

CITY OF OAKLAND



Sanitary Sewer Collection System

Annual Report

January 1, 2013 to June 30, 2014

Stipulated Order for Preliminary Relief

CITY OF OAKLAND



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Oakland Public Works Department
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September 26, 2014

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Environment and Natural Resources Division
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Washington, D.C. 20044-7611
DOJ No. 90-5-1-1-09361/1

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

RE: 2013-14 Annual Report

Dear Mr. Greenberg, et al.:

In accordance with the Stipulated Order for Preliminary Relief and Consent Decree Case No. 09-cv-05684-RS, enclosed for your review is the City of Oakland's Annual Report for the period January 1, 2013 to June 30, 2014.

If there are any questions about this report, please contact Mr. Gus Amirzehni, Principal Civil Engineer, at 510-238-6601. We would appreciate the opportunity to meet with you and discuss this report at your earliest convenience.

Sincerely,

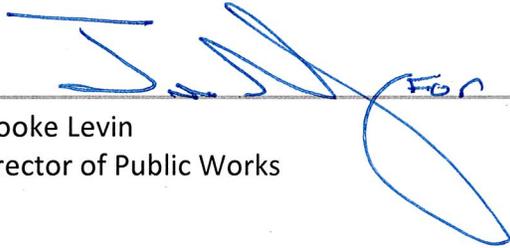
Brooke A. Levin
Director, Oakland Public Works

cc: Sejal Choksi-Chugh (Baykeeper)
Heidi Oriol (EBMUD)
Chris Chan, Director of Engineering, Port of Oakland

Attachments: 2013-14 Annual Report

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.



Brooke Levin
Director of Public Works

9/24/14

Date

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Attachment

- A) Port of Oakland Sewer Collection System Annual Report for January 1, 2013 – June 30, 2014.

Executive Summary

The City of Oakland is pleased to submit this Annual Report describing sewer maintenance activities and capital improvements required by its Stipulated Order for Preliminary Relief (SO). Since previous reports described accomplishments on a Calendar Year basis while the recently approved Consent Decree requires reporting on a Fiscal Year basis, this report covers the period January 1, 2013 to June 30, 2014 (18 months).

Sanitary Sewer Overflows. The City of Oakland sewer system had 95 SSO events during FY 2013-14. This amount represents a 4% reduction in the number of overflows compared to the previous Fiscal Year and a reduction of over 50% compared to FY 2007-08.

Sewer Repair, Rehabilitation and Replacement Program. Between January 1, 2013 and June 30, 2014, the City completed eleven (11) sanitary sewer projects totaling 131,653' (24.9 miles) at a cost of \$18,113,573. This total includes the last of the projects required by the Regional Water Board's Cease and Desist Order. A letter has been sent to the Regional Water Board informing them that Oakland has successfully completed its 25-year Compliance Plan. Work consisted of rehabilitating 75 sewer basins and adding additional capacity at over 120 locations at a cost of approximately \$300 million. This work resulted in a 29% reduction in flows to EBMUD's Wastewater Treatment Plant. The Cease and Desist Order is expected to be rescinded by the Regional Water Board shortly so it can be replaced by the Consent Decree.

Inflow Identification and Reduction Program. Between January 1, 2011 and June 30, 2014 the City smoke tested 167 miles of City owned sewer mains. Testing resulted in 1393 infiltration or inflow indicators, 82% of which were on private property. Follow-up of smoke testing indicators of private inflow continues. Follow-up of results on public property have shown a large instance of "false positives". Results will be provided to EBMUD for inclusion in its Regional Technical Support Program.

The City exceeded the 25 building permits per fiscal year which may be finalized without a Compliance Certificate issued by EBMUD by 8 in FY 2012-13 and by 11 in FY 2013-14. City staff is reviewing the data to make sure Compliance Certificates were not overlooked and also reviewing the City's building permit processes to understand why so many permits were "final'ed" without Certificates of Compliance. It should be noted that an additional 370 permits have been issued Certificates of Compliance which have not been counted because permits have not yet been finalized.

Sewer Cleaning and Root Control Program. As of June 30, 2014, the City has cleaned 2,085,942 feet (395.1 miles) of the estimated 4,907,000 feet (929 miles) in its sewer system. This exceeds the Consent Decree requirement to clean 1,900,800 feet (360 miles) by June 30, 2014.

In anticipation of the new Consent Decree, staff reviewed City records and created a new Hot Spot List containing 58 locations having more than one SSO in a three year period. Each of these Hot Spots was cleaned at least once in FY 2013-14.

The City also root foamed 116,000 feet (22 miles) in 2012; none between January 1, 2013 and June 30, 2013; and 304,811 feet (57.7 miles) between July 1, 2013 and June 30, 2014. This exceeds the Consent Decree requirement to treat 264,000 feet (50 miles) of sewer main by June 30, 2014.

Sewer Pipe and Maintenance Hole Inspection Program. Between January 1, 2013 and June 30, 2014, City sewer crews inspected and rated 344,965 feet (65 miles) of sewer mains using CCTV inspection. This exceeds the 242,880 feet (46 miles) required to be inspected by June 30, 2014, by paragraph 83.c of the Consent Decree.

During this reporting period, CCTV inspection identified 20 Acute Defects. 12 of these Acute Defects were corrected within twelve months of identification as required. The remaining Acute Defects have either been corrected or scheduled for repair. It should be noted that these Acute Defects did not result in any Sanitary Sewer Overflows. The City is streamlining its processes to assure all Acute Defects are corrected within twelve months of identification.

Asset Management Implementation Program (AMIP). The City is currently revising its AMIP/SSMP at the request of the Regional Water Board and to comply with the requirements of the new Consent Decree. The revised AMIP/SSMP will be submitted to EPA for approval in the near future.

Pump Station Improvement Program. One pump station has been completely rehabilitated. Design work on the remaining six is under way. The City is significantly ahead of schedule with its Pump Station Improvement Program, with completion planned for 2017, five years ahead of schedule.

Although the City continues to reduce the number of Sanitary Sewer Overflows, and is well ahead of schedule in sewer rehabilitation, sewer cleaning, root control, CCTV inspection, and pump station rehabilitation, the City needs to improve its processing of Acute Defects and building permits/compliance certificates. The City has increased its sewer service budget, staffing, and equipment for FY 2014-15 and intends to continue to meet its obligations under the Consent Decree.

Section 1 Introduction

Paragraph 140 of Consent Decree – Case Nos. C09-00186 and 09-05684 - requires:

“Each Satellite shall include in the first Annual Report all of the information required by Section XIII of the Satellite SO (Annual Reporting Requirements) for the period January 1, 2013 to June 30, 2014.”

This Annual Report has been prepared pursuant to the requirements of the Stipulated Order and the Consent Decree. The following sections of this report present the required information for the eighteen (18) month period between January 1, 2013, and June 30, 2014.

Section 2.	SO Para 89 (a) i)	Annual Report of Sanitary Sewer Overflows
Section 3.	SO Para 89 (a) ii)	Sewer Repair, Rehabilitation and Replacement Program
Section 4.	SO Para 89 (a) vii)	Inflow Identification and Reduction Program
Section 5.	SO Para 89 (a) ix)	Sewer Cleaning and Root Control Program
Section 6.	SO Para 89 (a) ix)	Sewer Pipe and Maintenance Hole Inspection Program
Section 7.	SO Para 89 (a) xi)	Asset Management Implementation Program
Section 8.	SO Para 89 (a) xii)	Pump Station Improvement Program Progress Report
Section 9.	SO Para 89 (b)	Deliverables
Section 10.	SO Para 89 (c)	Known Noncompliance with Stipulated Order
Section 11.	SO Para 89 (d)	Recommended Changes to Required Work

Section 2 Annual Report of Sanitary Sewer Overflows

Stipulated Order, Section X, Paragraph 70, states: *“Beginning in 2011, as part of the Annual Report submitted pursuant to Section XIII, the City of Oakland shall submit a copy to EPA of the Annual Report of Sanitary Sewer Overflows required by the Regional Water Board (“Annual Overflow Report”). To the extent that the information is not included in the Annual Overflow Report, the City shall provide a listing of the number and location of any repeat SSOs, a list of SSOs in any areas in which the sewer pipes have been rehabilitated, and a description of measures that will be taken to help prevent these SSOs in the future.”*

In a letter dated October 3, 2012, the Regional Board notified all agencies owning or operating a sanitary sewer collection system that, effective immediately, the requirement to submit an Annual Overflow Report was discontinued. In an ensuing communication, EPA informed the East Bay satellites that EPA agreed with the Regional Board and that most of the information provided in the Reports can be obtained on a real time basis from the California Integrated Water Quality System, and thus EPA will not require that the agencies continue preparing the Annual Overflow Report for purposes of compliance with the Stipulated Order. However, EPA continues to require that each agency provide a listing of the number and locations of repeat SSOs, a list of any SSOs in areas in which the sewer pipes have been rehabilitated, and a description of measures that will be taken to help prevent these SSOs in the future.

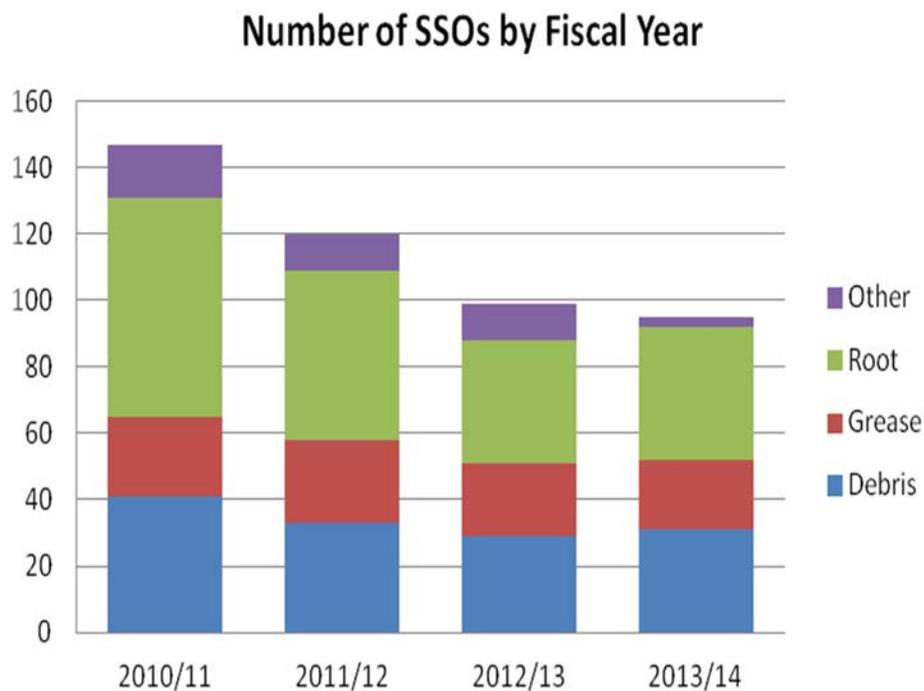
Number of SSOs

The City of Oakland sewer system had 95 SSO events during FY 2013-14. This amount represents a 4% reduction in the number of overflows compared to the previous Fiscal Year, a 50% reduction compared to FY 2007-08, and is the smallest number of SSO’s since SSO tracking began.

The total volume spilled in FY 2013-14 was 67,054 gallons, representing a 43% reduction in volume compared to the previous Fiscal Year. Of the total amount spilled, 64% was contained and returned to the system.

Figure 2-1 below shows the number of SSO events by Fiscal Year from July 1, 2010 to June 30, 2014.

Figure 2-1



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

- Increasing sewer fees to pay for estimated increase in expenditures.
 - **16%** increase on January 1, 2011 (from **\$22.24** to **\$25.80** per residence per month)
 - **16%** increase on January 1, 2012 (to **\$29.93** per residence per month)
 - **16%** increase on January 1, 2014 (to **\$34.72** per residence per month)
- Increasing sewer maintenance staff by over **20 FTE**.
- Purchasing over **\$3,000,000** in new equipment
- Reorganizing staff into three zones to decrease SSO response time

Number and Location of Repeat Overflows

In Fiscal Year 2013-14, the City had only two locations in which a second sewer overflow occurred within a twelve-month period. Table 2-1 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.

**Table 2-1
Repeat SSO Locations**

SSO Location	Dates	CIWQS #	Measure(s) to Prevent SSO's
347/349 Perkins	7/29/13 (2)	797330,797395	Added to 12 month high frequency PM schedule. No SSO's since 7/9/13.
6420 Ascot/ 2930 Hollywood	8/27/13 2/9/14	798343 803871	Added to 12 month high frequency PM schedule. No SSO's since 2/9/14. Last cleaned 7/25/14.

Sewer Overflows in Rehabilitated Areas

In FY 2013-14, six SSO locations occurred in areas rehabilitated within the last ten years as shown in Table 2-2 below. Of these locations, five SSO's were caused by debris or FOG related problems, and one location experienced SSOs due to root intrusion. Corrective actions, as detailed below, include cleaning, CCTV inspection, and addition to the "Hot Spot" list.

