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WEST BAY SANITARY DISTRICT

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Phil Scott
District Manager

In reply, please refer to our

File No. 1580.1

April 5, 2016

Claudia Villacorta
California Regional Water Quality Control Board, San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Annual Report of Sanitary Sewer Overflows and SSMP Review Calendar Year 2015

Dear Ms. Villacorta,

The purpose of this document is to report the Sanitary Sewer Overflows (SSOs) that occurred in the West Bay Sanitary District's sanitary sewer system during the period January 1, 2015 through December 31, 2015. This report is submitted pursuant to the requirements of Section D-Provisions of the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems and includes the SSO classifications from the revised MRP that went into effect September 9, 2013.

The West Bay Sanitary District provides wastewater collection and transport services to approximately 55,000 residential, commercial and industrial establishments in a 13 square mile area in southeast San Mateo County. The District maintains approximately 210 miles of sanitary sewer pipeline varying in size from 2 inch to 54 inch and 13 raw sewage lift stations (Includes the Flow Equalization Facility). The service area includes the City of Menlo Park and portions of Redwood City, Atherton, Portola Valley, Woodside, East Palo Alto and unincorporated areas of San Mateo and Santa Clara Counties.

SSO's

The total number of SSOs for the reporting period was 5. All of the SSOs were associated with gravity sewers. SSOs are summarized by size in Table 1.

Table 1. Number of SSOs

Size of SSO (gallons)	Number	Percent of Total
Greater than or equal to 1,000	*1	20%
From 100 to 999	2	40%
From 10 to 99	2	40%
Less than 10 [can include in line above]		
[Public portion of lateral (if applicable)]	**N/A**	**N/A**
Total	**5**	**100 %**

*** Category Type-II SSO**

The total volume released is estimated to be 1822 gallons. The volume of spills contained and returned to the sewer system, as well as the volume reaching waters of the State are shown in Table 2.

Table 2. Volume of SSOs

	Volume (gallons)	Percent of Total
Total volume contained and returned to sewer system for treatment	1765	97%
Total volume reaching waters of the State	0	0%
Total volume not contained but not reaching waters of the State (everything else)	57	3%
Total	**1822**	**100%**

One reported SSO exceeded 1,000 gallons in volume and was reported as a Category Type-IISSO. The District had 1-Category 2 and 3-Category 3 type SSO's. Two of the reported SSO's were due to non-dispersible wipes, and one due to a mismarked USA by a Cal-Water. Outreach materials were distributed in areas where SSO's were caused by the illegal discharge of non-flushable wipes, informing property owners of "What not to Flush".

This report does not include SSOs that occurred within the West Bay Sanitary District 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 the sewer service laterals, up to the connection to the public sewer main.

The predominant cause of SSOs during the period of this report was 3-Other blockages. The distribution of SSOs by cause is shown on Table 3.

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

The reported SSOs for this reporting period occurred in tree lined residential neighborhoods. Those sections of pipeline where overflows have occurred are CCTV'd within two working days, and fully assessed within 7-days of the SSO to determine the pipeline's condition. This measure ensures that maintenance cleaning processes are effective or if alternative measures should be implemented to prevent a repeat SSO. Those sections of mainlines (where an SSO has occurred) that have been repaired with a pipe patch or point repair for the line segment, with no other deformities, shall go to an adjusted preventative maintenance schedule based on pipe diameter (Noted below). However, those sections of mainline 8" inches and less shall remain on a 12 month preventative maintenance schedule.

Pipe Size	Cleaning Schedule
<10"	12 Month Cleaning Interval
12" to 21"	36 Month Cleaning Interval
24" to 54"	60 Month Cleaning Interval

Those mainline segments of the collection system experiencing an SSO shall have an assessment completed within 7 days and, mainline segments that do not require a repair shall be placed on the High Frequency (HF) cleaning schedule. If the section of mainline that overflowed requires a minor repair by either pipe patch or open trench repair the District goal is to complete the work within 30 days or place it on a future CIP schedule.

