

CITY OF PACIFICA

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Scenic Pacifica Incorporated Nov. 22, 1957

3/13/17

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 2016

The purpose of this letter is to report on the calendar year 2016 Sanitary Sewer System Overflows (SSOs) that occurred in the City of Pacifica sanitary sewer system during the period January 1, 2016 through December 31, 2016 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 5. All 5 SSOs were related to wet-weather and at the same location during this period. 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	100%
From 100 to 999	0	0%
From 10 to 99	0	0%
Less than 10 [can include in line above]	0	0%
Total	5	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	0	0%
Total volume reaching waters of the State	278,610	100%
Total volume not contained but not reaching waters of the State (everything else)		
Total	278,610	100%

2016 seen an increase in total SSOs. All 5 SSOs were storm related and no sewage was recoverable.

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
2011	14	9		4	1				
2012	5	5							
2013	7	2		4		1			
2014	9	3	1	1			4		
2015	1	1							
2016	5						5		

Location of SSOs

The 5 SSOs that occurred in the City of Pacifica were located within the 400-500 Block of Linda Mar Blvd & Anza Dr. These manholes are the 2 lowest manhole elevation locations in the Linda Mar Valley.

SSO Trends

The number of SSOs from a mainline in the City of Pacifica during 2016 was an increase from 2015.

Table 4. Mainline SSOs

Mainline SSOs	Year	2011	2012	2013	2014	2015	2016
Walling COOS	Annual Number	5	5	7	9	1	5

Under Part VI of the City's Consent Decree the SSO Reduction Performance Goal for 2015 was 10 and we were 5 SSOs under our goal. The goal of the Wastewater Division in 2016 was to have less than 7 SSOs during the calendar year and we were 2 SSOs under that goal.

Sewer System Management Plan (SSMP)

No changes were made to the SSMP in 2016. To view the current version of the SSMP go to: http://www.cityofpacifica.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 subbullet 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 7
 - a. Accomplished 5 SSOs in calendar 2016
- 7. Continue to implement and evaluate chemical root control program
 - a. Accomplished 13,913 linear feet of sewer mains were chemically treated in calendar 2016.
- 8. Perform at least 90 miles of line cleaning activities
 - a. Accomplished Over 112 miles were cleaned
- 9. Perform at least 15 miles of CCTV inspection and assessment activities
 - a. Accomplished 15.85 miles of sewer mains were CCTV'd in calendar year 2016
- 10. Continue to perform sewer main and manhole repairs identified through line cleaning and CCTV activities
 - a. Accomplished Over 30 in-house repairs made in 2016
 - b. Accomplished By contract, the installation of a lift station bypass "tee" and valves were installed at the Brighton Lift Station to complete the redundant force main project and also to accomplish a method for bypassing the entire lift station in the event of a failure.

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 255 construction inspections of private sewer lateral replacements in 2016 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 September 2015. 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 hydrojet 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 2016 Division staff cleaned approximately 112.5 miles of main lines using a mechanical power rodder (55 miles) and a hydro-jetter (57.5 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 2016 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 2016 approximately 15.8 miles of sewer mains were televised and inspected. 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. In 2016 the Division performed over 30 repairs and main line replacements with this in-house crew. In addition, contract related repair and installation of a lift station bypass "tee" and valves were installed at the Brighton Lift Station to complete the redundant force main project and also to accomplish a method for bypassing the entire lift station in the event of a failure.

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 retreatment 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 continue to receive training with Tilson & Associates (T&A). In the coming year we have a training session with T&A scheduled for June. 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 once or twice a year. Two full-time 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.

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 2016 from the LRSS-CIP were: Installation of a lift station bypass "tee" and valves at the Brighton Lift Station to complete the redundant force main project and also to accomplish a method for bypassing the entire lift station in the event of failure. 2 new fuel tanks were installed. One new 1000 gallon stainless steel diesel tank at Sharp Park lift station to replace an existing concrete/steel tank that was near failure and an additional 2000 gallon stainless steel tank at Linda Mar lift station. The 2000 gallon addition at Linda Mar will accomplish our goal of having 24 hours' worth of fuel exclusively for the standby generator in the event of an extended power failure.

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 is scheduled to begin construction in May 2017 and completed by September 2018. The project is currently waiting for final approval from the City Council.

An updated complete schedule for the EQ Basin is included in this report.