**Table 2-2
SSO Locations within Rehabilitated Areas**

No.	SSO Location	Cause	Measure(s) to Prevent SSOs	Rehab Year
1	4130 Coolidge Ave	Grease and Debris	Main sewer cleaned on 9-29-13 using Hydro Flusher to remove grease, debris and pipe fragment. Line was treated with Grease Release emulsifier and then CCTV'ed - no structural issues. SSO caused by a piece of broken pipe left in main. EBMUD notified of grease related SSO. No further issues in this reach.	2004
2	3901 High St	Root Intrusion	Main sewer cleaned on 6-2-14 using Power Rodder and Hydro Flusher to remove roots and small amounts of grease. Line was CCTV'ed - no structural issues. No further issues in this reach.	2006
3	8624 Macarthur Blvd	Debris-Rags	Main sewer cleaned on 5-14-14 using a Hydro Flusher to remove rags and general debris. Line was CCTV'ed -no structural issues. No further issues in this reach.	2008
4	392 11th Street	Grease Deposition (FOG)	Main sewer cleaned on 8-5-2014 using Power Rodder and Hydro Flusher to remove heavy grease. Line was treated with Grease Release emulsifier and then CCTV'ed - no structural issues. EBMUD notified of grease related SSO. No further issues in this reach.	2007
5	Grand Ave and Harrison St	Grease Deposition (FOG)	Main sewer cleaned on 7-10-13 using Hydro Flusher to remove heavy grease. Line was treated with Grease Release emulsifier and then CCTV'ed - no structural issues, although line had several sags. Engineering staff notified. EBMUD notified of grease related SSO. No further issues in this reach.	2010
6	1100 62nd Ave	Grease Deposition (FOG)	Main sewer was cleaned on 6-9-14 using Hydro Flusher to remove light grease. Line was treated with Grease Release emulsifier and then CCTV'ed - no structural issues. EBMUD notified of grease related SSO. No further issues in this reach.	2011

Section 3 Sewer Repair, Rehabilitation and Replacement Program

According to the Stipulated Order, Section X, Paragraph 69, "As part of the Annual Report provided for in Section XIII, the City of Oakland shall submit information to EPA documenting sewer repair, rehabilitation, and/or replacement activities completed in the previous year; describing projects to be completed in the coming year; and discussing the reductions in flows and/or SSOs that have been achieved."

Sanitary Sewer Projects Completed Between 7/1/13 and 6/30/14

Between January 1, 2013 and June 30, 2014, the City completed eleven (11) sanitary sewer projects totaling 131,653' (24.9 miles) at a cost of \$18,113,573. 742 sanitary sewer structures (maintenance holes and other access holes) were replaced and 2,999 lower sewer laterals were rehabilitated. Details are shown in Table 3-1 below. This table includes the last of the Cease and Desist Order projects even though it was actually completed on August 29, 2014.

**Table 3-1
Sanitary Sewer Projects Completed (January 1, 2013 – June 30, 2014)**

Project No	Title	NOC	SubBasin No	Lateral Connection	Structure	Length Total	Total Miles	Construction Cost
C329130	SS Rehab Easement Elinora Ave and Reinhard Dr	2/25/2014	83-303 & 83-501	37	7	2,109	0.4	\$271,672
C268310	RHS - Rehab Bounded by San Leandro Blvd., Edes Ave. and 85th Ave. (SB 85-101)	6/30/2014	85-101 & 85-208	434	93	27,709	5.2	\$3,517,000
C312010	RHS - Rehab Bounded by Lochard, Edgemont, Kerrigan (SB 85 - 232)	4/16/2014	85-232, 81-102, 50-09 & 52-06	233	126	21,263	4.0	\$1,958,347
C312310	RHS - Shattuck, 66th, Telegraph	6/30/2014	50-10	940	64	15,314	2.9	\$2,795,525
C312410	RHS - Rehab Bounded by MacArthur Blvd., Lincoln Ave., Coolidge Terr., and Coolidge Ave. (SB 80-113)	6/30/2014	80-113 & 83-401	670	154	24,198	4.6	\$3,122,400
C312510	RHS - Mounain, Greenridge, Long	6/23/2014	85-502, 80-001, 83-303 & 54-05	193	77	11,765	2.2	\$1,320,394
C312810	RHS- Rehab bounded by (SB 85-012)	8/29/2014	85-012	256	136	17,361	3.3	\$ 2,275,032
C329131	SS and SD Rehab Easement Bet. York & Erie St; SS in Easement by Wellington St; SS in Easement by Brighton	5/13/2014	54-08 & 54-16	20	13	924	0.2	\$338,175
C329133	SS Rehab Easement Bet. Hornhill Dr and Cabot Dr, and in Gouldin Rd bet. Alhambra Ave And Amour Dr	6/19/2014	50-20 & 50-22	14	9	1,457	0.3	\$264,575
C428510	RHS - Macarthur Blvd, Maple Ave, Barner Ave, and Frye St	6/27/2014	80-102, 56-07, 54-12 & 56-05	184	50	6,805	1.3	\$1,354,367
C428610	RHS - Dennison St	6/30/2014	61-01	18	13	2,748	0.5	\$896,086
				2,999	742	131,653	24.9	\$18,113,573

A letter has been sent to the Regional Water Board informing them that Oakland has successfully completed its 25-year Compliance Plan required by the Board's Cease and Desist Order. Work consisted of rehabilitating 75 sewer basins and adding additional capacity at over 120 locations at a cost of approximately \$300 million. This work resulted in a 29% reduction in flows to EBMUD's Wastewater Treatment Plant.

Minor Repairs Completed

Between January 1, 2013 and June 30, 2014, the City's Sewer Maintenance Section responded to 227 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 3-2 below:

**Table 3-2
Collection System Spot Repair Work (January 1, 2013 – June 30, 2014)**

WorkOrderId	Description	Address
501148	Sewers - Repair - Sewer Spot Repair	5721 ELIZABETH AVE
502404	Sewers - Repair - Sewer Spot Repair	6031 MAURITANIA
505256	Sewers - Repair - Sewer Spot Repair	1632 VISTA STREET
506580	Sewers - Repair - Sewer Spot Repair	1449 AUSEON AVE
512316	Sewers - Repair - Sewer Spot Repair	5630 GOLDEN GATE
512617	Sewers - Repair - Sewer Spot Repair	5600 GOLDEN GATE
513561	Sewers - Repair - Sewer Spot Repair	11 STREET @ BROADWAY
513844	Sewers - Repair - Sewer Spot Repair	6141 MAURITANIA AVE
515965	Sewers - Repair - Sewer Spot Repair	7101 EDGEWATER DR
516316	Sewers - Repair - Sewer Spot Repair	1505 89TH AVE
517049	Sewers - Repair - Sewer Spot Repair	534 ZORAH ST
518138	Sewers - Repair - Sewer Spot Repair	515 WELDON
518429	Sewers - Repair - Sewer Spot Repair	515 WELDON AVE
518437	Sewers - Repair - Sewer Spot Repair	3665 OAK KNOLL BLVD.
518445	Sewers - Repair - Sewer Spot Repair	534 ZORAH ST.
518767	Sewers - Repair - Sewer Spot Repair	2230 AUSEON AVE
518769	Sewers - Repair - Sewer Spot Repair	1555 BEACH
518771	Sewers - Repair - Sewer Spot Repair	2732 INYO
519321	Sewers - Repair - Sewer Spot Repair	3914 BROOKDALE AVE
519356	Sewers - Repair - Sewer Spot Repair	1404 37TH AVE
519830	Sewers - Repair - Sewer Spot Repair	4349 BRIAR CLIFF RD
520776	Sewers - Repair - Sewer Spot Repair	2100 MACARTHUR BLV
521038	Sewers - Repair - Sewer Spot Repair	2475 MAVIS STREET
521041	Sewers - Repair - Sewer Spot Repair	2230 57 AVE
521042	Sewers - Repair - Sewer Spot Repair	5900 MANCHESTER
521393	Sewers - Repair - Sewer Spot Repair	3615 EMERSON STREET
522119	Sewers - Repair - Sewer Spot Repair	2230 57 AVE
522498	Sewers - Repair - Sewer Spot Repair	5860 MARGARITO DRIVE
523716	Sewers - Repair - Sewer Spot Repair	4812 WEBSTER
524090	Sewers - Repair - Sewer Spot Repair	481 CROFTON AVE
524134	Sewers - Repair - Sewer Spot Repair	8049 WINTHORPE

524374	Sewers - Repair - Sewer Spot Repair	8733 B STREET
524978	Sewers - Repair - Sewer Spot Repair	1455 WELLINGTON ST
525309	Sewers - Repair - Sewer Spot Repair	1455 WELLINGTON ST
525310	Sewers - Repair - Sewer Spot Repair	7800 HANSOM
525555	Sewers - Repair - Sewer Spot Repair	9010 SAGE
526010	Sewers - Repair - Sewer Spot Repair	693 VERNON ST
526606	Sewers - Repair - Sewer Spot Repair	5365 JAMES AV
526906	Sewers - Repair - Sewer Spot Repair	693 VERNON STREET
526957	Sewers - Repair - Sewer Spot Repair	605 VERNON
527159	Sewers - Repair - Sewer Spot Repair	693 VERNON ST
527171	Sewers - Repair - Sewer Spot Repair	693 VERNON ST
527174	Sewers - Repair - Sewer Spot Repair	2900 TELEGRAPH AV
527182	Sewers - Repair - Sewer Spot Repair	2900 TELEGRAPH AVE
527190	Sewers - Repair - Sewer Spot Repair	2900 TELEGRAPH AV
527191	Sewers - Repair - Sewer Spot Repair	2230 57TH AVE
527512	Sewers - Repair - Sewer Spot Repair	200 GRAND AVE
527612	Sewers - Repair - Sewer Spot Repair	1455 WELLINGTON
528358	Sewers - Repair - Sewer Spot Repair	555 30TH STREET
528994	Sewers - Repair - Sewer Spot Repair	1810 89TH AVE
530907	Sewers - Repair - Sewer Spot Repair	965 70 AVE
531257	Sewers - Repair - Sewer Spot Repair	10 EAST CIRCLE
532490	Sewers - Repair - Sewer Spot Repair	5546 BALBOA
532919	Sewers - Repair - Sewer Spot Repair	4294 MONTGOMERY ST
533428	Sewers - Repair - Sewer Spot Repair	3141 HERRIOTT AV
534566	Sewers - Repair - Sewer Spot Repair	725 WALAVISTA AV
535285	Sewers - Repair - Sewer Spot Repair	448 SUNNYSLOPE AV
535882	Sewers - Repair - Sewer Spot Repair	5546 BALBOA DR
536228	Sewers - Repair - Sewer Spot Repair	432 SUNNYSLOPE AV
536830	Sewers - Repair - Sewer Spot Repair	7873 GREENLY DR
537036	Sewers - Repair - Sewer Spot Repair	308 FAIRMOUNT AV
537498	Sewers - Repair - Sewer Spot Repair	859 WARFIELD AV
537737	Sewers - Repair - Sewer Spot Repair	605 VERNON ST
538351	Sewers - Repair - Sewer Spot Repair	2554 WAKEFIELD AV
538922	Sewers - Repair - Sewer Spot Repair	48 HEGENBERGER COURT
539574	Sewers - Repair - Sewer Spot Repair	5719 OAK GROVE
539582	Sewers - Repair - Sewer Spot Repair	3633 E 16TH ST
540512	Sewers - Repair - Sewer Spot Repair	7620 GREENLY
540764	Sewers - Repair - Sewer Spot Repair	7605 VALINTIME
541297	Sewers - Repair - Sewer Spot Repair	7895 STERLING DR
541341	Sewers - Repair - Sewer Spot Repair	3510 GRAND AV
542069	Sewers - Repair - Sewer Spot Repair	645 JEAN ST
542071	Sewers - Repair - Sewer Spot Repair	
542550	Sewers - Repair - Sewer Spot Repair	PERKINS ST & PALM AV
542832	Sewers - Repair - Sewer Spot Repair	301 PERKINS ST
543097	Sewers - Repair - Sewer Spot Repair	7880 SANFORD ST
544007	Sewers - Repair - Sewer Spot Repair	3415 ROBINSON DR
544023	Sewers - Repair - Sewer Spot Repair	
544315	Sewers - Repair - Sewer Spot Repair	1954 MOUNTAIN BLVD
544862	Sewers - Repair - Sewer Spot Repair	1265 75TH AV
545212	Sewers - Repair - Sewer Spot Repair	99 MONTELL ST
545233	Sewers - Repair - Sewer Spot Repair	VERON & SANTA ROSA
545653	Sewers - Repair - Sewer Spot Repair	40 BOWLING DR