The status of the 5 spills for 2015 are as follows; 1-required a Point Repair, 2- due to non-flushable wipes-Outreach material distributed, 1-was due to mismarked USA by water purveyor, and 1-added to the HF cleaning Schedule.

Root Control

Tree root related blockages are a significant area of concern related to future SSOs. In 2010, the District implemented a Root Foaming program to further address areas with known root blockages in three phases. Approximately 77,000 linear feet of sewer line was treated at that time (Phase-1); in 2011 the District treated another 108,706 linear feet (Phase-2) and in 2012 the District treated approximately 110,000 linear feet (Phase-3) and re-treated the Phase 1 area. In 2013, Phase 2 was retreated along with some miscellaneous pipe segments referred to as Phase 1 for a total of 105,000 linear feet in Phase 1. In 2014 the District implemented Phase-3 and treated 145,000 linear feet. This has resulted in a significant reduction of SSO's in the application areas. In 2015 the District treated 155,400 linear feet and one root related blockage. With the implementation of the Root Foaming Program in 2010, the District has had a 98% reduction in root related overflows during this six year period.

FOG

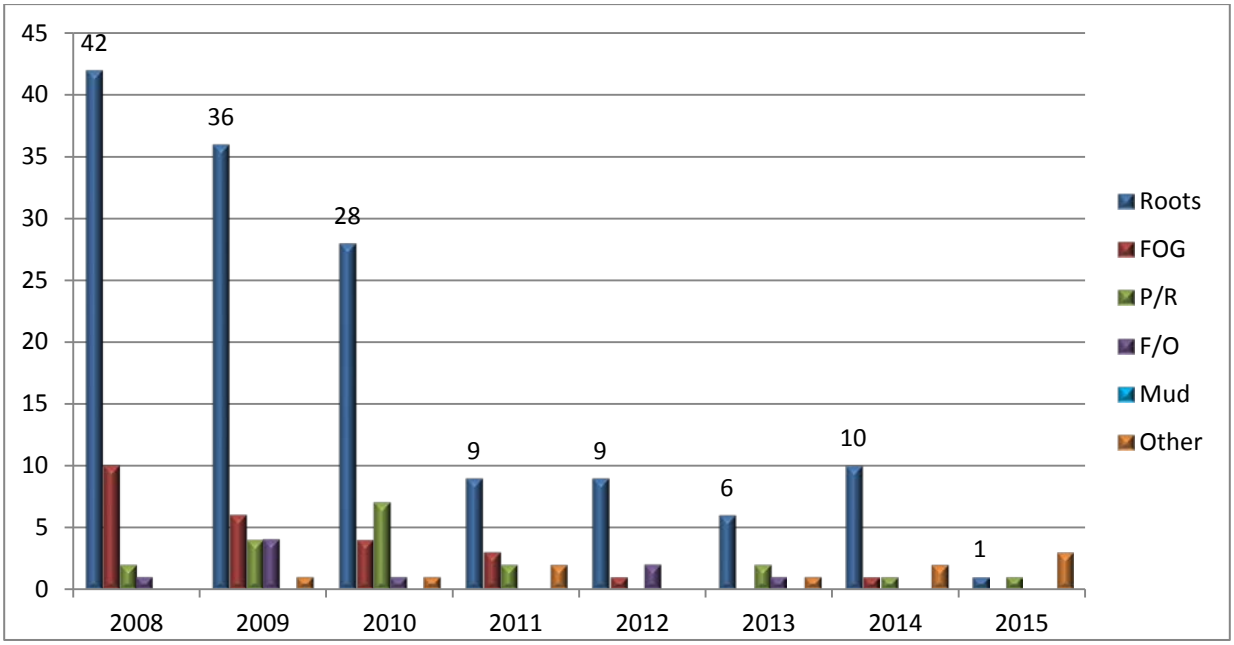
There have been no grease related blockages from food preparation (commercial) facilities in the last several years. This is due in large part to Preventive Maintenance, Source Control activities, cooperation from the San Mateo County Environmental Health Department and the City of Menlo Park's Code Enforcement Division. Also, the District did not have any residential grease-related overflows in 2015 and continues to provide outreach material to residents where grease related observations are reported and continues to provide outreach materials my mailers and on the District's website.

