe segments inspected, 476 segments were found to be in acceptable structural condition (Grade 1), 737 segments were found to be in minimal collapse risk condition (Grade 2), 411 segments were in

collapse unlikely in near future condition (Grade 3), 111 segments were found to be in collapse likely in foreseeable future condition (Grade 4, and 55 segments were found to be in danger of imminent collapse or were found to have unusually large pipe blockage (i.e., roots) (Grade 5).

Grade 5 pipe blockages are addressed immediately. Grade 5 structural defects are considered Acute Defects and are treated as described in Section 5-3.

From the FY 2014-15 Annual Report, please find the following corrected numbers: From a total of 2,116 pipe segments inspected, 690 segments were found to be in acceptable structural condition (Grade 1), 823 segments were found to be in minimal collapse risk condition (Grade 2), 414 segments were in collapse unlikely in near future condition (Grade 3), 115 segments were found to be in collapse likely in foreseeable future condition (Grade 4); and 74 segments were found to be in danger of imminent collapse or were found to have unusually large pipe blockage (i.e., roots) (Grade 5).

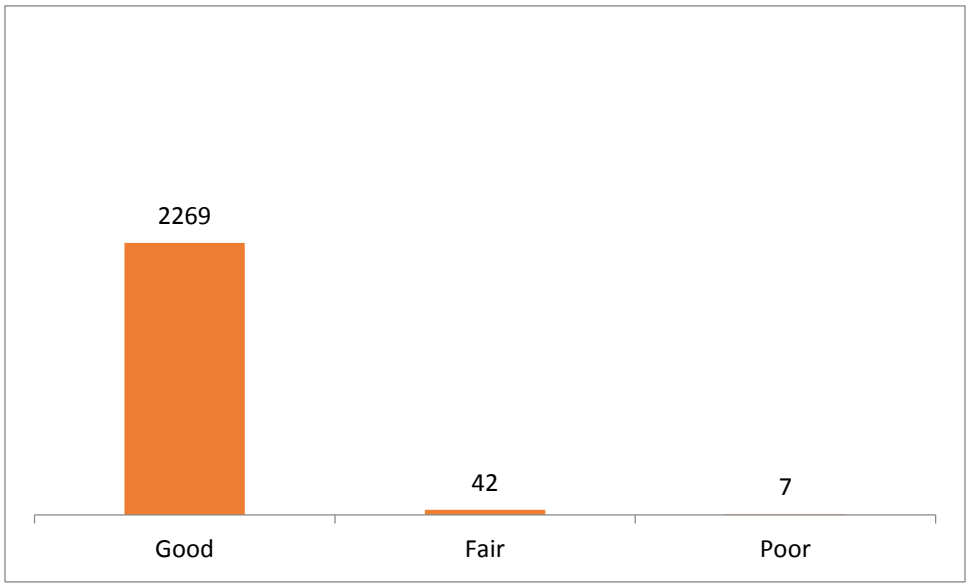
Maintenance Hole Inspection

Paragraph 83.c of the Consent Decree also requires:

"When the City inspects a Sewer Main, it shall also inspect all Maintenance Holes associated with that Sewer Main."

Between July 1, 2015 and June 30, 2016, 2,318 maintenance-hole inspections were performed. Inspectors used a modified Manhole Assessment Certification Program (MACP) where field staff visually inspected the barrel of every maintenance hole and completed a computerized maintenance hole inspection form. Results of the inspections are summarized in Figure 4-2 below.

Figure 4-2
Maintenance Hole Inspection Results (FY 2015-16)



Of 2,318 Maintenance Hole inspections, 2,269 inspections found Maintenance Holes in good condition, 42 found Maintenance Holes in fair condition, and 7 found Maintenance Holes in poor condition. Table 4-8 contains a list of Maintenance Holes in poor condition.

Table 4-8
Maintenance Holes in Poor Condition (FY 2015-16)

Inspection ID#	WO#	Inspection Type	Location	Condition	MH #
8743	748885	v2 Maintenance Hole Inspection	PORTER & HIGH ST	Poor	9510
8660	745833	v2 Maintenance Hole Inspection	743 ROSEMONT	Poor	15161
8659	745833	v2 Maintenance Hole Inspection	812 ROSEMONT	Poor	15100
8190	720673	v2 Maintenance Hole Inspection	MARKET ST & 19TH ST	Poor	16639
9735	767424	v2 Maintenance Hole Inspection	EDWARDS AV & MOUNTAIN BLVD	Poor	7566
9636	766111	v2 Maintenance Hole Inspection	MOUNTAIN BLVD AND BERNEVE COURT	Poor	10931
9539	763909	v2 Maintenance Hole Inspection	34TH ST & MARKET ST	Poor	19381

9 maintenance holes were found to be in poor condition in the first Annual Report (January 1, 2013 to June 30, 2014). 4 maintenance holes were found to be in poor condition in the previous Annual Report (July 1, 2014 to June 30, 2015). 7 maintenance holes were found to be in poor condition in the FY 2015-16. Repairs on all manholes will have been completed by end of the 2016 calendar year.

4.3 Development of Regional Standards

Paragraph 166.1.iii. of the Consent Decree requires the Annual Report to contain:

"Regional Standards: a description of the activities to develop…Regional Standards."

Paragraph 83.d. further requires:

"The City shall work with other Defendants to create Regional Standards for sewer installation, Rehabilitation and Repair and participate in submitting a group report of the recommended standards for EPA's review and approval by June 30, 2016, and for review, every five years thereafter."

The City bases its construction plans and specifications on The "Greenbook": Standard Specifications for Public Works Construction, a statewide standard for the municipal construction industry. The Greenbook is updated every three years.

A Regional Standards committee (RSC) was formed in May 2015 by all Defendants for the review and development of Regional Standards regarding the work on sewer mains, manholes, and sewer laterals. In April 2015 a consultant (Humphrey Consulting) was contracted to assist the Defendants and the RSC in the development of standards. The City actively participated in the meetings of the RSC, held from May 2015 through June 2016. On June 30, 2016, Humphrey Consulting submitted the Regional Standards to EPA for review and approval and to the Plaintiffs on behalf of all Defendants, as required in the Consent Decree.

4.4 Sewer Lateral Inspection and Repair

Paragraph 166.b.i. of the Consent Decree requires the Annual Report to contain:

"Sewer Laterals: a description of the activities taken and materials used to notify property owners of defective sewer Laterals…"

Regional Private Sewer Lateral (PSL) Program

Paragraph 84.c of the Consent Decree requires:

"The City, to satisfy the requirements of this subparagraph, shall document, in spreadsheet format, the building permits issued during the Fiscal Year, the certificates of occupancy issued, and whether a Compliance Certificate was submitted prior to issuance of the certificate(s) of occupancy."

Oakland started its PSL program on January 16, 2012, in collaboration with the Regional PSL Program administered by the East Bay Municipal Utility District (EBMUD).

The City requires that persons seeking building permits which require certificates of occupancy for construction or remodeling exceeding $100,000 test and, where necessary, replace defective private sewer laterals and obtain Compliance Certificates from EBMUD before being issued certificates of occupancy.

Table 4-10 below shows the City's compliance with the CD requirement to have "…permittees to submit Compliance Certificates before being issued certificates of occupancy for construction or remodeling permits in excess of $100,000." (Paragraph 84.c).

Table 4-10
Permits Finalized, with EBMUD Certificates of Compliance

Fiscal Year	# Permits Finalized	# with Compl Cert	# w/o Compl Cert
FY 2015-16	249	245	4

In FY 2015-16, the City finalized 249 building permits which required certificates of occupancy for construction or remodeling permits in excess of $100,000. 245 building permits received Compliance Certificates issued by EBMUD and 4 have not. This met the Consent Decree requirement to limit the number of building permits issued without Compliance Certificates to less than 25 per Fiscal Year. The City continues to share data with EBMUD and sends spreadsheets detailing Oakland's activities.

Other Privately Owned Defective Sewer Laterals

Paragraph 85.a. of the Consent Decree requires:

"Within 90 days of identifying a Sewer Lateral as defective the City of Oakland shall notify the owner in writing."

Paragraph 166.b.i. of the Consent Decree requires the Annual Report to contain:

"A. the number of sewer Laterals identified as defective;
B. the number of property owners notified that their Sewer Laterals are defective;

C. a copy of a representative notice that was sent to property owners notifying them that their Sewer Lateral is defective;

D. a description and the number of administrative enforcement actions taken against property owners for defective Sewer Laterals;"

As shown in Table 4-11, during FY 2015-16 City crews identified 62 defective Sewer Laterals. 14 property owners have corrected their defective Sewer Laterals. 48 property owners have not corrected the defect after notices were sent.

The City sent out defective lateral notices to properties in accordance with the requirement described on Paragraph 85a of the Consent Decree. The City is currently aggregating all lateral related reports and complaints in one database. The City sent out notices to property owners including those with lateral defects and those with only temporary blockages. Of the 62 defective sewer laterals identified, 16 notices were sent within the 90-day requirement. 36 notices were sent beyond the 90-day requirement, and 10 have not been sent notices. 10 of the defective sewer laterals were protruding laterals. Of these, all were sent a notice. The City is adding additional staff to handle and follow up on defective laterals within the 90 days of identification in order to be compliant.

Table 4-11
Defective Sewer Laterals

# of Defective Sewer Laterals Identified in Fiscal Year 2015-16	# of Defective Sewer Laterals Repaired	# of Defective Sewer Laterals Not Repaired	# Of Notices Sent Within 90 Days	# Of Notices Sent Beyond 90 Days	# Of Notices Not Sent
62	14	48	16	36	10

From last year's Annual Report, 3 defective sewer laterals were reported as not repaired. After the investigation, 1 did not have a defective sewer lateral, 1 was repaired, and 1 was not repaired in which the City have sent two letters to the homeowner. Additional enforcement action is being taken against this property owner. Figure 4-3, shown on **Appendix C,** shows a sample notice to property owners.

Oakland Owned Sewer Laterals

Paragraph 166.b.i.E requires the Annual Report to contain:

"…the number of Oakland-owned Sewer Laterals inspected and Repaired or Rehabilitated and the cumulative number of Oakland-owned Sewer Laterals inspected and Repaired or rehabilitated from the Effective Date;"

On June of 2016, the City awarded an on-call construction contracts with two Contractors to inspect and, where necessary, Repair or Rehabilitate defective City owned Sewer Laterals of 95 City facilities identified in Appendix H-1 of the Consent Decree. Construction is scheduled to begin in fall 2016. The City expects to complete inspection and repair of City owned Sewer Laterals well ahead of the September 21, 2024, completion date specified in the Consent Decree.

Defective Sewer Laterals Owned by Other Public Entities or Government Agencies

Paragraph 166.b.i.F. requires the Annual Report to contain:

"…the address and name of any property owned by a Public Entity, or the State or federal government, that has an identified defective Sewer Lateral, including a description of the defect;"

During FY 2014-15, the city did not identify any defective Sewer Laterals owned by other Public Entities or the State or federal government.

Sewer Lateral Education and Outreach Program

Paragraph 166.b.i.G. requires the Annual Report to contain:

"… a summary of the City's assistance to EBMUD in the development of a Sewer Lateral education and outreach program:"

The City assisted EBMUD in the development of the Sewer Lateral education and outreach program. The City participated in a meeting with EBMUD in January 2015, when the development of the program and educational materials was reviewed and discussed. Additional review and comments occurred in February 2015, prior to EBMUD's submittal of the plan to EPA for review and comment in March 2015. The City will continue to work with EBMUD in implementation of the program.

Lower Sewer Laterals

Paragraph 166.b.i.G. requires the Annual Report to contain:

"Lower Sewer Laterals: the number of Sewer Laterals connected to the Rehabilitated Sewer Mains and the number of Lower Sewer Laterals Repaired or Rehabilitated."

As shown in Table 4-2 and Table 4-4, as part of its Sewer Main Rehabilitation, the City reconnected all 1048 encountered Sewer Lateral connections which included connections to laterals within easements. The City Repaired or Rehabilitated 659 Lower Sewer Laterals as part of the construction projects. Laterals within easements are within private properties and are not considered Lower Sewer Laterals.

4.5 Inflow and Rapid Infiltration Identification and Elimination

Paragraph 166.c.i. of the Consent Decree requires the Annual Report to contain:

"a description of the City's cooperation with EBMUD's implementation of the RTSP;…"

By a letter dated January 20, 2015, EBMUD provided a draft of its Regional Technical Support program (RTSP) plan to the East Bay Collection System Advisory Committee (EBCSAC) for review and comment. EBCSAC's comments on the EBMUD draft RTSP were provided to EBMUD by letter dated February 19, 2015. EBMUD submitted the RTSP Plan to EPA, RWQCB, SWRCB, and DOJ on March 23, 2015. Based on comments from EPA received on May 19, 2015, EBMUD resubmitted a revised RTSP Plan on July 20, 2015. The revised RTSP Plan received a condition of approval by EPA on April 14, 2016. EBCSAC agencies have also discussed RTSP issues with EBMUD at monthly meetings from January 2015 to the present time. The City will continue to work with EBMUD in implementation of the program.

On September 29, 2016, EBMUD submitted to the City FY 2015-16 Annual Satellite Notification. The City will review the Notification and continue to participate with EBMUD on the RTSP inspections performed.

Section 5. SSO Reduction Work

Paragraph 167 of the Consent Decree requires:

"The City shall summarize its Work to reduce SSOs in its service area in the reporting Fiscal Year."

A summary of the City's work is described below.

5.1 Capacity Assurance

Paragraph 167.a. of the Consent Decree requires that the Annual Report contain:

"Capacity Assurance: a description of the activities performed in order to monitor the locations in Paragraph 89(a) during rain events…"

During FY 2015-16, the City monitored water levels in Maintenance Holes listed in Paragraph 89(a) of the Consent Decree. Table 5-1 provides information required in Paragraph 167a of the Consent Decree.

Paragraph 167ai requires the City to show the *"highest water level in relation to the Maintenance Hole observed in the reporting Fiscal Year"*.

> Table 5-1 is a cumulative list of all locations that received high water level alarms in FY 2014-15 and FY 2015-16. In FY 2015-16 the City experienced a total of ten locations that reached within one foot of the Maintenance Hole rim. All flows were contained within the system and no SSO event occurred at any of these ten locations. Four locations were suspected to be capacity related. Four locations were non-capacity related. Two were triggered by maintenance staff during CCTV operations.

Paragraph 167aii requires the City to identify any *"capacity-related SSO or instance of the water level reaching within one (1) foot of the Maintenance Holes rim due to a lack of capacity and whether the event(s) occurred during a rain event that was greater than the December 5, 1952 Storm"*.

> As shown in Table 5-1 high water levels were experienced in six locations that were triggered by the December 11, 2014 storm event. Our analysis shows that the December 11, 2014 storm to be a storm event exceeded the December 5, 1952 storm. This event surpassed a 5-year classification with a full duration classification of a 10-year, 21-hour event. Despite this, and out of an abundance of caution, the City has begun design of upgrades at all locations where high water levels were triggered. A full detail of the City's progress on the planned upgrades is provided below.

Paragraph 167aiii requires the City to provide *"a description of all activity the City performed to prevent an SSO from occurring at a location where the City had reason to believe a capacity-related SSO was likely to occur"*.

> Table 5-1 includes a description of maintenance activities performed to prevent SSO's for each location.

Paragraph 167aiv requires the City to provide *"a description of activities to address locations that do not have sufficient capacity"*.