546043	Sewers - Repair - Sewer Spot Repair	2551 LILAC ST
546953	Sewers - Repair - Sewer Spot Repair	CAPELL STREET & PROSPECT AVE
547410	Sewers - Repair - Sewer Spot Repair	GRAND AVE & MANDANNA
547417	Sewers - Repair - Sewer Spot Repair	GRAND AV & MANDANA BLVD
547904	Sewers - Repair - Sewer Spot Repair	4224 FRUITVALE AVE
548361	Sewers - Repair - Sewer Spot Repair	SANTA ROSA AV & VERNON ST
548642	Sewers - Repair - Sewer Spot Repair	824 E 28TH ST
548646	Sewers - Repair - Sewer Spot Repair	824 E 28TH ST
548883	Sewers - Repair - Sewer Spot Repair	824 E 28TH ST
549119	Sewers - Repair - Sewer Spot Repair	824 E 23RD ST
549139	Sewers - Repair - Sewer Spot Repair	5902 HOLWAY ST
549245	Sewers - Repair - Sewer Spot Repair	4218 AGUA VISTA
549825	Sewers - Repair - Sewer Spot Repair	6766 ARMOUR DR
550315	Sewers - Repair - Sewer Spot Repair	6600 DOVER ST
551094	Sewers - Repair - Sewer Spot Repair	4609 PARK BLVD
551808	Sewers - Repair - Sewer Spot Repair	6125 MEDAU PL
551877	Sewers - Repair - Sewer Spot Repair	429 VERNON ST
552904	Sewers - Repair - Sewer Spot Repair	2120 E 30TH STREET
553115	Sewers - Repair - Sewer Spot Repair	1031 89 AVE
553116	Sewers - Repair - Sewer Spot Repair	2115 102 AVE
553493	Sewers - Repair - Sewer Spot Repair	4517 FAIRFAX AVE
553822	Sewers - Repair - Sewer Spot Repair	7946 MOUNTAIN BLV
554349	Sewers - Repair - Sewer Spot Repair	6901 SOBRANTE ROAD
554565	Sewers - Repair - Sewer Spot Repair	5271 BOYD AVE
554815	Sewers - Repair - Sewer Spot Repair	3253 HELEN STREET
555199	Sewers - Repair - Sewer Spot Repair	2929 WEST STREET
555886	Sewers - Repair - Sewer Spot Repair	6707 CHABOT ROAD
555926	Sewers - Repair - Sewer Spot Repair	6651 CHABOT RD
556525	Sewers - Repair - Sewer Spot Repair	1040 51 AVE
556798	Sewers - Repair - Sewer Spot Repair	1435 8TH AVE
557364	Sewers - Repair - Sewer Spot Repair	1148 NORWOOD AVE
557519	Sewers - Repair - Sewer Spot Repair	849 BROCKHURST STREET
557819	Sewers - Repair - Sewer Spot Repair	9501 CASTLEWOOD
558466	Sewers - Repair - Sewer Spot Repair	6090 ROCKRIDGE BLV
558734	Sewers - Repair - Sewer Spot Repair	6090 ROCKRIDGE BLV
558993	Sewers - Repair - Sewer Spot Repair	328 ELWOOD AVE
559025	Sewers - Repair - Sewer Spot Repair	2015 102ND AV
559026	Sewers - Repair - Sewer Spot Repair	4238 DUNSMUIR AV
559033	Sewers - Repair - Sewer Spot Repair	2024 94TH AVE
559679	Sewers - Repair - Sewer Spot Repair	1815 102ND AVE
560208	Sewers - Repair - Sewer Spot Repair	1912 47 AVE
560216	Sewers - Repair - Sewer Spot Repair	2118 47 AVE
560479	Sewers - Repair - Sewer Spot Repair	410 VERNON STREET
560710	Sewers - Repair - Sewer Spot Repair	6651 CHABOT ROAD
561001	Sewers - Repair - Sewer Spot Repair	3934 BROWN AV
561039	Sewers - Repair - Sewer Spot Repair	2816 EAST 16TH STREET
561044	Sewers - Repair - Sewer Spot Repair	1623 85TH AV
561924	Sewers - Repair - Sewer Spot Repair	1825 9TH AVE
563130	Sewers - Repair - Sewer Spot Repair	89 YOSEMITE AVE
563415	Sewers - Repair - Sewer Spot Repair	1021 BROOKWOOD RD
563445	Sewers - Repair - Sewer Spot Repair	3249 HELEN STREET
563457	Sewers - Repair - Sewer Spot Repair	858 CLEVELAND STREET

563802	Sewers - Repair - Sewer Spot Repair	884 WILLOW ST
564345	Sewers - Repair - Sewer Spot Repair	1700 INTERNATIONAL BLV
564587	Sewers - Repair - Sewer Spot Repair	1722 INTERNATIONAL BLV
564627	Sewers - Repair - Sewer Spot Repair	4017 E17TH ST
564896	Sewers - Repair - Sewer Spot Repair	1722 INTERNATIONAL BLV.
565222	Sewers - Repair - Sewer Spot Repair	1722 INTERNATIONAL
565255	Sewers - Repair - Sewer Spot Repair	2233 EAST 19TH STREET
565527	Sewers - Repair - Sewer Spot Repair	123 TAURUS AVE
565530	Sewers - Repair - Sewer Spot Repair	6211 MEDOU PL
565840	Sewers - Repair - Sewer Spot Repair	6211 MEDAU PLACE
566060	Sewers - Repair - Sewer Spot Repair	606 ALMA AVE
566397	Sewers - Repair - Sewer Spot Repair	3300 GRAND AVE
567314	Sewers - Repair - Sewer Spot Repair	1000 PARK LANE
567961	Sewers - Repair - Sewer Spot Repair	3300 GRAND AVE.
568175	Sewers - Repair - Sewer Spot Repair	5542 CARLTON STREET
568415	Sewers - Repair - Sewer Spot Repair	5567 CARLTON ST
568523	Sewers - Repair - Sewer Spot Repair	5542 CARLTON AVE
569113	Sewers - Repair - Sewer Spot Repair	1014 E 22ND ST
569574	Sewers - Repair - Sewer Spot Repair	5515 CARLTON STREET
569830	Sewers - Repair - Sewer Spot Repair	53RD AV & INTERNATIONAL BLVD
570104	Sewers - Repair - Sewer Spot Repair	405 ALCATRAZ
570355	Sewers - Repair - Sewer Spot Repair	411 ALCATRAZ
570572	Sewers - Repair - Sewer Spot Repair	425 ALCATRAZ
570771	Sewers - Repair - Sewer Spot Repair	1080 53RD STREET
571161	Sewers - Repair - Sewer Spot Repair	2326 E 21ST ST
571185	Sewers - Repair - Sewer Spot Repair	445 49TH ST
572150	Sewers - Repair - Sewer Spot Repair	6124 OCEAN VIEW DR
572364	Sewers - Repair - Sewer Spot Repair	1407 WEST ST
572916	Sewers - Repair - Sewer Spot Repair	7057 EXETER DR
572920	Sewers - Repair - Sewer Spot Repair	6000 ROCKRIDGE
573320	Sewers - Repair - Sewer Spot Repair	2325 E 21ST ST
573568	Sewers - Repair - Sewer Spot Repair	1412 E 32ND ST
573575	Sewers - Repair - Sewer Spot Repair	8710 OLIVE ST
573578	Sewers - Repair - Sewer Spot Repair	YGNACIO AV & VICKSBURG AV
573832	Sewers - Repair - Sewer Spot Repair	MOUNTAIN BLVD & KEARNEY AV
574116	Sewers - Repair - Sewer Spot Repair	5768 MENDOCINO AV
574993	Sewers - Repair - Sewer Spot Repair	2746 INTERNATIONAL BLVD
575922	Sewers - Repair - Sewer Spot Repair	9443 CHERRY ST
576633	Sewers - Repair - Sewer Spot Repair	5801 BROADWAY
576637	Sewers - Repair - Sewer Spot Repair	ARMOUR DR
576926	Sewers - Repair - Sewer Spot Repair	GOLDEN GATE UNDER PASS
577229	Sewers - Repair - Sewer Spot Repair	2515 63RD AV
578206	Sewers - Repair - Sewer Spot Repair	1539 78TH AV
578697	Sewers - Repair - Sewer Spot Repair	2764 INTERNATIONAL BLVD
579308	Sewers - Repair - Sewer Spot Repair	327 34TH ST
579313	Sewers - Repair - Sewer Spot Repair	1407 WEST STREET
580150	Sewers - Repair - Sewer Spot Repair	8026 SHEPHERD CANYON ROAD
580158	Sewers - Repair - Sewer Spot Repair	8111 SKYLINE BLVD
580475	Sewers - Repair - Sewer Spot Repair	5429 BELGRAVE PL
580746	Sewers - Repair - Sewer Spot Repair	5314 DOVER ST
582108	Sewers - Repair - Sewer Spot Repair	886 MCELROY ST
582400	Sewers - Repair - Sewer Spot Repair	2364 100TH AV

583060	Sewers - Repair - Sewer Spot Repair	5405 BELGRAVE PL
584799	Sewers - Repair - Sewer Spot Repair	2893 CHELSEA DRIVE
585145	Sewers - Repair - Sewer Spot Repair	3512 GRAND AV
586384	Sewers - Repair - Sewer Spot Repair	8 EASTWOOD CT
586993	Sewers - Repair - Sewer Spot Repair	8 EASTWOOD CT
587892	Sewers - Repair - Sewer Spot Repair	LONGCROFT DR & HAVERHILL DR
588982	Sewers - Repair - Sewer Spot Repair	775 ROSEMONT
590361	Sewers - Repair - Sewer Spot Repair	4522 FAIRFAX AV
592459	Sewers - Repair - Sewer Spot Repair	55 MONTELL ST
592690	Sewers - Repair - Sewer Spot Repair	6767 SIMS DR
592954	Sewers - Repair - Sewer Spot Repair	1902 40TH AV
593275	Sewers - Repair - Sewer Spot Repair	1827 40TH AV
594820	Sewers - Repair - Sewer Spot Repair	88TH AV & BIRCH ST
594828	Sewers - Repair - Sewer Spot Repair	1821 LINDEN ST
595922	Sewers - Repair - Sewer Spot Repair	514 62ND ST
595926	Sewers - Repair - Sewer Spot Repair	
596172	Sewers - Repair - Sewer Spot Repair	2037 39TH AV
597040	Sewers - Repair - Sewer Spot Repair	96TH AV & PLYMOUTH ST
597389	Sewers - Repair - Sewer Spot Repair	9320 CHERRY ST
597620	Sewers - Repair - Sewer Spot Repair	32 MALL CT
597645	Sewers - Repair - Sewer Spot Repair	HEGENBERGER RD & PARDEE DR
598775	Sewers - Repair - Sewer Spot Repair	2769 MAXWELL AV
599034	Sewers - Repair - Sewer Spot Repair	4323 MONTGOMERY ST
599692	Sewers - Repair - Sewer Spot Repair	4317 VIEW ST
599894	Sewers - Repair - Sewer Spot Repair	GOLDEN GATE AVE & ACACIA AVE
602145	Sewers - Repair - Sewer Spot Repair	6140 ROCKRIDGE BLVD
602190	Sewers - Repair - Sewer Spot Repair	4294 MONTGOMERY ST
603025	Sewers - Repair - Sewer Spot Repair	SEMINARY AV & MEDIAN INTERNATIONAL
603342	Sewers - Repair - Sewer Spot Repair	32 MALL CT
603870	Sewers - Repair - Sewer Spot Repair	920 PARAMOUNT RD
604312	Sewers - Repair - Sewer Spot Repair	9306 CHERRY ST
604907	Sewers - Repair - Sewer Spot Repair	CHELTON DR & ASCOT DR
606782	Sewers - Repair - Sewer Spot Repair	4400 FOOTHILL BLVD
606802	Sewers - Repair - Sewer Spot Repair	4400 FOOTHILL BLVD
607366	Sewers - Repair - Sewer Spot Repair	2528 CHEROKEE AV
607981	Sewers - Repair - Sewer Spot Repair	POPLAR ST & 16TH ST
608397	Sewers - Repair - Sewer Spot Repair	16TH ST & POPLAR ST
608678	Sewers - Repair - Sewer Spot Repair	1131 88TH AV
609603	Sewers - Repair - Sewer Spot Repair	2376 E 22ND ST

As of June 30, 2014, maintenance crews have a backlog of 60 minor repairs to be completed in the next few months.

2014-15 Proposed Sanitary Sewer Projects

In FY 2014-15, the City plans to complete ten sanitary sewer rehabilitation projects as listed in Table 3-3 below. These projects will rehabilitate approximately 12 miles of sewer mains. All appurtenant sewer structures will also be rehabilitated as part of these projects. The locations of these projects are selected from Appendix H of the Consent Decree. Appendix H lists Oakland's collection system sub-basin priorities.

**Table 3-3
FY 2014-15 Sanitary Sewer Projects Proposed for Completion**

No.	Project No.	Description
1	C227230	Rehabilitation of Sanitary Sewers in the Area Bounded by 20 th Street, San Pablo Avenue, Telegraph Avenue, Alice Street, and 12 th Street
2	C329128	Rehabilitation of Sanitary Sewers in Rosedale Avenue
3	C329129	Rehabilitation of Sanitary Sewers in Bridge Avenue
4	C329132	Rehabilitation of Sanitary Sewer in the Easement between Delmont Avenue and Edgemoor Place, Easement between Majestic Avenue and Laird Avenue, and Easement between Modesto Street and Madera Avenue
5	C329134	Rehabilitation of Sanitary Sewers in the Area Bounded By Broadway, Golden Gate Avenue and Contra Costa Road
6	C329135	Rehabilitation of Sanitary Sewers in the Easement between Clarendon Crescent Avenue and Sunny Hills Road
7	C329137	Rehabilitation of Sanitary Sewers in the Area of Ostrander Road and Broadway Terrace, and in the Easement by Margarido Drive
8	C329138	Rehabilitation of Sanitary Sewers in the Easement between Shepherd Canyon Road and Moore Drive, and in Larry Lane between Ascot Drive and Mastlands Drive
9	C329143	Rehabilitation of Sanitary Sewer in the Area bounded by Park Boulevard, Hollywood Ave, Sunnyside Rd, and Brighton Ave (54-16)
10	C461810	Rehabilitation of Sanitary Sewers in 57th Avenue

Special Environmental Project (SEP)

As part of an administrative enforcement action taken by The Regional Water Board in 2011, the City implemented a Low Impact Development (LID) retrofit project at a City fire station. The City conducted a feasibility analysis of three potential sites and selected the City's Firehouse One as the site for the SEP. This project has been completed. The Regional Water Board was notified regarding completion of the project by letter dated May 31, 2014. A completion acknowledgement letter was issued by the Regional Water Board dated August 4, 2014.