Blockage by Debris Type

The chart below lists blockages by type of debris declining prior to 2015.

	Roots	FOG	P/R	F/O	Mud	Other	SSO TTL	% Decline
2008	42	10	2	1	0	0	55	7%
2009	36	6	4	4	0	1	51	20%
2010	28	4	7	1	0	1	41	61%
2011	9	3	2	0	0	2	16	25%
2012	9	1	0	2	0	0	12	25%
2013	6	0	2	1	0	1	10	17%
2014	10	1	1	0	0	2	14	
2015	1	0	1	0	0	3	5	64%

The graph below shows overall debris type SSO trends declining from 2008 through 2015.



Over the last seven years the number of SSO's have noticeably declined, from 2009 to 2010 an SSO reduction of 20 percent, 2010 to 2011 61%, 2011 to 2012 25% and 2012 to 2013 17%, 2013 to 2014 increased by 2-SSO's or 17%, 2014 to 2015 decreased by 64%.

The Root Foaming Program implemented in 2010 shows a drastic reduction in the number of root related blockages in 2015 at 98%.

Staff is closely reviewing the SSMP and associated practices to continue a downward trend in future years.

SMART Covers

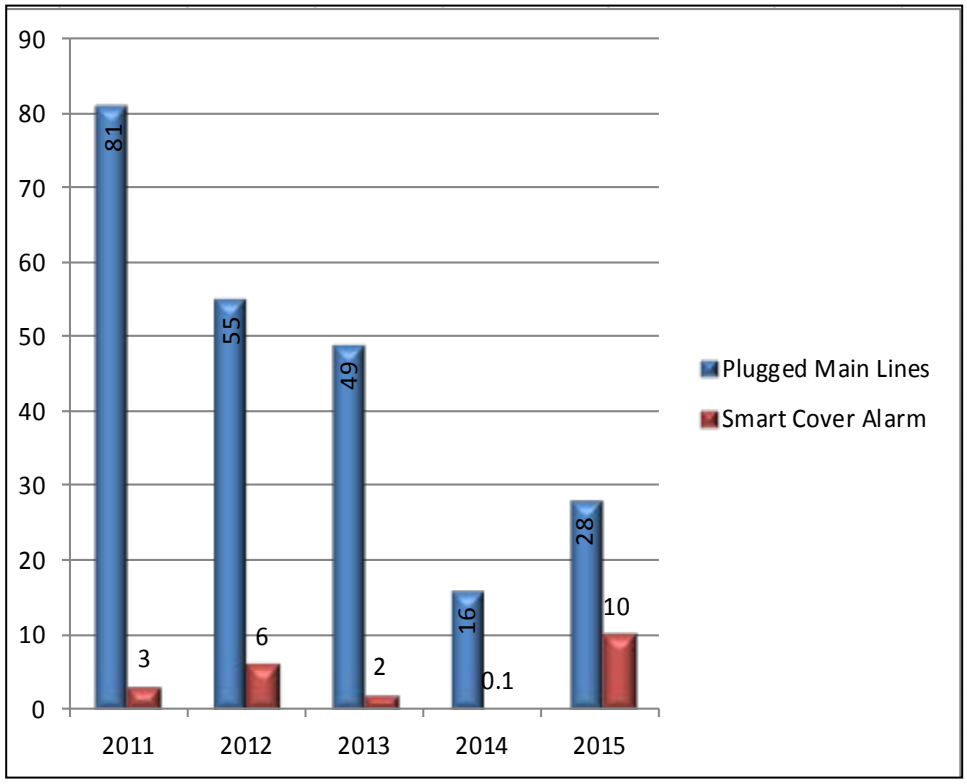
During fiscal year 2015/2016, the District added two more Smart Covers to its inventory for a total of 31-Smart Covers to monitor flow levels within the collection system.

