

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

July 19, 2012

Mr. Steve Huang, Director  
Engineering and Building Services Department  
City of Redondo Beach  
415 Diamond Street  
Redondo Beach, California 90277

Dear Mr. Huang:

Enclosed is the May 30, 2012, report regarding EPA's Clean Water Act compliance inspection of the City of Redondo Beach's sewer collection system conducted on December 21, 2011. Attached to the report is a copy of the Inspection Form originally completed and submitted to EPA during the inspection, revised and resubmitted on January 9, 2012. EPA completed the inspection participants section. The main findings of EPA's compliance inspection are summarized below:

- EPA recommends that the City enhance its efforts to eliminate sewage overflows from its collections system.
- EPA recommends that the City improve its documentation and reporting of sewage overflows.

Please review this report and if any factual disputes are identified, please contact EPA within 14 calendar days of receipt of this letter. Please provide a response to each of the recommendations in the report within 30 calendar days of receipt of this letter. Thank you for your cooperation and the cooperation of your staff during the inspection. If you have any questions, please feel free to contact JoAnn Cola of my staff by e-mail at [cola.joann@epa.gov](mailto:cola.joann@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Ken Greenberg".

Ken Greenberg, Chief  
Clean Water Act Compliance Office

Enclosure

cc: Hugh Marley, Los Angeles Regional Water Quality Control Board  
Jim Fischer, California Water Resources Control Board



**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
**REGION 9**  
**CLEAN WATER ACT COMPLIANCE OFFICE**

**NPDES COMPLIANCE EVALUATION INSPECTION REPORT**

**Utility Name:** City of Redondo Beach Sewage Collection System  
**NPDES Permit Number:** N/A  
**Date of Inspection:** December 21, 2011

**Inspection Participants:**

<b>Inspector</b>	<b>Agency</b>
JoAnn Cola	Environmental Protection Agency
Julie Berrey	California Water Resources Control Board
Jim Fischer	California Water Resources Control Board
Andrew Choi	Los Angeles Regional Water Board
Chris Lopez	Los Angeles Regional Water Board
Jose Morales	Los Angeles Regional Water Board

**Utility Personnel**  
Steve Huang, Director of Engineering and Building Services  
Mike Witzansky, Director of Public Works  
Tim Shea, Deputy Director of Public Works  
Tony Funaki, Public Works Maintenance Supervisor  
Geraldine Trivedi, Associate Civil Engineer  
Elaine Jeng, Civil Engineer  
Mike Shay, Principal Civil Engineer

**Report Prepared By:** JoAnn Cola, Environmental Engineer  
**Date Prepared:** May 30, 2012



INSTRUCTIONS

Section A: National Data System Coding (i.e., PCS)

Column 1: Transaction Code: Use N, C, or D for New, Change, or Delete. All inspections will be new unless there is an error in the data entered.

Columns 3-11: NPDES Permit No. Enter the facility's NPDES permit number - third character in permit number indicates permit type for U=unpermitted, G=general permit, etc.. (Use the Remarks columns to record the State permit number, if necessary.)

Columns 12-17: Inspection Date. Insert the date entry was made into the facility. Use the year/month/day format (e.g., 04/10/01 = October 01, 2004).

Column 18: Inspection Type\*. Use one of the codes listed below to describe the type of inspection:

A Performance Audit	U IU Inspection with Pretreatment Audit	I Pretreatment Compliance (Oversight)
B Compliance Biomonitoring	X Toxics Inspection	@ Follow-up (enforcement)
C Compliance Evaluation (non-sampling)	Z Sludge - Biosolids	{ Storm Water-Construction-Sampling
D Diagnostic	# Combined Sewer Overflow-Sampling	} Storm Water-Construction-Non-Sampling
F Pretreatment (Follow-up)	\$ Combined Sewer Overflow-Non-Sampling	: Storm Water-Non-Construction-Sampling
G Pretreatment (Audit)	+ Sanitary Sewer Overflow-Sampling	- Storm Water-Non-Construction-Non-Sampling
I Industrial User (IU) Inspection	& Sanitary Sewer Overflow-Non-Sampling	< Storm Water-MS4-Sampling
J Complaints	\ CAFO-Sampling	> Storm Water-MS4-Audit
M Multimedia	= CAFO-Non-Sampling	
N Spill	2 IU Sampling Inspection	
O Compliance Evaluation (Oversight)	3 IU Non-Sampling Inspection	
P Pretreatment Compliance Inspection	4 IU Toxics Inspection	
R Reconnaissance	5 IU Sampling Inspection with Pretreatment	
S Compliance Sampling	6 IU Non-Sampling Inspection with Pretreatment	
	7 IU Toxics with Pretreatment	

Column 19: Inspector Code. Use one of the codes listed below to describe the lead agency in the inspection.

A --- State (Contractor)	O --- Other Inspectors, Federal/EPA (Specify in Remarks columns)
B --- EPA (Contractor)	U --- Other Inspectors, State (Specify in Remarks columns)
E --- Corps of Engineers	U --- EPA Regional Inspector
J --- Joint EPA/State Inspectors—EPA Lead	U --- State Inspector
L --- Local Health Department (State)	U --- Joint State/EPA Inspectors—State lead
N --- NEIC Inspectors	

Column 20: Facility Type. Use one of the codes below to describe the facility.

- 1 --- Municipal. Publicly Owned Treatment Works (POTWs) with 1987 Standard Industrial Code (SIC) 4952.
- 2 --- Industrial. Other than municipal, agricultural, and Federal facilities.
- 3 --- Agricultural. Facilities classified with 1987 SIC 0111 to 0971.
- 4 --- Federal. Facilities identified as Federal by the EPA Regional Office.
- 5 --- Oil & Gas. Facilities classified with 1987 SIC 1311 to 1399.

Columns 21-66: Remarks. These columns are reserved for remarks at the discretion of the Region.

Columns 67-69: Inspection Work Days. Estimate the total work effort (to the nearest 0.1 work day), up to 99.9 days, that were used to complete the inspection and submit a QA reviewed report of findings. This estimate includes the accumulative effort of all participating inspectors; any effort for laboratory analyses, testing, and remote sensing; and the billed payroll time for travel and pre and post inspection preparation. This estimate does not require detailed documentation.

Column 70: Facility Evaluation Rating. Use information gathered during the inspection (regardless of inspection type) to evaluate the quality of the facility self-monitoring program. Grade the program using a scale of 1 to 5 with a score of 5 being used for very reliable self-monitoring programs, 3 being satisfactory, and 1 being used for very unreliable programs.

Column 71: Biomonitoring Information. Enter D for static testing. Enter F for flow through testing. Enter N for no biomonitoring.

Column 72: Quality Assurance Data Inspection. Enter Q if the inspection was conducted as followup on quality assurance sample results. Enter N otherwise.