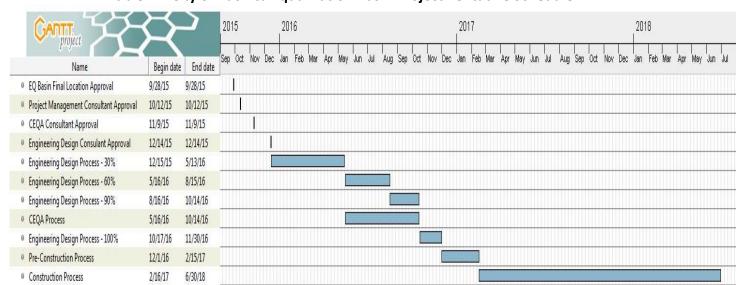


Table 1 – City of Pacifica Equalization Basin Project Tentative Schedule

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 2016 we had public outreach meetings regarding the equalization basin project.

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

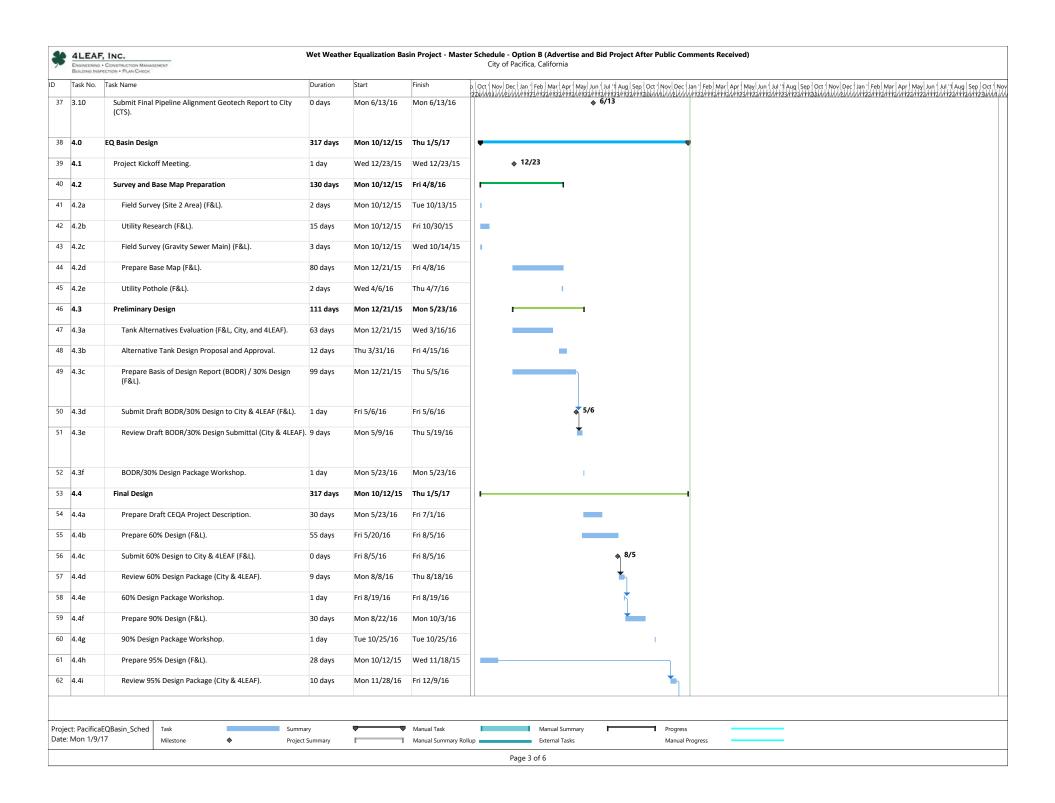
CITY OF PACIFICA LONG RANGE SANITARY SEWER CAPITAL IMPROVEMENT PLANS - FY 2011-2032 (Updated January 2017)