> Table 5-1 includes a description of maintenance activities performed to prevent SSO's for each location. In addition, as stated above, the City is proceeding with preparing construction plans for capacity

upgrades at all six (6) locations. This work started last year; however, due to the complexity of the project location and encountering physical challenges in the existing field conditions, our project has been delayed. The following is a summary progress report on all six locations:

- San Pablo Avenue at 60th Street – Design 100% Completed. Construction planned for 2017.
- San Pablo Avenue at 62nd Street - Design 100% Completed. Construction planned for 2017.
- Grand Avenue and Harrison Street – Design 100% Completed. Construction planned for 2017.
- Park Blvd and Spruce Street - Design 65% Completed. Construction planned for 2017.
- East 18th Avenue at 4th Avenue - Design 65% Completed. Construction planned for 2017.
- Maybelle Avenue and Masterson Street - Design 100% Completed. Construction planned for 2017.

The City's plan is to complete design on all six locations and advertise for bids in November 2016 with construction expected to begin in 2017.

Furthermore, in FY 2015-16, the City completed a large sewer rehabilitation project downstream of three triggered locations: 27th Avenue & Vernon Street, Grand Ave and Harrison St, and 19th Street and Jackson Street. That project rehabilitated approximately 1,079 linear feet of existing 60" conduit sewer pipes with Centrifugally Cast, Fiberglass-Reinforced, Polymer Mortar (CCFRPM) pipes and applied coating for approximately 342 linear feet of existing 3'x 4'-10" conduit sewer pipes. That project is expected to improve the hydraulic conditions of the sewer system in the downtown area and lower the overall hydraulic gradient line in sewer pipes upstream.

Paragraph 167av requires the City to provide *"a list of sewer segments improved pursuant to Paragraph 89(b) including the date the capacity was improved, and certification that any improved Sewer Main has sufficient capacity"*.

There are no activities to report.

Paragraph 167avi requires the City to provide *"identification of any capacity-related SSOs and the SSO date and location"*.

In FY 2015-16, no Sanitary Sewer Overflows occurred in any of the Maintenance Holes listed in Paragraph 89(a) of the Consent Decree.

Table 5-1
Capacity Related High Level Alarms Triggered in FY 2015-16

No. Listed from Consent Decree	Location	Event First Occurrence Time	Reasons for High Level Alarm	Maintenance Performed to Prevent SSO's	Comment
i.	San Pablo Avenue at 60th Street	* 12/11/2014 & 1/19/2016	Grease & Capacity	Televised on 5-29-14 Cleaned on 4-28-16	**Planned for 2017 Construction. Design 100% Completed.
ii.	San Pablo Avenue at 62nd Street	9/23/2015, Not a rain event	Maintenance staff triggered sensor	Televised on 4-29-14 Cleaned on 9-23-15	Planned for 2017 Construction. Design 100% Completed.
iii.	Stanford Avenue at Gaskill Street	9/23/15, Not a rain event	Maintenance staff triggered sensor	Cleaned on 10-06-15. Inspected and reset surcharge alarm unit 9-23-15, Televised on 8-20-14	Upsizing not needed.
iv.	27th Avenue & Vernon Street	* 12/11/2014 & 1/19/2016	Unknown	Televised on 4-29-14 and 12-16-14 Cleaned on 8-25-16 On High Frequency Cleaning List Every 6 Months	Upsizing not needed. Existing pipe size is 10" instead of 8" listed in the Sewer System Hydraulic Modeling and Capacity Analysis Report dated November 2012. The location is placed on the High Frequency 6-month cleaning list.
vi.	Grand Avenue and Harrison Street	* 12/11/2014 & 1/06/2016	Grease & Sag	Televised on 4-28-14 Cleaned on 6-8-16 On High Frequency Cleaning List every 12 Months	**Planned for 2017 Construction. Design 100% Completed. Downstream hydraulic condition was improved by a 54" slip line project in 2016.
vii.	19th Street and Jackson Street	12/13/2015	Capacity	Televised 5-27-14 Cleaned 11-21-14	Planned for 2017 Construction. Design 25% Designed.

No.	Location	Event First Occurrence Time	Reasons for High Level Alarm	Maintenance Performed to Prevent SSO's	Comment
viii.	Park Blvd and Spruce Street	1/17/2016	Capacity	Televised 11-14-14 Cleaned on 7-8-16	**Planned for 2017 Construction. 65% Designed. Resolving utility/private improvements conflicts, utility poles, telecommunication conduits, etc.
ix.	East 18th Avenue at 4th Avenue	* 12/11/2014 & 12/13/2015	Capacity	Televised on 12-26-14 & 8-14-15 Cleaned on 8-09-16 On High Frequency Cleaning list every 6 Months	**Planned for 2017 Construction. 65% Designed. Resolving utility/private improvements conflicts, utility poles, telecommunication conduits, etc. Downstream hydraulic condition was improved by a 54" slip line project in 2016.
x.	Maybelle Avenue and Masterson Street	* 12/11/2014 & 1/17/2016	Sag	Televised on 1-2-15 Cleaned on 12-27-15	**Planned for 2017 Construction. 100% Designed.
xii.	Trestle Glen road and Creed Road	* 12/11/2014 & 1/17/2016	Debris & Sag	Televised on 1-26-16 Cleaned on 5-10-16 Location on High Frequency Cleaning List Every 3 Months	Sag will be corrected in 2017. 25% Designed.

*Locations in which the water level reached within one foot of the Maintenance Hole rim during the December 11, 2014 rain event. Rain event exceeded 1952 Storm.
** Project C329154

5.2 Post SSO Inspection

Paragraph 167.b. of the Consent Decree requires that the Annual Report contain:

"Inspections: a statement that Oakland completed CCTV inspections downstream of each SSO location."

During FY 2014-15, the City completed CCTV inspections downstream of each SSO.

5.3 Acute Defects

Paragraph 167.c. of the Consent Decree requires that the Annual Report contain:

"Acute Defects: a description of the activities to Repair Acute Defects…"

Paragraph 91 further provides:

"Acute Defects. The City of Oakland shall continue to repair Acute Defects as soon as possible, but no later than within one Year of identification."

Acute Defects are shown in Table 5-3 of **Appendix D**. Table 5-3 shows location of Acute Defect locations identified after the Consent Decree (July 1, 2014).

As shown in Table 5-3, the following is a list of activities related to acute defects.

- 25 New Acute Defects were found in FY 2015-16.
- 12 FY 2015-16 identified Acute Defects were repaired. 25 FY 2014-15 identified Acute Defects were repaired within one Year of Identification.
- Remaining 13 acute defects will be repaired within one Year of Identification.

Between July 1, 2015 and June 30, 2016, the median time to correct an Acute Defect was 266 days. It should be noted that delays in repairing Acute Defects did not result in any Sanitary Sewer Overflows.

Minor Repairs Completed

In addition to the Sewer Main Rehabilitation described above, between July 1, 2015 and June 30, 2016, the City's Sewer Maintenance Section performed 54 spot repair work orders. These spot repairs consisted of excavating damaged sewer lines and installing new segments of sewer line or repairing structures. The list of repair locations is shown in Table 4-5 of **Appendix B**.

As of June 30, 2016, maintenance crews have 120 minor repairs to be completed.

5.4 Sewer Main Cleaning

Paragraph 167.d. of the Consent Decree requires that the Annual Report contain:

"Sewer Main Line Cleaning: a description of activities conducted under its sewer cleaning program…"

Paragraph 92.a. further provides:

"The City of Oakland shall complete the cleaning of its entire Collection System program which began in 2010, by June 30, 2018. By June 30, 2014, the City shall have cleaned 1,900,800 feet of Sewer Mains. Beginning July 1, 2014, the City shall clean its remaining Sewer Mains at the rate of 739,200 feet per Fiscal Year on a cumulative basis (i.e., 2,640,000 feet by June 30, 2015; 3,379,200 feet by June 30, 2016; etc.)."

As shown in Table 5-4a, 3,777,533 unique feet (715 miles) of Sewer Main have been cleaned. This exceeds the Consent Decree requirement of 3,379,200 feet (640 miles).

Table 5-4a
Feet of Sewer Main Cleaned (Unique Feet)

Fiscal Year	Mains Cleaned*	Cumulative Total**	CD Requirement
FY 2013-14	544,051' (103 miles)	2,085,969' (395 miles)	1,900,800' (360 miles)
FY 2014-15	778,526' (147 miles)	2,864,495' (543 miles)	2,640,000' (500 miles)
FY 2015-16 ***	941,179' (178 miles)	3,777,533' (715 miles)	3,379,200' (640 miles)
Since Effective Date (September 22, 2014)****	1,482,896' (281 miles)	n/a	n/a

*Newly-unique feet cleaned during the FY (feet that had no previous cleaning between January 1, 2010 and the start of the FY)
**Cumulatively-unique feet starting January 1, 2010
*** Numbers reflect updates to sewer GIS data, the updates were done in FY 2015-16. Totals for prior fiscal years were not re-calculated based on the newer updates to sewer GIS data; therefore the current cumulative total may not equal the prior cumulative total plus the total for the current fiscal year.
****Newly-unique feet cleaned starting September 22, 2014 (feet that had no previous cleaning between January 1, 2010 and September 21, 2014). Numbers reflect updates to sewer GIS data, the updates were done in FY 2015-16
Reference: Paragraph 92.a., Paragraph 167.d.i.

Table 5-4b
Feet of Sewer Main Cleaned More Than Once
Per Paragraph 167.d.ii., in this Table 5-4b, the length of a Sewer Main is counted once regardless of the number of times it is cleaned.

Fiscal Year	Mains Cleaned	Cumulative Total*	CD Requirement
FY 2014-15	379,663' (72 miles)	1,508,005' (286 miles)	n/a
FY 2015-16 **	411,287' (78 miles)	1,960,753' (371 miles)	

*Starting January 1, 2010
** Numbers reflect updates to sewer GIS data, the updates were done in FY 2015-16. Totals for prior fiscal years were not re-calculated based on the newer updates to sewer GIS data. The pipes that are cleaned more than once in a fiscal year may be the same or different in each fiscal year, and the calculation is specific to each fiscal year. For example, pipe A may have been cleaned twice in FY2014-15 and twice in 2015-16, so its feet are included in each fiscal year's calculation; whereas pipe B may have been cleaned once in FY 2014-15 and twice in FY2015-16, so its feet are only included in the FY 2015-16 calculation. The cumulative total would include pipe A only once and pipe B only once, which is why the current cumulative total cannot be calculated as the prior cumulative total plus the total for the current fiscal year.

Table 5-4c Feet of Sewer Main Cleaned, Including Repeat Cleanings
Per Paragraph 167.d.iii., in this Table 5-4c, the length of a Sewer Main is multiplied by the number of times it is cleaned.

Fiscal Year	Mains Cleaned	Cumulative Total*	CD Requirement
FY 2014-15	2,017,932' (382 miles)	6,486,856' (1,229 miles)	n/a
FY 2015-16 **	2,361,494' (447 miles)	8,799,050.32' (1,666 miles)	

*Starting January 1, 2010
** Numbers reflect updates to sewer GIS data, the updates were done in FY 2015-16. Totals for prior fiscal years were not re-calculated based on the newer updates to sewer GIS data; therefore the current cumulative total may not equal the prior cumulative total plus the total for the current fiscal year.

A summary of the cleaning by Sub-Basin is shown in Figure 5-1 of **Appendix E.**

5.5 Root Cleaning (Foaming)

Paragraph 167.e. of the Consent Decree requires that the Annual Report contain:

"Root Cleaning: a description of the activities conducted under Oakland's root control program, including the feet of Sewer Main treated for root control cumulatively and in each Fiscal Year beginning July 1, 2013."

Paragraph 92.e. further provides:

"For the first three Fiscal Years, the City of Oakland shall treat a minimum of 264,000 feet of Sewer Mains per Fiscal Year on a cumulative basis (i.e., 264,000 feet by June 30, 2014; 528,000 feet by June 30, 2015; and 792,000 feet by June 30, 2016.)"

The City has used various root-foaming contractors to treat sewer pipes for root control. The root-foaming program uses an herbicide which penetrates root cell walls and causes them to decay and die. This treatment kills roots that can cause stoppages and pipe destruction in City Sewer Mains.

Figure 5-1 contains a location map showing subbasins root-foamed in 2012, 2013-14, and 2014-15. All pipes in the subbasins were root foamed. Also shown in the map are subbasins planned for FY 2015-16 in which targeted pipes were selected in each of the subbasins. The selection criteria for root foaming are in the following:

1. All pipes that have root intrusion as indicated in CCTV inspections.
2. All pipes along easements.
3. All pipes in the subbasin if a significant number of pipes were affected by root intrusion as indicated in CCTV inspections.
4. Pipes will not be selected for root foaming if the pipe will be rehabilitated within five years or the pipe resides in the hot spot list.

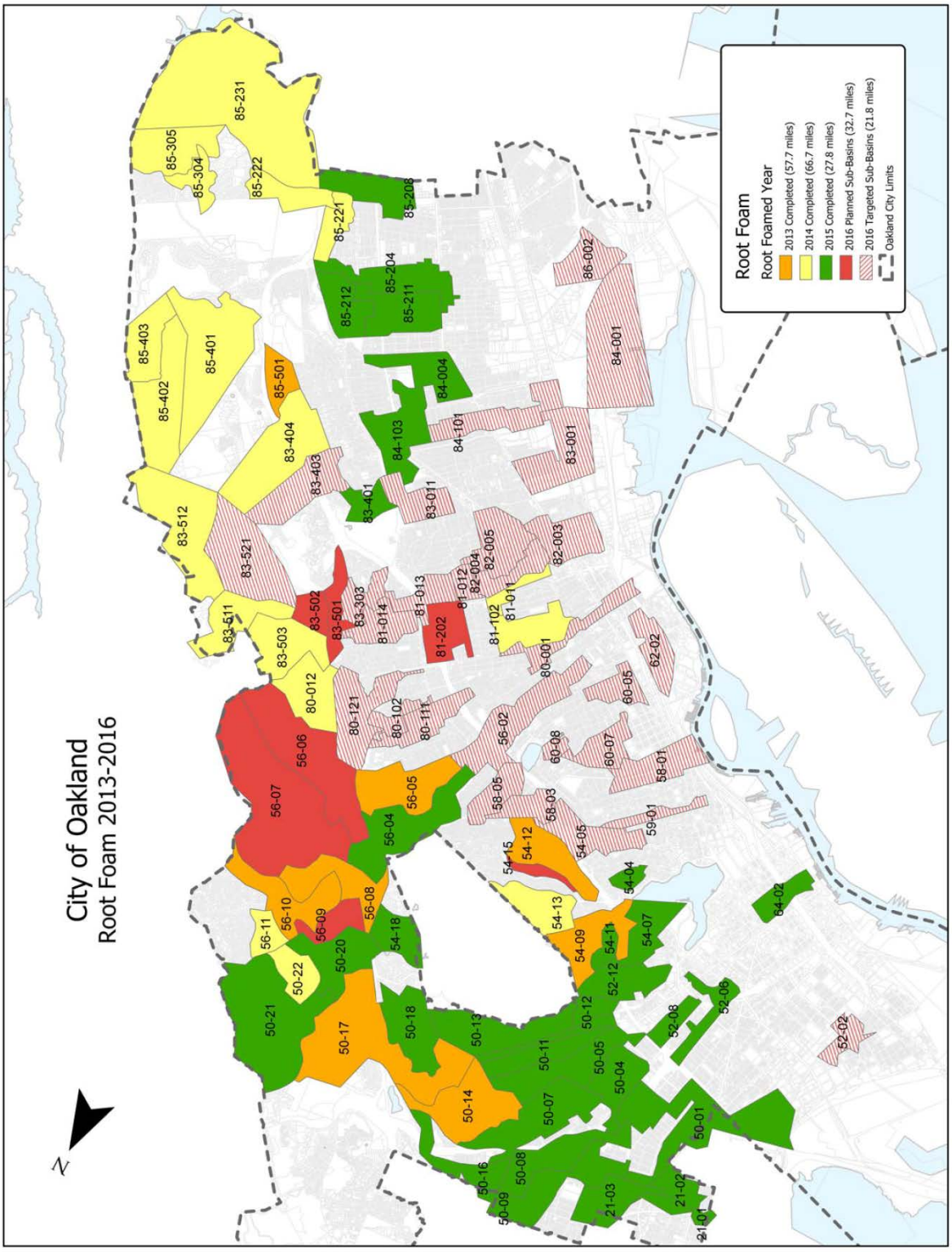
Results of the City's Root Control are as follows:

Table 5-5.
Root Control Program Implementation

Fiscal Year	Mains Assessed	Cumulative Total	CD Requirement
FY 2013-14	304,811' (57.7 miles)	304,811' (57.7 miles)	264,000' (50 miles)
FY 2014-15	352,176' (66.7 miles)	656,987' (124.4 miles)	528,000' (100 miles)
FY 2015-16	146,784' (27.8 miles)	803,771' (152.2 miles)	792,000' (150 miles)

As of June 30, 2016, the City had root foamed 803,771 feet (152.2 miles) of Sewer Mains, which meets the Consent Decree requirement of 792,000 feet (150 miles).