Section 4 Inflow Identification and Reduction Program

According to the Stipulated Order, Section X, Paragraph 63B:

“Beginning in 2012, as part of the Annual Report provided for in Section XIII, the City of Oakland shall submit the following information as it becomes available on implementation of the Inflow Identification and Reduction Program:

- 1. Locations and results of inflow testing done the previous year including the total number of illicit connections discovered;*
- 2. Description of follow-up actions that were conducted including the number of illicit connections which were disconnected;*
- 3. Description of enforcement actions taken against any property owner which did not comply with disconnection requirements;*
- 4. Description of methods used to seal manhole covers in Collection System areas prone to flooding, and list of locations at which this work was done; and*
- 5. A schedule for locations to be tested in the next year.*

Smoke Testing

Since the beginning of its smoke testing program, the City has utilized the services of various contractors to smoke test City owned sewer mains. Smoke testing was done one sub-basin at a time. Figure 4-1, below, shows where smoke testing was conducted.

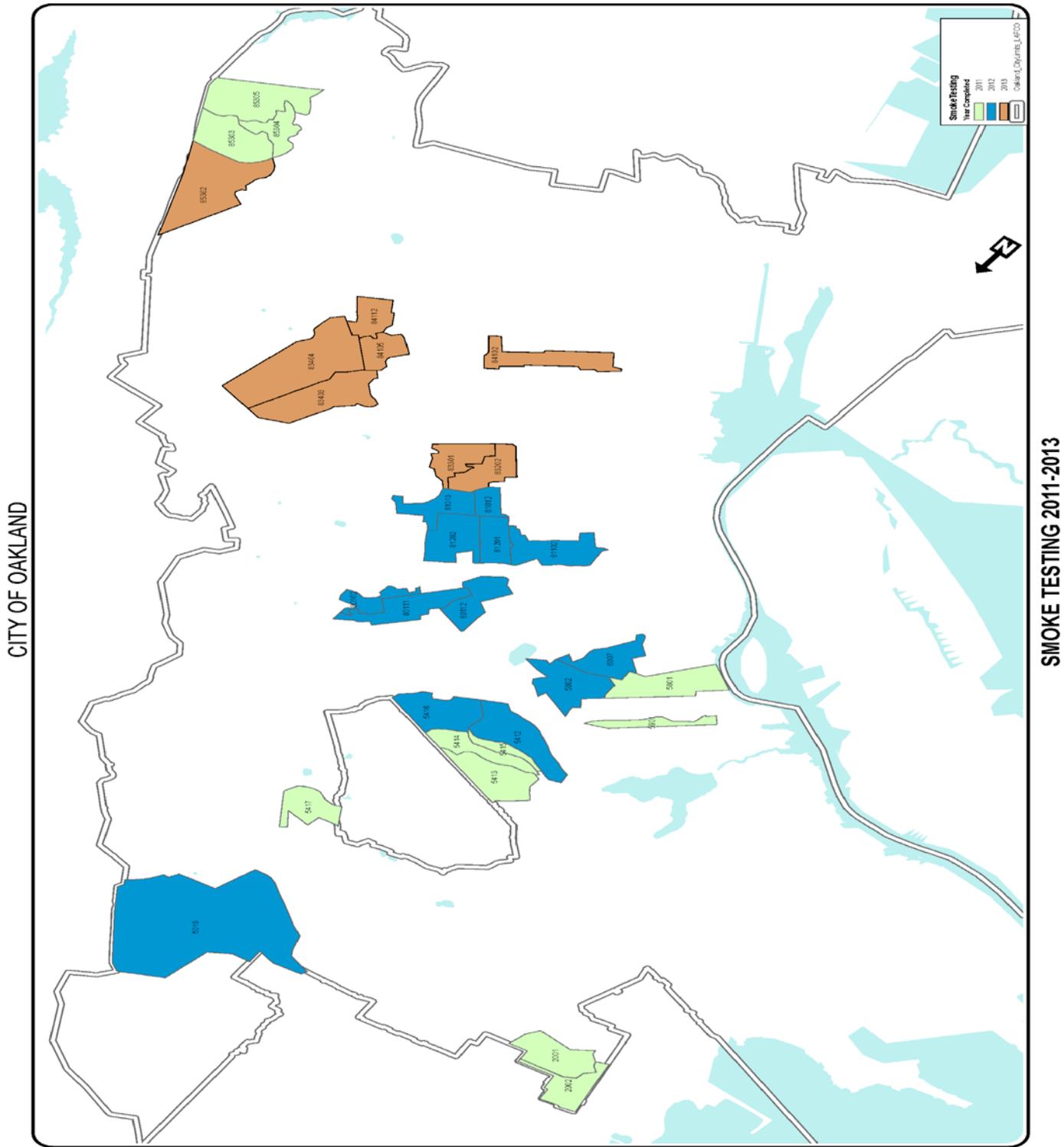


Figure 4-1
Sub-Basins Smoke Tested

Results of Smoke Testing Program

Between January 1, 2011 and June 30, 2014, the City smoke tested 881,964 linear feet (167 miles) of sewer mains. Table 4-1 below summarizes smoke-testing results.

**Table 4-1
Smoke Testing Results Summary**

Sub-Basin	Length of Pipe Tested	Number of Smoke Indicators	Private Property		Streets	
	(lf)		Inflow	Infiltration	SD	SS
85-232, 85-301, 85-303, 85-304, 85-305	71,400	66	5	38	1	22
54-17	16,450	16	0	12	0	4
20-01	8,200	26	1	24	1	0
54-13	42,500	128	10	71	11	36
20-02	7,000	19	7	12	0	0
21-03	14,850	35	3	29	0	3
58-01	38,035	16	1	13	0	2
50-14, 50-17	106,429	174	18	99	16	41
50-19	35,606	19	0	11	0	8
54-12	43,066	85	15	53	5	12
54-16	46,772	127	19	72	1	35
58-02	30,066	43	3	32	4	4
59-01	61,269	228	38	167	11	12
60-07	26,712	44	2	38	1	3
80-111	42,910	54	5	45	0	4
81-102	34,411	45	2	39	0	4
81-012, 81-013, 81-201, 81-202	76,118	104	8	94	1	1
83-202	32,543	64	4	55	0	5
83-301	20,395	34	3	30	0	1
83-403	16,458	7	0	5	0	2
83-404	41,273	17	1	14	0	2
84-105	28,743	11	5	6	0	0
84-112	16,221	7	2	5	0	0
85-302	17,087	2	1	1	0	0
56-01, 56-02	7,450	22	2	19	1	0
Total	881,964	1393	155	984	53	201

Smoke testing results showed a total of 1,393 locations where smoke indicators were observed: 1139 locations were within private property, and 254 locations were within street areas. As shown above, within private properties 155 locations were suspected to be sources of inflow; and 984 locations to be sources of infiltration. Within the street areas, 53 locations were found to be in the storm drain system; and 201 locations were found in the sanitary sewer system.

The City performed the following follow-up actions on smoke testing results:

- A. Private Property – Inflow Indicators. Enforcement letters were sent to 155 property owners on 8/3/2013 and 4/21/2014. A second follow-up letter was sent on 5/23/2014 and 6/13/2014. To date 44 of 155 property owners have corrected inflow problems in private sewer laterals identified by smoke testing. The City is continuing enforcement actions on these properties.
- B. Private Property – Infiltration indicators. Enforcement letters were sent to 984 property owners on 3/7/2012, 1/23/2014, and 5/7/2014. A second follow-up letter was sent on 5/23/2014 and 6/13/2014. To date 176 of 984 property owners have corrected infiltration defects in private sewer laterals identified by smoke testing. The City has now completed enforcement action in this category since defects in private sewer laterals will be corrected by the Consent Decree’s Regional Private Sewer Lateral (PSL) program.
- C. Public Storm Drain System. The City performed dye testing and CCTV inspection of all twelve (12) storm drains with smoke indicators identified through its 2011 smoke testing program. No cross connections were found between sewer mains and the storm drain system. These results reinforced earlier discussions with regulatory agencies about “false positives” generated by smoke testing. No further City work is planned in this area. The results will be turned over to EBMUD for use in its Technical Support Program.
- D. Public Sanitary Sewer System. Rehabilitation of sanitary sewer mains and manholes will be included in the City's sewer rehabilitation program which is prioritized to target areas with high infiltration rates. (It should be noted that two sub-basins within the tested areas [85-232 and 58-01] have already been rehabilitated as part of the City’s sewer rehabilitation program.)

Maintenance Hole Sealing

To reduce storm-water inflow through manhole structures, City staff uses wet patch sealant to fill cracks around manhole riser rings and inside the manhole barrels. Vented manhole covers are also replaced with solid manhole covers to prevent storm runoff from entering into manhole structures. Between January 1, 2013 and June 30, 2014, manhole repair/rehabilitation work was done by City forces at 57 locations as shown in Table 4-2 below.

**Table 4-2
Manhole Repairs (January 1, 2013 – June 30, 2014)**

Work Order Id	Description	Priority	Address
513119	Sewers – Repair – Manhole Casting and Cover Replacement	2	6224 BROADWAY TER
518323	Sewers – Repair – Manhole Casting and Cover Replacement	3	6650 GUNN DR
520429	Sewers – Repair – Manhole Casting and Cover Replacement	2	710 JEAN STREET
520432	Sewers – Repair – Manhole Casting and Cover Replacement	2	645 JEAN STREET
531216	Sewers – Repair – Manhole Casting and Cover Replacement	3	6324 CASTLE DR
531514	Sewers – Repair – Manhole Casting and Cover Replacement	3	68 WEYBRIDGE CT
536482	Sewers – Repair – Manhole Casting and Cover Replacement	3	870 PINE ST
538089	Sewers – Repair – Manhole Casting and Cover Replacement	3	6514 FARALLON WY
539575	Sewers – Repair – Manhole Casting and Cover Replacement	3	HOLY NAMES COLLEGE
541852	Sewers – Repair – Manhole Casting and Cover Replacement	3	PERALTA OAKS DR & PERALTA OAKS CT
542463	Sewers – Repair – Manhole Casting and Cover Replacement	3	MAXWELL AV & TRASK ST
542549	Sewers – Repair – Manhole Casting and Cover Replacement	2	2175 48 TH AVE
544864	Sewers – Repair – Manhole Casting and Cover Replacement	1	4760 GRASS VALLEY
547404	Sewers – Repair – Manhole Casting and Cover Replacement	2	23 RD AV & E 11 TH ST
548119	Sewers – Repair – Manhole Casting and Cover Replacement	1	4432 PIEDMONT AVE
549432	Sewers – Repair – Manhole Casting and Cover Replacement	2	6898 OAKWOOD DR
552685	Sewers – Repair – Manhole Casting and Cover Replacement	3	624 SYCAMORE ST
554054	Sewers – Repair – Manhole Casting and Cover Replacement	1	55 TH AVE & INTERNATIONAL BLV
555438	Sewers – Repair – Manhole Casting and Cover Replacement	2	327 34 TH STREET

561251	Sewers – Repair – Manhole Casting and Cover Replacement	3	1554 FRUITVALE AVE
561324	Sewers – Repair – Manhole Casting and Cover Replacement	2	100 AVE & A STREET
561661	Sewers – Repair – Manhole Casting and Cover Replacement	2	100 TH AVE & INTERNATIONAL BLV
561853	Sewers – Repair – Manhole Casting and Cover Replacement	2	4034 QUIGLEY ST
562305	Sewers – Repair – Manhole Casting and Cover Replacement	2	3500 GRAND AVE
562568	Sewers – Repair – Manhole Casting and Cover Replacement	2	4525 SAN CARLOS
562575	Sewers – Repair – Manhole Casting and Cover Replacement	2	410 VERNON ST
565846	Sewers – Repair – Manhole Casting and Cover Replacement	1	85 TH AVE & BLAINE STREET
566398	Sewers – Repair – Manhole Casting and Cover Replacement	1	6639 EASTLAWN STREET
566846	Sewers – Repair – Manhole Casting and Cover Replacement	2	6502 BROADWAY TERR,
569341	Sewers – Repair – Manhole Casting and Cover Replacement	3	1722 INTERNATIONAL
569885	Sewers – Repair – Manhole Casting and Cover Replacement	3	14 TH ST & WEST ST
572083	Sewers – Repair – Manhole Casting and Cover Replacement	3	7057 EXETER DR
573835	Sewers – Repair – Manhole Casting and Cover Replacement	3	2080 ROSECREST DR
574618	Sewers – Repair – Manhole Casting and Cover Replacement	3	7057 EXETER DR
574952	Sewers – Repair – Manhole Casting and Cover Replacement	3	1407 WEST ST
575348	Sewers – Repair – Manhole Casting and Cover Replacement	2	281 CAPRICORN AV
575581	Sewers – Repair – Manhole Casting and Cover Replacement	3	970 42 ND ST
578014	Sewers – Repair – Manhole Casting and Cover Replacement	3	5719 OAKGROVE AVE
580143	Sewers – Repair – Manhole Casting and Cover Replacement	3	4825 CONGRESS AVE
580145	Sewers – Repair – Manhole Casting and Cover Replacement	3	53 RD STREET & GASKILL
581723	Sewers – Repair – Manhole Casting and Cover Replacement	1	LEMERT & PARK BLVD
590617	Sewers – Repair – Manhole Casting and Cover Replacement	3	4517 FAIRFAX AVE
595194	Sewers – Repair – Manhole Casting and Cover Replacement	2	88 TH AV & BIRCH ST
598307	Sewers – Repair – Manhole Casting and Cover Replacement	2	24 TH ST & TELEGRAPH AV
600175	Sewers – Repair – Manhole Casting and Cover Replacement	1	GOLDEN GATE AV & ACACIA AV
602186	Sewers – Repair – Manhole Casting and	1	76 AVE & BANCROFT AVE