PROJECTS	BEGIN DATE	DATE COMPLETED/E STIMATED COMPLETION	DURATION	EST. COST
LINDA MAR FLOW EQUALIZATION	Sep-12	Oct-18	4-5 years	\$ 20,670,000.00
			TOTAL	\$ 20,670,000.00
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)*	May-17	Nov-17	6 months	\$ 300,000.00
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)*	Jul-17	Jun-18	12 months	\$ 365,300.00
TERRA NOVA MAINLINE (Master Plan Project IDs. 2 &3)*	Jul-17	Jun-18	12 months	\$ 388,700.00
LINDA MAR PUMP STATION 4th PUMP (Master Plan Project ID.13B)	Jul-17	Jun-18	12 months	\$ 260,000.00
			TOTAL	\$ 2,109,700.00
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	Jun-18	12 months	\$ 2,100,000.00
FY 2016 - 18 (Southeast side of Lower Linda Mar)	May-17	Jun-18	12 months	\$ 2,100,000.00
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	\$ 28,136,556.00
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
COLLECTION SYSTEM PROJECT FY 2016-17	Jul-16	Jun-17	12 months	\$ 1,300,000.00
COLLECTION SYSTEM PROJECT FY 2017-22 (@\$150,000/FY)	Jul-17	Jun-32		\$ 2,250,000.00
CRESPI SANITARY SEWER MAIN REPAIR PROJECT	Nov-16	Jun-17	7 months	\$ 1,100,000.00
RELOCATION OF MAINLINE AT SHARP PARK PUMP STATION#	TBD			\$ 400,000.00
RELOCATION OF SHARP PARK FORCEMAIN#	TBD			\$ 400,000.00
NOTES:			TOTAL	\$ 6,814,324.00
* Capacity Improvement Projects will be included with the Rehab				
and Replacement Project for that Fiscal Year			GRAND TOTAL	\$ 57,730,580.00
# Schedule of Project will be dependent on the Redevelopment				

of the Beach Boulevard Property

*	4LEAF,	INC. CONSTRUCTION MANAGEMENT CETION - PLAN CRECK	Wet Weath	er Equalization Ba	sin Project - Mast	er Schedule - Option B (Advertise and Bid Project After Public Comments Received) City of Pacifica, California
ID	Task No.	Task Name	Duration	Start	Finish	D Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct 'Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct ' Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct ' Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct ' Nov Dec Jan ' Feb Mar Apr May Jun ' Jul '' Aug Sep Oct ' Nov Dec Jan ' Feb M
1	1.0	Project Team Selection and Procurement	99 days	Tue 9/29/15	Fri 2/12/16	230000 100020000000000 220002000 220002000
2		Selection of PM/CM - 4LEAF.	1 day	Tue 9/29/15	Tue 9/29/15	
3	1.1	PM/CM Contract Award & NTP - 4LEAF.	1 day	Mon 10/12/15	Mon 10/12/15	♦ 10/12
4	1.2a	CEQA Consultant RFP.	1 day	Mon 10/5/15	Mon 10/5/15	
5	1.2b	CEQA Consultant Contract Award & NTP - Terraphase.	1 day	Mon 11/9/15	Mon 11/9/15	♦ 11/9
6	1.3a	Site 2 Geotech Investigation RFP.	1 day	Tue 11/3/15	Tue 11/3/15	
7	1.3b	Site 2 Geotech Investigation Contract Award & NTP (CTS).	1 day	Tue 11/24/15	Tue 11/24/15	♦ 11/24
8	1.4a	Design Consultant RFP.	1 day	Tue 10/13/15	Tue 10/13/15	
9	1.4b	Design Consultant Interviews.	1 day	Wed 11/18/15	Wed 11/18/15	
10	1.4c	Design Consultant Contract Award & NTP - Freyer & Laureta (F&L).	1 day	Mon 12/14/15	Mon 12/14/15	♦ 12/14
11	1.5a	Pipeline Alignment Geotech Investigation RFP.	1 day	Mon 1/25/16	Mon 1/25/16	
12	1.5b	Pipeline Alignment Geotech Investigation Contract Award & NTP - CTS.	1 day	Fri 2/12/16	Fri 2/12/16	
13	2.0	Site 2 Geotechnical Investigation	76 days	Wed 11/25/15	Thu 3/10/16	
14	2.1	Prepare Work Plan (CTS).	7 days	Wed 11/25/15	Thu 12/3/15	
15	2.2	Secure Boring Permit w/ San Mateo County (CTS).	3 days	Fri 12/4/15	Tue 12/8/15	
16	2.3	Mark Borings in Field and Call In Ticket to USA (4LEAF & CTS).	1 day	Wed 12/2/15	Wed 12/2/15	
17	2.4	Perform Site Investigation (CTS).	6 days	Thu 12/10/15	Thu 12/17/15	
18	2.5	Laboratory Analysis and Prepare Draft Geotechnical Report (CTS).	18 days	Mon 12/21/15	Wed 1/13/16	
	ct: PacificaE Mon 1/9/1	CQBasin_Sched Task Summar Milestone Project	y Summary		Manual Task Manual Summary Ro	Manual Summary Progress Illup External Tasks Manual Progress
			-		·	Page 1 of 6