Figure 5-1 Root Foaming Areas



Paragraph 92.e. further provides:

"By December 31, 2016, the City shall submit an evaluation of its root control program to EPA for review and approval. The evaluation shall consider the need to treat additional or fewer Sewer Mains to address results from cleaning and CCTV. The evaluation shall propose refinements to the City's root control program in order to ensure excessive roots in the Collection System are controlled."

On June 2, 2015 the City hired V&A Consulting Engineers to evaluate the City's Root Foaming Program and recommend refinements to the program. A report will be submitted by December 31, 2016.

5.6 Hot Spot Cleaning

Paragraph 167.f. of the Consent Decree requires that the Annual Report contain:

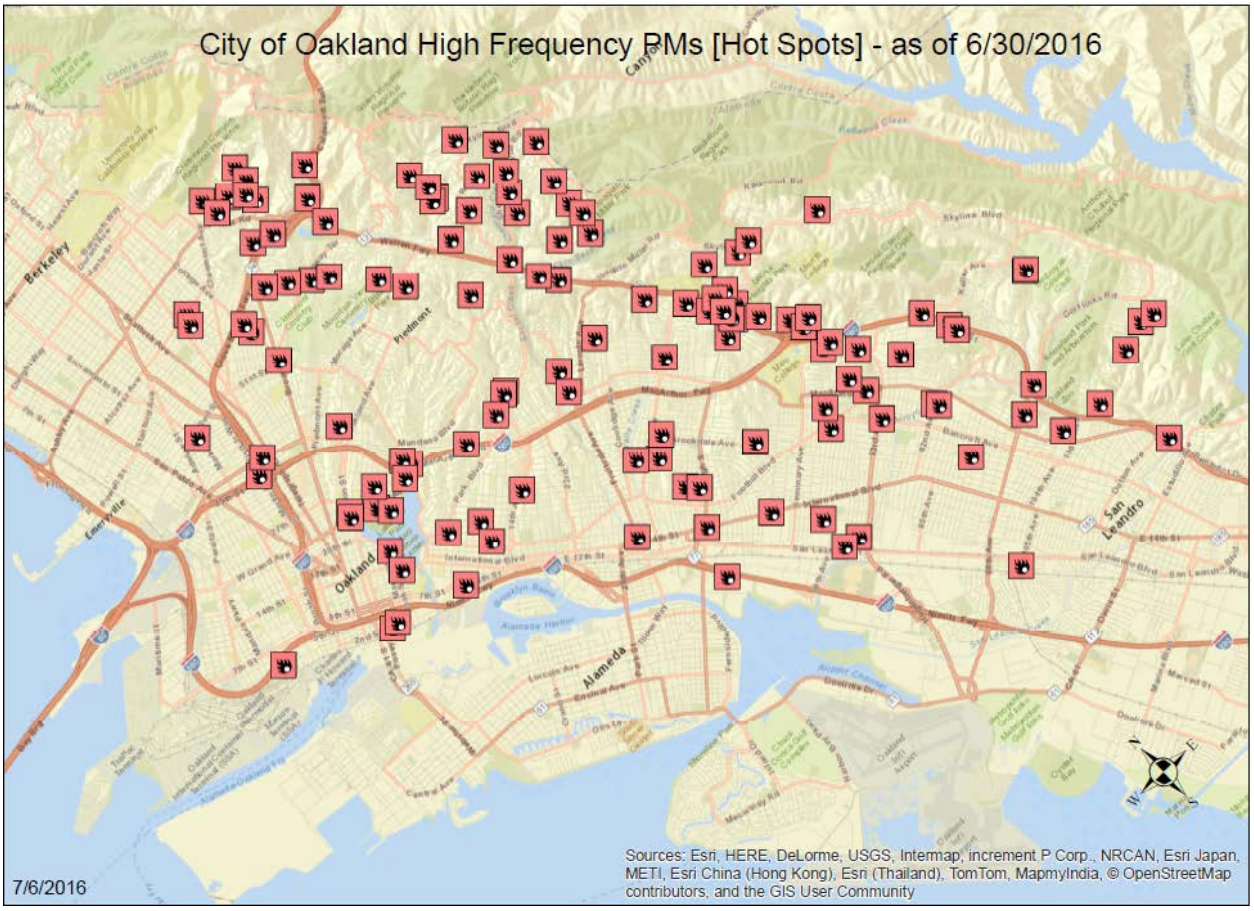
"Hot Spot Cleaning: description of activities conducted under its hot spot program, including feet of Sewer Main in the hot spot cleaning program and the range of cleaning frequencies for Sewer Main in the hot spot cleaning program;"

The Consent Decree changed both the definition of "Hot Spot" and the cleaning requirements. In anticipation of the CD, staff reviewed City records and created a new High Frequency Preventive Maintenance List (Hot Spots) containing both locations having more than one SSO in a three year period (Hot Spots) and other locations identified by staff. The list now contains 134 locations. Each of these locations was cleaned at least once in FY 2015-16. Table 5-5 of Appendix F contains the new High Priority PM List (as of June 30, 2016). Figure 5-2 contains a map of these locations.

The City reviewed its data for risk factors such as pipe age, size, slope and materials of construction, and found no correlation between SSOs and those factors.

The hot spot cleaning program contains 108,384 feet (20.5 miles) of Sewer Mains which are cleaned every three (3) to twelve (12) months as shown. Between July 1, 2015 and June 30, 2016, the City's sewer crews cleaned 322,333 feet (61 miles) of Sewer Mains as part of the hot spot sewer cleaning program.

Figure 5-2
High Frequency PM Locations, as of 6/30/2016



5.7 Fats, Oil and Grease (FOG) Control

Paragraph 167.g. of the Consent Decree requires that the Annual Report contain:

"FOG: a description of activities to control FOG in the Collection System; a list of any SSOs that were thought to be associated with FOG or excessive buildup of grease, a list of FOG locations referred to EBMUD for investigation, and any actions that were taken against food service establishments related to inadequate FOG controls."

The City's FOG Control Program is described in Section 3.3 of its AMIP. The City identifies and reports FOG problems to EBMUD. EBMUD investigates and inspects FOG sources and works with food service establishments (FSEs) to correct FOG problems. Non-compliant FSEs are referred to the City for enforcement action.

In FY 2015-16, 39 SSOs were thought to be associated with FOG as listed in Table 2-1. These locations were referred to EBMUD for investigation as shown in Table 5-6.

EBMUD has not referred any FSEs to the City for enforcement action.

Table 5-6

FOG-Related SSOs Reported to EBMUD With CIWQS #s.			
Address	**Street**	**Date Reported to EBMUD**	**CIWQWS #**
2950	Lakeshore Av	8/18/2015	816254
600	Hegenburger Rd	8/18/2015	816257
	14th St & Castro St	8/18/2015	816634
4616	Mattis Ct	8/18/2015	816449
	Perkins St & Bellevue Av	8/18/2015	816854
550	Grand Av	8/18/2015	817393
411	E. 18th St.	8/18/2015	817392
1902	90th Ave.	9/30/2015	818775
895	47th St.	10/1/2015	818777
6520	Bancroft Ave	10/2/2015	818245
4183	Fruitvale Ave.	10/2/2015	817121
4374	Terra Bella Way	10/2/2015	818251
2477	Monterey Blvd.	10/2/2015	817627
4400	International Blvd.	10/2/2015	818252
2800	68th Ave	10/5/2015	818575
3642	International Blvd.	11/2/2015	819502
	Mountain Blvd. & Moraga Ave.	11/6/2015	819382
392	11th St.	11/25/2015	819914
3228	Guido St.	12/5/2015	820124
48	Spyglass Hill	12/8/2015	820123
2960	Peralta Oaks Ct.	12/13/2015	820415
9855	St. Elmo Dr.	12/30/2015	820669

Address	Street	Date Reported to EBMUD	CIWQWS #
297	Rishell Dr.	1/8/2016	820979
	La Salle Ave. & Moraga Ave.	1/18/2016	821108
2501	75th Ave.	1/23/2016	821326
3220	87th Ave.	2/9/2016	821935
1225	Fallon St.	1/20/2016	821377
2127	11th Ave.	2/11/2016	822036
5440	La Salle Ave.	3/1/2016	822557
7867	Bancroft Ave.	2/26/2016	822553
2591	Leimert Blvd.	3/11/2016	823081
	37th Ave. & E. 12th St.	3/15/2016	823080
454	Santa Clara Ave.	4/7/2016	823698
	Mauritania Ave. & Seminary Ave.	4/23/2016	824143
6784	Paso Robles Dr	6/28/2016	825634
387	9th St	6/28/2016	825277
6401	Eastlawn St	6/28/2016	825641
7535	Sunkist Dr	6/28/2016	823964
2221	Broadway	7/13/2016	824719

5.8 Pump Station Renovation

Paragraph 167.g of the Consent Decree requires that the Annual Report contain:

"Pump Stations: a description of pump station renovation and upgrades required by the Pump Station Reliability Plan during the previous Fiscal Year and a description of projects to be completed in the following Fiscal Year."

Paragraph 94 further requires:

"The City shall complete improvements described in the Plan by October 15, 2022."

The city's collection system has seven (7) small pump/lift stations:

- Denton Place
- Fallon Street
- Hegenberger Road
- Parkridge Drive
- Tidewater Avenue
- Shepherd Canyon Road
- Skyline Blvd

Work on the Tidewater Pump Station was completed in 2012.

Schaaf & Wheeler, the consultant have completed the design plans and specifications for improvements all pump/lift stations. Construction at locations Fallon Street, Hegenberger Road, and Shepherd Canyon Road are scheduled to begin in October, 2016. Construction at locations Denton Place, Parkridge Drive, and Skyline Blvd are scheduled to begin in 2018. Design has been completed.

The City is significantly ahead of schedule with its Pump Station Improvement Program, with completion planned for 2019, three years ahead of schedule.

Section 6. Deliverables

On June 30, 2016, Humphrey Consulting on behalf of all Defendants submitted to EPA the Regional Standards, as required in the Consent Decree. The Deliverable was submitted ahead of schedule.

As required from Paragraph 92e of the Consent Decree, the City plans to submit by December 31, 2016 an evaluation report of the root control program to EPA for review and approval.

Section 7. Known Non-Compliance with Consent Decree

The City is well ahead of schedule in sewer rehabilitation, sewer cleaning, root control, CCTV inspection, and pump station rehabilitation and is compliant with the Consent Decree. The City has increased its sewer service budget, staffing, and equipment and intends to continue to meet its obligations under the Consent Decree. The City sent out defective lateral notices to properties in accordance with the requirement described in Paragraph 85a of the Consent Decree. This section states that "*Within 90 Days of identifying a Sewer Lateral as defective the City of Oakland shall notify the affected owner in writing."* The City is currently aggregating all lateral related reports and complaints in one database. The City sent out notices to all property owners including those with lateral defects and those with only temporary blockages. 65 of those notices were sent beyond the 90-day requirement; however, it is not known how many out of those are subject to the above requirement. The City is adding additional staff to handle and follow up on defective laterals within the 90 days of identification.

The City believes that it is compliant with the Consent Decree and that no penalties should be assessed for the City's Collection System. If Plaintiffs disagree with this position, the City would appreciate the opportunity to discuss potential penalties and provide additional explanations of its position.

Section 8. Assessment of Stipulated Penalties

Paragraph 172 of the Consent Decree provides:
"If the Annual Report documents that any of the obligations subject to stipulated penalties may not have been complied with, and a Defendant takes the position that potentially applicable stipulated penalties should not be assessed, that Defendant may include in the Annual Report an explanation as to why Plaintiffs should forego collecting such penalties; ... "

The City believes that it is fully compliant with the Consent Decree and that no penalties should be assessed for the City's Collection System. The City has used all reasonable methods to prevent Sanitary Sewer Overflows and is unaware of any areas of non-compliance with the programmatic requirements of the Consent Decree.

If Plaintiffs disagree with this position, the City requests the opportunity to provide additional supporting documentation and explanations beyond the information provided in this annual report for consideration.

Section 9. Recommended Changes to Required Work

The City has no recommendations for changes to this Consent Decree at this time.

