



Scenic Pacifica
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CITY OF PACIFICA

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3/13/18

Bruce H. Wolfe, Executive Officer
California Regional Water Quality Control Board, San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
ATTN: Mary Boyd

Dear Mr. Wolfe,

Subject: SSMP Audit and Annual Report of Sanitary Sewer System Overflows for Calendar Year 2017

The purpose of this letter is to report on the calendar year 2017 Sanitary Sewer System Overflows (SSOs) that occurred in the City of Pacifica sanitary sewer system during the period January 1, 2017 through December 31, 2017 and provide an audit of the Sewer System Management Plan (SSMP) for the same period. This report is submitted pursuant to the requirements included in the San Francisco Bay Regional Water Quality Control Board Letter, New Requirements for Reporting Sanitary Sewer Overflows, dated November 15, 2004 and the Statewide General WDR dated May 2, 2006.

Number and Size of SSOs

The total number of SSOs for the reporting period was 6. 5 SSOs were related to wet-weather and at the same location during this period. 1 SSO was caused by root intrusion. The sizes of SSOs are summarized as shown on Table 1.

Table 1. Number of SSOs

Size of SSO (gallons)	Number	Percent of Total by Number
Greater than or equal to 1,000	5	83.33%
From 100 to 999	1	16.67%
From 10 to 99	0	0%
Less than 10 [can include in line above]	0	0%
Total	6	100%

The volume of spills contained and returned to the sanitary 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 by Volume
Total volume contained and returned to sewer system for treatment	550	.02%
Total volume reaching waters of the State	272,525	99.8%
Total volume not contained but not reaching waters of the State (everything else)		
Total	273,075	100%

2017 seen an increase in total SSOs. 5 SSOs were storm related and no sewage was recoverable. 1 SSO was recovered completely at 550 gallons.

This report does not include SSOs that occurred from private sewer service laterals within the City of Pacifica jurisdiction that were caused by conditions in privately-owned laterals or on private property. On January 1, 2012 the City Council passed a new ordinance that, among other provisions, removed any responsibility for the maintenance or repairs of any part of a sewer service lateral regardless of the location of a cleanout. The property owners are responsible for the condition and the operation of the sewer service lateral from the structure to the sewer main line in the public right-of-way.

Cause of SSOs

The following table presents the causes of the SSOs during the period of this report and of the previous five years. The distribution of SSOs by cause is shown on Table 3.

Table 3. Causes of SSOs

Year	Total SSOs	Roots	F.O.G.	Debris	Vandalism	Pipe Failure	Capacity	Pump Station Failure	Other
2012	5	5							
2013	7	2		4		1			
2014	9	3	1	1			4		
2015	1	1							
2016	5						5		
2017	6	1					5		

Location of SSOs

The 5 capacity related SSOs that occurred in the City of Pacifica were located within the 400-500 Block of Linda Mar Blvd. These manholes are the lowest manhole elevation locations in the Linda Mar Valley. The root intrusion SSO was located on the 1300 Block Crespi Dr.

SSO Trends

The number of SSOs from a mainline in the City of Pacifica during 2017 was an increase from 2016.

Table 4. Mainline SSOs

Mainline SSOs	Year	2012	2013	2014	2015	2016	2017
	Annual Number	5	7	9	1	5	6

Under Part VI of the City's Consent Decree the SSO Reduction Performance Goal for 2017 was 8 and we were 2 SSOs under our goal. The goal of the Wastewater Division in 2017 was to have less than 5 SSOs during the calendar year and we were 1 SSO over that goal.

Sewer System Management Plan (SSMP)

No changes were made to the SSMP in 2017. To view the current version of the SSMP go to:
http://www.cityofpacific.org/depts/wwt/waste_water_collection/sanitarymp.asp

SSMP Audit

Goals

The goals for the Collections Division of the Wastewater Department are outlined below along with a sub-bullet describing whether it was accomplished:

1. Operate the collection system in accordance with state and federal law to minimize maintenance-related backups/overflows and to reduce wet weather inflow/infiltration
 - a. Accomplished
2. Locate points of inflow and infiltration through flow measurement/television inspection and develop improvement programs for problem areas
 - a. Accomplished
 - i. Performed CCTV activities throughout the year
 - ii. During wet-weather events we performed visual inspection of areas with known infiltration
3. Continue implementation and refinement of the CMMS and GIS map
 - a. Accomplished
4. Maintain sewer evaluation television system to comply with state regulations