These Smart Covers have an electronics package attached to the underside of a normal manhole cover. When sewage levels rise beyond normal levels or if the manhole cover is opened, alarms are generated and are sent to WBSD personnel's cell phones and or pagers (typically within 30 seconds). In all instances of alarm, employees were able to respond quickly and avert a potential spill. These units are located in easements and in sections of mainline which could impact waters of the State.

To date these devices have prevented twenty-six potential sanitary sewer overflows. Due to the dramatic decrease in the number of SSO's over the past two years, the implementation of a formal "Root Control Foaming" program, the continued installation of Smart Cover Monitoring equipment and the revamping of the Maintenance Schedule programs, the District has observed only 3-SSO's in 5 years in the Ladera Neighborhood which typically had 5 to 10 SSO's per year.

The District plans to purchase 2 more Smart Cover units to install in other areas in fiscal 2016/2017.

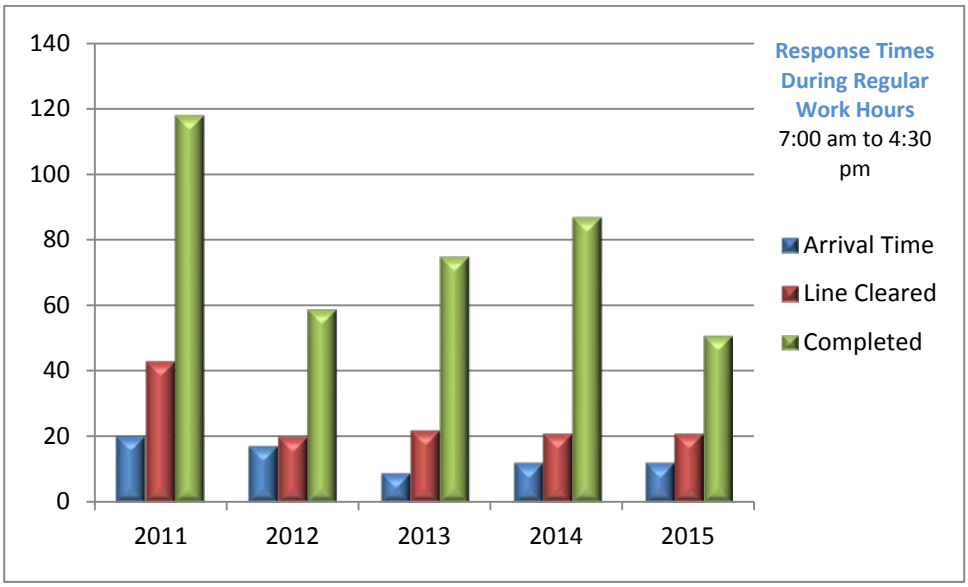
The chart below shows the number of overflows prevented with the implementation of the SMART covers vs. Staff finding manholes holding during scheduled and un-scheduled maintenance operations.