Appendix Summary

Appendix	Table Name	Table Number
A	List of Sanitary Sewer Overflows (SSOs) in FY 2015-16	Table 2-1
B	Collection System Spot Repair Work (July 1, 2015 – June 30, 2016)	Table 4-5
C	Notice to Abate Sample Letter	Figure 4-3
D	Acute Defect Lists	Table 5-3
E	Cleaning by Sub-Basin	Figure 5-1
F	High Frequency PM Locations	Table 5-5
G	Port of Oakland Sewer Collection System Annual Report for July 1, 2015 – June 30, 2016.	-

Appendix A

Table 2-1
List of Sanitary Sewer Overflows (SSOs) in FY 2015-16

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
816538	4616 Mattis Ct. Oakland, CA, 94619	2015.07.06 10.09.00	2015.07.06 11.30.00	40	40	40	Building or Structure	8 vcp main sewer overflowed into a building spilling 40 gallons. Staff recovered all 40 gallons of wastewater and returned it to the collection system.
110700	14th st & Castro st oakland ca	2015.07.03 14.00.00	2015.07.03 16.00.00	240	240	240	Other (specify below)	Main sewer plugged in street and sewage came out from ground under overpass. Staff used Hydro Flusher to vacuum sewage and return to sanitary system.
270183	7287 Sayre St Oakland,CA,94611	2015.07.16 08.00.00	2015.07.16 09.00.00	60	60	60	Street/Curb and Gutter	8 vcp main sewer overflowed from a manhole in the street. Staff recovered 60 gallons of wastewater and returned it to the sanitary main sewer.
955916	Perkins St & Bellevue Ave Oakland,CA,94610	2015.07.25 10.30.00	2015.07.25 12.15.00	180	150	150	Street/Curb and Gutter;Surface Water	8 vcp main sewer overflowed onto the street and into the curb and gutter area. Staff recovered 150 gallons of wastewater and returned it to the collection system. 30 gallons went into the strom drain and into Lake Merritt.
253773	491 30th St	2015.07.31 18.15.00	2015.07.31 20.00.00	86	86	86	Street/Curb and Gutter	8 VCP sanitary main sewer had plugged and overflowed out of the manhole in the street and into the gutter area. Staff blocked street curb and gutter.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
581851	4183 Fruitvale Ave	2015.08.03 20.00.00	2015.08.03 21.20.00	160	0	160	Building or Structure;Unpaved surface	8 VCP sanitary main sewer plugged due to grease and debirs and discharged sewage into house and out of property clean-out.
736879	411 E 18th St	2015.08.12 08.00.00	2015.08.12 10.30.00	1050	1050	1050	Building or Structure;Street/Curb and Gutter	8' sanitary main sewer plugged due to grease and overflow into the building and onto the street curb and gutter. Staff contained all portions of the overflow. Staff flushed the main sewer to restore the flow. Staff cleaned all affected areas and returned all portions of the overflow back to the sewer collection system. Staff will CCTV the main sewer.
722559	550 Grand Ave	2015.08.11 17.10.00	2015.08.11 20.30.00	200	200	200	Building or Structure	8 VCP sanitary main sewer plugged due to grease and backed up into the building. Staff contained all portions of the spill. Staff flushed the main sewer to unplug stoppage and return the flow. Staff cleaned and returned all portions of the overflow back to the collection system. Staff will CCTV the sanitary main sewer.
265451	2012 Melvin Rd. Oakland Ca	2015.08.14 18.00.00	2015.08.14 21.00.00	100	25	100	Unpaved surface	Staff recovered 25 gallons and 75 gallons soaked into the ground.
127254	2477 Monterey Blvd Oakland Ca	2015.08.24 09.00.00	2015.08.24 12.00.00	360	0	360	Other (specify below)	Main discharged from a main hole onto the dirt and soaked into the ground
216822	102 Crest Rd Oakland, CA, 94611	2015.08.31 17.00.00	2015.08.31 21.00.00	600	0	600	Unpaved surface	600 gallons overflowed from an 8 sewer line and soaked into the ground.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
311016	9879 Lawlor St, Oakland, CA, 94605	2015.09.08 11.50.00	2015.09.08 12.35.00	10	10	10	Building or Structure	8 vcp main sewer overflowed into a downstairs bathroom. Staff recovered all 10 gallons of wastewater and returned it to sanitary main sewer.
265519	11900 Campus Dr. Oakland,CA, 94619	2015.09.15 03.30.00	2015.09.16 19.00.00	930	0	930	Unpaved surface	930 gallons overflowed from an 8 vcp sewer line on an easement and soaked into the ground.
172456	2646 Claremont ave Oakland ca	2015.09.15 07.50.00	2015.09.15 10.00.00	650	0	650	Unpaved surface	null
466010	6520 Bancroft Ave Oakland ca	2015.09.13 11.30.00	2015.09.13 14.00.00	150	150	150	Street/Curb and Gutter	Staff contained spill at gutter area and used Hydro Flusher to vacuum sewage and return to Sanitary sewer line. Staff cleaned and disinfected area where spill occurred.
532570	4374 Terrabella Way Oakland,CA94619	2015.09.19 07.00.00	2015.09.19 09.30.00	300	0	300	Unpaved surface	300 gallons overflowed from an 8' vcp sewer line onto an easement and soaked into the ground.
540826	4400 International Blvd Oakland ca	2015.09.12 12.00.00	2015.09.12 14.30.00	150	150	150	Street/Curb and Gutter	Staff contained spill at inlet and used Hydro Flusher to vacuum sewage and return to Sanitary System.
276427	5978 Ascot Dr Oakland,CA,94611	2015.09.21 10.45.00	2015.09.21 18.30.00	930	200	930	Unpaved surface	930 gallons overflowed from an 8 vcp sewer line on an easement. 200 gallons were recovered and returned to the collection system. 730 gallons soaked into the ground.
454926	2800 68th Ave Oakland, CA, 94605	2015.10.05 08.30.00	2015.10.05 11.00.00	300	300	300	Street/Curb and Gutter	8 vcp main sewer overflowed onto the street and into the curb and gutter area. Staff recovered all 300 gallons of wastewater and returned it to the collection system.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
876600	6327 Broadway Terr	2015.10.04 07.00.00	2015.10.04 08.30.00	450	0	450	Unpaved surface	8 Sanitary main sewer plugged due to root intrusion and overflowed out of the manhole in the rear of the property onto the ground.
989323	7401 Claremont Ave Oakland,CA, 94618	2015.10.02 09.00.00	2015.10.02 12.30.00	210	210	210	Street/Curb and Gutter	8 vcp main sewer overflowed onto the sreeet and gutter area. Staff recovered all 210 gallons of wastewater and returned it to the collection system.
949064	700 Trestle Glen Rd Oakland, CA, 94610	2015.10.01 10.00.00	2015.10.01 14.00.00	360	300	360	Unpaved surface	360 gallons overflowed from an 8 vcp sewer line onto an easement in a backyard. 300 gallons were revcovered and returned to the collection system. 60 gallons soaked into the ground.
726230	1902 90th ave Oakland ca	2015.09.30 19.35.00	2015.09.30 21.08.00	465	300	465	Street/Curb and Gutter	Staff contained sewer spill in gutter using sandbags and matts, then used Hydro Flusher to vaccuum sewage and return to Sanitary main sewer.
790780	895 47th st Oakland ca	2015.09.30 20.30.00	2015.10.01 12.45.00	10	0	10	Building or Structure	null
797271	264 Capricorn Ave Oakland CA. 94611	2015.10.13 15.28.00	2015.10.13 20.00.00	8	0	8	Unpaved surface	8 gallons overflowed from a crack in walkway on an easement. 0 gallons were recovered.
687318	1515 Market St Oakland,CA, 94607	2015.10.21 07.20.00	2015.10.21 10.00.00	600	0	600	Unpaved surface	600 gallons overflowed from an 8 vcp sewer line into the ground.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
312102	Mountain Blvd & Moraga Ave Oakland, CA, 94511	2015.11.06 08.00.00	2015.11.06 10.00.00	600	600	600	Street/Curb and Gutter	600 gallons overflowed from an 8 vcp sewr line onto the sreet and into the curb / gutter area. Staff recovered all 600 gallons and returned it to the collection system.
233740	6861 Saroni Dr	2015.11.06 11.00.00	2015.11.06 19.30.00	500	500	500	Unpaved surface	8 VCP Sanitary Main Sewer overflowed from lamp hole structure at the rear of the property. Staff contained overflow, hand rodded main sewer to break blockage and return flow to all portion of sanitary main sewer.
677656	162 Cross Rd	2015.11.07 10.30.00	2015.11.07 12.30.00	100	100	100	Street/Curb and Gutter	8 VCP sanitary main sewer plugged due to root intrusion and overflowed out of a water meter box in the side walk gutter area.
185717	7283 Claremont	2015.11.07 13.15.00	2015.11.07 15.45.00	150	0	150	Other (specify below);Unpaved surface	8 VCP sanitary main sewer plugged and overflowed out of the manhole and soaked into the ground.
278429	3642 International Boulevard	2015.11.02 13.15.00	2015.11.02 17.00.00	450	450	450	Building or Structure	null
322650	92 Gravett Dr	2015.11.01 12.20.00	2015.11.01 14.30.00	65	0	65	Unpaved surface	8inch Sanitary Sewer located in the middle of a street, consisting of Vitrifed Clay Pipe was blocked. Water was exiting from m/h located on street. Runoff had spilled into side of road and had soaked back into the earth.
837630	4308 Harbord Dr	2015.11.03 20.15.00	2015.11.03 21.15.00	65	65	65	Paved Surface	8inch sanitary sewer that consists of vitrified clay pipe became plugged and is located withing the front yard of a residence. Wastewater ran down paved driveway and collected at the base of the driveway.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
626886	6769 Estates Dr.	2015.10.26 11.00.00	2015.10.26 13.00.00	120	100	120	Unpaved surface	Final spill destination consisted of an unpaved surface and had soaked into the ground.
207892	6205 Westwood way Oakland ca	2015.11.14 13.30.00	2015.11.14 16.30.00	240	240	240	Other (specify below)	Staff used Hydro Flusher to vacuum sewage from dirt on side of hill and return to sanitary system. cleaned and disenfected area.
165122	392 11th St Oakland,CA,94607	2015.11.25 14.30.00	2015.11.25 16.30.00	540	540	540	Building or Structure	540 gallons overflowed from an 8 vcp sewer line into the basement of the building. Staff recovered all 540 gallons and returned it to the collection system.
881861	48 Spy Glass Hill Street, Oakland Ca,	2015.12.08 13.18.00	2015.12.08 16.40.00	202	0	202	Unpaved surface	Two hundred and two gallons soaked in to the dirt at this location. This spill occured on an easement. Tree roots and grease was the call of this overflow.
343239	3228 Guido Street, Oakland Ca,	2015.12.05 08.00.00	2015.12.05 11.20.00	200	0	200	Unpaved surface	Two hundred gallons spilled from an 8 VCP sewer main. Two hundred gallons soaked in the dirt at this location. Tree roots and grease was the cause of this spill. The spill occured on an easement.
965784	1294 Holman Rd Oakland CA, 94610	2015.12.04 09.15.00	2015.12.04 14.00.00	285	0	285	Unpaved surface	285 gallons overflowed from an 8 vcp sewer line into the ground in the rear yard.
891904	3501 Calafia Ave Oakland, CA, 94605	2015.12.15 08.00.00	2015.12.15 10.00.00	240	0	240	Unpaved surface	240 gallons overflowed from an 8 vcp sewer line and soaked into the ground .
276067	5109 Saddle Brook Dr oakland, CA, 94619	2015.12.22 12.30.00	2015.12.22 14.30.00	3000	0	3000	Unpaved surface	3000 gallons overflowed from an 8 vcp sewer line into a broken strom line and soaked into the ground on an easement.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
997028	2960 Peralta Oaks Oakland Ca	2015.12.13 14.00.00	2015.12.13 18.00.00	600	0	600	Unpaved surface	null
814956	9855 St Elmo St Oakland,CA,94503	2015.12.30 10.30.00	2015.12.30 11.30.00	60	60	60	Street/Curb and Gutter	60 gallons overflowed from a cleanout into the curb and gutter area. Staff recovered all 60 gallons.
187191	297 Rishell Dr Oakland,CA, 94619	2016.01.08 07.00.00	2016.01.08 09.30.00	60	60	60	Unpaved surface	60 gallons overflowed from a lamphole in the backyard. All 60 gallons were recovered and returned to the collection system.
889612	3745 Brookdale ave Oakland ca	2015.12.02 08.00.00	2015.12.02 12.30.00	135	135	135	Other (specify below)	Staff used Hydro Flusher to vacuum sewage that spilled onto driveway, returned sewage water back into our sanitary system.12
382935	2289 Melin Rd	2016.01.14 08.00.00	2016.01.14 12.00.00	240	0	240	Unpaved surface	8 sanitary main sewer located on the easement in the rear of the property plugged and overflowed out of the manhole onto the ground.
588823	LA SALLE AVE & MORAGA AVE Oakland,CA, 94611	2016.01.18 11.00.00	2016.01.18 14.00.00	900	100	0	Separate Storm Drain	900 gallons spilled from an 8 vcp sanitary sewer main. 100 gallons were captured and returned to the collection system.
371387	3628 Loma Vista ave Oakland ca	2016.01.18 12.40.00	2016.01.18 07.00.00	340	340	340	Building or Structure	null
889764	2501 75th Ave Oakland,CA,94605	2016.01.23 17.45.00	2016.01.23 22.30.00	285	285	285	Street/Curb and Gutter	285 gallons overflowed from a cleanout into the curb and cutter area. Staff recovered all 285 gallons.
513653	3627 Virden Ave Oakland,CA,94619	2016.01.25 08.00.00	2016.01.25 10.00.00	125	125	125	Building or Structure	125 gallons overflowed from an 8 vcp sewer line into a building. Staff contained sewage and returned all 125 gallons to collection system.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
149325	1225 fallon st oakland ca	2016.01.20 08.15.00	2016.01.20 10.15.00	360	300	360	Unpaved surface	null
106387	2344 Harrington Ave Oakland, CA,94601	2016.01.27 10.30.00	2016.01.27 13.30.00	10	10	10	Paved Surface	10 gallons overflowed from a 6 vcp sewer line in the front yard clean out. Staff recovered all 10 gallons.
616881	102 crest rd oakland ca	2016.01.18 14.00.00	2016.01.18 17.30.00	450	0	450	Other (specify below)	Dirt on easement.
821743	2058 Rosedale Ave	2016.01.23 13.00.00	2016.01.23 18.00.00	1496	1496	1496	Building or Structure	6 sanitary main sewer plugged and overflowed into the building basement.
523261	10712 Mark st oakland ca	2016.01.21 11.30.00	2016.01.21 13.30.00	120	120	120	Paved Surface	Staff used Hydro Flusher to vacuum sewage and return to sanitary system.
998446	414 Balfour Ave Oakland, CA,94610	2016.01.29 07.50.00	2016.01.29 11.20.00	210	10	210	Unpaved surface	210 gallons overflowed from an 8 vcp sewer line. 10 gallons were recovered. 200 gallons soaked into the ground.
759780	308 Jackson Street Oakland, California	2016.02.01 15.30.00	2016.02.01 20.00.00	1080	1080	1080	Street/Curb and Gutter	8 VCP Sanitary sewer main overflowed due to debris obstructing the main line.One thousand eighty gallons spilled at this location onto the curb and gutter. One thousand eighty gallons was captured and returned to collection system.
811385	171 Roble Rd Oakland, CA,94618	2016.02.03 07.45.00	2016.02.03 09.15.00	900	150	0	Surface Water	900 gallons spilled from an 8 VCP sanitary sewer main. 150 gallons were captured and returned to the collection system. 750 gallons went into the strom inlet down to Temescal Creek to SFO Bay.
997140	2330 87th Ave Oakland,CA,94605	2016.02.09 10.00.00	2016.02.09 12.00.00	480	480	480	Unpaved surface	480 gallons overflowed from an 8 vcp sewer line into the rear yard. Staff recovered all 480 gallons and returned it to the collection system.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
138858	400 Hawthorne Ave Oakland, CA,94605	2016.02.10 12.20.00	2016.02.10 15.50.00	210	210	0	Separate Storm Drain;Street/ Curb and Gutter	210 gallons overflowed from an 8 vcp sewer line into the curb and gutter area and down the storm drain. Staff blocked off the storm line downstream and recovered all 210 gallons.
414858	2127 11th Ave Oakland,CA,94606	2016.02.11 12.07.00	2016.02.11 13.40.00	93	93	0	Separate Storm Drain	93 gallons overflowed from a cleanout into the storm drain. Staff blocked off the storm line downstream and recovered all 93 gallons.
211254	15 Somerset Rd	2016.02.16 12.25.00	2016.02.16 13.48.00	56	40	56	Unpaved surface	8 Sanitary main sewer plugged and overflowed out of the manhole and soaked into the ground.
553862	171 Roble Dr.	2016.02.02 12.15.00	2016.02.02 15.00.00	495	495	495	Drainage Channel	8 VCP sanitary main sewer plugged due to root intrusion and debris. The main sewer overflowed out of the manhole in the drainage channel. Staff blocked inlet and collected sewage from overflow. Staff rodded the main sewer to unplug stoppage and return the flow. Staff returned all portions of the overflow back to the collection system. Staff will CCTV the sanitary main sewer.
864587	3115 Middleton Street Oakland Ca,	2016.02.22 08.10.00	2016.02.22 10.10.00	120	0	120	Unpaved surface	Eight inch VCP overflowed due to debris blocking sewer main. One hundred and twenty gallons overflowed at this location on to the ground at this location. This overflowed occurred on an easement. One hundred and twenty gallons spilled on to the ground. Zero gallons were recovered.
538458	947 Hillcroft Circle	2016.02.22 14.45.00	2016.02.22 18.40.00	10	2	10	Unpaved surface	8 VCP sanitary main sewer overflowed out of the manhole and soaked into the ground.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
132918	1071 Alcatraz Oakland Ca,	2016.02.20 13.30.00	2016.02.20 14.00.00	30	30	30	Unpaved surface	Six inch VCP overflowed due to debris obstructing the pipe. Thirty gallons overflowed on to the curb and gutter at this location. This occurred on the street. Thirty gallons were captured and returned back to collection system.
789717	# 74 Castle Park Way Oakland ca	2016.02.27 11.30.00	2016.02.27 12.35.00	6	6	6	Street/Curb and Gutter	Staff contained sewer spill at gutter and used Hydro Flusher to vacuum spill and return to Sanitary System.
357155	7867 bancroft ave oakland ca	2016.02.26 16.36.00	2016.02.26 19.00.00	31	31	31	Street/Curb and Gutter	Staff contained spill at gutter and used Hydro Flusher to vacuum sewage and return to Sanitary System.
732338	5440 la salle ave oakland ca	2016.03.01 10.30.00	2016.03.01 12.30.00	240	240	240	Street/Curb and Gutter	Sewer spill was contained at storm inlet and vacuumed then returned to our sanitary system.
253461	37th ave & E-12th st oakland ca	2016.03.15 09.00.00	2016.03.15 11.00.00	120	120	120	Street/Curb and Gutter	Staff recovered sewage at downstream inlet using Hydro Flusher to vacuum spilled sewage.
242426	2591 Leimert ave oakland ca	2016.03.11 12.00.00	2016.03.11 15.00.00	180	0	180	Other (specify below)	Sewage soaked into the ground, staff cleaned solids around manhole and disinfected area.
150654	2960 Peralta Oaks Ct Oakland, CA, 94506	2016.03.29 08.30.00	2016.03.29 11.30.00	900	800	900	Unpaved surface	900 gallons overflowed from an 8 vcp sewer lamp hole onto the ground. 800 gallons were recovered and returned to the collection system. 100 gallons soaked into the ground.
938786	Edwards Ave & Mountain Blvd Oakland,CA,94605	2016.04.03 09.15.00	2016.04.03 11.15.00	360	360	360	Street/Curb and Gutter	8 vcp main sewer overflowed into the street/curb and gutter area. Staff recovered all 360 gallons of wastewater and returned it to the collection system.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
633696	454 Santa Clara Ave Oakland, CA, 94610	2016.04.07 07.00.00	2016.04.07 10.00.00	540	540	540	Street/Curb and Gutter	8 vcp main sewer overflowed into the street/curb and gutter area. Staff recovered all 540 gallons of wastewater and returned it to the collection system.
635687	466 Cresent Street Oakland Ca,94612	2016.04.06 14.30.00	2016.04.06 16.30.00	720	500	720	Building or Structure;Other (specify below)	Sewage overflowed on to the citizens property at this location. 500 gallons was captured and returned back in the collection system. 120 gallons soaked into the dirt.
542472	7353 Sunkist Dr Oakland, CA, 94605	2016.04.18 09.50.00	2016.04.18 12.50.00	180	0	180	Unpaved surface	180 gallons overflowed from an 8 vcp sewer line into the ground on a easement.
667717	Mauritania ave & Seminary ave oakland ca	2016.04.23 19.35.00	2016.04.23 21.20.00	210	210	210	Street/Curb and Gutter	Staff contained sewage at storm inlet using sandbags and mats, they vacuumed sewage using Hydro Flusher and also flushed storm line and vacuumed sewage and returned to sanitary system.
615780	2058 Rosedale ave oakland ca	2016.01.19 09.50.00	2016.01.19 14.00.00	673	673	673	Building or Structure	The reason for the late report is there were two overflows which occurred at this location. we found our error during our quarterly inspection of our reporting records. we successfully reported on of the two incidents however because one was reported the other was confused to have been reported because they were both at the same location. Once our oversight was discovered we contacted CIWQS and after speaking with a representative we were instructed to report incident and include this explanation of why our report was late.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
648070	6038 Mauritania ave oakland ca	2016.04.28 07.00.00	2016.04.28 17.40.00	10	10	10	Street/Curb and Gutter	null
865560	1171 72nd avenue Oakland Ca, 94621	2016.05.15 11.00.00	2016.05.15 01.00.00	50	50	50	Street/Curb and Gutter	Debris obstructed the sewer main at this location. Fifty gallons spilled on to the curb and gutter at this location. Fifty gallons was captured and returned back to collection system. This overflow occurred on an eight inch sanitary sewer main.
671149	2221 Broadway Street Oakland Ca,94601	2016.05.21 03.30.00	2016.05.21 14.30.00	480	480	480	Building or Structure	Large amounts of grease obstructed the sewer main at this location. This was a twenty four inch sewer main. Four hundred and eighty gallons overflowed from the main into the basement. Four hundred and eighty gallons was captured and returned to collection system.
309241	3115 Holyrood Dr	2016.05.20 10.10.00	2016.05.20 14.10.00	240	0	240	Unpaved surface	Waste-water was absorbed by hillside. Staff hand rodded main sewer to remove roots and restore flow. Staff will CCTV Main Sewer.
774782	387 9th St Oakland,CA, 94607	2016.06.06 10.00.00	2016.06.06 13.00.00	180	180	180	Building or Structure	8 vcp main sewer overflowed into a basement. Staff recovered all 180 gallons of wastewater and returned it to the sanitary main sewer through the floor drain.
360801	1836 Gaspar dr oakland ca	2016.05.27 15.00.00	2016.05.27 17.00.00	15	0	15	Other (specify below)	Sewage soaked into the ground.