	Cover Replacement		
602192	Sewers – Repair – Manhole Casting and Cover Replacement	1	6 TH AV & E 10 TH ST
602507	Sewers – Repair – Manhole Casting and Cover Replacement	3	PINEWOOD RD & CALDWELL RD
603024	Sewers – Repair – Manhole Casting and Cover Replacement	1	SEMINARY AV & INTERNATIONAL BLVD
605011	Sewers – Repair – Manhole Casting and Cover Replacement	3	975 SUNNYHILLS RD
610988	Sewers – Repair – Manhole Casting and Cover Replacement	3	7277 WOODROW DR
611437	Sewers – Repair – Manhole Casting and Cover Replacement	2	29 TH AV & GLASCOCK ST
617108	Sewers – Repair – Manhole Casting and Cover Replacement	2	2114 E 30 TH ST
618181	Sewers – Repair – Manhole Casting and Cover Replacement	3	42 ND & MARKET
621080	Sewers – Repair – Manhole Casting and Cover Replacement	3	279 LEE ST
625982	Sewers – Repair – Manhole Casting and Cover Replacement	2	GOLF LINKS RD & ELYSIAN FIELDS DR
625998	Sewers – Repair – Manhole Casting and Cover Replacement	2	4140 SAINT ANDREWS RD

Private Sewer Lateral (PSL) Program

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 for new 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 4-3 below shows the City's construction/remodel summary for building permits over \$100,000 between January 17, 2012 and June 30, 2014. Between January 17, 2012 and June 30, 2014, the City "Final'ed" 248 Building Permits for construction over \$100,000 as shown in Table 4-3 below.

Table 4-3
Permits Final'ed with EBMUD Certificates of Compliance

Fiscal Year	# Permits Final'ed	# with Compl Cert	# w/o Compl Cert
FY 2012-13	128	95	33
FY 2013-14	120	80	36
Totals	248	175	69

The City exceeded the 25 building permits per fiscal year which may be finalized without a Compliance Certificate issued by EBMUD by 8 in FY 2012-13 and by 11 in FY 2013-14. City staff is reviewing the data to make sure Compliance Certificates were not overlooked and also reviewing the City's building permit processes to understand why so many permits were "final'ed" without Certificates of Compliance. Significant improvement is expected in the future.

It should also be noted that an additional 370 permits have been issued Certificates of Compliance but have not been counted in Table 4-3 because permits have not yet been finalized. These results will appear in future Annual Reports as permit work is completed.

Section 5 Sewer Cleaning and Root Control Program

According to the Stipulated Order, Section X, Paragraph 67B:

“Beginning in 2012, as part of its Annual Report provided for in Section XIII, the City of Oakland shall document the activities conducted under its Sewer Cleaning and Root Control Program during the previous year, including miles of pipe cleaned as part of the routine and hot spot cleaning programs, and miles of pipe treated by each method for controlling roots. The City of Oakland shall include a description of the success of the Sewer Cleaning and Root Control Program at preventing blockages and SSOs as well as any changes to be made to the Program to further reduce SSOs.”

Sewer Cleaning.

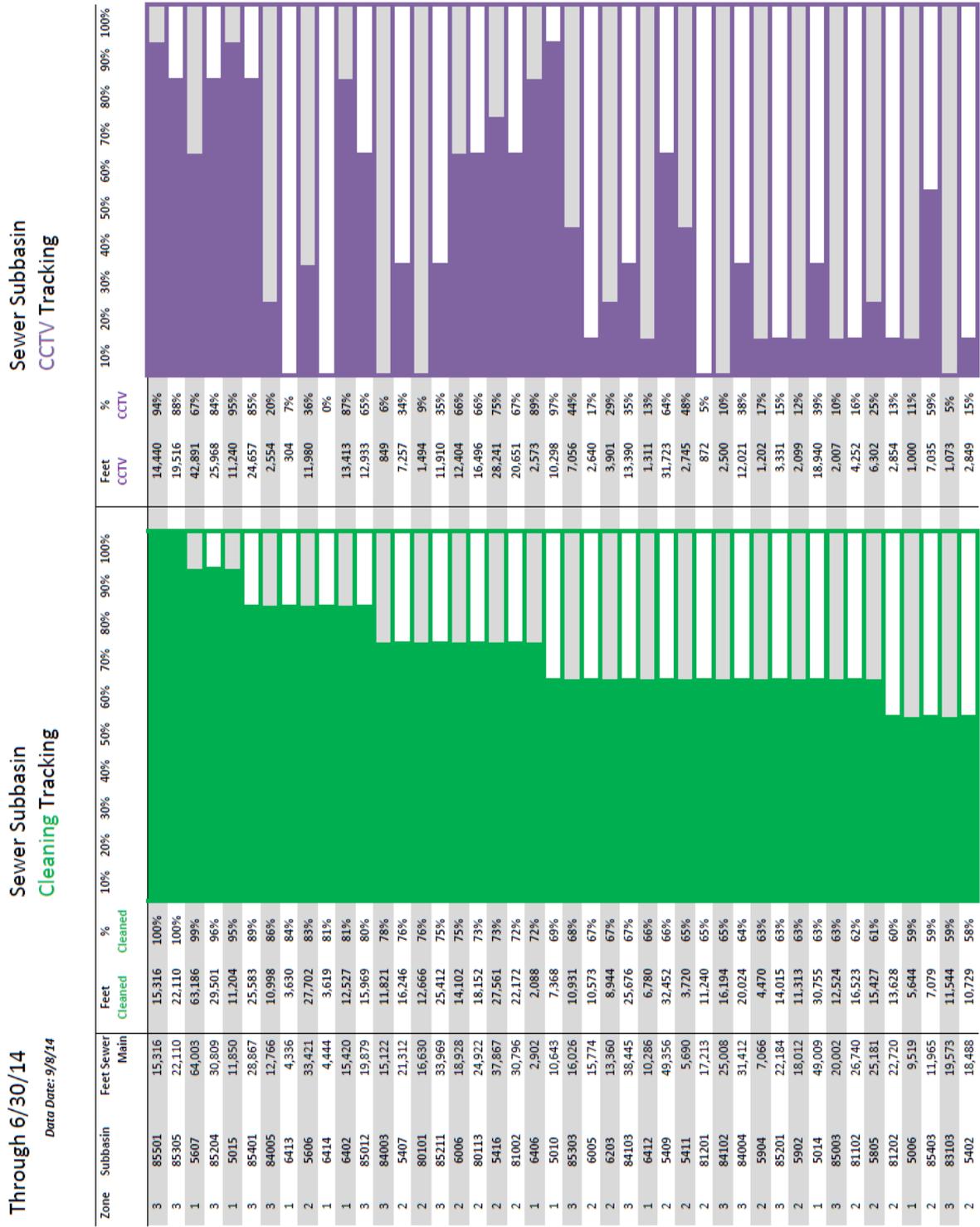
In addition to increasing staff and purchasing new equipment, the City has implemented a new resourcing approach in order to improve efficiency, effectiveness, and response time to service requests. The new approach entails dividing our collection system into three smaller geographical zones, and assigning field crews with dedicated sewer equipment to each zone. Dedicating crews and cleaning and inspection equipment to smaller areas allows the crews to reduce their travel time, thus improving response time to service requests and increasing productivity.

Between January 1, 2013 and June 30, 2014, City crews cleaned 724,675 unique feet (137.2 miles) of sewer mains as part of its routine sewer cleaning program using hydro-flusher and power-rodding equipment.

As of June 30, 2014, the City has cleaned 2,085,942 feet (395.1 miles) of the estimated 4,907,000 feet (929 miles) in its sewer system. This exceeds the Consent Decree requirement to clean 1,900,800 feet (360 miles) by June 30, 2014.

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

Figure 5-1
Cleaning by Sub-Basin



Zone	Subbasin	Feet Sewer Main	Feet Cleaned	% Cleaned	CCTV															
					10%	20%	30%	40%	50%	60%	70%	80%	90%	100%						
3	82004	14,116	6,225	44%	1,002	7%														
3	86004	13,510	5,949	44%	820	6%														
1	5003	20,012	8,748	44%	1,937	10%														
1	2102	15,415	6,717	44%		0%														
2	80111	26,394	11,274	43%	8,981	34%														
3	81013	19,200	8,190	43%	2,808	15%														
2	80012	18,768	7,942	42%	1,076	6%														
2	5901	11,193	4,715	42%	619	6%														
3	83102	14,635	6,129	42%	929	6%														
2	80112	18,881	7,871	42%	2,533	13%														
3	81012	7,158	2,981	42%	192	3%														
3	84104	26,726	11,023	41%	10,931	41%														
3	85222	16,166	6,591	41%	1,670	10%														
3	87002	9,148	3,705	41%	1,860	20%														
2	83403	25,863	10,432	40%	6,562	25%														
2	81011	15,210	6,100	40%	1,564	10%														
3	82003	24,139	9,584	40%	1,310	5%														
1	6410	8,187	3,249	40%	362	4%														
1	5005	37,518	14,850	40%	6,626	18%														
2	61	3,186	1,259	40%	311	10%														
2	5804	8,000	3,152	39%	2,720	34%														
2	5602	58,217	22,919	39%	3,847	7%														
1	64	42,066	16,443	39%	3,607	9%														
2	5401	48,711	19,031	39%	4,849	10%														
2	80102	5,662	2,209	39%	4,800	85%														
3	83001	30,827	12,022	39%	3,412	11%														
1	5008	32,667	12,701	39%	4,541	14%														
2	5903	9,021	3,500	39%	844	9%														
3	86005	14,578	5,488	38%	1,296	9%														
1	5009	46,599	17,536	38%	8,368	18%														
1	5211	11,342	4,268	38%	597	5%														
1	5207	14,668	5,517	38%	556	4%														
3	83201	17,987	6,737	37%	3,931	22%														
1	5020	36,457	13,618	37%	2,479	7%														
1	5202	16,370	6,068	37%	313	2%														
2	83501	15,219	5,633	37%	4,363	29%														
2	85402	20,300	7,489	37%	8,504	42%														
1	5212	23,886	8,794	37%	7,105	30%														
3	83401	17,063	6,273	37%	1,384	8%														
3	85212	24,246	8,914	37%	3,975	16%														
1	5004	28,389	10,425	37%	2,400	8%														
2	5412	43,389	15,906	37%	7,482	17%														
1	6403	10,316	3,754	36%	652	6%														
2	5603	10,540	3,829	36%	365	3%														
1	17	49,106	17,642	36%	3,300	7%														
3	85101	32,469	11,603	36%	1,759	5%														
2	5801	34,360	12,264	36%	7,128	21%														
1	2002	14,497	5,165	36%	1,171	8%														