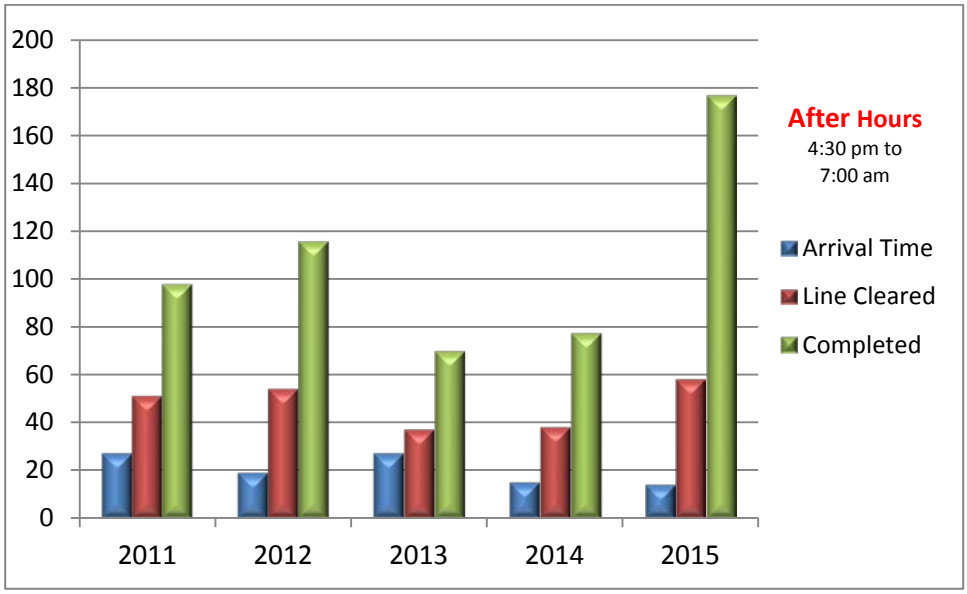
Response Time

The District's response time to after hour SSO's in calendar year 2010 was approximately 50 minutes, the On-call employee would get the call , drive directly to work, pick up the emergency response vehicle and drive to the site. This process did not leave enough time to call in extra resources and perform reporting in a timely manner for mitigating and reporting a Category-1 SSO. In 2011, the District Manager implemented policy for the On-call person to take the Emergency Response Vehicle home and drive directly to the site when called out. This new procedure reduced the after hour call out response time by 54% when compared with 2010 response times. The goal of the District is to be onsite within 45 minutes of being notified of an SSO (Timeframes are in minutes).

The average response times during normal work hours for 2015 were: Arrival 12-minutes, Line Cleared 21-minutes and the job completed (including clean up) within 51-minutes.



The average response times for after-hours service were: Arrival 14 minutes, line cleared 58 minutes and the job completed in 177 minutes.



Force Main Inspection

The District has 13-Raw Sewage Pump Stations; this includes our Flow Equalization Facility (FEF). While voluntarily compiling the data for the State Water Board's Pre-Inspection Questionnaire (as recommended during our 5-year audit in 2012) we confirmed we needed to implement a Force Main Inspection Program. Generally two pump stations and their force mains will be inspected on an annual basis; the type of inspection may vary from station to station.

In 2012 the Corte Madera Pump Station Force Main was inspected and replaced with new larger 10" HDPE line and By-pass valves.

In 2013 the 30" Flow Equalization Pump Station Force Main was inspected and appears in good condition.