Cert ID	Spill Loc Name	Start DT	Est End DT	Spill Vol	Spill Vol Recover	Spill Vol Reached Land	Final Spill Dest	Final Spill Dest Expl
603499	2200 11th Ave	2016.06.08 13.30.00	2016.06.08 16.30.00	360	360	360	Other (specify below)	8 VCP sanitary main sewer line had a separated joint causing sewage to leak out of the pipe into the storm drain system. Staff blocked off storm drain. Staff removed all sewage out off the strorm drain pipe and returned it back to the collection system. Staff cleaned all affected areas of the overflow. Staff made all repairs on the 8 sanitary main sewer. Staff CCTV the main sewer.
621075	6784 Paso Robles Dr	2016.06.21 13.30.00	2016.06.21 19.30.00	360	0	360	Unpaved surface	8 PVC sanitary main sewer plugged and overflowed out of the manhole and soaked into the ground. Staff flushed the main sewer to unplug stoppage and return the flow. Staff cleaned all affected areas of the overflow. Staff will CCTV the sanitary main sewer.
805983	6401 Eastlawn Street Oakland Ca,94601	2016.05.19 20.30.00	2016.05.19 22.30.00	120	120	120	Street/Curb and Gutter	One hundred and twenty gallons overflowed due to grease and rags obstructing the main. One hundred and twenty gallons spilled on to the curb and gutter at this location. One hundred and twenty gallons was captured and returned to the collection system. This overflow occurred on a eight inch VCP main. Line was televised by CCTV crew for further inspection. Flow was restored back to normal. Staff cleaned up site.
743172	1035 Grand View Dr. Berkeley, CA, 94705	2016.06.30 09.20.00	2016.06.30 14.00.00	280	0	280	Unpaved surface	280 gallons spilled from an 8 vcp main sewer main into the dirt on an easement. 0 gallons were recovered.

Appendix B
Table 4-5
Collection System Spot Repair Work (July 1, 2015 – June 30, 2016)

WO#	Description	Address	Repair Length
694458	Sewer Spot Repair (LnFt)	5043 HARBORD DR	15
695626	Sewer Spot Repair (LnFt)	5403 HARBORD DR	10
696934	Sewer Spot Repair (LnFt)	85TH AV & INTERNATIONAL BLVD	10
704124	Sewer Spot Repair (LnFt)	2406 RITCHIE ST, OAKLAND, CA	6
704320	Sewer Spot Repair (LnFt)	OAKLAND AV & SANTA CLARA AV	9
704918	Sewer Spot Repair (LnFt)	835 CHESTER ST	1
706050	Sewer Spot Repair (LnFt)	9908 MADDUX DR	6
709082	Sewer Spot Repair (LnFt)	66 MACARTHUR BLVD	10
709988	Sewer Spot Repair (LnFt)	2701 13TH AV	5
710665	Sewer Spot Repair (LnFt)	3257 HELEN ST	3
711937	Sewer Spot Repair (LnFt)	587 MIRA VISTA AV	10
713251	Sewer Spot Repair (LnFt)	5843 BUENA VISTA AV	12
716526	Sewer Spot Repair (LnFt)	1021 BROOKWOOD RD	12
717462	Sewer Spot Repair (LnFt)	2477 MONTEREY BLVD	10
717466	Sewer Spot Repair (LnFt)	195 PERRY PL	10
718769	Sewer Spot Repair (LnFt)	1515 MARKET ST	1
723423	Sewer Spot Repair (LnFt)	2720 108TH AV	10
724804	Sewer Spot Repair (LnFt)	211 CAPRICORN	3
726603	Sewer Spot Repair (LnFt)	6101 ACACIA AV	12
727591	Sewer Spot Repair (LnFt)	2837 21ST AV	20
728349	Sewer Spot Repair (LnFt)	1971 ARROWHEAD DR	6
729485	Sewer Spot Repair (LnFt)	6111 ACACIA AV	10
733752	Sewer Spot Repair (LnFt)	7283 CLAREMONT AV	6
734959	Sewer Spot Repair (LnFt)	1442 102ND AV	10
736800	Sewer Spot Repair (LnFt)	2121 41ST AV	3
738175	Sewer Spot Repair (LnFt)	2045 41ST AV	10
738311	Sewer Spot Repair (LnFt)	85TH AVE & INTERNATIONAL BLVD	134
738479	Sewer Spot Repair (LnFt)	2101 41ST AV	6
738658	Sewer Spot Repair (LnFt)	3201 GRAND AV	8
738667	Sewer Spot Repair (LnFt)	3201 GRAND AV	10
738684	Sewer Spot Repair (LnFt)	3201 GRAND AVENUE	5
738745	Sewer Spot Repair (LnFt)	478 SANTA CLARA AV	3
739537	Sewer Spot Repair (LnFt)	2055 41ST AV	10
739871	Sewer Spot Repair (LnFt)	8530 INTERNATIONAL BLVD	15
742243	Sewer Spot Repair (LnFt)	1257 101ST AV	8
742666	Sewer Spot Repair (LnFt)	8909 SAGE RD	14
744399	Sewer Spot Repair (LnFt)	947 HILLCROFT CIR	8
745284	Sewer Spot Repair (LnFt)	2330 87TH AV	6
749298	Sewer Spot Repair (LnFt)	2177 MANZANITA DR	20
750288	Sewer Spot Repair (LnFt)	427 HADDON RD	10
751310	Sewer Spot Repair (LnFt)	983 LONGRIDGE RD	10
751835	Sewer Spot Repair (LnFt)	1060 LONGRIDGE RD	15
756020	Sewer Spot Repair (LnFt)	1939 MELVIN RD	10
760160	Sewer Spot Repair (LnFt)	2 STANTONVILLE CT	6
762818	Sewer Spot Repair (LnFt)	2831 ATWELL AV	1
763372	Sewer Spot Repair (LnFt)	2945 57TH AV	1
763397	Sewer Spot Repair (LnFt)	4354 39TH AV	1
768559	Sewer Spot Repair (LnFt)	355 GLENDALE AV	14

WO#	Description	Address	Repair Length
768961	Sewer Spot Repair (LnFt)	359 GLENDALE AV	6
769033	Sewer Spot Repair (LnFt)	2200 11TH AV	8
770548	Sewer Spot Repair (LnFt)	1836 GASPAR DR	100
772482	Sewer Spot Repair (LnFt)	WAYNE AV & WESLEY AV	8
772717	Sewer Spot Repair (LnFt)	4436 MASTERSON ST	12
774139	Sewer Spot Repair (LnFt)	5372 HILLTOP CREST	4

Appendix C

Figure 4-3
14 Day Notice to Abate

CITY OF OAKLAND

Oakland Public Works • Design, Engineering and Construction • Right of Way Management

Sewer & Sidewalk Division • 250 Frank H. Ogawa Plaza, Suite # 4314 • Oakland, California 94612 • (510)238-3651

14 Day Notice to Abate

Date

Name
Address
Oakland, CA 94607-2225

Re: Sewer Lateral at Address, Oakland

Dear Property Owner,

Your are hereby notified that under the provisions of Section 13.08.540 of the Oakland Municipal Code[i] and in the opinion of the Director of Public Works Agency, the public health, safety, and welfare require repairs to your building sewer lateral.

The dye test conducted on **date** from the caved in area of the street at **address** by the City's Sewer Maintenance Division noted that the dye did appear in the City sewer main which indicates that the private sewer lateral servicing your home is in need of repair. This is a public health hazard and must be corrected. You are required to repair or replace your building's private sewer lateral no later than **date**.

The completed repairs must restore the subject-building sewer to a watertight condition, free of breaks or separations and constructed to proper grade and alignment. An inspection must be performed by the Construction Inspector to assure that the repairs meet the code requirements.

Prior to repairing or replacing a sewer lateral, you must have a Building Sewer Inspection Permit and/or a Street Excavation Permit if the repairs are to be completed in the public right-of-way.

If you have already made the repairs please provide proof of the repairs, you may fax it to 510-238-6632.

Questions concerning this matter should be directed to Fred Loeser, Construction Inspection Supervisor, at (510) 238-6348 or email floeser@oaklandnet.com.

Sincerely,

Fred Loeser,
Supervisor, Construction Inspection

/ts

SEC. 13.08.540 EMERGENCY WORK BY CITY, NOTICE, LIABILITY FOR COST OF WORK

Whenever, in the opinion of the Director of Public Works Agency, the Public Health, safety, or welfare shall require that repairs or protective measures to a building sewer be made or instituted immediately, the Director is hereby authorized to proceed with all necessary work to abate the condition and may enter upon private property for such purposes. The City may erect and maintain all necessary barricades, warning lights, and the protective devices upon public or private property. The City will give the owner of the premises upon which the repairs are to be made, or the protective measures to be instituted, such notice, if any, and by such means 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 of Oakland for all costs incurred by it in abating said emergency condition and erecting and maintaining said protective devices.