Zone	Subbasin	Feet Sewer Main	Feet Cleaned	% Cleaned	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	Feet CCTV	% CCTV	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
1	5608	27,363	9,728	36%											3,626	13%											
2	5601	14,195	5,025	35%											585	4%											
2	81001	24,815	8,771	35%											2,104	8%											
2	83402	7,513	2,651	35%											467	6%											
2	5612	52,366	18,331	35%											4,828	9%											
1	5002	22,976	7,976	35%											1,838	8%											
1	5001	75,112	26,024	35%											5,592	7%											
3	86001	11,021	3,785	34%											1,500	9%											
2	5403	16,451	5,496	33%											1,409	23%											
1	5210	6,039	1,987	33%											7,306	21%											
2	5405	34,864	11,454	33%											6,785	37%											
2	80103	18,282	5,998	33%											4,593	12%											
2	5605	39,752	12,880	32%											1,848	11%											
2	80011	17,510	5,413	31%											2,907	13%											
2	80001	22,854	7,034	31%											1,174	5%											
1	6411	24,779	7,524	30%												0%											
2	6001	3,224	975	30%											738	5%											
1	5611	15,201	4,595	30%											181	3%											
1	6407	5,605	1,689	30%											3,016	18%											
2	83521	16,894	5,087	30%											7,447	35%											
1	2001	21,544	6,380	30%											1,949	6%											
3	83202	30,185	8,936	30%											2,562	12%											
1	5022	20,516	6,032	29%											4,105	36%											
1	5011	11,341	3,324	29%											1,116	6%											
3	85013	19,605	5,717	29%											5,779	12%											
2	5604	47,522	13,761	29%											3,548	18%											
2	83511	19,432	5,582	29%											3,683	9%											
1	5610	40,349	11,539	29%											1,805	9%											
2	83512	20,855	5,904	28%											392	3%											
1	5012	12,353	3,455	28%											610	5%											
3	83012	11,382	3,147	28%											478	2%											
1	5201	30,845	8,509	28%											3,954	27%											
2	5415	14,677	3,972	27%											9,172	15%											
1	5205	62,862	16,717	27%											5,896	29%											
3	83301	20,395	5,417	27%											4,660	10%											
1	5208	5,347	1,396	26%												0%											
2	83404	45,083	11,672	26%											4,210	21%											
3	82001	8,354	2,119	25%											1,660	8%											
3	83302	20,314	5,132	25%											2,068	14%											
2	6202	21,250	5,316	25%											1,274	5%											
2	5406	14,628	3,625	25%											997	6%											
3	85301	24,097	5,792	24%											2,355	15%											
3	85011	16,302	3,896	24%											2,806	7%											
2	83303	16,121	3,849	24%											2,222	15%											
2	5413	41,334	9,840	24%											1,819	9%											
3	84105	14,372	3,279	23%											2,302	13%											
3	84001	21,006	4,753	23%												0%											
1	5209	17,856	4,033	23%												0%											

Hot-Spot Cleaning

Under the Stipulated Order, the Hot Spot list included all repeat SSO locations. Any SSO occurring in the same asset more than once within twelve months was added to the Hot Spot List for quarterly routine maintenance. After three (3) consecutive cleaning and inspections (9 months), a final CCTV inspection was conducted. Locations were removed from the Hot Spot List if CCTV inspection showed that the system was free of blockages and defects. In the event an asset was found to need major repairs, a capital improvement project (CIP) request was sent to Engineering. Maintenance crews continued to clean and inspect the compromised pipe segment to prevent future SSOs until that pipe segment had been replaced.

Between January 1, 2013 and June 30, 2014, the City's sewer crews cleaned 29,168 feet (5.5 miles) of sewer mains as part of the "Hot Spot" sewer 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 Hot Spot List containing 58 locations having more than one SSO in a three year period. Each of these Hot Spots were cleaned at least once in FY 2013-14.**

Table 5-1 contains the new Hot Spot List (as of July 1, 2014). Figure 5-2 contains a map of Hot Spot locations.

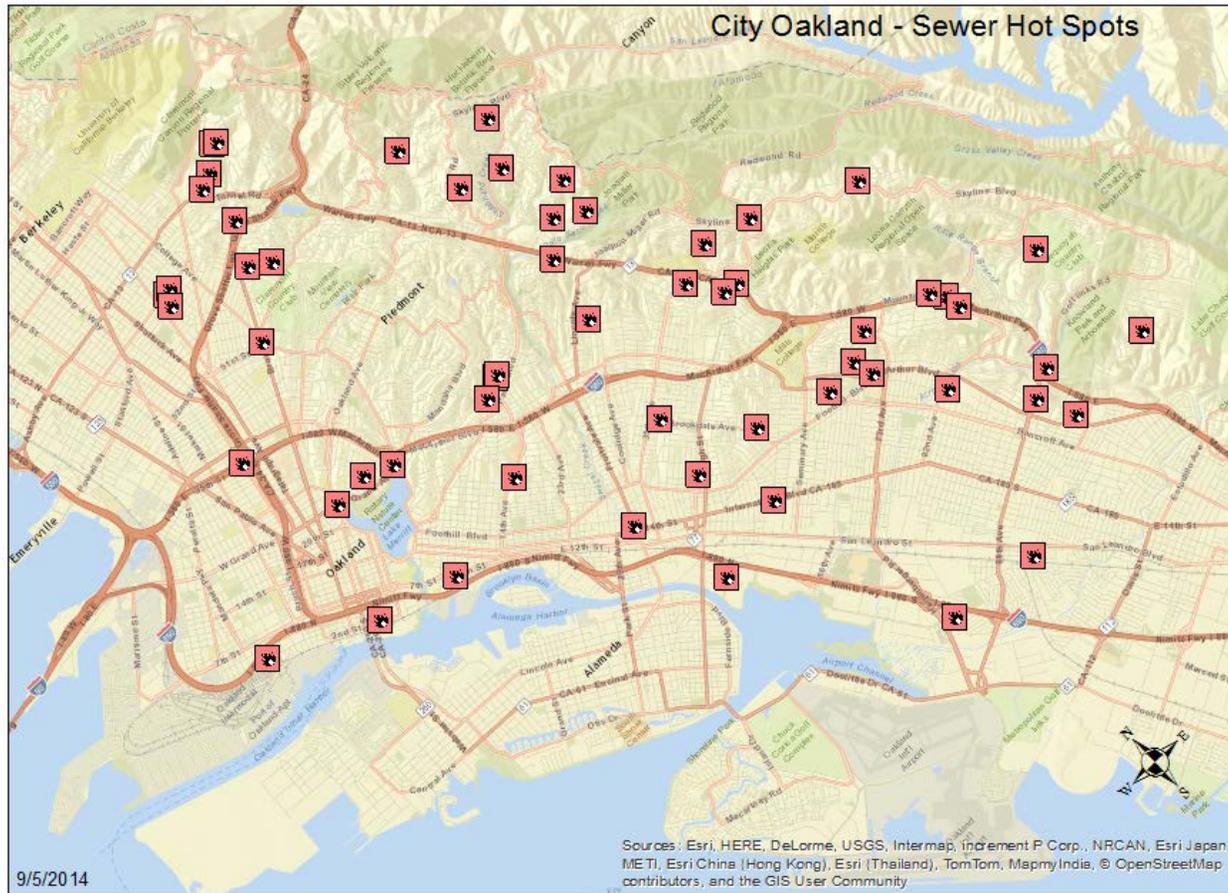
**Table 5-1
Hot Spot Locations+**

#	Location	Supervisor	Parent Work Order #	Footage	Zone #	Sub Basin #	Asset ID #s	Monthly Cleaning Cycle
1	36TH St & MLK Wy	David Amate	558726	769	1	5002	22607, 22606, 22605	3
2	7295 Saroni Drive	David Amate	558358	103	1	5612	26947	3
3	800 Creed Road	David Amate	558706	147	1	5612	17963, 17962	3
4	6636 Laird Ave	David Amate	558094	160	1	84104	8269	3
5	5200 Broadway	David Amate	558356	250	1	5005	25780	3
6	74 Beechwood Drive	David Amate	558220	161	1	5014	27692	3
7	600 Grand Ave	David Amate	558065	25	1	5409	31918	3
8	1125 Fleet Road	David Amate	557397	140	1	5416	17964	3
9	6929 Chabot Road	David Amate	557385	51	1	5019	30446	3
10	6330 Pinehaven	David Amate	557339	306	1	5021	28577	3
11	1957 Asilomar Drive	David Amate	557337	108	1	5610	24802, 24803, 24804	3
12	100 Gravatt Drive	David Amate	557328	165	1	17	30807	3
13	439 Alcatraz Ave	David Amate	557239	200	1	5009	30251	3
14	6245 Westover Drive	David Amate	556888	71	1	5610	25257	3
15	400 Alcatraz Ave	David Amate	556769	218	1	5009	30252	3
16	Shone & Mountain Blvd	Miguel Guzman	569796	232	3	85502	6843	6
17	33 Hegenberger Court	Miguel Guzman	569721	650	3	86002	749, 750, 751	6
18	11110 Kerrigan Drive	Miguel Guzman	558225	180	3	85232	2668	3
19	7018 Macarthur Blvd	Miguel Guzman	558090	164	3	84104	6566	3
20	4550 Sequoyah Road	Miguel Guzman	557402	155	3	85401	5740	3
21	4330 Mountain Blvd	Miguel Guzman	557391	150	3	83502	12162	3

22	8100 Fontaine Street	Miguel Guzman	557352	223	3	85502	6886	3
23	7844 Mountain Blvd	Miguel Guzman	557347	100	3	85502	6837	3
24	3914 Edgemoor Place	Miguel Guzman	557006	123	3	83403	8149	3
25	12980 Brookpark Road	Miguel Guzman	556757	140	3	83512	12496, 12507	3
26	4216 Carrington Street	Tony Jones	594700	1258	2	81011	7508, 9072	12
27	2600 Leimert Blvd	Tony Jones	567114	262	2	5606	20744, 20750, 20749	3
28	6000 Ascot Drive	Tony Jones	556780	159	2	5607	22039	3
29	6260 Castle Drive	Tony Jones	558365	50	2	5607	20992	3
30	9777 Golf Links Road	Tony Jones	558351	104	2	85301	3519	3
31	5707 Redwood Road	Tony Jones	558698	1077	2	83511	14477, 14291	3
32	4121 Laguna Ave	Tony Jones	557387	100	2	80113	16014	3
33	4300 Atlas	Tony Jones	556788	200	2	80012	14137	3
34	2633 Abbey Street	Tony Jones	575865	448	2	81201	10425	12
35	823 105TH Ave	Miguel Guzman	575904	1200	3	85101	1044, 881, 1054, 1056, 800	12
36	339 Union ST	David Amate	581142	10	1	6410	14668, 14651, 14670, 14671	6
37	2524 14th Ave	Tony Jones	598188	140	2	5802	13373, 13374, 13385	6
38	1479 Fruitvale Ave	Tony Jones	598332	300	2	5601	8772	6
39	374 Perkins ST	David Amate	598344	250	1	5407	14799, 19647, 19660	12
40	98th Ave & Burr ST	Miguel Guzman	598359	555	3	85206	2444, 2446, 2439	12
41	10306 Foothill Blvd	Miguel Guzman	598362	315	3	85221	1729, 1704	12
42	430 Lesser ST	Miguel Guzman	598468	525	3	81001	4696, 4697	12
43	6334 Camden ST	Miguel Guzman	598676	170	3	84103	6318	12
44	55th Ave & International Bl	Miguel Guzman	598648	325	3	82002	4847	12
45	2646 Cole ST	Miguel Guzman	598680	400	3	83202	7764, 7769	12
46	1092 Amito Ave	David Amate	598371	170	1	17	31394	12
47	6098 Rockridge Blvd	David Amate	598379	330	1	5014	29274, 29275	12
48	469 63rd ST	David Amate	598391	540	1	5009	29175	12

49	353 Crestmont	Tony Jones	598610	300	2	83503	14133	12
50	Grand Ave & Harrison ST	David Amate	598351	270	1	5205	19608	12
51	2926 Holyrood Dr	Tony Jones	598639	200	2	5607	23791, 31552	12
52	4515 Elinora Ave	Miguel Guzman	598000	400	3	83501	12124, 12125, 12126	12
53	740 E 8TH ST	Miguel Guzman	602889	1000	2	5402	11129,11095,11097, 11098, 11088	12
54	111 Alvarado Road	David Amate	608235	876	1	17	30725, 30724, 30723, 30722, 30721	12
55	1301 Holman Rd	Tony Jones	608015	754	2	5412	18026, 18027, 18026, 18028, 18030, 18025	12
56	25 Dartmouth	David Amate	602282	165	1	17	31394	12
57	8301 Iris	Miguel Guzman	608020	710	3	85011	4241, 4235, 4239	12
58	220 Alice Street	Miguel Guzman	615007	567	1	64	1250, 1249, 11019, 11020, 11021	6