	F, INC.	Wet Weath	er Equalization Ba	sin Project - Mas	ter Schedule - Option B (Advertise and Bid Project After Public Comments Received) City of Pacifica, California
Building In	SPECTION - PLAN CHECK				- y
Task No.	Task Name	Duration	Start	Finish	OCT Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul '1 Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul 'I Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May Jun 'Jul 'I Aug Sep Oct 'Nov Dec Jan 'Jul 'I Aug Sep Oct 'Nov Dec Jan 'Feb Mar Apr' May
19 2.6	Perform Additional Site Investigation at Site 2 (CTS).	1 day	Tue 1/5/16	Tue 1/5/16	
20 2.7	Submit Draft Geotech Report to Project Team for Review (CTS).	0 days	Wed 1/13/16	Wed 1/13/16	♦ 1/13
21 2.8	Project Team Review of Draft Site 2 Geotech Report (City, 4LEAF, F&L).	12 days	Thu 1/14/16	Fri 1/29/16	
22 2.9	Revise Draft Geotech Report (incorporate Project Team comments and add'l lab data) (CTS).	5 days	Mon 2/1/16	Fri 2/5/16	→
23 2.10	Submit Draft Final Geotech Report to Project Team (CTS).	0 days	Fri 2/5/16	Fri 2/5/16	φ 2/5
24 2.11	Project Team Review of Draft Final Site 2 Geotech Report (City, 4LEAF, F&L).	10 days	Mon 2/8/16	Fri 2/19/16	
25 2.12	Revise Draft Geotech Report (incorporate Project Team comments and add'l lab data) (CTS).	13 days	Mon 2/22/16	Wed 3/9/16	
26 2.13	Submit Final Site 2 Geotech Report to City (CTS).	0 days	Thu 3/10/16	Thu 3/10/16	3/10
27 3.0	Pipeline Alignment Geotechnical Investigation	85 days	Tue 2/16/16	Mon 6/13/16	
28 3.1	Prepare Encroachment Permit Application (CTS).	3 days	Tue 2/16/16	Thu 2/18/16	I I
29 3.2	Mark Borings in Field and Call In Ticket to USA (City, 4LEAF, & CTS).	1 day	Wed 2/17/16	Wed 2/17/16	
30 3.3	Receive Approved Encroachment Permit from City.	1 day	Fri 2/19/16	Fri 2/19/16	
31 3.4	Perform Site Investigation (CTS).	2 days	Mon 2/22/16	Tue 2/23/16	h
32 3.5	Laboratory Analysis and Prepare Draft Geotechnical Report (CTS).	31 days	Wed 2/24/16	Wed 4/6/16	
33 3.6	Submit Draft Geotech Report to 4LEAF for Review (CTS).	0 days	Thu 4/7/16	Thu 4/7/16	4/7
34 3.7	Review of Draft Geotech Report (4LEAF).	6 days	Fri 4/8/16	Fri 4/15/16	
35 3.8	Revise Draft Geotech Report (incorporate 4LEAF comments (CTS).	7 days	Mon 4/18/16	Tue 4/26/16	
36 3.9	Submit Draft Final Geotech Report to Project Team (CTS).	0 days	Wed 4/27/16	Wed 4/27/16	4/27
Project: Pacific Date: Mon 1/9	aEQBasin_Sched	ry Summary		Manual Task Manual Summary Re	Manual Summary Progress Sternal Tasks Manual Progress
	Project	Janimaly		wanda summary Ki	Page 2 of 6
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Т	Task No.	Task Name	Duration	Start	Finish	OCT NOV Dec Jan Feb Mar Apr May Jun Jul Aug Sep OCT Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep OCT Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep OCT 2000 August 100 A
4	4.4j	Prepare 100% Design and Draft O&M Manual Template (F&L).	16 days	Mon 12/12/16	Wed 1/4/17	220MA11/M2/MM1123/1124/1124/1124/1124/1124/1124/1124/
4	4.4k	Submit 100% Design/Bid Documents.	0 days	Thu 1/5/17	Thu 1/5/17	1/5
5 5	5	CEQA Evaluation and Analysis	317 days	Tue 11/24/15	Thu 2/16/17	•
5 5	5.1	Kickoff Meeting with City and 4LEAF (Terraphase).	1 day	Tue 11/24/15	Tue 11/24/15	
7 5	5.2	Review Draft Project Description from F&L and Prepare Draft Project Description (Terraphase).	10 days	Fri 7/1/16	Fri 7/15/16	
8 5	5.3	Submit Draft Final Project Description to City/4LEAF/F&L (Terraphase).	0 days	Mon 7/18/16	Mon 7/18/16	7/18
9 5	5.4	Review Draft Final Project Description (City / 4LEAF / Terraphase / F&L).	3 days	Tue 7/19/16	Thu 7/21/16	
0 5	5.5	Incorporate Project Team Comments and Finalize Project Description (City / Terraphase / 4LEAF / F&L).	68 days	Fri 7/22/16	Wed 10/26/16	
1 5	5.6	Prepare Administrative Draft Initial Study (IS) / MND (Terraphase).	72 days	Mon 7/18/16	Wed 10/26/16	
2 5	5.7	Submit Administrative Draft IS to City/4LEAF/F&L (Terraphase).	0 days	Wed 10/26/16	Wed 10/26/16	10/26
5	5.8	Prepare Administrative Draft Mitigation Monitoring and Reporting Program (MMRP) (Terraphase).	26 days	Wed 9/21/16	Wed 10/26/16	
1 5	5.9	Prepare Draft Notice of Intent (NOI) (Terraphase).	15 days	Thu 10/6/16	Wed 10/26/16	
5 5	5.10	Submit Draft MMRP and NOI to City/4LEAF/F&L for Review (Terraphase).	0 days	Wed 10/26/16	Wed 10/26/16	10/26
5 5	5.11	Review Preliminary Draft MND/IS Document (City/4LEAF/F&L).	11 days	Thu 10/27/16	Thu 11/10/16	
7 5	5.12	Incorporate Traffic Study Information, Revise Air Study Methodology Discussion, and Prepare Revised Preliminary Draft MND/IS Document (Terraphase).	6 days	Fri 11/11/16	Fri 11/18/16	
3 5	5.13	Submit Screen Check Draft MND/IS to City/4LEAF/F&L (Terraphase).	0 days	Fri 11/18/16	Fri 11/18/16	11/13
9 5	5.14	Review Screen Check Draft MND/IS (City/4LEAF/F&L).	5 days	Mon 11/21/16	Tue 11/29/16	
	Dacific -	AEODacia School Tark	201		Manual Task	Manual Cummany Progress
	:: Pacifica Mon 1/9/	DEQBasin_Sched	ary t Summary		Manual Task Manual Summary Ro	Manual Summary Progress Sllup External Tasks Manual Progress