The cost of abating such condition shall constitute a special assessment against the real property on which said condition was abated. The special assessment shall be made in the manner set forth in Section 13.08.280 of the Oakland Municipal Code using the Notice of Lien as found in Section 13.08.330.

(As added by Ordinance No. 10877 C.M.S., passed June 23, 1987)

Appendix D

Table 5-3
Acute Defect Lists

Table 5-3
Acute Defect List - Identified Fiscal Year 2015-16 (July 1, 2015 – June 30, 2016)

Asset ID	Date Identified	Bureau Responsible	Date Completed	Completions by FY	Days Outstanding	Days to Completion	Address	Street	WO #	PACP Defect Code
UNKNOWN	6/9/16	BEC/ROW	no repair		64	-	861	37TH STREET		TBI, Tap break intruding
SEPI2292	5/21/16	BIO	7/7/16	16/17	-	46	2045	98TH AV	775994	
SEPI22619	5/13/16	BEC/ROW	no repair		91	-		WEST ST		TBI, Tap break intruding
SEPI15291	5/9/16	BEC/ROW	no repair		95	-		PARK BLVD		TBI, Tap break intruding
SEPI14359	5/3/16	BIO	7/17/16	16/17	-	74		CREIGHTON WY		
SEPI25847	4/12/16	BIO	5/19/16	15/16	-	37		GLENDALE AV	764665	BSV, Broken Soil Visible
SEPI31522	3/29/16	BEC	no repair		136	-		HANOVER AV		BSV, Broken Soil Visible
SEPI10156	3/21/16	BEC	no repair		144	-		26TH AV		B, Broken
SEPI26119	3/15/16	BEC	no repair		150	-		ESTATES DR		TBI, Tap Break In-truding
SEPI26117	3/15/16	BIO	6/1/16	15/16	-	76	5566	ESTATES DR	767329	BSV, Broken Soil Visible
SEPI8007	3/7/16	BIO	5/24/16	15/16	-	77		BRANN ST	765595	BVV, Broken Void Visible
SEPI23085	2/19/16	BEC	no repair		175	-		PERSHING DR		LFZ Lining Failure Other
SEPI1558	2/3/16	BEC/ROW	no repair		191	-		103RD AV		TBI, Tap Break In-truding
SEPi8003	1/8/16	BIO	5/12/16	15/16	-	124		57TH AV	763372	BVV, Broken Void Visible
SEPi27692	12/22/15	BEC	no repair		234	-		BEECHWOOD DR		XP, collapsed Pipe Sewer
SEPi26690	11/23/15	BEC	no repair		263	-	6861	SARONI DR		BVV, Broken Void Visible
SEPi2961	11/23/15	BEC	no repair		263	-		73RD AV		BVV, Broken Void Visible

Asset ID	Date Identified	Bureau Responsible	Date Completed	Completions by FY	Days Outstanding	Days to Completion	Address	Street	WO #	PACP Defect Code
SEPi26159	11/20/15	BEC	no repair		266	-		CAPRICORN AV		D, Deformed
SEPi3335	11/18/15	BEC	4/26/16	15/16	-	158		CHEROKEE AV		BVV, Broken Void Visible
SEPi14169	11/3/15	BEC/ROW	no repair		283	-		ATLAS AV		TRI, Tap Rehabilitated Intruding
SEPi12206	10/28/15	BEC	9/16/16		-	318		ADELAIDE ST		XP, Collapsed Pipe Sewer
SEPi29482	10/1/15	BEC	9/22/16		-	351		GOLDEN GATE AV		XP, Collapsed Pipe Sewer
SEPi31918	8/17/15	BEC	6/27/16	15/16	-	310		Grand AV		BSV, Broken Soil Visible
SEPi14124	8/3/15	BIO	5/10/16	15/16	-	277		VICTOR AV	762556	BSV, Broken Soil Visible
SEPi10734	7/8/15	BEC	6/9/16	15/16	-	331		FAIR AV		XP, Collapsed Pipe Sewer
SEPi5462	6/9/15	BEC	10/26/15	15/16	-	137		Outlook Av		TRI, Tap Rehabilitated Intruding
SEPi4635	4/29/15	BIO	4/4/16	15/16	-	335		INVERNESS CT	753802	BVV, Broken Void Visible
SEPi11561	4/29/15	BIO	4/16/16	15/16	-	347		26TH ST E	757069	BSV, Broken Soil Visible
SEPi6013	4/23/15	BIO	4/2/16	15/16	-	339		12TH ST E	753404	BSV, Broken Soil Visible
SEPi6394	4/22/15	BIO	3/20/16	15/16	-	328		63RD AV	750340	BVV, Broken Void Visible
SEPi9369	4/15/15	BEC	4/11/16	15/16	-	356		MILLS COLLEGE		XP, Collapsed Pipe Sewer
SEPi21714	4/3/15	BIO	3/30/16	15/16	-	357		JEAN ST	752746	BSV, Broken Soil Visible
SEPi18293	3/13/15	BIO	3/22/16	15/16	-	369		OAKMORE RD	750918	BVV, Broken Void Visible
SEPi5190	3/10/15	BIO	3/16/16	15/16	-	366		PARKER AV	749832	BVV, Broken Void Visible
SEPi24234	3/10/15	BIO	2/16/16	15/16	-	336		42ND ST	741605	BVV, Broken Void Visible

Asset ID	Date Identified	Bureau Responsible	Date Completed	Completions by FY	Days Outstanding	Days to Completion	Address	Street	WO #	PACP Defect Code
SEPi10673	3/2/15	BIO	10/17/15	15/16	-	225		REINHARDT DR	716217	BSV, Broken Soil Visible
SEPi13384	2/25/15	BIO	2/10/16	15/16	-	345		25TH ST E	740999	BSV, Broken Soil Visible
SEPi29370	2/24/15	BIO	2/25/15	14/15		1		BROADWAY	712308	BSV, Broken Soil Visible, XP
SEPi9530	2/21/15	BEC	2/1/16	15/16	-	340		SEMINARY AV		BVV, Broken Void Visible
SEPi3013	1/27/15	BEC	1/29/16	15/16	-	362		77TH AVE		D, Deformed
SEPi13485	1/15/15	BIO	10/12/15	15/16	-	267		30TH ST E	715168	XP, Collapsed Pipe Sewer
SEPi26916	12/26/14	BIO	11/10/15	15/16	-	314		WOODROW DR	659175	BSV, Broken Soil Visible
SEPi15485	12/5/14	BEC	11/19/15	15/16	-	344		33RD ST E		B, Broken
SEPi13378	12/2/14	BIO	10/27/15	15/16	-	325		WALLACE ST	718137	XP, Collapsed Pipe Sewer
SEPi13465	11/20/14	BIO	10/3/15	15/16	-	313		21ST AV	713103	BVV, Broken Void Visible
SEPi15298	11/19/14	BIO	9/24/15	15/16	-	305		PARK BLVD	711318	XP, Collapsed Pipe Sewer
SEPi24613	11/17/14	BIO	10/28/15	15/16	-	341		MOUNTAIN BLVD	718427	BVV, Broken Void Visible
SEPi13421	11/14/14	BIO	9/14/15	15/16	-	300		13TH AV	709069	IG, I NFLOW Gusher
SEPi15005	11/7/14	BEC	8/3/15	15/16	-	266		14TH ST		BSV, Broken Soil Visible
SEPi5258	10/14/14	BEC	10/15/15	15/16		361		STERLING DR		XP, Collapsed Pipe Sewer

Appendix E

Figure 5-1
Cleaning by Sub-Basin, through June 30, 2016

Through 6/30/16

Data Date: 7/6/16

Sewer Subbasin

Cleaning Tracking

Unique feet cleaned starting 1/1/10 (Paragraph 167.d.i and 92.a)

Sewer Subbasin

CCTV Tracking

Unique feet televised starting 1/1/14 (Paragraph 83.c)

Effective 6/2/16: Reflects GIS data updated 5/4/16 (258 pipes abandoned, 324 pipes added). Later GIS work may change which pipes are assigned to which subbasins.

Zone	Subbasin	Feet Sewer Main	Feet Cleaned	% Cleaned	Feet CCTV	% CCTV
1	5607	64,003	64,003	100%	23,570	37%
3	85401	28,867	28,867	100%	3,867	13%
2	6007	17,398	17,398	100%	8,379	48%
2	81201	17,213	17,213	100%	9,100	53%
2	83402	7,513	7,513	100%	7,357	98%
3	84003	15,122	15,122	100%	11,217	74%
3	85305	22,110	22,110	100%	7,895	36%
1	2101	10,384	10,384	100%	4,518	44%
1	5009	46,599	46,599	100%	9,830	21%
2	5402	18,488	18,488	100%	4,752	26%
2	5411	5,690	5,690	100%	1,115	20%
2	6003	11,500	11,500	100%	6,533	57%
2	6101	1,761	1,761	100%	479	27%
1	6406	2,902	2,902	100%	485	17%
3	85211	33,969	33,969	100%	22,256	66%
1	2103	24,417	24,417	100%	19,579	80%
1	5010	10,643	10,643	100%	3,669	34%
1	5015	11,850	11,850	100%	8,191	69%
2	5905	9,930	9,930	100%	3,786	38%
1	6413	4,336	4,336	100%	566	13%
3	83304	9,320	9,320	100%	5,206	56%
2	5406	14,628	14,628	100%	8,209	56%
2	5804	8,000	8,000	100%	6,448	81%
2	5901	11,193	11,193	100%	4,471	40%
2	5904	7,062	7,062	100%	3,919	55%
2	6008	3,238	3,238	100%	2,344	72%
2	83303	16,121	16,121	100%	5,409	34%
2	83501	15,219	15,219	100%	14,128	93%
2	83502	14,433	14,433	100%	14,373	100%
3	85204	30,809	30,809	100%	9,387	30%
1	6414	4,444	4,444	100%		0%
2	80101	16,630	16,630	100%	15,204	91%
3	83103	19,573	19,573	100%	19,573	100%
3	85501	15,316	15,316	100%	2,607	17%
3	82004	14,116	14,116	100%	2,436	17%
2	83013	14,585	14,585	100%	14,585	100%
3	84005	12,766	12,766	100%	8,831	69%
	84111	16,835	16,835	100%	8,965	53%
2	5902	18,010	18,010	100%	10,633	59%
3	85012	19,879	19,879	100%	1,498	8%
2	5606	33,425	33,319	100%	32,422	97%
1	5007	60,204	59,364	99%	13,447	22%
3	85206	31,839	31,218	98%	9,665	30%
2	6006	18,928	18,556	98%	17,218	91%

Effective 6/2/16: Reflects GIS data updated 5/4/16 (258 pipes abandoned, 324 pipes added). Later GIS work may change which pipes are assigned to which subbasins.

Zone	Subbasin	Feet Sewer Main	Feet Cleaned	% Cleaned	Feet CCTV	% CCTV
3	85203	13,679	13,390	98%	4,500	33%
3	83102	14,635	14,181	97%	9,494	65%
2	81102	26,740	25,883	97%	1,513	6%
2	83503	25,548	24,670	97%	23,828	93%
2	5903	9,021	8,618	96%	2,972	33%
3	85201	22,184	21,017	95%	4,759	21%
3	82005	38,019	35,941	95%	16,689	44%
3	86004	13,510	12,758	94%	2,639	20%
2	85403	11,965	11,205	94%	6,566	55%
3	83401	17,062	15,863	93%	1,288	8%
3	84104	26,726	24,748	93%	13,986	52%
2	6001	3,224	2,956	92%		0%
3	85004	19,768	18,069	91%	17,764	90%
3	84103	38,445	34,983	91%	16,548	43%
3	85221	16,895	15,203	90%	1,417	8%
3	85304	11,617	10,433	90%	1,937	17%
2	5802	29,450	26,183	89%	20,102	68%
3	84101	26,499	23,529	89%	16,129	61%
2	5404	7,493	6,637	89%	2,863	38%
3	85208	32,940	29,051	88%	17,268	52%
1	2102	15,415	13,594	88%	5,468	35%
2	5603	10,540	9,288	88%		0%
1	6412	10,286	9,047	88%	763	7%
3	83012	11,515	10,109	88%	11,230	98%
3	85207	17,284	15,157	88%	8,231	48%
2	6005	15,774	13,813	88%	3,449	22%
3	85003	20,002	17,445	87%	11,599	58%
3	85212	24,246	21,059	87%	5,075	21%
3	84102	25,008	21,689	87%	14,913	60%
3	84112	16,041	13,897	87%	9,702	60%
2	5803	15,293	13,236	87%	4,685	31%
3	81012	7,158	6,194	87%	3,080	43%
1	17	49,106	42,455	86%	6,554	13%
2	5805	25,181	21,758	86%	4,431	18%
1	5203	117,127	101,177	86%	22,951	20%
3	85301	24,097	20,706	86%	9,294	39%
1	6402	15,420	13,242	86%	3,001	19%
2	80113	24,922	21,400	86%	12,178	49%
2	5407	21,312	18,223	86%	4,632	22%
2	80022	16,591	14,113	85%	15,769	95%
2	81011	15,210	12,915	85%	2,468	16%
2	5605	39,714	33,718	85%	5,092	13%
1	2001	21,544	18,221	85%	14,746	68%
3	85002	21,468	18,146	85%	9,028	42%
2	5410	3,901	3,267	84%	979	25%
3	81013	19,200	16,044	84%	5,709	30%
3	85102	21,556	18,004	84%	6,759	31%
1	5022	20,516	17,103	83%	2,192	11%

Effective 6/2/16: Reflects GIS data updated 5/4/16 (258 pipes abandoned, 324 pipes added). Later GIS work may change which pipes are assigned to which subbasins.

Zone	Subbasin	Feet Sewer Main	Feet Cleaned	% Cleaned	Feet CCTV	% CCTV
3	85202	23,617	19,662	83%	10,389	44%
1	5003	20,012	16,608	83%	9,611	48%
2	6203	13,360	11,050	83%	8,041	60%
2	83512	20,853	17,211	83%	2,823	14%
3	85302	17,087	14,080	82%	13,801	81%
1	5006	9,519	7,821	82%	957	10%
2	81101	21,430	17,598	82%	6,266	29%
2	81202	22,720	18,655	82%	5,927	26%
3	85205	30,287	24,769	82%	9,752	32%
1	5008	32,667	26,624	82%	4,779	15%
3	84105	14,372	11,708	81%	4,690	33%
2	5405	34,864	28,387	81%	14,137	41%
2	80111	26,394	21,470	81%	22,481	85%
2	6002	17,168	13,897	81%	6,623	39%
3	84004	31,412	25,335	81%	16,053	51%
3	85303	16,026	12,807	80%	5,728	36%
2	5612	52,366	41,719	80%	2,991	6%
3	85222	16,166	12,828	79%	3,197	20%
3	83301	20,395	16,143	79%	12,485	61%
2	81015	21,177	16,761	79%	10,813	51%
1	6409	9,534	7,535	79%	2,378	25%
3	86003	15,539	12,273	79%	4,112	26%
2	80012	18,768	14,800	79%	6,932	37%
1	6401	27,012	21,262	79%	6,183	23%
1	5610	40,349	31,578	78%	1,331	3%
1	5005	37,518	29,258	78%	10,646	28%
1	5609	22,187	17,282	78%	458	2%
3	83101	11,317	8,805	78%	3,842	34%
1	5013	14,783	11,433	77%	2,039	14%
3	83002	23,945	18,481	77%	13,754	57%
2	5413	41,334	31,865	77%	3,052	7%
3	83201	17,987	13,863	77%	2,337	13%
2	6004	11,286	8,676	77%	10,931	97%
3	83011	28,862	22,117	77%	13,388	46%
3	82002	23,772	18,105	76%	7,351	31%
2	81002	30,796	23,449	76%	1,918	6%
2	6102	17,633	13,416	76%	698	4%
1	5018	40,858	31,049	76%	5,796	14%
3	86005	14,578	11,075	76%	645	4%
1	5011	11,341	8,574	76%	6,508	57%
2	80021	13,907	10,360	74%	307	2%
1	5016	25,041	18,646	74%	2,584	10%
3	85231	30,172	22,422	74%	4,168	14%
3	85232	19,818	14,685	74%	603	3%
3	86006	23,305	17,236	74%	17,114	73%
3	85013	19,605	14,467	74%	2,471	13%
2	5416	37,867	27,900	74%	3,472	9%
1	5611	15,201	11,199	74%	680	4%

Effective 6/2/16: Reflects GIS data updated 5/4/16 (258 pipes abandoned, 324 pipes added). Later GIS work may change which pipes are assigned to which subbasins.