Columns 73-80: These columns are reserved for regionally defined information.

Section B: Facility Data

This section is self-explanatory except for "Other Facility Data," which may include new information not in the permit or PCS (e.g., new outfalls, names of receiving waters, new ownership, other updates to the record, SIC/NAICS Codes, Latitude/Longitude).

Section C: Areas Evaluated During Inspection

Check only those areas evaluated by marking the appropriate box. Use Section D and additional sheets as necessary. Support the findings, as necessary, in a brief narrative report. Use the headings given on the report form (e.g., Permit, Records/Reports) when discussing the areas evaluated during the inspection.

Section D: Summary of Findings/Comments

Briefly summarize the inspection findings. This summary should abstract the pertinent inspection findings, not replace the narrative report. Reference a list of attachments, such as completed checklists taken from the NPDES Compliance Inspection Manuals and pretreatment guidance documents, including effluent data when sampling has been done. Use extra sheets as necessary.

\*Footnote: In addition to the inspection types listed above under column 18, a state may continue to use the following wet weather and CAFO inspection types until the state is brought into ICIS-NPDES: K: CAFO, V: SSO, Y: CSO, W: Storm Water 9: MS4. States may also use the new wet weather, CAFO and MS4 inspections types shown in column 18 of this form. The EPA regions are required to use the new wet weather, CAFO, and MS4 inspection types for inspections with an inspection date (DTIN) on or after July 1, 2005.



## Single Event Violation Table - Codes and Descriptions\*

CODE	DESCRIPTION	CODE	DESCRIPTION
<b>Effluent Violations</b>		<b>CSO</b>	
A0018	Approved Bypass	A0C18	Approved Bypass
A0013	Failed Toxicity Test	A0024	Dry weather overflow
A0023	Industrial Spill	B0030	Failure to Develop Adequate LTCP
A0017	Inspection sample above historic DMR range	B0031	Failure to Implement LTCP
A0022	Narrative Effluent Violation	B0029	Failure to Implement Nine Minimum Controls (NMCs)
A0012	Numeric effluent violation	BC291	Failure to implement required NMC #1 (Proper operation and maintenance)
A0016	Reported Fish Kill	BC292	Failure to implement required NMC #2 (Maximization Use of the collection system)
A0011	Unapproved Bypass	BC293	Failure to implement required NMC #3 (Review pretreatment requirements)
A0015	Unauthorized Discharge of Brine	BC294	Failure to implement required NMC #4 (Maximization of flow)
<b>Management Practice Violations</b>		BC295	Failure to implement required NMC #5 (Elimination of dry weather flow)
B0019	Best Management Practice Deficiencies	BC296	Failure to implement required NMC #6 (Control of solids)
B0024	Biosolids/Sewage Sludge Violation (Part 503)	BC297	Failure to implement required NMC #7 (Pollution prevention programs)
B0026	Failure to Allow Entry	BC298	Failure to implement required NMC #8 (Public notification)
B0012	Failure to Conduct Inspections	BC299	Failure to implement required NMC #9 (Monitoring)
B0027	Failure to Develop Adequate SPCC Plan	BC41	Failure to Maintain Records or Meet Record Keeping Requirements
B0017	Failure to develop any or adequate SWPPP/SWMP	CO011	Failure to monitor
B0011	Failure to Develop/Enforce Standards	EOC16	Failure to submit required report (non-DMR)
B0028	Failure to Implement SPCC Plan	EOC13	Improper/Incorrect reporting
B0018	Failure to Implement SWPPP/SWMP	B0044	LTCP implementation schedule milestones missed
B0041	Failure to Maintain Records	A0C22	Narrative effluent violation
B0040	Improper Chemical Handling	EOC14	Noncompliance with section 308 Information Request
B0023	Improper Land Application (non-503, non-CAFO)	A0C12	Numeric effluent violation
B0020	Improper Operation and Maintenance	A0C11	Related Unapproved Bypass
B0025	Inflow/Infiltration (I/I)	A0021	Unauthorized CSO Discharge to Waters/Wet Weather
B0021	Laboratory Not Certified	A0025	Unauthorized overflow to dry land or building backup
B0022	No Licensed/Certified Operator	B0045	Violation of a milestone in a permit
B0042	Violation of a milestone in an order	BOC42	Violation of a milestone in an order
<b>Monitoring Violations</b>		<b>SSO</b>	
CO017	Analysis not Conducted	A0S18	Approved Bypass
CO011	Failure to Monitor for non-Toxicity Requirements	A0020	Discharge to Waters
CO021	Failure to Monitor for Toxicity Requirements	DO511	Discharge without a valid permit (includes satellite systems)
CO015	Frequency of Sampling Violation	BO541	Failure to Maintain Records or Meet Record Keeping Requirements
CO018	Improper Analysis or Lab Error	CO511	Failure to monitor
CO014	Invalid/Unrepresentative Sample	EO018	Failure to report other violation
CO016	No Flow Measurement Device	EO019	Failure to report violation that may endanger public health 122.41(f)(7)
<b>Permitting Violations</b>		DO512	Failure to submit required permit application info (includes satellite systems)
D0014	Application Incomplete	BO520	Improper Operation and Maintenance
D0011	Discharge Without a Valid Permit	A0S22	Narrative effluent violation
D0012	Failure to Apply for a Permit	EO514	Noncompliance with section 308 Information Request
D0015	Failure to Pay Fees	A0S12	Numeric effluent violation
D0016	Failure to Submit Timely Permit Renewal Application	A0026	Overflow to Dry Land or Building Backup
D0013	Unapproved Operation	A0S11	Related Unapproved Bypass
D0017	Violation Specified in Comment	BS42A	Violation of milestone in an administrative order
		BS42I	Violation of milestone in judicial decree
		B0046	Violation of sewer moratorium or restriction
<b>Reporting Violations</b>		<b>Storm Water Construction</b>	
EO017	Failure to Notify	DOR11	Discharge without a permit