Figure 5-2
Hot Spot Locations



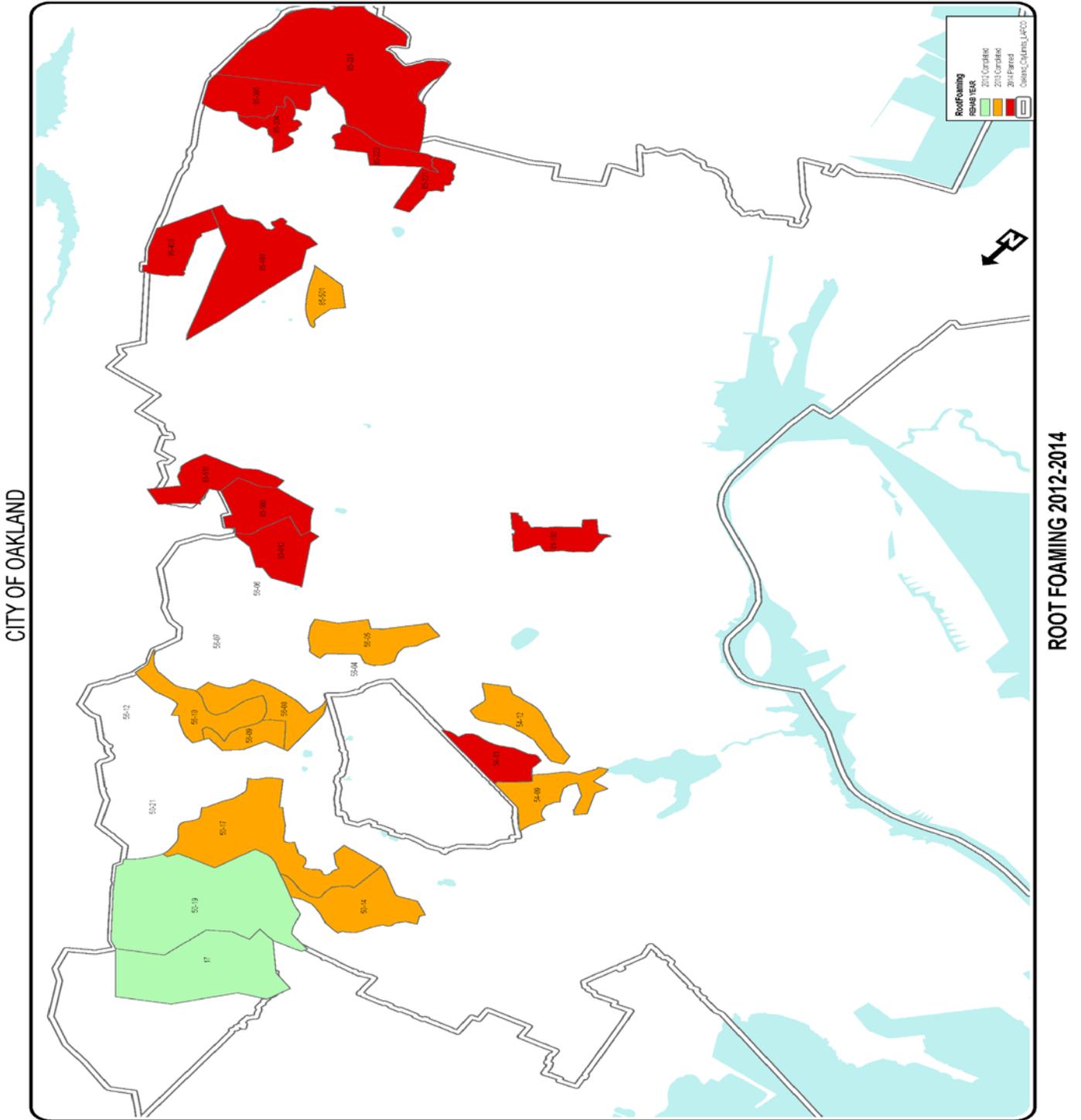
Root Control.

The City has used various root-foaming contractors to treat sewer pipes for root control. The root-foaming program uses a 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 our mains. This program reduces overflows and allows maintenance staff to perform other routine or proactive sewer maintenance activities to further reduce SSOs.

Although neither the Stipulated Order nor the City's approved Asset Management Implementation Plan specify miles of sewer mains to be root foamed, **the City root foamed 116,000 feet (22 miles) in 2012; none between January 1, 2013 and June 30, 2013; and 304,811 feet (57.7 miles) between July 1, 2013 and June 30, 2014. This exceeds the Consent Decree requirement to treat 264,000 feet (50 miles) of sewer main by June 30, 2014.**

Figure 5-3 contains a location map showing sub-basins root-foamed in 2012, 2013-14, and sub-basin root foaming planned for FY 2014-15.

Figure 5-3 Root Foaming Areas



Program Results

As shown in Figure 2-1, the number of Sanitary Sewer Overflows experienced by the City' sewer collection system continues to decrease. SSO's have been reduced from over 200 in FY 2007-08 to 95 in FY 2013-14. SSO reductions have occurred even before the more stringent requirements of the Consent Decree took effect. The City is in excellent position to attain still further reductions as the City moves toward the Consent Decree requirement to clean the entire collection system by June 30, 2018.

Section 6 Sewer Pipe and Maintenance Hole Inspection Program

According to the Stipulated Order, Section X, Paragraph 68B:

“Beginning in 2012, as part of the Annual Report provided for in Section XIII, the City of Oakland shall submit information to EPA summarizing inspection methods and findings of the sewer pipe and maintenance hole condition assessment conducted during the previous year and the estimated miles of sewer pipe and number of maintenance holes to be inspected during the current year, along with a description of how the findings are being used to prioritize rehabilitation projects.”

The inspection methods used in determining condition assessment of sewer pipes in the City of Oakland is based on the Pipeline Asset Certification Program (PACP) which allows City crews to gather condition assessment information to evaluate the general condition of pipe lines. City crews are fully trained and certified through National Association of Sewer Service Companies (NASSCO) under this program. Detailed inspection information is stored in the City’s Computerized Maintenance Management System (CMMS) which is used to report identified defects, determine the condition of pipes, and provide information or recommendations for corrective actions.

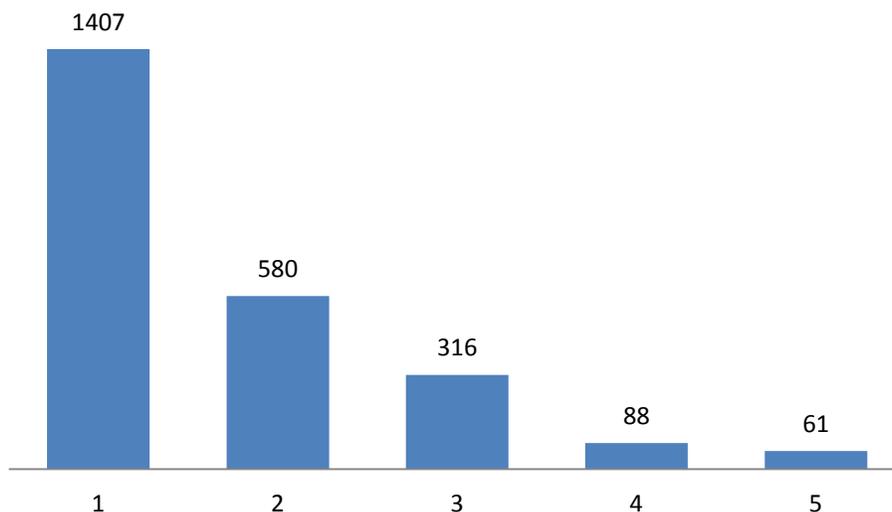
In conjunction with the pipeline inspection program training described above, City crews are also trained in manhole assessment. This program allows City crews to gather condition assessment information to evaluate the general condition of manholes.

Sewer Inspection

Between January 1, 2013 and June 30, 2014, City sewer crews inspected and rated 344,965 feet (65 miles) of sewer mains using CCTV inspection. This exceeds the 242,880 feet (46 miles) required to be inspected by June 30, 2014, by paragraph 83.c of the Consent Decree.

Results of the inspections are summarized in Figure 6-1.

**Figure 6-1
Sewer Main Condition Grades**



From a total of 2452 pipe segments inspected, 1407 segments were found to be in acceptable structural condition (Grade 1), 580 segments were found to be in minimal collapse risk condition (Grade 2), 316 segments were in collapse unlikely in near future condition (Grade 3), 88 segments were found to be in collapse likely in foreseeable future condition (Grade 4); and 61 segments were found to be in danger of imminent collapse (Grade 5).

Generally, all Grade 5 defects are treated as Acute Defects to be repaired within 12 months. Table 6-1 provides the status of Acute Defects. 61 Acute Defects were identified during the reporting period. Since six of the defects were duplicates, Table 6-1 contains the status of 55 Acute Defects.

The table shows that:

- 12 Acute Defects were corrected within 12 months of identification
- 5 Acute Defects were corrected, but took more than 12 months
- 2 Acute Defects have been scheduled for correction, but took more than 12 months
- 1 reported defect was a private lateral and was not an Acute Defect

It should be noted that these Acute Defects did not result in any Sanitary Sewer Overflows. The City is streamlining its processes to assure all future Acute Defects are corrected within 12 months of identification.

**Table 6-1
Acute Defects**

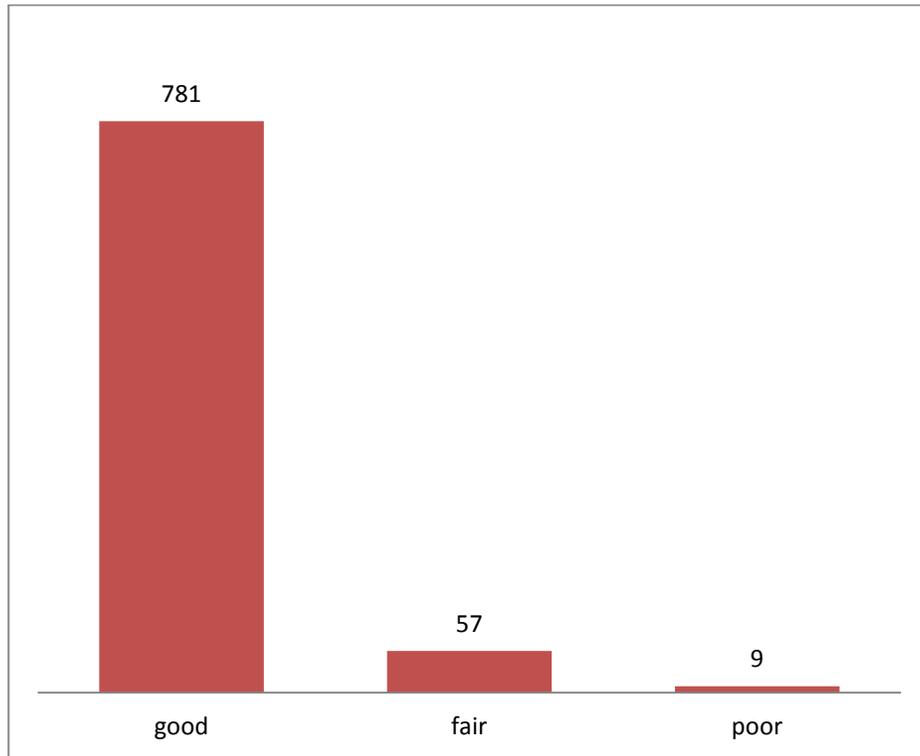
Oakland Public Works Department
Sewer Maintenance Division - Prepared by: Al Swithenbank
Category 5 Pipe Assessment Report (January 1, 2013 - June 30, 2014)

Date Identified	Bureau Responsible	Date Completed	Days Outstanding	Location	WO #	Pipe Size	Pipe Type	PACP Defect Code	Notes
1/23/13	BIO	2/27/13	Complete	GOLDEN GATE AV	504686	6.00	VCP	BVV, Broken Void Visible	Replaced 10' of 6" VCP Pipe.
	BIO	4/26/13	Complete	1507 WELLINGTON ST.	524978	6.00	VCP	D, Deformed	Pipe is Egg-Shaped. Repair Complete.
1/31/13	BIO	9/10/14	Complete	BROADWAY TER	625359, 625404	8.00	VCP	BVV, Broken Void Visible	Replaced 14' of 8" VCP Clay Pipe on City main sewer.
2/5/13	BIO	2/15/13	Complete	RAVENWOOD LN	608113	8.00	VCP	RBB, Roots Ball Barrel	Root barrel in pipe, cleaned by rodding crew.
2/6/13	BIO	2/6/13	Complete	BRIGHTON AV	617687	8.00	VCP	RBB, Roots Ball Barrel	Root barrel in pipe, cleaned by rodding crew
2/7/13	BEC	no repair	595	GALVIN ST.	n/a	8.00	PVC	TFI, Tap Factory Protruding	Sent to BEC for repair on 9/17/14
2/20/13	BIO	2/20/13	Complete	RAVENWOOD LN	511264	8.00	VCP	RBB, Roots Ball Barrel	Root barrel in pipe, cleaned by rodding crew.
3/29/13	BEC	6/30/14	Complete	LAGUNA AV	623948	8.00	VCP	TBI, Tap Break in-truding	BEC Repaired Pipe.
4/3/13	BIO	7/25/13	Complete	SUNNYSLOPE AV	542069	6.00	VCP	XP, Collapsed Pipe Sewer	Repaired by City crew.
4/5/13	BIO	no repair	538	SEMINARY AV	520684	8.00	VCP	BSV, Broken Soil Visible	Pipe scheduled for repair 9/29/2014
5/15/13	BIO	8/5/14	Complete	BAY PL	617724	8.00	VCP	RBB, Roots Ball Barrel	Root barrel in pipe, clean out by rodding crew.
7/22/13	BIO	7/22/13	Complete	MAGARTHUR BLVD	541309	8.00	VCP	DSZ, Deposits Settled	Pipe full of debris. Cleaned by Hydro Flushing Crew
7/22/13	BIO	9/22/14	Complete	WEST VIEW DR	540015	8.00	VCP	RBB, Roots Ball Barrel	Root barrel in pipe, cleaned by Hydro Flushing Crew.
7/31/13	BIO	6/24/14	Complete	16TH ST		8.00	VCP	B, Broken	Repaired 12' of 8" VCP pipe.
8/2/13	BIO	8/7/14	Complete	SCOTT ST	617752	6.00	VCP	OPM, Object Pipe Material	Obstruction in pipe removed by Rodding crew.
8/5/13	BIO	9/19/14	Complete	JOHN ST		8.00	VCP	BSV, Broken Soil Visible	Repaired by City Construction Crew.
8/7/13	BEC	n/a	n/a	LINDEN ST	504575	14.00	VCP	MYV, Miscellaneous	Dye test depression in street from private lateral; refer to BEC
8/22/13	BEC	3/15/14	Complete	TELEGRAPH AV	547658	8.00	VCP	XP, Collapsed Pipe Sewer	Repair made by BEC.
8/30/13	BEC	9/5/13	Complete	28TH ST E	547651	8.00	VCP	XP, Collapsed Pipe Sewer	BEC Repaired Pipe.
9/17/13	BIO	12/9/13	Complete	BROADWAY		8.00	VCP	DRZ, Deposits Settled	Heavy Debris Cleaned from line.
9/19/13		no repair	369	HELEN ST		8.00	VCP	BSV, Broken Soil Visible	
10/11/13		no repair	349	HANOVER AV		8.00	XXX	D, Deformed	
10/15/13		no repair	345	JAYNE AV		8.00	VCP	D, Deformed	
10/18/13		no repair	342	BROOKSIDE AV		6.00	PE	D, Deformed	
11/21/13		no repair	308	SANTA CLARA AV		8.00	PE		
11/21/13		no repair	308	SANTA CLARA AV		8.00	PE		
12/6/13		no repair	293	MONAN ST		8.00	PE		
12/6/13		no repair	293	BROADWAY		8.00	PE		
12/16/13		no repair	283	MANCHESTER DR		6.00	PE		
12/19/13		no repair	280	EL PASEO DR		8.00	PE		
12/29/13		no repair	270	OCEAN VIEW DR		6.00	VCP		
1/6/14		no repair	262	WESTOVER DR		6.00	PE		
1/10/14		no repair	258	CALIFORNIA ST		8.00	VCP		
1/10/14		no repair	258	SEQUOYAH RD		8.00	PE		
1/15/14		no repair	253	JULIE ANN WY		8.00	VCP		
1/21/14		no repair	247	GOLDEN GATE AV		6.00	VCP		
1/27/14		no repair	241	GLEN MANOR PL		8.00	PE		
1/27/14		no repair	241	GLEN MANOR PL		8.00	PE		
1/27/14		no repair	241	GLEN MANOR PL		8.00	PE		
1/30/14		no repair	238	TUNNEL RD		8.00	CMP		
1/31/14		no repair	237	BRISTOL DR		8.00	VCP		
2/10/14		no repair	227	23RD STE		8.00	VCP		
2/11/14		no repair	226	100TH AVE		-	VCP		
2/18/14		no repair	219	BROADWAY		8.00	VCP		
2/19/14		no repair	218	67TH AVE		-	CAS		
3/6/14		no repair	203	STERLING DR		8.00	VCP		
3/21/14		no repair	188	TRESTLE GLEN RD		8.00	VCP		
4/24/14		no repair	154	DAKPORT ST		10.00	XXX		
4/30/14		no repair	148	FOOTHILL BLVD		6.00	VCP		