	Zone	Subbasin	Feet Sewer Main	Feet Cleaned	% Cleaned	Feet CCTV	% CCTV
1	1	5210	6,039	4,434	73%	1,183	20%
2	2	5409	49,356	35,146	73%	5,232	11%
1	1	5001	74,961	54,869	73%	18,775	25%
3	3	82003	24,139	17,635	73%	4,209	17%
2	2	85502	24,069	17,539	73%	4,385	18%
1	1	5017	98,136	71,501	73%	12,755	13%
1	1	5204	36,317	26,443	73%	2,337	6%
2	2	81014	14,791	10,730	73%	7,716	52%
2	2	5801	34,363	24,853	72%	11,710	34%
2	2	5412	43,391	31,155	72%	1,161	3%
3	3	86002	18,379	13,006	71%	3,627	20%
2	2	80011	17,510	12,387	71%	11,717	67%
1	1	5014	49,009	34,618	71%	7,178	15%
3	3	83202	30,185	21,252	70%	10,985	36%
1	1	6411	24,779	17,234	70%	3,951	16%
1	1	5021	63,593	43,988	69%	4,069	6%
2	2	6204	11,114	7,664	69%	5,483	49%
1	1	5417	16,162	11,114	69%	5,108	32%
3	3	85001	13,066	8,976	69%	5,350	41%
3	3	84001	21,006	14,400	69%	9,091	43%
2	2	83511	19,432	13,253	68%	5,403	28%
1	1	6408	3,399	2,297	68%		0%
3	3	85011	16,302	10,996	67%	1,772	11%
1	1	64	42,066	28,316	67%	5,497	13%
1	1	5019	67,078	44,294	66%	6,290	9%
2	2	80102	5,662	3,737	66%	1,981	35%
1	1	6410	8,187	5,357	65%	1,108	14%
2	2	83521	16,894	10,997	65%	5,227	31%
1	1	5212	23,886	15,444	65%	2,619	11%
2	2	61	3,186	2,057	65%		0%
2	2	5602	58,217	37,450	64%	8,872	15%
2	2	5401	48,711	31,275	64%	6,025	12%
1	1	5004	28,389	18,116	64%	5,939	21%
1	1	5012	12,353	7,860	64%	2,443	20%
1	1	5207	14,668	9,265	63%	1,568	11%
2	2	6201	11,458	7,133	62%	4,339	38%
2	2	81001	24,815	15,397	62%	703	3%
2	2	80121	35,178	21,796	62%	10,857	31%
1	1	5608	27,363	16,846	62%	2,098	8%
2	2	80112	18,881	11,601	61%	3,856	20%
1	1	5213	16,886	10,324	61%	2,846	17%
1	1	5211	11,342	6,812	60%	1,582	14%
2	2	85402	20,300	12,113	60%	8,511	42%
3	3	83001	30,827	18,335	59%	9,410	31%
1	1	5202	16,370	9,683	59%	108	1%
2	2	80103	18,282	10,763	59%	7,852	43%
1	1	5002	22,976	13,445	59%	3,641	16%
3	3	86001	11,021	6,421	58%		0%

Effective 6/2/16: Reflects GIS data updated 5/4/16 (258 pipes abandoned, 324 pipes added). Later GIS work may change which pipes are assigned to which subbasins.

Zone	Subbasin	Feet Sewer Main	Feet Cleaned	% Cleaned	Feet CCTV	% CCTV
3	85101	32,469	18,867	58%	7,004	22%
2	5414	26,408	15,180	57%	1,027	4%
2	5604	47,464	27,248	57%	7,785	16%
1	5418	16,985	9,682	57%	2,129	13%
1	5201	30,845	17,150	56%	3,130	10%
1	6403	10,316	5,695	55%	354	3%
1	5020	36,457	19,929	55%	1,570	4%
2	80002	6,414	3,475	54%	255	4%
2	83404	45,083	23,899	53%	7,211	16%
1	2002	14,497	7,510	52%	1,136	8%
3	87001	2,294	1,180	51%		0%
2	83403	25,863	13,100	51%	11,389	44%
2	80001	22,854	11,191	49%	1,252	5%
2	5601	14,195	6,949	49%		0%
2	6202	21,250	10,364	49%	7,391	35%
1	5205	62,912	30,319	48%	11,203	18%
3	84002	15,294	7,281	48%	1,752	11%
1	6407	5,605	2,569	46%		0%
2	5403	16,451	7,490	46%	4,090	25%
3	83302	20,314	9,062	45%	4,710	23%
	(blank)	41,059	17,458	43%	2,921	7%
2	5408	20,442	8,533	42%	1,482	7%
2	5415	11,664	4,866	42%		0%
3	87002	9,148	3,705	41%	118	1%
1	5208	5,347	2,089	39%	575	11%
1	5209	17,856	6,425	36%	844	5%
1	6404	16,353	5,824	36%	198	1%
3	82001	8,354	2,519	30%		0%
1	5206	8,401	2,486	30%		0%
1	647	30,526	7,156	23%	1,069	4%
1	6415	2,412	395	16%		0%
1	6405-1	5,323		0%		0%
	220	4,903,672	3,777,533	77.0%	1,408,769	28.7%
	Miles:	929	715		267	

Appendix F

Table 5-5
High Frequency PM Locations [134]

WO#	Description	Pipe ID #	Address	Feet
682147	Hi-Freq 6 Month	20983	2598 MONTEREY BLVD	63
668202	Hi-Freq 3 Month	6883, 6884, 6886, 6162	8100 FONTAINE ST	644
608237	Hi-Freq 12 Month	30724, 30721, 30722, 30725, 30723	81 ALVARADO RD	875
669030	Hi-Freq 3 Month	24802, 24803, 24804, 24805, 24801, 24800, 24799	1957 ASILOMAR DR	934
608358	Hi-Freq 12 Month	31394, 31373, 31374	25 DARTMOUTH DR	227
669825	Hi-Freq 3 Month	17964, 17987, 15469, 17989	1125 FLEET RD	699
670151	Hi-Freq 3 Month	25870, 25805, 25844, 25779, 22174, 25810	5200 BROADWAY	1250
649191	Hi-Freq 6 Month	6566	7018 MACARTHUR BLVD	163
669922	Hi-Freq 3 Month	12163, 12162, 12161, 12166, 12149, 12148	4330 MOUNTAIN BLVD	674
669965	Hi-Freq 3 Month	5740, 5739, 5746	4550 SEQUOYAH RD	601
670935	Hi-Freq 3 Month	3087	110 GRAVATT DR	424
663647	Hi-Freq 6 Month	2843, 2838, 2837	11212 MONAN ST	273
650656	Hi-Freq 6 Month	12002, 11995, 12003, 11994	3624 LOMA VISTA	1465
655325	Hi-Freq 6 Month	19704, 19724, 17359, 17413	500 LAKE PARK AV	746
673363	Hi-Freq 3 Month	6837, 6830, 6833, 6831, 6897, 6898, 6899	7844 MOUNTAIN BLVD	745
652259	Hi-Freq 3 Month	4249, 4251, 4250	83RD AV & IRIS ST	511
652389	Hi-Freq 6 Month	19580, 19583, 19581, 19566, 19565, 19564	2336 HARRISON ST	770
653419	Hi-Freq 6 Month	14671, 32340, 14670, 14651,14668, 14667	339 UNION ST	899
653715	Hi-Freq 6 Month	20992, 20989, 20991, 20990	6260 CASTLE DR	187
678393	Hi-Freq 3 Month	14137, 14138, 14283, 14157, 14139	4300 ATLAS AV	647
678268	Hi-Freq 3 Month	20744, 20743, 20751, 20734, 20733, 21058, 32481, 20720, 20717, 31548, 20747	2600 LEIMERT BLVD	2180
683060	Hi-Freq 12 Month	26574	6020 ASPINWALL RD	217

WO#	Description	Pipe ID #	Address	Feet
683064	Hi-Freq 12 Month	23736, 23824, 23822, 23735	6730 LONGWALK DR	426
683077	Hi-Freq 12 Month	9563, 9533, 9532	6167 OVERDALE AV	505
661213	Hi-Freq 6 Month	5740, 5741	SEQUOYAH RD & MCGURRIN RD	315
668336	Hi-Freq 6 Month	30942, 30958, 30688, 30686	1200 WESTVIEW DR	639
669192	Hi-Freq 6 Month	17297, 17296, 17295	290 GRAND AV	951
666647	Hi-Freq 6 Month	9570	6288 SUNNYMERE AV	83
663677	Hi-Freq 6 Month	4236, 4197, 4239, 4241, 4235, 4198	82ND AV & IRIS ST	1373
688780	Hi-Freq 3 Month	17429, 17441, 31918, 17427,17428	600 GRAND AV	941
688789	Hi-Freq 3 Month	30446, 30447, 30440, 30445	6929 CHABOT RD	340
689447	Hi-Freq 3 Month	8149, 8134, 8132, 8133, 8152, 8153, 8155, 8151	3914 EDGEMOOR PL	1370
667300	Hi-Freq 6 Month	11019, 12850, 12849, 11021, 11020, 11022, 12853	220 ALICE ST	1190
690899	Hi-Freq 3 Month	15954, 16014, 16013, 15958	4122 LAGUNA AVE	502
690903	Hi-Freq 6 Month	25257	6245 WESTOVER DR	71
667324	Hi-Freq 6 Month	22039, 22038, 22036, 22037, 22035	6000 ASCOT DR	453
668264	Hi-Freq 3 Month	31496, 31493, 31494, 31497, 31498	1520 LAKESIDE DR	1022
668449	Hi-Freq 3 Month	22607, 22606, 22605	36TH ST & MLK JR WY	770
668261	Hi-Freq 6 Month	30842, 30844, 31131, 30845, 30841, 30840, 31057, 30843, 31133	1801 TUNNEL RD	601
692123	Hi-Freq 3 Month	2718, 2717, 2720, 2719, 2716, 2695, 2694, 1924, 1923	11110 KERRIGAN DR	1542
693428	Hi-Freq 3 Month	26947, 26946, 26910, 26823, 26822, 26896, 26945	7295 SARONI DR	620
693456	Hi-Freq 3 Month	2982, 2986	72ND AV & HAWLEY ST	765
693514	Hi-Freq 3 Month	28577, 28573, 28572, 28576, 28574, 28563, 28513, 28623, 28512, 28627, 28626, 28514, 28578	6330 PINEHAVEN RD	1739
674212	Hi-Freq 6 Month	27809, 27866	1 MORRILL CT	194
674160	Hi-Freq 12 Month	5518, 5517	8251 FONTAINE ST	597

WO#	Description	Pipe ID #	Address	Feet
662167	Hi-Freq 6 Month	25182, 25183	7280 WOODROW DR	279
678147	Hi-Freq 6 Month	25918, 25921, 25919, 25920, 25917, 25922	25 STARK KNOLL PL	597
678414	Hi-Freq 6 Month	26568	1731 GOULDIN RD	71
679624	Hi-Freq 6 Month	10836, 10835	5425 LEONA ST	208
639210	Hi-Freq 12 Month	11129, 11059, 11097, 11095, 11088, 11098	740 E 8TH ST	959
680157	Hi-Freq 3 Month	17963, 17962, 18001, 17998, 18000, 17961, 17956, 17955, 18055	800 CREED RD	1065
683084	Hi-Freq 12 Month	9596, 9595, 9593, 9592, 9591, 9589	5815 LEONA ST	684
680520	Hi-Freq 6 Month	30251, 30223, 30252, 30220, 30253	439 ALCATRAZ AV	856
682002	Hi-Freq 6 Month	27511, 27525, 27523, 27522, 27512, 27529, 27526, 27530	COLLEGE AV & TAFT AV	2430
683091	Hi-Freq 6 Month	10791, 10792, 10790, 10794, 10793	4210 KNOLL AV	594
641763	Hi-Freq 12 Month	18025, 18026, 18028, 18030, 18029, 18027	1301 HOLMAN RD	755
642824	Hi-Freq 12 Month	4239, 4235, 4241	8301 IRIS ST	835
685103	Hi-Freq 6 Month	29751, 29752, 29755, 29756, 29754, 29753	451 MOUNTAIN BLVD	572
686563	Hi-Freq 6 Month	2444, 2446, 2439, 2438, 2442, 2431, 2568, 2443, 2440, 2561	98TH AV & BURR ST	1441
677946	Hi-Freq 12 Month	13226, 13225	9TH AV & E 20TH ST	349
686572	Hi-Freq 6 Month	13373, 13436, 13374, 13381, 13385, 13435, 13383, 13384, 13386, 13434	2524 14TH AV	1791
643548	Hi-Freq 12 Month	12124, 12126, 12125	4515 ELINORA AV	292
643776	Hi-Freq 12 Month	1044, 881, 1054, 1056, 800	823 105TH AV	1203
687286	Hi-Freq 6 Month	30625, 30624, 30632, 30626, 31179, 31178, 30855, 30854, 30495, 31128, 31127, 31126, 31081, 30617, 30623, 30622, 30621	200 CALDECOTT LN	2518
687750	Hi-Freq 12 Month	12451, 12452, 12465, 12466, 12467, 12468, 12471, 12469, 12472, 12473, 12474	12580 BROOKPARK RD	1783