ED012	Failure to Submit DMRs	DOR18	Failure to apply for a notice of termination
ED016	Failure to submit required report (non-DMR, non-pre-treatment)	BCR12	Failure to Conduct Inspections
ED013	Improper/ Incorrect Reporting	BOC17	Failure to develop any or adequate SWPPP/SWMP
ED011	Late Submittal of DMRs	BOC18	Failure to Implement SWPPP/SWMP
ED014	Noncompliance with Section 308 Information Request	BCR41	Failure to Maintain Records
<b>Pre-treatment</b>		CCR11	Failure to Monitor
CO012	Baseline Monitoring Report Violation	BR19A	Failure to properly install/implement BMPs
BOP12	Failure to Conduct Inspections	BR19B	Failure to properly operate and maintain BMPs
BOP11	Failure to Develop/Enforce Standards	DOR12	Failure to submit required permit application information
B0013	Failure to Enforce Against IU	EDR16	Failure to submit required report (non-DMR)
B0015	Failure to Establish Local Limits	AOR22	Narrative effluent violation
CO013	Failure to Establish Self-Monitoring Requirements	EOR14	Noncompliance with section 308 Information Request
B0014	Failure to Issue SRU Permits	AOR12	Numeric Effluent Violation
B0016	Failure to Meet Inspection and Sampling Plan for SIUs	BOR42	Violation of a milestone in an order
ED015	Failure to submit required report (non-DMR)	<b>Storm Water MS4</b>	
BOP40	Improper Chemical Handling	DOM11	Discharge without a permit
AO14	IU Violation of Pretreatment Standards	DOM18	Failure to apply for a notice of termination
<b>CAFO</b>		BOM12	Failure to Conduct Inspections
BOA19	Best Management Practice Deficiencies	BOM17	Failure to develop any or adequate SWPPP/SWMP
B0038	Direct Animal Contact with Waters of US	BOM18	Failure to Implement SWPPP/SWMP
DOA11	Discharge without a permit	BOM41	Failure to Maintain Records or Meet Record Keeping
BOA12	Failure to Conduct Inspections	COM11	Failure to Monitor
B0032	Failure to Develop any or adequate NMP	BM19A	Failure to properly install/implement BMPs
B0033	Failure to Implement NMP	BM19B	Failure to properly operate and maintain BMPs
BOA41	Failure to Maintain Records or Meet Record Keeping Requirements	DOM12	Failure to submit required permit application information
B0043	Failure to meet order final compliance date	EDM16	Failure to submit required report (non-DMR)
COA11	Failure to Monitor	ADM22	Narrative effluent violation
DOA12	Failure to submit required permit application information	EDM14	Noncompliance with section 308 Information Request
CO019	Failure to Test Maxum	ADM12	Numeric Effluent Violation
BOA40	Improper Chemical Handling	BOM42	Violation of a milestone in an order
BOA23	Improper Land Application	<b>Storm Water Non-Construction</b>	
B0039	Improper Manure Handling (not including land application)	DON11	Discharge without a permit
B0037	Improper Mortality Management	DON18	Failure to apply for a notice of termination
B0036	Improper O&M of Storage Facility	BON12	Failure to Conduct Inspections
EOA13	Improper/incorrect reporting	BON17	Failure to develop any or adequate SWPPP/SWMP
B0034	Insufficient Buffers/Setbacks	BON18	Failure to Implement SWPPP/SWMP
B0035	Insufficient Storage Capacity	BON41	Failure to Maintain Records
AOA22	Narrative effluent violation	CON11	Failure to Monitor
EOA16	No Annual Report Submitted	BN19A	Failure to properly install/implement BMPs
CO020	No Depth Marker	BN19B	Failure to properly operate and maintain BMPs
EOA14	Noncompliance with section 308 Information Request	DON12	Failure to submit required permit application information
AOA12	Numeric effluent violation	EDN16	Failure to submit required report (non-DMR)
AO019	Production Area Runoff	ADR22	Narrative effluent violation
BOA42	Violation of a milestone in an order	EDN14	Noncompliance with section 308 Information Request
		ADN12	Numeric Effluent Violation
		BON42	Violation of a milestone in an order

\* N. B. The codes and code names listed herein may change over time. Please consult ICIS-NPDES and PCS system documentation for updated lists.

## Attachment 1

### Inspection Summary

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- **Introduction.** On December 21, 2011, staff from EPA Region 9, the Los Angeles Regional Board, and the State Water Board inspected the wastewater collection system owned and operated by the City of Redondo Beach. The purpose of the inspection was to determine compliance with the Clean Water Act. Redondo Beach is a city of 6.4 square miles located approximately 20 miles from downtown Los Angeles with a population of 68,105. Redondo Beach's sewage collection system consists of 110 miles of pipe with 16 pump stations and 2 siphons. Redondo Beach is a satellite collection system tributary to Los Angeles County Sanitary District 5 and Southbay Cities District. Information provided by Redondo Beach representatives is summarized in the Inspection Form, above. This summary provides highlights of EPA's inspection findings.
- **Regulatory Requirements.** Discharges to waters of the United States without a permit are prohibited by Section 301(a) of the Clean Water Act. The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ, states that any spill that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.
- **Occurrence of SSOs.** Discharges to waters of the United States without a permit are prohibited by Section 301(a) of the Clean Water Act. In addition, Part C.1 Prohibitions of the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ, states that any spill that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

According to the inspection questionnaire completed by the City of Redondo Beach and submitted to EPA following the inspection, 50 Sanitary Sewer Overflows ("SSOs") due to blockages or problems within City-owned pipes occurred during the 5-year period between January 1, 2007 and December 20, 2011. The City actually reported 58 SSOs to CIWQS; of these, 6 SSOs were reported to have reached surface waters. The number of SSOs has generally trended upward from 2007 to 2011. The City owns and is responsible for the operation and maintenance of 110 miles of pipe.

Of the SSOs reported to the California Integrated Water Quality System ("CIWQS") database by the City, SSO volume was chiefly attributable to either root intrusion (33%); pump station failure (20%); or Fats, Oils, and Grease ("FOG") (13%).

The City reported in its inspection questionnaire that the entire system is cleaned once every three years, and that hot spots due to roots and FOG are cleaned on a schedule of either three or six times per year. Redondo Beach submitted to the inspection team its February 2011 O&M Plan. Table 2-1 of the Plan summarizes the City's preventive maintenance program: annual system cleaning, quarterly hot spot cleaning, and annual force main inspection and cleaning. According to the 2010 System Evaluation and Capacity Assurance Plan and Rehabilitation and Replacement Program ("SECAP"), the City scheduled cleaning every two years, but was unable to complete it due to staffing issues. The SECAP recommended annual cleaning of the system to reverse the upward SSO



trend. Despite stated improvements in the sewer cleaning program, the number of SSOs during 2011 increased over the previous several years.

City staff told the inspectors that there are "over 50 hot spots" in the collection system, but according to the SECAP, there are 111 locations consisting of 28,247 ft. that require accelerated hot spot cleaning. In other words, 5% of the system requires quarterly cleaning.

Order No. 2006-0003-DWQ requires the SSMP to include regular visual inspection of the system in the maintenance program. The City stated that it inspects the system with CCTV every 5 years, having done so in 2002 and in 2006. Section 5 of the City's Sewer System Management plan ("SSMP") reports that CCTV inspection was first performed in 1997 and most recently in 2007 (87% of system). The City's SECAP recommends annual CCTV for "areas of concern" (5% of system); every 4 years for operation and maintenance ("O&M") deficiency ratings (38% of system); every 5 years for "moderate" pipe ratings (7.4% of system); and every 10 years for "minor" and "no deficiency" ratings (48% of system). The SECAP recommendations were based on the 2007 CCTV inspections. The February 2011 O&M Plan recommends CCTV following every SSO and installation of new pipe, although it says that CCTV equipment did not have recording capability. During the inspection, City staff stated that it has the in-house capability to do the CCTV, and does so following most SSOs. The City staff said that it is currently in the process of procuring new CCTV equipment.