- a. Accomplished
5. Continue implementing the Long Range Sanitary Sewer Capital Plan (LRSS-CIP)
 - a. Accomplished
6. Reduce sanitary sewer overflows (SSO) to under 5
 - a. Not accomplished – 6 SSOs in calendar 2017
7. Continue to implement and evaluate chemical root control program
 - a. Accomplished – 11,971 linear feet of sewer mains were chemically treated in calendar 2017.
8. Perform at least 90 miles of line cleaning activities
 - a. Accomplished – Over 90 miles were cleaned
9. Perform at least 15 miles of CCTV inspection and assessment activities
 - a. Not accomplished – 8.3 miles of sewer mains were CCTV'd in calendar year 2017
10. Continue to perform sewer main and manhole repairs identified through line cleaning and CCTV activities
 - a. Accomplished – Over 65 in-house repairs made in 2017
 - b. Accomplished – By contract over 2300 feet of damaged pipe was replaced

Organization

No changes were made to the organizational structure of the Collections Division and no changes were requested.

Legal Authority

No changes were made to our legal authority and no changes were requested. On January 1, 2012 the Pacifica City Council passed an ordinance that, among many things, placed the responsibility for maintaining and upgrading individual building sewer laterals with the property owners and required a condition assessment and potential replacement of the sewer lateral at a transfer of property event, significant structure remodel, addition of drain or fixture, and a change in water services. This was our formal private sewer lateral ordinance. Staff enforced this ordinance through the year and performed over 250 construction inspections of private sewer lateral replacements in 2017 many of which were replaced because of the private sewer lateral ordinance.

Overflow Emergency Response Plans (OERP)

The OERP was updated in 2014 to reflect new changes to State regulations of sanitary sewer overflows and based on some feedback from the Collections staff. DKF Solutions, the consultant that collaborated with us to produce previous OERPs, was hired to work with us in updating our current OERP. This was accomplished in March of 2014 and the crews were retrained based on the updated procedures. The crews received a one week refresher course from Tilson & Associates in June 2017. We successfully used the OERP for all SSOs during the year as well.

The OERPs for the pump stations did not require any changes and none were made. These plans continue to work well for us.

Operations and Maintenance

We have an ongoing sewer system maintenance program in which we use a power rodding truck and a hydro-jet rod truck to clean the system based on a SSO Reduction Plan schedule. A computerized asset management/maintenance system (CMMS) program was implemented in September of 2011 (ICOM3 by Redzone Robotics) and we are now scheduling our maintenance and repair activities through the program.

The SSO Reduction Plan was developed for the Division by RMC Engineering and the information from this plan was incorporated in the CMMS. The data that is aggregated in the CMMS from line cleaning activities and CCTV activities are used to update the scheduled cleaning of the system and schedule any needed repairs. In 2017 Division staff cleaned approximately 90.7 miles of main lines using a mechanical power rodder (41.5 miles) and a hydro-jetter (49.2 miles). The Training Program identifies as performance metrics an average of six set-ups for a workday of power rodding and 10 set-ups with the hydro-jetter. A review of our performance data shows that we averaged in 2017 a little over five set-ups with the power rodder and 9 set-ups with our hydro-jetting units.

The Division has a CCTV in-house inspection program to identify sources of potential SSOs and infiltration and inflow and in 2017 approximately 8.3 miles of sewer mains were televised and inspected. We were not able to accomplish our desired 15 miles due to numerous mechanical and electronic failures throughout the year with our CCTV van. We have a CIP budgeted for the 17/18 fiscal year to replace the existing van and equipment and plan to be back on track with a 15 mile minimum.

An inspection and assessment of our wastewater force mains was completed in 2014 under the project management of Brown and Caldwell. The inspection and assessment showed the various pipe types of the force mains to be in satisfactory condition and the report is available upon request.

The Division has a regular sewer repair crew that performs spot repairs of main lines identified as category four or five defects through CCTV and maintenance activities, and in some cases replaces whole pipe segments of the system. These in house repairs also represent manhole repairs. In 2017 the Division performed over 65 repairs and main line replacements with this in-house crew. In addition to our in house repairs we issued 2 pipeline replacement contracts in 2017 which included the replacement of 545 feet of 6" root intruded VCP pipe with 8" HDPE, 407 feet of 8" root intruded VCP pipe was replaced with 8" HDPE, 83 feet of 10" AC pipe was replaced with 10" HDPE, 450 feet of 10" root intruded VCP pipe was replaced with 12" HDPE, 818' of H2S damaged AC pipe was replaced with 12" HDPE and 50' of sagging RCP pipe was replaced with 11' of 30" PVC and 60' of 18" PVC for a total of 2374' replaced by contract.

We continued with our root foaming program using Duke's Root Control, Inc. Approximately 28,000 feet of main lines were identified from our CMMS data and CCTV inspections as having major root intrusion issues and Duke's was contracted to root foam those pipe segments. We performed quality control CCTV activities of most of the pipe segments that were root foamed over the last few years. We observed inhibited root growth in many of the pipe segments and the ones that did not appear to have been inhibited we had Duke's Root Control come back and perform a re-treatment. Approximately 95% of the pipe segments did not require re-treatment and appeared to have the root growth inhibited in a satisfactory manner.