*	4LEAI ENGINEERING BUILDING INS	F, INC. I - CONSTRUCTION MANAGEMENT PRECION - PLAN CHECK	Wet Weath	er Equalization Ba	sin Project - Mas
ID	Task No.	Task Name	Duration	Start	Finish
80	5.15	Incorporate Review Comments and Prepare Draft MND/IS for Public Review Period.	5 days	Wed 11/30/16	Tue 12/6/16
81	5.16	Draft MND/IS 37-Calendar-Day Public Comment Period.	25 days	Thu 12/8/16	Fri 1/13/17
82	5.17	Public Meeting.	1 day	Thu 12/15/16	Thu 12/15/16
83	5.18	Incorporate Public Comments and Finalize MND/IS (Terraphase).	11 days	Mon 1/16/17	Mon 1/30/17
84	5.19	Review Final MND/IS (City/4LEAF/F&L).	1 day	Tue 1/31/17	Tue 1/31/17
85	5.20	Prepare Staff Reports for Adoption of the MND/IS and Use Permit (City/4LEAF/Terraphase/F&L).	e 45 days	Thu 12/1/16	Fri 2/3/17
86	5.21	Planning Commission Meeting.	1 day	Mon 2/6/17	Mon 2/6/17
87	5.22	Use Permit Appeal Period.	8 days	Tue 2/7/17	Thu 2/16/17
88	5.23	File Notice of Determination (NOD) (City & Terraphase).	1 day	Mon 2/13/17	Mon 2/13/17
89	6	EQ Basin and Pipeline Construction	451 days	Tue 2/14/17	Thu 11/8/18
90	6.1	Pre-Construction Phase	75 days	Tue 2/14/17	Mon 5/29/17
91	6.1a	Advertise Project to Potential Bidders (City & 4LEAF).	19 days	Mon 1/30/17	Thu 2/23/17
92	6.1b	Perform Public Outreach and Post Public Notices (City & 4LEAF).	& 54 days	Mon 1/30/17	Thu 4/13/17
93	6.1c	Coordinate and Hold Contractor Pre-bid Proposal Meeting and Site Visit (City & 4LEAF).	1 day	Tue 2/7/17	Tue 2/7/17
94	6.1d	Review and Evaluate Contractor Bids/Proposals and Prepare Contract Award Recommendation (City & 4LEAF).	9 days	Mon 2/27/17	Thu 3/9/17
95	6.1e	Perform Bid Opening and Notify Sucessful and Unsuccessful Bidders (City & 4LEAF).	1 day	Fri 3/10/17	Fri 3/10/17
96	6.1f	Perform Contract Negotiations and Manage Contractor Award Signing Process (City & 4LEAF).	10 days	Mon 3/13/17	Fri 3/24/17
97	6.1g	Award Construction Contract & NTP.	1 day	Mon 3/27/17	Mon 3/27/17
		aEQBasin_Sched Task Sumi		•	Manual Task
Date:	: Mon 1/9/	/17 Milestone ♦ Proje	ct Summary		Manual Summary Re