*Recommendation:* The City is required by Order No. 2006-0003-DWQ to take all feasible steps to eliminate SSOs; therefore, it should increase its efforts to reduce SSOs by following the recommended system-wide cleaning interval of its SECAP. It should intensify focus on eliminating preventable SSOs. The City should follow the recommendations of its Rehabilitation Report and continue its plan to procure CCTV equipment, thus enabling it to CCTV following SSOs and to perform routine CCTV inspection. Redondo Beach might consider SSO reduction tools that other California cities use, for example, those described in *Best Management Practices for Sanitary Sewer Overflow Reduction Strategies*, CVCWA and BACWA, December 2009. (This can be downloaded at <http://bacwa.org/Portals/0/Committees/CollectionSystems/Library/SSO%20BMP%20Manual%201%201.pdf>).

- **Documentation of SSOs.** Order No. 2006-0003-DWQ requires Redondo Beach to develop and implement an SSMP, including a Sewer System Overflow Response Plan ("SSORP"). Monitoring and Reporting Program No. 2006-0003-DWQ establishes requirements for monitoring, recordkeeping, and reporting. Paragraph B of the Monitoring Program requires that the documentation related to SSOs must be maintained by the Enrollee for a period of five years. The required documents include copies of the reports submitted to California Integrated Water Quality System ("CIWQS"), logs of SSO calls, service call records, SSO records, complaints, and maintenance records.

The City provided scanned copies of SSO reports on a CD, which included copies of CIWQS certification pages, public works staff field reports, fire department field reports, and the logs of the calls obtained from the police department dispatcher. A random review of the field reports reveals that time of the call recorded on the field report does not match the time on the police dispatch report: for the SSO that occurred on January 9, 2011, the police log says the call came in at 10:50 AM, and the field report states the call came in at 10:55 AM; for the SSO that occurred on March 19, 2011, the police log says the call came in at 9:52 AM, and the field report says 10:01 AM. This error may seem insignificant, but it causes an underestimation in spill duration and volume estimation.

Page 5 of the City's SSORP states that when SSOs are either on or may affect city property, responders are to collect information, estimate volume, and capture photo documentation. City staff told the inspection team that city response trucks are equipped with digital cameras and spill reporting kits. None of the spill reports reviewed contained photographs. The SSORP states that dispatch should ask callers when the spill began; during the inspection, city staff said that dispatch does not ask. The SSORP does not contain sufficient information to correctly estimate spill volume.

**Record Keeping.** Section D.13.iv of Order No. 2006-0003-DWQ requires the City's SSMP include provisions for documenting routine and hot spot maintenance and work orders. In addition, Section B of the Monitoring and Reporting requirements require records of SSOs, and work orders, work completed, and other maintenance records be maintained for five years. The City uses "OPRA" work order module to track service requests but is not a wastewater maintenance management system. A review of the summary of work orders that was submitted by the City, did not track or indicate specifically that there had been appropriate follow-up, or that new work orders were generated when repairs were recommended. New work orders are manually generated. The City's February 2011 O&M Plan recommended tracking all cleaning records in an electronic record keeping system. The City has purchased i-WATER MMS, and expect that it will be deployed in 3 to 6 months. It will generate routine maintenance orders and link the alarms.

**Recommendation:** To comply with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, the City should make all efforts to improve the completeness and accuracy of its documentation of SSOs. Standard procedures should be established for preparing complete and accurate documentation of SSOs, beginning with the logging of the initial call from the public until the final spill report is submitted to CIWQS. The SSORP should be revised to contain all relevant information. When possible, response crews should follow up to determine the actual time the SSO began. The City should also consider preparing spill response documentation kits to be maintained in its service vehicles, including tools to aid in estimating SSO volume, including digital cameras. All staff that responds to SSOs should receive additional training in preparing and maintaining required SSO documentation. The City should adopt a maintenance management system ("MMS") that would more efficiently allow the City to map, track, record maintenance, SSOs, inspection history, and condition assessment of its pipes. An MMS would provide a system for integrating and maintaining the SSO documentation required by the State's Order No. 2006-0003-DWQ.

- **Reporting of SSOs.** According to Order No. 2006-0003-DWQ Statewide General Waste Discharge Requirements, the City of Redondo Beach is required to report all SSOs to the State's CIWQS database.

The inspection team asked the City how SSOs were treated when a blockage and SSO occurs on city property; for example, a service lateral from City Hall. The City staff responded that they would treat

basement backups or lateral blockages on or from city-owned properties as private spills, and not report them to CIWQS.

Geraldine Trivedi, who is the point of contact for SSOs in Redondo Beach, told inspectors that the time of call or time of crew arrival is typically recorded for the spill start time. The document titled "Police Dispatch Typical Questions" submitted by the city on a CD dated January 9, 2012 contained a list of questions asked of callers when dispatch responds to an SSO call. The document contains questions regarding SSO start time, duration, and flow rate. During the interview, inspectors were told that dispatch does not typically ask when a spill may have started, but that crews speak to residents when possible. City crew members interviewed in the field stated that they do not currently try to accurately determine the actual time the spill began.

According to the CIWQS report for a spill that occurred on July 2, 2011, the spill volume of 10 gallons was completely recovered; time the city was notified was 9:10 AM, time the spill started was 9:10 AM, time the response crew arrived was 9:20 AM, and the time the spill stopped was 10:00 AM. The spill rate was 0 gpm. The spill was returned to the sewer system. CCTV was used to determine that the cause of the spill was root intrusion. The inspection team interviewed operations staff in the field regarding the 7/2/11 SSO regarding volume calculation, SSO response training & procedures. When asked about how the city was notified, operator Frank Contreras said that he received a cell phone call that Saturday morning from a colleague in the neighboring city of Manhattan Beach. The spill occurred at the city line but the spilling manhole was on the Redondo Beach side. Operator Frank Contreras said that the original call had probably been made to Manhattan Beach, and their crew had responded, saw that it was on the Redondo Beach side of the line, and Don Sobitsky of Manhattan Beach then called Mr. Contreras, who responded from home. Mr. Contreras said that he did not ask his Mr. Sobitsky what time Manhattan Beach was notified of the SSO. He said when he arrived; there was only a trickle from the manhole, and damp pavement. He said he calculated the spill volume by estimating the size of a rectangular area that was already mostly dry because it was so hot outside. (According to Weather Underground ([www.wunderground.com](http://www.wunderground.com)), the high temperature in Redondo Beach for that day was 75 F, reached by 9 AM) He said he called the on-call equipment operator, Roy Lacey, to come with the vactor truck to remove the blockage and wash down the street. He said that the wash water was vactored up. Mr. Lacey, who was interviewed separately, told the interviewers that he was called by the Police Department dispatcher. Mr. Lacey told inspectors that he had been employed for 2 years as an equipment operator, and that he had been trained to operate the vactor truck. He also said he'd been handed a brochure on obtaining grade 1 wastewater certification, but was not yet certified. He had so far only been called to respond to "a couple" of SSOs. He told the inspection team that when he uses the vactor to retrieve spilled wastewater, the amount vactored up at an SSO is not measured, and that he does not dump the truck until it is full. A review of the police department dispatch log, submitted on a CD provided by Redondo Beach on January 9, 2012, indicates the spill was not logged in as called in to Redondo Beach Police Department.