The Division's training program continues to be a success with the CWEA training, regular bi-weekly safety training and weekly crew meetings. We will continue to receive training with Tilson & Associates (T&A). We will be reviewing and re-training on our customized standard operating procedures (SOPs) for the rod truck, sewer combination cleaner trucks, CCTV vehicle, and emergency response truck along with SSO calculation.

Design and Construction Standards

No changes were made to our design and construction standards and no changes were requested.

Fats, Oils, and Grease (FOG) Program

Staff continues to administer a FOG and Source Control Program in which we inspect the food establishments and FOG producers in Pacifica approximately twice a year. Two source control inspectors administer this program and they work with local businesses to identify areas of non-compliance with our ordinances and will require upgrades where needed. Any establishments out of compliance are given a formal letter requiring them to become compliant or face enforcement action. In addition to issuing noncompliance letters our staff has now been authorized to issue monetary citations. We are now seeing near perfect compliance.

System Evaluation and Capacity Assurance Plan

Capital Plan and Master Plan Implementation

A copy of our updated LRSS-CIP is included with this report. The LRSS-CIP update included any additional condition assessment information from the CMMS and CCTV activities that had not been completed at the time the original LRSS-CIP was put together. The major projects completed in 2017 were rebuilding the Engine Driven Pump motor at Linda Mar Lift Station, installing a new emergency standby generator at the David Davis Lift Station and replacing the damaged pipelines mentioned prior.

The “Equalization Basin Project” (EQ Basin) is one of the capacity improvement projects recommended in the City of Pacifica Collection System Master Plan and mandated by the Cease and Desist Order (CDO) issued by the California Regional Water Quality Control Board and the Consent Decree (CD) with Our Children’s Earth Foundation.

On September 28, 2015, the City Council approved the final location for the project, and on October 12, 2015 approved the contract with 4LEAF Inc. for Project and Construction Management Services. Then on November 9, 2015, the City Council approved the contract with TerraPhase to perform CEQA evaluation for the project. Then finally, on December 14, 2015, the City Council approved the contract with Freyer and Laureta, Inc. to perform the engineering design. The design for the EQ Basin project began shortly after Council approved Freyer and Laureta, and by November 2016 the 95% design was completed. On December 2016 the draft Mitigated Negative Declaration/Initial Study (MND/IS) was completed, and public comment period lasted from December 8, 2016 to January 13, 2017. On January 2016 Freyer and Laureta completed 100% design for the EQ Basin. On February 6, 2017 the Planning Commission approved the final MND/IS and approved the use of Permit. The project began construction in June 2017 and is scheduled to be completed by December 2018.

An updated complete schedule for the EQ Basin is below.

Project Phase	Calendar Year 2017											Calendar Year 2018										
	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Phase 1A																						
Phase 1B																						
Phase 2																						
Phase 3																						
Phase 4																						

- Phase 1A: EQ Basin Construction
- Phase 1B: Pipeline Construction
- Phase 2: Site Electrical
- Phase 3: Ventilation & Odor Control
- Phase 4: Site and Parking Lot Restoration and Landscaping

Monitoring, Measurement, and Program Modifications

We continually perform these functions and make modifications to our programs when deficiencies are identified. This report is the formal summary of the ways in which we monitor and measure performance and the actual and potential program modifications based on our performance.

SSMP Audits

Communication

No changes were made to our Communication program. In 2017 we had public outreach meetings regarding the equalization basin project and also numerous neighborhood meetings discussing the benefits of private lateral replacement while we upgrade our mainlines.

Certification

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.

Sincerely,



Brian Martinez
Collection System Manager, City of Pacifica

JDB (Crespi)

New Pipe		Previous Pipe	
Size and Material	Linear Footage	Size and Material	Linear Footage
12" HDPE	818	12" ACP	808

C2R (C005D)

New Pipe		Previous Pipe	
Size and Material	Linear Footage	Size and Material	Linear Footage
Juanita			
8" HDPE	545	6" VCP	545
Lockhaven			
8" HDPE	407	8" VCP	407
12" HDPE	450	10" VCP	450
Linda Mar			
30" PVC	11	30" RCP	50
18" PVC	60		
10" HDPE	83	10" HDPE	83

CITY OF PACIFICA
LONG RANGE SANITARY SEWER CAPITAL IMPROVEMENT PLANS - FY 2011-2032
(Updated March 2018)