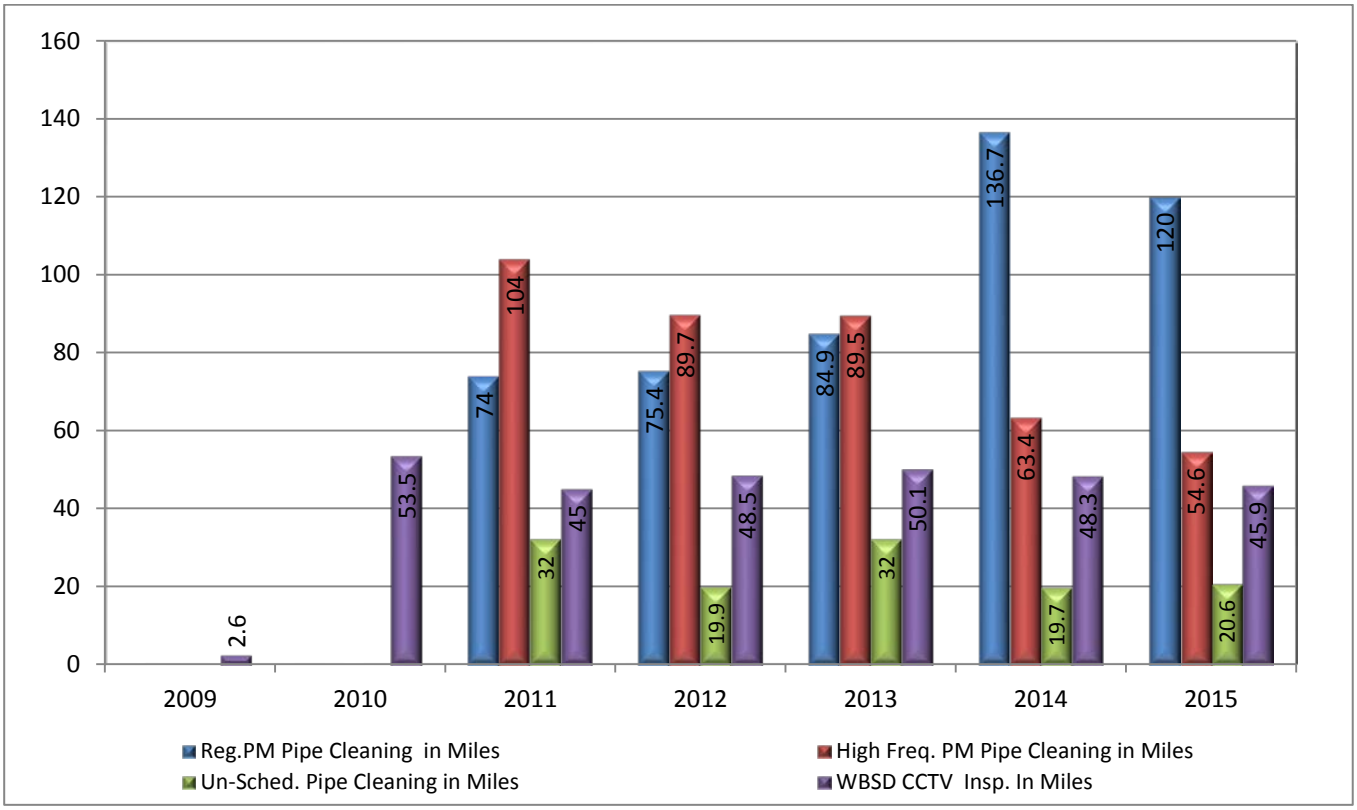
The District inspected the Willow Road Pump Station Force Main in FY14/15; in FY 15/16 the District replaced 1,300 linear Feet of force main on the Sausal Vista Lift Station.

O & M Statistics

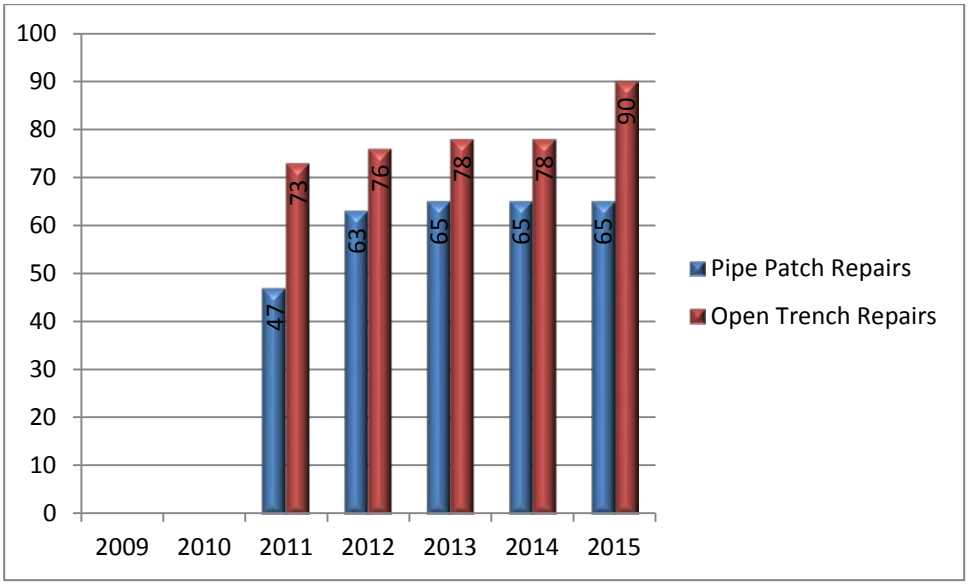
Additional information identified in the 5-year audit was to include the Annual Operation and Maintenance Statistics performed during the year and to log the data in miles completed within the Annual SSO Report and Audit.