A brief review of work orders submitted by the city revealed four possible unreported SSOs; but it was unclear from the work order documentation whether these potential SSOs were public or private spills.

*Recommendation:* The City must report all SSOs, including "basement backups" and backups from city-owned laterals, as required by Monitoring and Reporting Program No. 2006-0003-DWQ. The City should provide EPA and the State with the reasons any SSOs were not reported to CIWQS and report all missing SSO data to CIWQS, as appropriate. Information reported into CIWQS should be as accurate as possible. Response staff should receive training on SSO field documentation, especially volume calculation. Response staff should be encouraged to accurately determine the time the spill started so that volume calculations are more accurate.

- **Pump Stations.** Section D of Order No. 2006-0003-DWQ requires Redondo Beach to take all steps feasible to eliminate SSOs. A review of CIWQS SSO data for Redondo Beach reveals that 20% of its reported spills were due to pump station failure. A significant number of SSOs could be eliminated by improving preventive maintenance and making necessary repairs to pump stations. The May 2011 SSMP audit report states that the Portofino pump station rebuild and the Rindge pump station upgrades were to be complete in 2012; however none of the documents supplied by the City to the inspection team indicate the work has been started.

*Recommendation:* To comply with the Clean Water Act and Order No. 2006-0003-DWQ, the City should ensure that all proper operation and maintenance procedures are routinely performed. All alarms, pumps, electrical systems and generators should be inspected, and all preventive maintenance should be performed as recommended by the manufacturer. Exercise equipment as recommended. Verify that all alarms and communication systems operate properly. Ensure that maintenance staff is trained on proper maintenance procedures. The City should schedule its pump stations and force mains for immediate upgrades to assure reliability, as recommended by its Master Plan.

- **Repeat SSO Locations.** Section D of Order No. 2006-0003-DWQ requires Redondo Beach to take all steps feasible to eliminate SSOs. A review of CIWQS data indicates there are four locations which have experienced more than one SSO: 3 SSOs at Lucia Street (MH 2355 2 debris, 1 root intrusion); 2 SSOs at 510 Pacific Coast Highway and 1 SSO at 525 Pacific Coast Highway (FOG, FOG & roots); 2 SSOs at Helberta St. (debris, FOG); and 3 SSOs at Esplanade St. (FOG, FOG & debris). Repeat SSOs may indicate insufficient preventive maintenance in these areas, insufficient FOG & root intrusion programs, or unresolved pipe defects.

*Recommendation:* To comply with the Clean Water Act and Order No. 2006-0003-DWQ, the City should ensure that it determines the root cause of SSO by inspection, and then deal with the underlying cause of the problem. Ensure that maintenance staff is properly trained. The City should inspect pipes using CCTV following SSOs to determine the root cause.

- **Fats, Oils, and Grease ("FOG") and Root Control Programs.** The City is subject to Order No. 2006-0003-DWQ requiring a program designed to eliminate FOG from being discharged to the sewage collection system pipes where it is a problem. The May 2011 SSMP audit acknowledged the fact that most SSOs in Redondo Beach are caused by either FOG or roots; it recommended enhancing the FOG and root programs. Redondo Beach currently bases its FOG program on the Clean Bay restaurant certification program, the primary focus of which is preventing polluted runoff from



entering the ocean. The Clean Bay program relies heavily on restaurant "best management practices" that primarily target outdoor FOG, with little focus on preventing FOG from entering the sewage collection system. Terry Zook, who is responsible for FOG inspections in Redondo Beach, told inspectors that FSEs are inspected twice per year; but that she never requests that owners open the traps or interceptors. She said she relies on the maintenance documentation kept by the facility to determine whether the trap is more than half full. If the maintenance documentation indicates that a trap is half or more than half full, or if the restaurant does not have maintenance documentation, a notice of non-compliance is given to the facility. The restaurant is then responsible to fix the problem and a re-inspection fee of \$121 is charged.

Redondo Beach does not include as FSEs: churches with kitchens, rest homes, or schools; all of which are potential generators of FOG. New construction or new plumbing permits trigger the installation of grease traps, as does a county health permit. At the present, although the county health department prefers an in-ground interceptor for sanitation, Redondo Beach allows installation of small under sink traps. The City's FOG ordinance does not prescribe a minimum maintenance schedule. The City of Redondo Beach doesn't have the authority under its ordinance to cite or enforce; Ms Zook said that she would have to turn problem cases over to the city's prosecutor. She said she had two big cases and several small cases last year, and both large cases came into compliance.

The City's inspection questionnaire states that Redondo Beach contracts with Pacific Sewer Maintenance for its chemical root control program. Chemical treatment is performed on an "as needed" basis. Redondo Beach does not cut roots before foaming mild to moderate root infiltration. Under "Root Removal and Chemical Application Procedures" in *Sanitary Sewer Integrated Root Control Best Management Practice*, the recommended practice is to first cut the roots, wait a few months for regrowth to begin, then apply herbicide.

*Recommendation:* To prevent FOG from entering the sewage collection system and eliminate spills due to FOG, the City should begin as soon as possible to aggressively implement a comprehensive FOG control program. There are a number of good sources in California that can provide a description of effective FOG control programs, for example, [www.calfog.org](http://www.calfog.org). Redondo Beach should consider obtaining from the City of Los Angeles a copy of *Sanitary Sewer Integrated Root Control Best Management Practice*, California Collection System Collaborative Benchmarking Group, March 2005, to help develop and implement an effective root control plan.

- **Flow Measurements and Capacity.** Part D.10 of Order No. 2006-0003-DWQ states that an Enrollee must provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events. According to Figure 1.2 of the SECAP, approximately 1 mile of the 110 miles was calculated to have capacity issues. The calculations were based on limited flow data from seven metered locations over a single wet season and a number of assumptions.