90	4LEAF	. Inc.	Wet Weath	er Equalization Ba	sin Project - Mas
90	ENGINEERING	CONSTRUCTION MANAGEMENT PEAN CHECK			·
D	-	Task Name	Duration	Start	Finish
98	6.1h	Pre-Construction Meeting (City & 4LEAF).	1 day	Mon 4/3/17	Mon 4/3/17
99	6.1i	Contractor Submittals and Review (City, 4LEAF, & F&L).	19 days	Tue 4/4/17	Fri 4/28/17
,,,	0.11	Contractor Submittals and Neview (City, 4LLAr, & F&L).	15 days	146 4/4/17	1114/20/17
100	6.1j	Perform Pre-Construction Project Site Condition	1 day	Tue 4/4/17	Tue 4/4/17
		Inspections (4LEAF).			
101	6.2	Construction Phase	342 days	Mon 5/1/17	Thu 8/23/18
102	6.2a	Contractor Mobilization.	5 days	Mon 5/1/17	Fri 5/5/17
103	6.2b	Construct EQ Basin, Appurtenances, and Influent/Effluen	t 337 days	Mon 5/8/17	Thu 8/23/18
		Pipelines.			
104	6.2c	Construction Management and Field Inspection (4LEAF).	343 days	Mon 5/1/17	Fri 8/24/18
,	0.20	construction management and ricia inspection (4EEA).	5 45 days		0, 24, 10
105	6.2d	Design Team Review and Response to Submittals and RFI's, etc. (F&L).	343 days	Mon 5/1/17	Fri 8/24/18
		in is, etc. (i oc).			
106	6.2e	Prepare O&M Manual (F&L).	15 days	Mon 7/10/17	Fri 7/28/17
107	6.3	Post-Construction Phase	45 days	Mon 8/27/18	Fri 10/26/18
108	6.3a	Final Punch Inspections (City and 4LEAF).	5 days	Mon 8/27/18	Fri 8/31/18
109	6.3b	Startup and Commissioning.	10 days	Mon 9/3/18	Fri 9/14/18
110	6.2-				
110	6.3c	Contractor Demobilization.	5 days	Mon 9/17/18	Fri 9/21/18
111	6.3d	Document Closeout (City & 4LEAF).	15 days	Mon 9/17/18	Fri 10/5/18
112	6.3e	Fiscal Closeout (City & 4LEAF).	15 days	Mon 9/17/18	Fri 10/5/18
112	6.3f	Prepare and Submit Notice of Completion Report to	18 days	Wed 9/19/18	Fri 10/12/18
113	0.31	Regional Water Quality Control Board (City & 4LEAF).	10 udys	vveu 3/13/18	111 10/12/16