PROJECTS	BEGIN DATE	DATE COMPLETED/E STIMATED COMPLETION	DURATION	EST. COST
LINDA MAR FLOW EQUALIZATION (WET WEATHER EQUALIZATION BASIN PROJECT)	Sep-12	Dec-18	4 -5 years	\$ 24,500,000.00
			TOTAL	\$ 24,500,000.00
CAPACITY IMPROVEMENT PROJECTS:				
PALMETTO MAINLINE (MasterPlan Project ID. 9)	Jun-12	Sep-12	3 months	\$ 376,700.00
DESOLO MAINLINE (MasterPlan Project ID. 8)*	Jul-13	Dec-13	6 months	\$ 76,000.00
ARGUELLO MAINLINE (MasterPlan Project ID.7)*	Jul-13	Dec-13	6 months	\$ 240,000.00
MILAGRA MAINLINE (MasterPlan Project ID.10)	Feb-16	Apr-16	1 month	\$ 48,000.00
AVALON MAINLINE (Master Plan Project ID.11)	Feb-16	Apr-16	1 month	\$ 10,000.00
MANOR MAINLINE (Master Plan Project ID. 12)		Not Needed		\$ -
SAN PEDRO MAINLINE (Master Plan Project ID.6)*	Dec-17	Dec-18	12 months	\$ 180,000.00
LINDA MAR MAINLINE (Master Plan Project ID.5)*		Not Needed		\$ -
PERALTA RD MAINLINE (Master Plan Project ID.4)*	Feb-15	Jul-15	4 months	\$ 45,000.00
ODDSTAD MAINLINE (Master Plan Project ID. 1)*	Dec-17	Dec-18	12 months	\$ 420,000.00
TERRA NOVA MAINLINE (Master Plan Project IDs. 2 &3)*	Dec-17	Dec-18	12 months	\$ 500,000.00
LINDA MAR PUMP STATION 4th PUMP (Master Plan Project ID.13B)	Dec-17	Dec-18	12 months	\$ 260,000.00
			TOTAL	\$ 2,155,700.00
REHAB AND REPLACEMENT PROJECTS:				
FY 2012 - 14 (North side of Lower Linda Mar)	Jul-13	Jun-14	12 months	\$ 1,736,556.00
FY 2014 - 15 (South side of Lower Linda Mar)	Feb-15	Jul-15	4 months	\$ 1,200,000.00
FY 2016 - 18 (Pedro Point)	May-17	Dec-18	18 months	\$ 3,560,000.00
FY 2018 - 22 (@ \$1,500,000/FY) (Locations to be determined)	Feb-18		12 months/FY	\$ 6,000,000.00
FY 2022 - 32 (@ \$1,500,000/FY) (Locations to be determined)	Feb-23		12 months/FY	\$ 15,000,000.00
			TOTAL	\$ 27,496,556.00
OTHER COLLECTION SYSTEM PROJECTS NOT INCLUDED IN THE MASTERPLAN:				
MAINLINE REPLACEMENT AT AVALON AND EDGEMAR	Jan-11	Mar-11	2 months	\$ 104,980.00
SANITARY SEWER IMPROVEMENTS AT BOWER ROAD	Nov-11	Mar-12	3 months	\$ 175,370.00
LINDA MAR GENERATOR REHABILITATION (CONSTRUCTION PHASE)	Jun-14	Jun-15	4 months	\$ 583,974.00
PALMETTO AVE FORCEMAIN IMPROVEMENT	Feb-14	Jun-16	18 months	\$ 500,000.00
CRESPI SANITARY SEWER MAIN REPAIR PROJECT (C005E)	Sep-16	Mar-18	18 months	\$ 1,070,000.00
CRESPI DRIVE AND HIGHWAY 1 SEWER MAIN REPAIR PROJECT (COOF)	Aug-17	Dec-18	16 months	\$ 220,000.00
HEATHCLIFF SANITARY SEWER MAINLINE (C00G)	Jan-18	Jun-18	6 months	\$ 50,000.00
COLLECTION SYSTEM PROJECT FY 2016-17 (C005D)	Dec-16	Dec-17	12 months	\$ 688,000.00
COLLECTION SYSTEM PROJECT FY 2017-22 (@\$150,000/FY)	Jul-18	Jun-32		\$ 2,250,000.00
RELOCATION OF MAINLINE AT SHARP PARK PUMP STATION#	TBD			\$ 400,000.00
RELOCATION OF SHARP PARK FORCEMAIN#	TBD			\$ 400,000.00
			TOTAL	\$ 6,442,324.00
NOTES:				
* Capacity Improvement Projects will be included with the Rehab and Replacement Project for that Fiscal Year				GRAND TOTAL \$ 60,594,580.00
# Schedule of Project will be dependent on the Redevelopment of the Beach Boulevard Property				