Although the City of Redondo Beach expressed confidence that it has no capacity problems, of the 2,100 manholes in the City of Redondo Beach, 31 have "smart covers", which are moved where needed, presumably where there is a possibility of surcharging.

*Recommendation:* The City should verify that the conclusions drawn by the modeling study are valid and eliminate capacity issues within its system.

- **Capital Improvement.** Section D.8. of Order No. 2006-0003-DWQ requires an Enrollee to properly operate and maintain its sewer collection system. Section D.9. of Order No. 2006-0003-DWQ requires Enrollees to allocate adequate resources for operation, maintenance, and repair of its sewage collection system. According to the SECAP, the total estimated cost to upgrade the sewer pipe with severe or major condition priorities is \$11,242,604. (4.22 miles). The total cost including pump station and capacity upgrades is \$33Million.

*Recommendation:* The City should aggressively implement the recommendations of its Rehabilitation Plan, especially those regarding sewer system upgrades and CCTV inspections. A plan and schedule for completing the work should be developed. In order to consistently meet sewer system expenses and fund needed rehabilitation work, the City should consider continuing its increased sewer rates to fund capital improvements. Elaine Jeng, an Engineer with the City of Redondo Beach, said in a March 7, 2012 telephone call that the proposed rate hike they told inspectors about during the inspection was passed at the March 6, 2012 City Council meeting.

- **Staffing and Training.** Part D.8 of Order No. 2006-0003-DWQ states that an Enrollee must ensure that all operators are adequately trained. Part D.9 requires Enrollees to allocate sufficient resources for proper operation and maintenance of the system. Part D.13.iv.d. requires Enrollees to provide regular training of operations staff. According to the February 2011 O&M Plan, 6.3 staff per 100 miles of line is recommended. Redondo Beach has 1 of 5 public works crews spending 80% of its time on sewer and storm drain systems, according to the questionnaire. Redondo Beach should have two more staff to meet the recommendation of its O&M Plan. The O&M Plan says Redondo Beach has the highest ratio of miles pipe per crew member of all local agencies that participated in the benchmarking survey; it also has the highest number of SSOs.

*Recommendation:* In order for Redondo Beach to comply with State Water Resources Control Board Order No. 2006-0003-DWQ it must have sufficient trained staff to perform adequate operation and maintenance of its sewage collection system.

**Attachment 2**

**SEWAGE COLLECTION SYSTEM INSPECTION FORM  
(EPA Reg 9; form revised September 23, 2010)**

**GENERAL INFORMATION**

Inspection Date 12/21/2011

Utility Name: City of Redondo Beach, California
Address: 415 Diamond Street, Redondo Beach, California 90277
Contact Person: Steve Huang
Phone: 310 318-0661 x2431    Cell: 310 560-5618    Fax: 310 374-4828
Email: steve.huang@redondo.org

Inspectors Names Agency/Contractor

<b>JoAnn Cola</b>	<b>US EPA</b>
<b>Julie Berrey</b>	<b>State of California Water Board</b>
<b>Jim Fischer</b>	<b>State of California Water Board</b>
<b>Andrew Choi</b>	<b>Los Angeles Regional Water Board</b>
<b>Chris Lopez</b>	<b>Los Angeles Regional Water Board</b>
<b>Jose Morales</b>	<b>Los Angeles Regional Water Board</b>

Utility personnel who accompanied inspectors

Name Title

<b>Mike Witzansky</b>	<b>Director of Public Works</b>
<b>Tim Shea</b>	<b>Deputy Director of Public Works</b>
<b>Tony Funaki</b>	<b>Public Works Maintenance Supervisor</b>
<b>Geraldine Trivedi</b>	<b>Associate Civil Engineer</b>
<b>Elaine Jeng</b>	<b>Civil Engineer</b>
<b>Mike Shay</b>	<b>Principal Civil Engineer</b>
<b>Steve Huang</b>	<b>City Engineer</b>

## SYSTEM OVERVIEW

Population: 68,105 Service Area (Sqr. Miles): 6.35

Service Area Description: Residential community southwest from downtown Los Angeles

	Residential	Commercial	Industrial	Total
Number of service connections	13,109	566	56	13,731

Combined Sewers (% of system): 0

Name and NPDES permit number for WWTP(s) owned or operated by the collection system utility:  
N/A

Name and NPDES permit number for WWTP(s) that receive flow from the collection system utility:  
Los Angeles County Sanitation District Joint Water Pollution Control Plant NPDES Permit No. CA0053813

Names of upstream collection systems sending flow to the collection system utility:

N/A

Names of downstream collection systems receiving flow from the collection system utility:

Los Angeles County Sanitation District 5

Southbay Cities District

Do any interagency agreements exist with upstream collection systems? (Y/N) N

Does the utility maintain the legal authority to limit flow from upstream satellite collection systems? (Y/N) N



**SYSTEM INVENTORY (LIST ONLY ASSETS OWNED BY UTILITY)**

Miles of gravity main	Miles of force main	Miles of Laterals	Number of maintenance access structures	Number of pump stations	Number of siphons
110	1.25	79	2,482	16	2

Utility responsibility for laterals (none, whole, lower) None

**Size Distribution of Collection System**

Diameter in inches	Gravity Sewer (miles)	Force Mains (miles)
6 inches or less	1.75	0.5
8 inches	98	1
9 - 18 inches	10	0
19 - 36 inches	0	0
> 36 inches	0	0

**Age Distribution of Collection System**

Age	Sewer Mains, miles	# of Pump Stations
0 - 25 years	0	14
26 - 50 years	39	1
51 - 75 years	72.25	1
> 76 years	0	0

## SYSTEM FLOW CHARACTERISTICS

Collection System		
Average Daily Dry Weather Flow (MGD)	Peak Daily Wet Weather Flow (MGD)	Peak Instantaneous Wet Weather Flow (MGD)
5.99	10.38	14.53

Location of flow monitor(s) from which above information obtained: Seven locations: 1) Inglewood Avenue, north of Manhattan Beach Blvd.; 2) Marshallfield Lane, west of Harness Lane; 3) In parking lot next to Albertsons; 4) Broadway Avenue at Diamond St.; 5) Pearl St., east of PCH; 6) Catalina Ave. at Avenue F; and 7) Avenue H, east of Massena.