The Annual Operations and Maintenance (O & M) statistics are listed in separate categories, Pipe Maintenance (includes CCTV operations), Pipe Repair and Pump Station Maintenance.

The chart below displays O & M PM line cleaning, High Frequency line cleaning and CCTV operations in miles of pipe. We expect that as we continue to repair and replace pipeline that the High Frequency Line Cleaning should trend downward each year.



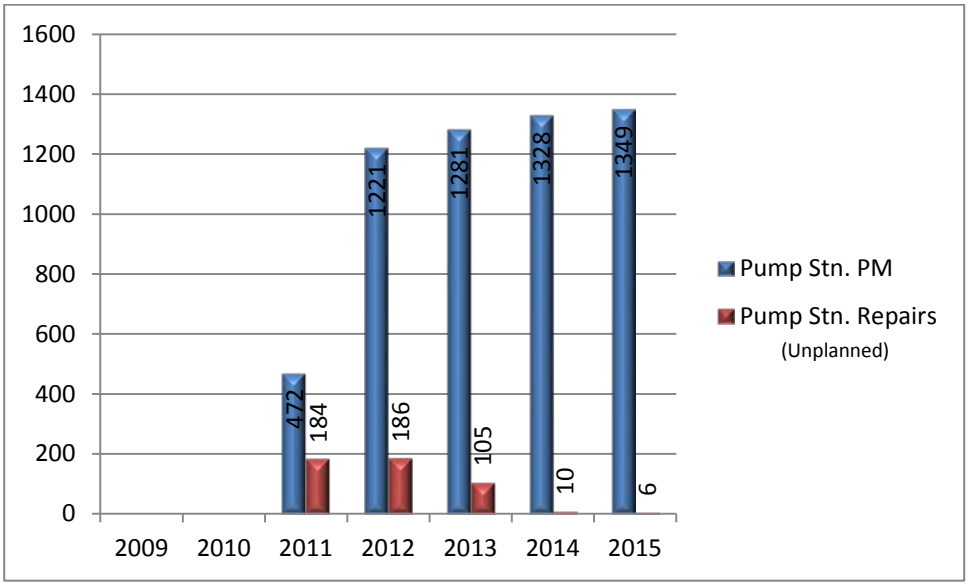
In 2011 the District implemented a non-intrusive pipeline repair program or “Pipe Patch Program”
The number of rehabilitation repairs for open trench and pipe patch repairs are shown in the chart below.



Pump Station Maintenance

The District maintains; 13-Raw Sewage Pump Stations, 20-Septic Tank Effluent Pump stations (STEP) with 2 more -in the completion stages as of the writing of this report and 44-Grinder Pump Stations. The STEP and Grinder Stations are located in the District’s On-Site Wastewater Disposal Zone referred to as the “Zone” located in the Portola Valley; the Zone was created in 1987 to provide residences with an alternative means to sewer their property when their existing septic system(s) failed. The RWQCB requires the District maintain these systems.

The number of PM’s performed on the 13-Raw Sewage pumping facilities is shown in the chart below.
The goal is to have as few unplanned pump station repairs as possible and perform all maintenance by “predictive or preventative” maintenance measures.



Annual SSMP Review

The 2015 SSMP review had minor language changes, inserted a Revision Log, date changes and was presented to and approved by the Board of Directors in August 26, 2015.

I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, 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 violations.

Very truly yours,

West Bay Sanitary District

Phil Scott
District Manager