WO#	Description	Pipe ID #	Address	Feet
689162	Hi-Freq 6 Month	22665, 22666, 24078, 24118, 22587, 24079, 22672, 22673, 22669, 22668, 24080, 24081, 24075	37TH ST & W MACARTHUR BLVD	2911
690494	Hi-Freq 6 Month	8986, 7376, 7375, 8988, 8987, 8841, 8840, 8838, 8853, 8852, 8883, 8877	2058 ROSEDALE AV	2466
690602	Hi-Freq 3 Month	27692, 27693, 27697	74 BEECHWOOD DR	574
690880	Hi-Freq 6 Month	8772, 8770, 8771	1479 FRUITVALE AV	608
690890	Hi-Freq 6 Month	2968, 2971	69TH AV & SNELL ST	487
693491	Hi-Freq 6 Month	14292, 14291, 14461, 14479, 14478, 14290	5707 REDWOOD RD	1108
693521	Hi-Freq 6 Month	27518	5600 COLLEGE AVE	129
650089	Hi-Freq 12 Month	7508, 9072	4216 CARRINGTON ST	1258
660363	Hi-Freq 12 Month	10425, 10419, 10424	2633 ABBEY ST	705
666667	Hi-Freq 12 Month	9576, 9562, 9533, 9541, 9534, 9560	4228 MOUNTAIN VIEW AV	1002
665716	Hi-Freq 12 Month	14133, 14368, 14370, 14369, 32471, 32408, 31614, 14132, 14399, 14398, 14371, 14374, 16219, 16403, 16402, 14372, 14129	353 CRESTMONT DR	2357
667100	Hi-Freq 3 Month	8269, 8268, 8267, 8270	6636 LAIRD AV	546
667899	Hi-Freq 12 Month	14339, 14340, 14338, 14341, 14348, 14349, 14351, 14347, 14346, 14344, 14343, 14342, 14387, 14378, 14375, 16388, 14373, 16218, 16364, 16284	297 RISHELL DR	2737
668188	Hi-Freq 12 Month	22955, 22954, 22953, 22952	642 EL DORADO AV	1228
669044	Hi-Freq 12 Month	25433, 25344, 25343, 25307, 25431, 27009, 25338	7047 EXETER DR	649
681051	Hi-Freq 12 Month	11242, 11252, 11174, 11175	745 11TH AVE	703
680414	Hi-Freq 12 Month	29175, 29176, 29172, 30192, 30197, 30191, 29134, 29223, 29226	469 63RD ST	3034
680868	Hi-Freq 12 Month	29274, 29275, 29273, 29596, 29272, 29271, 29276	6098 ROCKRIDGE BLVD	1478

WO#	Description	Pipe ID #	Address	Feet
682827	Hi-Freq 12 Month	1729, 1703, 1704, 1726, 1721, 1705, 1702, 1730, 1697, 1701	10306 FOOTHILL BLVD	1891
683122	Hi-Freq 12 Month	19647, 19660, 19648, 19646, 19541, 17313, 17311, 19644	347 PERKINS ST	1625
684121	Hi-Freq 12 Month	4847, 6109, 6132, 6131, 4853	55TH AV & INTERNATIONAL BLVD	1679
683771	Hi-Freq 12 Month	6318, 6461, 6319, 7982, 7976	6334 CAMDEN ST	1371
684868	Hi-Freq 12 Month	19608, 19609, 19613, 17345, 19614, 19615, 19610, 19606, 19611, 17357	GRAND AVE & HARRISON ST	1884
686360	Hi-Freq 12 Month	4696, 4697	488 LESSER ST	522
688750	Hi-Freq 12 Month	3519, 3465	9777 GOLF LINKS RD	409
690592	Hi-Freq 12 Month	7769, 7764	2646 COLE ST	401
693414	Hi-Freq 12 Month	10285, 11913	2300 HUMBOLDT AV	556
695601	Hi-Freq 12 Month	23634, 23635	5959 WESTOVER DR	49
695612	Hi-Freq 12 Month	31552, 23790, 23791	2922 HOLYROOD DR	273
697187	Hi-Freq 6 Month	2790, 2789	11177 ELVESSA ST	690
697185	Hi-Freq 6 Month	12107, 12105, 12106, 12104	4445 SHEPHERD ST	528
697201	Hi-Freq 12 Month	24578, 24577	5692 CABOT DR	222
698182	Hi-Freq 12 Month	20983	1480 WESTVIEW DR	63
699228	Hi-Freq 3 Month	17342, 17340, 17339, 17341, 17325	PERKINS & BELLVIEW	942
713181	Hi-Freq 6 Month	17738,17739,17740,17741,17742, 17721	1021 BROOKWOOD RD	600
713182	Hi-Freq 12 Month	5905, 5906	4332 INTERNATIONAL BLVD	270
713187	Hi-Freq 6 Month	13164	411 E 18TH ST	196
713191	Hi-Freq 6 Month	6417, 6418, 6420, 6423	6502 BANCROFT AV	983
719317	Hi-Freq 12 Month	21966	2477 MONTEREY BLVD	287
719315	Hi-Freq 12 Month	25585	895 47th ST.	356
719294	Hi-Freq 12 Month	13902, 11946, 12021, 12061	3770 35TH AV	948
719289	Hi-Freq 6 Month	14229	4020 REINHARDT DR	257
719285	Hi-Freq 12 Month	12111, 12110, 12109	4425 CARSON ST	361

WO#	Description	Pipe ID #	Address	Feet
719281	Hi-Freq 12 Month	12242, 12241, 12240, 12266, 12243	HUNTINGTON ST & FAIR AV	852
732054	Hi-Freq 6 Month	27835	4308 HARBORD DR	139
728196	Hi-Freq 3 Month	1857, 1858, 1595	PERALTA OAKS CT	521
738319	Hi-Freq 3 Month	23085	102 CREST	30
738339	Hi-Freq 12 Month	5244, 5243	BANCROFT AV AND 74TH AV	504
741625	Hi-Freq 12 Month	12819, 13107,15114, 15112,15098,31497,31498,31494,31496	1225 FALLON ST	2177
739991	Hi-Freq 12 Month	28737, 32368, 28735, 28736, 28727, 28728, 28726, 26545	6205 WESTWOOD WY	936
739994	Hi-Freq 12 Month	30480, 30415	171 ROBLE RD	196
739996	Hi-Freq 12 Month	31209, 31208, 31311	7351 Claremont	533
739999	Hi-Freq 6 Month	3199, 3198, 2168	1902 90th Av	1110
743184	Hi-Freq 12 Month	12912, 12926, 12925, 12762, 12920, 12936, 11027, 11010, 11011, 12778	308 Jackson	1950
747480	Hi-Freq 6 Month	26690	6861 SARONI	50
747490	Hi-Freq 6 Month	16131, 16138	GUIDO ST	213
751442	Hi-Freq 3 Month	15828, 15827, 15724	3826 LYMAN	683
751862	Hi-Freq 3 Month	23188	2345 SCOUT RD	282
766859	Hi-Freq 6 Month	22335	3072 HOLYROOD DR	62
764714	Hi-Freq 12 Month	15729, 15728	3577 FRUITVALE AVE	616
764673	Hi-Freq 6 Month	14244, 14245, 14238, 14239, 14246	4120 MOUNTAIN BLVD	642
764446	Hi-Freq 6 Month	6675, 6676	7575 SUNKIST DR	208
764444	Hi-Freq 3 Month	14408, 14418, 12356, 12325, 12326	REDWOOD RD & TERRABELLA	592
759125	Hi-Freq 6 Month	24396, 24395, 24529, 26145, 25850, 25897, 26146	5527 MORAGA AVE	1107
759150	Hi-Freq 6 Month	1864, 1863	2960 PERALTA OAKS CT	166
759449	Hi-Freq 6 Month	10237, 9368	2344 HARRINGTON AV	356
763261	Hi-Freq 12 Month	30673, 30685, 30674	GRAND VIEW DR & VINCENTE RD	769
763314	Hi-Freq 6 Month	606	3115 MIDDLETON	158
771527	Hi-Freq 6 Month	3854, 3852, 3851	EASTLAWN ST & 65TH AV	708

Appendix G

Port of Oakland Sewer Collection System Annual Report for July 1, 2015 – June 30, 2016

PORT OF OAKLAND

Chris Chan
Director of Engineering

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September 7, 2016

Brooke A. Levin
Director of Public Works
Oakland Public Works Agency
250 Frank H. Ogawa Plaza, Suite 4314
Oakland, CA 94612-2033

Subject: Port of Oakland Sanitary Sewer Collection System 2015-16 Annual Report

Dear Ms. Levin:

Enclosed is the Port of Oakland Sanitary Sewer Collection System Annual Report for the period from July 1, 2015 to June 30, 2016. The annual report has been prepared at the request of Oakland Public Works' staff.

If you have any questions, please contact Liem Nguyen at (510) 627-1636 or myself at (510) 627-1331.

Sincerely,

Chris Chan 9/12/16

Chris Chan
Director of Engineering

Attachment

cc: Thanh Vuong, Port Supervising Engineer

PORT OF OAKLAND

Port of Oakland
Sanitary Sewer Collection System
Annual Report

September 2016

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Section 1. Introduction

The Port of Oakland ("Port"), established under the City Charter in 1927, is an autonomous department of the City of Oakland ("City") under the governance of a seven-member Board of Port Commissioners appointed by the mayor of Oakland. The Port manages a container seaport, a passenger/cargo/general aviation airport, and waterfront properties for commercial and recreational purposes.

The Port owns, operates and maintains a sanitary sewer collection system which consists of lateral pipes, trunk lines, manholes, lift and ejector stations, triturators, and other sewer appurtenances that delivers sewage to the City's wastewater collection system and to East Bay Municipal Utility District ("EBMUD") wastewater interceptors and treatment facilities.

The FY 2015-16 Sanitary Sewer Collection System Annual Report was prepared at the request of the City Public Works. The following sections in this report present information pertaining to the following sanitary sewer programs for Fiscal Year 2015-16 (July 1, 2015 to June 30, 2016):

- Sanitary Sewer Overflows
- Asset Management Implementation Plan
- Infiltration and Inflow Reduction Work
- SSO Reduction Work

Section 2. Sanitary Sewer Overflows

Number and Size of Sanitary Sewer Overflows ("SSOs")

For the reporting period from July 1, 2015 to June 30, 2016, the Port's sanitary sewer collection system had five (5) SSO events, all of which were reported to California Integrated Water Quality System (CIWQS). Two SSOs were associated with construction activities at the former Oakland Army Base on City's properties but were reported by the Port. The other three SSOs were located at the Oakland International Airport. The size of the SSO is summarized in **Table 1**.

Table 1. Number of SSOs

Size of SSO (gallons)	Number	Percent of Total
Greater than or equal to 1,000	2	40%
From 100 to 999	3	60%
From 10 to 99	0	0%
Less than 10	0	0%
Total	**5**	**100%**

The total volume released is estimated to be approximately 3,530 gallons. The volume of spills contained and returned to the sewer system as well as the volume reaching waters of the State is shown in **Table 2**.

Table 2. Volume of SSOs

	Volume (gallons)	Percent of Total
Total volume contained and returned to sewer system for treatment	50	1.4%
Total volume reaching waters of the State	30	0.8%
Total volume not contained but not reaching waters of the State (everything else)	3,450	97.8%
Total	**3,530**	**100%**

This report may not include all SSOs that occurred from private sewer service laterals within the Port's jurisdiction that were caused by conditions in privately-owned laterals or on private property. The property owners are responsible for the condition and the operation of those sewer service laterals.

Causes of SSOs

The causes of SSOs during the reporting period were due to infrastructure failures and construction damage. The distribution of SSOs by cause is shown in **Table 3.**

Table 3. Causes of SSOs

Cause of SSO	Number	Percent of Total
Blockage:	0	0
Roots	0	0
Grease	0	0
Debris	0	0
Debris from Laterals	0	0
Vandalism	0	0
Animal Carcass	0	0
Construction Debris	0	0
Multiple Causes	0	0
Subtotal for Blockage	0	0
Infrastructure Failure	3	60%
Inflow & Infiltration	0	0
Electrical Power Failure	0	0
Flow Capacity Deficiency	0	0
Natural Disaster	0	0
Bypass	1	20%
Construction Damage	1	20%
Cause Unknown	0	0
Total	**5**	**100%**

Location of SSOs and Measures to Prevent Future Spills

During the reporting period there were two SSOs occurred in the Maritime area and three SSOs occurred at the Oakland International Airport.

Table 4. Locations of SSOs

SSO Event ID	Location	Causes	Measures to Prevent Future SSO
817211	Maritime Street	Contractor working on the redevelopment of the former Oakland Army Base accidentally hit a 10" sewer main during excavation to construct a storm drain line on Maritime Street	New sewer gravity and force mains are being constructed on Maritime Street
820784	Oakland International Airport, Ron Cowan Pkwy off-ramp	Pump controls instrumentation failure (bubblers) at Lift Station #1	Control panel will be replaced during the LS #1 Rehabilitation Project
821198	Former Oakland Army Base, W Burma Rd	Pipe coupling failure during temporary pumping bypass of Lift Station #18	Inspection & monitoring frequency were increased during construction
823541	Oakland International Airport, Gate 7	Failure to properly monitor lift station #7 during replacement of one of the two pumps	Inspection & monitoring frequency were increased during repair work
824304	Oakland International Airport, Ron Cowan Pkwy off-ramp	Pump controls instrumentation failure (relays) at Lift Station #1	Control panel will be replaced during the LS #1 Rehabilitation Project

SSO Trends

The number of SSOs increased from two (2) incidents in FY 2013-14 from July 1 to June 30 to five (5) incidents for the same period in FY 2015-16. The sewage overflow volume also increased slightly from 2,341 gallons in FY 2014-15 to 3,530 gallons in FY 2015-16, of which 30 gallons reached the surface water body. The SSOs associated with sewer lift stations will be significantly reduced once the upgrades and improvements at these lift stations are completed in FY 2016-17.

Section 3. Asset Management Implementation Plan

The Port prepared and submitted the Asset Management Implementation Plan ("AMIP") in 2012. Many programs set forth in the AMIP to reduce SSOs and infiltration/inflow ("I/I") are very similar to the required elements in the Sewer System Management Plan ("SSMP"), which was updated in July 2015. The SSMP can be found on the Port of Oakland's website at: http://www.portofoakland.com/community/environmental-stewardship/programs/

Section 4. Infiltration and Inflow Reduction Work

4.1 Sewer Main and Lateral Repair, Rehabilitation and Replacement

FY 2015-16 Sanitary Sewer Pipeline Projects Completed

- New gravity and force mains were constructed on Maritime Street and Burma Road as part of the former Oakland Army Base redevelopment.
- Minor repairs and lateral replacements throughout the Port areas.

FY 2016-17 Sanitary Sewer Pipeline Projects Proposed

- Continue with the sewer main and lateral repair and replacements in conjunction with tenant improvements and/or new development projects.

4.2 Sewer Main Inspection

The Port utilized outside contractors to inspect sanitary sewer lines within the Port areas. For the reporting period, approximately two (2) miles of sewer mains and laterals (in the Outer Harbor Berths 20-24, most of Port properties in Jack London Square and Airport Business Park, and 12-inch gravity main along Airport Drive) were inspected.

Section 5. SSO Reduction Work

5.1 Capacity Assurance

No capacity improvement is necessary at this time since sewer pipelines within the Port appears to contain sufficient capacity to accommodate existing design flows without exceeding the established capacity criteria. Future development at the Port will be subject to engineering review and evaluation to determine if capacity enhancement is necessary.

5.2 Sewer Main Cleaning

The Port utilized outside contractors to clean sanitary sewer lines within all three Port areas (i.e., Aviation, Maritime, and Commercial Real Estate). For the reporting period, approximately two miles of sewer line was flushed and/or jetted to remove grease buildups and to prevent potential

blockages. In addition, preventive maintenance activities at all sewer lift stations and grease interceptors were performed on a routine schedule.

5.3 Pump Station Renovation and Upgrade

FY 2015-16 Lift Station Improvement Projects Completed

- Repaired/replaced pumps at lift stations D03P, R18P, B01P in the Maritime area.
- Refurbished and installed RACO remote alarm monitoring at D06P and C07P in the Maritime area.
- Completed the design for rehabilitation of Airport sewer lift station AP01P.

FY 2016-17 Lift Station Improvement Projects Proposed

- Rehabilitate and upgrade Airport sewer lift station AP01P.
- Design for rehabilitation of Airport sewer lift station AP02P.