Period over which flow was monitored: December 9, 2009 to March 8, 2010

Agency conducting the flow monitoring: Redondo Beach via consultant ADS Environmental Services

If no flow monitors, describe method for estimating flows:

Wastewater Treatment Plant		
Average Daily Dry Weather Flow (MGD)	Peak Daily Wet Weather Flow (MGD)	Peak Instantaneous Wet Weather Flow (MGD)
N/A		

Upstream Satellite Name	Avg. Dry Weather Flow	Peak Flow (MGD)	Flow based on meter or estimate?	
	(MGD)	% of total flow		
N/A				

Constructed Overflow Points		
Overflow Point	Location	Number of Discharges/Year
N/A		

**REGULATORY BACKGROUND**

Does the system operate under the provisions of an NPDES permit (either their own or under provisions of another agencies permit)? (Y/N) Y

Permit holder City of Redondo Beach Permit # CAS-004-001 (stormwater)

List provision of the permit that apply (If permit holder is other than the agency being inspected) Under the Municipal Storm water NPDES permit, the following sections of the permit contains provisions that apply: Part IV, Section F.1 Sewer Maintenance Overflow and Prevention; Part IV, Section G.3 Illicit Discharges

Does the system operate under a state permit? (Y/N) Y

Are there any spill reporting requirements? (Y/N) Y

Which agency (or agencies) promulgates the spill reporting requirements? State of California Water Resources Control Board; City of Redondo Beach

Outline the spill reporting requirements (summarize spill reporting requirement for each applicable statute, regulation and permit): State Water Resources Control Board Statewide General Waste Discharge Requirements for Sanitary Sewer Systems Water Quality Order requires reporting of all wastewater overflows that are caused by sewer system main pipe lines.

## SPILLS

Sanitary Sewer Overflows From and Caused by Utility									
Note: Spill Rate = number of SSOs/100 miles of sewer pipe/year									
Year	Mains			Laterals *			Totals		
	(Miles of Mains <u>110</u> )			(Miles of Laterals _____)			(Total Miles <u>110</u> )		
	#SSOs	(1)Spill Rate (see below)	Gross Spill Volume	#SSOs	(2)Spill Rate (see below)	Gross Spill Volume	Total SSOs	(3)Total Spill Rate (see below)	Total Gross Spill Volume
2007	11	10	4,000				11	10	4,000
2008	8	7	2,700				8	7	2,700
2009	16	14	4,600				16	14	4,600
2010	10	9	6,100				10	9	6,100
2011	5		3,800				5	4	3,800
Total	50		21,200				50	44	21,200

\* Per instructions in e-mail to Redondo Beach dated December 18, 2011 from JoAnn Cola, spills that Redondo Beach is not responsible for may be excluded.

(1)Spill Rate = [(#SSOs in main pipe) X 100]/Miles of Main Pipe in System

(2)Spill Rate = [(#SSOs in laterals) X 100]/Miles of Lateral in System

(3)Total Spill Rate = [(#SSOs in Main + #SSOs in Laterals)X100]/[Miles of Main + Miles of Laterals]



**Spill Cause**

Year (as listed in Table above)	Blockage								Gravity Pipe Break		Force Main Break		Pump Station		Capacity	
	Grease		Roots		Debris		Multiple									
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
2007	3	27	0	0	4	37	0	0	0	0	0	0	4	36	0	0
2008	0	0	3	38	5	62	0	0	0	0	0	0	0	0	0	0
2009	3	19	8	50	0	0	4	25	0	0	0	0	1	6	0	0
2010	4	40	2	20	0	0	4	40	0	0	0	0	0	0	0	0
2011	1	20	2	40	0	0	2	40	0	0	0	0	0	0	0	0
Total	11	22	15	30	9	18	10	20	0	0	0	0	5	10	0	0

Please attach a copy of facility spill records for each of the past five years. The information for each spill should include, at a minimum, the following: Date of spill, time spill reported, location of spill (address and city), whether the spill occurred in a private lateral, whether it reached a surface water, total volume of the spill, volume of spill recovered, volume of spill that reached a surface water, the appearance point of the spill, final spill destination, spill cause and explanation, whether a health warning was posted.

<b>BUILDING BACKUPS (list only backups caused by problems in sewer mains)</b>		
Year	Number of backups	Cost of Settled Claims
2006	5	0
2007	1	0
2008	2	\$6,059
2009	0	0
2010	2	0
2011	2	\$405
TOTAL	15	\$6,614

**STAFFING**

Indicate \*Number of Staff – As pertaining specifically to collection system responsibilities

**\*Provided as numerical or FTEs or positions**

Management and Administrative: Budgeted 2 Filled 2

Maintenance: Budgeted 5 Filled 5

Electricians and Mechanical Technicians: Budgeted 0.5 (electrician) Filled 0.5 (electrician)

Operators: Budgeted 4 (pump stations) Filled 4 (pump stations)

Engineering: Budgeted 4 Filled 4

Number of Certified Collection System Operators/Certification Program: 2

Number of Sewer Cleaning Crews: 1

Sewer Cleaning Crew Size: 5

Contractor Services	Contractor Name(s) (NA if contractors not used)	Cost (\$/year)
Sewer Cleaning	N/A	
Chemical Root Control	Pacific Sewer Maintenance	\$184,524
Spot Repairs	Various	\$686,505
CCTV	Ace Pipeline Corporation (2006)	\$410,360
Spill Response	Various	FY11/12 Budget \$1.1M
Other:		

## EQUIPMENT

List Major Equipment Owned by the Utility:

Equipment	Number	Number in Service
Combination Trucks (hydroflush and vactor)	1	1
Hydroflusher	0	0
Mechanical Rodder	1	1
CCTV Truck	1	1
Utility Truck	2	2
Portable Pumps	5 (4 @ 4"; 1 @ 16")	5
Portable Generator	2	2

## FINANCIAL

Does the collection system operate from an enterprise fund? Yes

REVENUES	
Revenue Source	Annual Revenue (\$/year)
User Fees	\$2,474,232
Connection Fees	\$32,485
Grants	\$45,000
Bonds	\$3,168,000
SRF Loans	\$0
<b>TOTAL</b>	<b>\$5,719,717</b>

<b>EXPENSES</b>		
<b>Expense</b>	<b>Annual Cost</b> <b>(\$/year)</b>	<b>Cost / Mile of Pipe</b> <b>(Total Pipe Mileage: <u>110</u> )</b>
Maintenance	\$349,159 (FY11/12)	\$3,174
Operations (electric, fuel, etc.)	(see above)	(see above)
Salaries and Benefits	\$979,128 (FY11/12)	\$8,901
Capital Improvements	None	N/A
Debt payments	\$673,200	\$6,120
<b>TOTAL</b>	<b>\$2,001,487</b>	<b>\$18,195</b>

Average Monthly Household User Fee for Sewage Collection: \$7.25  
Wastewater Treatment: \$11.00  
Total Wastewater Fees: \$18.25

Sewer Fee Rate Basis (i.e. water consumption, flat rate, etc.): Tiered rate by unit (residential) / water consumption (commercial)

Last Fee Increase (Date): 2007

Planned Fee Increases: City is currently in the process of increasing user fee rates proposed effective July 2012.