Maintenance Hole Inspection

Between January 1, 2013 and June 30, 2014, City crews inspected and rated 918 maintenance holes. 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 6-2 below.

Figure 6-2
Maintenance Hole Inspection Results



From a total of 918 maintenance holes inspected, 781 were found to be in good condition, 57 were found to be in fair condition, and 9 were in poor condition. Table 6-2 contains a list of poor maintenance holes.

**Table 6-2
Maintenance Holes in Poor Condition**

ID #	W/O #	Inspection Type	Location	Condition	Depth
3291	576316	v2 Maintenance Hole Inspection	GOLDEN GATE & GOLDEN GATE WY	Poor	4
3716	601643	v2 Maintenance Hole Inspection	Brunell & Crestmont Dr	Poor	6.5ft
2513	515794	v2 Maintenance Hole Inspection	2439 Harrington	Poor	6
1962	502023	v2 Maintenance Hole Inspection	2732 Inyo	Poor	8
3288	573368	v2 Maintenance Hole Inspection	BROADWAY & PATTON ST	Poor	7.5
2886	547662	v2 Maintenance Hole Inspection	5100 TELEGRAPH AV	Poor	11
3953	608515	v2 Maintenance Hole Inspection	51st ave and E 12th st	Poor	14
2917	548716	v2 Maintenance Hole Inspection	11200 GLEN MANOR PL	Poor	11
2505	515408	v2 Maintenance Hole Inspection	542 WELDON AV	Poor	5

All maintenance holes found to be in poor condition have been scheduled for repair in FY 2014-15.

FY 2014-15 Inspection Plan

In compliance with paragraph 92.a. of the new Consent Decree, the City will increase the amount of sewer mains inspected to a cumulative total of 2,640,000 feet (500 miles) by June 30, 2015. When the City inspects a sewer main, it will also inspect all maintenance holes associated with that sewer main.

Section 7 Asset Management Implementation Program

According to the Stipulated Order, Section X, Paragraph 60C:

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

To avoid duplication of effort and conflicting provisions in parallel reports, the City chose to combine the EPA required Asset Management Implementation Plan (AMIP) with the State required Sanitary Sewer Management Plan (SSMP).

The City submitted its AMIP/SSMP to EPA initially on October 19, 2011, and in response to comments received on February 6, 2012, revised and re-submitted it to EPA for approval on May 4, 2012. A second set of comments was received from EPA on November 26, 2012. In response to those comments, the City issued an addendum to the AMIP/SSMP and re-submitted it to EPA on December 11, 2012. On December 28, 2012, EPA issued a conditional approval to the City's AMIP/SSMP.

Consent Decree paragraph 81 states:

“The City shall revise its AMIP as necessary, so that it is consistent with the requirements of this Section, and to ensure that Repair and Rehabilitation projects continue to be adequately identified and planned for.”

The City is currently revising its AMIP/SSMP at the request of the Regional Water Board and to comply with the requirements of the new Consent Decree. The revised AMIP/SSMP will be submitted to EPA for approval in the near future. Once approval is received, it will be presented to the City Council for a public hearing and will then be posted on the City's web site.

Section 8 Pump Station Improvement Program Progress Report

According to the Stipulated Order, Section X, Paragraph 65B:

“Beginning in 2012, as part of the Annual Report provided for in Section XIII, the City of Oakland shall submit information to EPA documenting pump station and force main renovations and upgrades during the previous year, and describing projects to be completed in the next year.”
and

“The schedule and financial plan shall be sufficient to ensure completion of the upgrade by October 15, 2022.”

The city's collection system has seven (7) small pump stations as listed below:

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

The Tidewater Pump Station was completely reconstructed in 2012. As part of this reconstruction, all civil, mechanical, and electrical components of the pump station were replaced.

Improvements to the City's remaining pump stations were included in the Fiscal Year 2012/13 budget. The City is currently in contract with a consultant to design and prepare construction plans and specifications for the needed improvements. It is anticipated that design work will be completed within one year. Construction is scheduled to begin in summer 2015.

The City is significantly ahead of schedule with its Pump Station Improvement Program, with completion planned for 2017, five years ahead of schedule.

Section 9. Deliverables

The only Deliverable required during this eighteen month reporting period was submittal of an Annual Report for January 1, 2013 – June 30, 2014 (18 months) by September 30, 2014. The Deliverable was submitted ahead of schedule

Section 10. Known Noncompliance with Stipulated Order

Although the City continues to reduce the number of Sanitary Sewer Overflows, and is well ahead of schedule in sewer rehabilitation, sewer cleaning, root control, CCTV inspection, and pump station rehabilitation, the City needs to improve its processing of Acute Defects and building permits/compliance certificates. The City has increased its sewer service budget, staffing, and equipment for FY 2014-15 and intends to continue to meet its obligations under the Consent Decree.

Section 11. Recommended Changes to Required Work

This is the last Annual Report required by the Stipulated Order. The Stipulated Order will be terminated once the Consent Decree has been finalized. Future Annual Reports will be on a Fiscal Year basis (July 1st – June 30th) to be submitted by September 30th of each year. The City of Oakland has no recommendations for changes to the Stipulated Order.

Attachment A

Port of Oakland
Annual Report for Year 2013-14



Port of Oakland
Sanitary Sewer Collection System
Combined Annual Report

August 2014

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Section 4.	2013-14 Annual Report – Sanitary Sewer Overflow
Section 5.	2013-14 Annual Report – Sewer Repair, Rehabilitation and Replacement Program
Section 6.	2013-14 Annual Report – Asset Management Implementation Program
Section 7.	2013-14 Annual Report – Pump Station Improvement Program

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, triturator, and other sewer appurtenances that delivers sewage to the City’s wastewater collection system and then to East Bay Municipal Utility District (“EBMUD”) wastewater interceptors and treatment facilities.

The 2013-14 Sanitary Sewer Collection Combined Annual Report was prepared at the request of the City of Oakland Public Works. The following sections in this report present information pertaining to the following sanitary sewer programs for the period from January 1, 2013 to June 30, 2014:

- Inflow Identification and Reduction Program
- Sewer Inspection and Cleaning Program
- Sanitary Sewer Overflow
- Sewer Repair, Rehabilitation and Replacement Program
- Asset Management Implementation Program
- Pump Station Improvement Program

Section 2: Inflow Identification and Reduction Program

The Port completed a two-year sub-basin wet weather flow monitoring and Inflow/Infiltration (I/I) assessment in 2011 and dye testing / smoke testing in 2012 for most of the Port’s areas. In 2013 and for the first six months of 2014, the Port has worked with its tenants and customers to repair and replace several cleanouts, manholes, and sewer laterals to eliminate the sources of storm water cross-connections identified during the smoke testing performed in 2012. For example, all sewer laterals from Hangar 5 (L-510) and the ramp area around buildings L-510 and L-550 were replaced, tested, and received a PASS receipt from EBMUD. In addition, sewer laterals from Hangar 9 (L-820) and building L-812 were also replaced.

Section 3. Sewer Inspection and Cleaning Program

The Port utilized outside contractors to inspect and clean sanitary sewer lines for both Aviation and Maritime collection system. For the reporting period, approximately one and a half miles of sewer lines were inspected and jetted to remove grease buildups and to prevent potential blockages.

Section 4. Sanitary Sewer Overflow (SSO)

Number and Size of SSOs

For the reporting period from January 1, 2013 to June 30, 2014, the Port's sanitary sewer collection system had two (2) SSO events, all of which were reported to California Integrated Water Quality System (CIWQS). Both SSOs were associated with construction of a new sewer lift station at the former Oakland Army Base and occurred during dry weather conditions. 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	0	0%
From 100 to 999	1	50%
From 10 to 99	1	50%
Less than 10	0	0%
Total	2	100%

The total volume released is estimated to be approximately 366 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	0	0%
Total volume reaching waters of the State	336	92%
Total volume not contained but not reaching waters of the State (everything else)	30	8%
Total	366	100%

At most spill locations, absorbents were used to contain the SSOs and the site was vacuumed, cleaned, and then disinfected. This report does not include 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.

Cause of SSOs

The predominant causes of SSOs during the reporting period were due to infrastructure failures associated with pump stations. 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	0	0
Inflow & Infiltration	0	0
Electrical Power Failure	0	0
Flow Capacity Deficiency	0	0
Natural Disaster	0	0
Bypass	0	0
Construction Damage	2	100%
Cause Unknown	0	0
Total	2	100%

Location of SSOs and Measures to Prevent Future Spills

SSO Event ID	Location	Causes	Measures to Prevent Future SSO
804793	Former Oakland Army Base, 19 th Street, between warehouses R805 and R806	Contractor failed to monitor and pump down sewage during construction of a new sewer lift station	Notify contractor of contract requirements
806195	-- Same location --	-- Same cause --	Issue warning letter to contractor

SSO Trends

There was no SSO in calendar year 2013 as opposed to five SSOs in 2012. For the first six months of 2014, the two SSOs could have been prevented if the contractor had followed a pumping bypass plan.

Section 5. Sewer Repair, Rehabilitation and Replacement Program

2013-14 Sanitary Sewer Pipeline Projects Completed

- Rehabilitation of approximately 900 feet of 10-inch sewer line at the Airport daily parking lot;
- Replacement of an existing 3-inch diameter drain line with a 4 inch diameter cast iron pipe in Terminal 1;
- Other spot repairs and sewer lateral replacements at the Airport.

2014-15 Sanitary Sewer Pipeline Projects Proposed

- Continue sewer lateral repair and replacements in conjunction with tenant improvements;
- 7th Street and Ferry Street sanitary sewer rehabilitation and replacement.

Section 6. Asset Management Implementation Program

The Port has begun the implementation of the Asset Management Implementation Plan (AMIP) since 2012. This AMIP included the Port's sewer inspection and cleaning program and the condition-based repair, rehabilitation and replacement program.

Section 7. Pump Station Improvement Program

2013-14 Lift Station Improvement Projects Completed

- Complete rehabilitation of LS D06P. Scope of work included replacement of pumping and control equipments and installation of alarm monitoring system;
- LS AP01P: Drywell wall repair and improvement re-design;
- LS AP05P (FedEx): Rebuilt completely;
- Other improvements including installation of new pumps at LS R18P and R36P; new alarm monitoring system at LS C07P, C08P, and D09P; installation of security fencing at LS C08P and R63P.

2014-15 Lift Station Improvement Projects Proposed

- Continue with the condition assessment and performance evaluation of nine (9) sanitary sewer lift and ejector stations at the Airport and program funding for rehabilitation and replacement.