Capital Improvement Fund: \$3,168M \$ for 1 years



## SPILL RESPONSE, NOTIFICATION AND REPORTING

Does the Utility Have a Written Spill Response Plan? Yes

Is the Plan Carried by Maintenance/Spill Response Crews? Yes

Indicate Elements Included In the Spill Response Plan		
Element	Y/N	Comment
Identification of Responsible Staff	Y	Organization chart in SSMP; chart provided to staff
<b>DISPATCH</b>		
System for Becoming Aware of Spills	Y	Calls from public or city staff
System for Receiving Public Calls	Y	
Dispatch Procedures – Normal Hours	Y	City hall to public works to crew
Dispatch Procedures – After Hours	Y	Police Department dispatch categorizes call as “sewer”; autodialers until response. Crew rotates responsibility for response, carries emergency cell phone.
Coordination with First Responders (police, fire department)	Y	
Response Time Goal	Y	15 minutes during business hours; 1 hour during off hours
<b>SPILL CONTROL/MITIGATION</b>		
Spill Response Activity Sequence	Y	City crew can do spill minimization and traffic control.
Spill Site Security	Y	Police and fire can assist with traffic control
Procedures for Stopping Spills	Y	Block and contain spill
Spill Containment	Y	Sand bags / catch basin plugs on sewer trailer
Protection of Storm Drains	Y	Pump out catch basin & return to main
Cleanup/Mitigation	Y	

<b>DOCUMENTATION</b>		
Spill Volume Estimation Method (list method in comment field)		Estimation California Water Environment Association, 2006 publication.
Determination of Spill Start Time	Y	Based on time first call received
Spill Sampling	Y	Consultant
Receiving Water Sampling	Y	Department of Health Services
Photographing Spill Site	Y	Digital camera
Field Notes Form	Y	Recorded on Spill Report Form
Spill Report Form	Y	Per State WDR
<b>NOTIFICATION</b>		
Notification of Affected Public (schools, recreational users, etc.)	Y	Direct contact with immediate affected areas. Coordination with life guard and the Department of Health Services for wider notifications.
Posting Warning Signs	Y	Posting by Department of Health Services
Sanitation Information re: building backups	Y	Department of Health Services is notified of all spills.
<b>REPORTING</b>		
Reporting Procedures	Y	
Spill Report Forms	Y	
Persons Responsible for Filing Reports	Y	

Are all spills reported regardless of volume? Y

Are Contractors Required to Follow Spill Response Procedures? Y

Average Spill Response Time (normal work hours): .25 hours

Average Spill Response Time (after hours/holidays): 1 hours

Does the Utility CCTV Pipes Following Spill? Y

Are Cleaning Schedules Adjusted in Response to Spills? Y

## SEWER CLEANING AND MAINTENANCE

Does the Utility Have Detailed Sewer System Maps? Y

Are Maps on GIS Database? Y

Are Maps Available to Maintenance Crews? Y

Maintenance Management System is (check whichever is applicable):

Written  Computerized  Both  Other (describe) \_\_\_\_\_

ANNUAL SEWER CLEANING – Include hydroflushing, mechanical and hand rodding			
Pipe Cleaning excluding repeats		Pipe Cleaning Including Repeats	
(miles/year)	% of system/year	(miles/year)	
35 miles	33	41	

What does the crew report for total length of pipe cleaned in a single visit if they clean the same pipe segment more than once during that visit? Crews only report the length of pipe cleaned.

System Cleaning Frequency (years to clean entire system): 3

Types of problems subject to hot spot cleaning? Known heavy root or grease areas

HOT SPOT CLEANING SCHEDULE			
Cleaning Frequency	Number of Locations	Pipe length excluding repeats (miles)	Pipe length including repeats (miles)
1/month	None		
6/year	1	0.27	1.61
3/year	110	5.06	15.18
2/year	None		
1/year	None		

## CHEMICAL ROOT TREATMENTS

Length of pipe subject to chemical root treatments (miles/year): 48 miles

Chemical treatment frequency: As needed

Root treatment chemicals used: Diquat, Dichlobenil, or equivalent product that is registered with EPA and the California Department of Pesticide Regulation

## SPOT REPAIRS

Spot repairs completed annually: 20 (#/year); \_\_\_\_\_ (miles/year)

Spot repair budget (\$/year): Varies from year to year; \$1M for FY11/12

Spot repair expenditures last year: \$ \$686,505 ; year: 2011

## ODORS

Annual number of complaints: 10 - 14

Odor hot spot locations: Turquoise Café in Riviera Village and the Harbor

Odor treatment facilities: None

## EASEMENT PIPE CLEANING

Total length of easement pipes (miles): 11.5

Annual easement pipe cleaning (miles/year): 1.5

Do maintenance workers have access to all easements? Yes, with permission from homeowner.

### FATS, OILS AND GREASE (FOG) CONTROL

Does the Utility have a FOG source control ordinance? Yes

Ordinance Citation: Redondo Beach Municipal Code Chapter 5-4.305

Agency responsible for implementing the FOG control program: Redondo Beach Engineering

Number of Food Service Establishments (FSEs) in service area: 213

Number of FSEs subject to FOG ordinance: 213

Indicate Elements Included In the Food Service Establishment FOG Source Control Program		
Element	Y/N	Comment
FSE Permits	Y	Business license
FSE inspections	Y	
FSE enforcement	Y	Notices of non-compliance
Oil & grease discharge concentration limit	N	
<b>Grease removal device (GRD) requirements:</b>		
traps	Y	Per Engineering / Public Works standard specifications
interceptors	Y	Per Engineering / Public Works standard specifications
Automatic cleaning traps	N	
FSEs subject to GRD installation:		
all FSEs (new and existing)	Y	
new FSEs	Y	
remodeled FSEs	Y	
for cause at existing FSEs	N	
GRD maintenance requirements:		



Cleaning frequency	Y	Regularly maintained
25% rule (grease and solids accumulation)	N	Common practice
Kitchen BMP Requirements (list required BMPs below)		
		Secondary spill containment
		Covered, bermed storage areas
		Dry method to clean spills
Allowance for chemical additives?	N	
Allowance for biological additives?	N	
FOG Disposal Requirements	Y	
FOG Disposal Manifest System	Y	Registered by State

Number of FOG Program staff:

Inspectors 1

Permit writers 0

Other 1

FSE Inspection frequency: Twice per year

Annual number of FSE inspections: 213

Does Utility use CCTV to identify FOG sources? Yes

Does sewer maintenance staff coordinate with FOG source control program staff? Yes

Cleaning targeted to FOG hot spots? Yes

Maintenance crew referrals to FOG program? Yes

Pipe repairs at FOG hot spots? As needed

Describe program for public outreach and education related to residential FOG sources: Clean Bay restaurant certification program, educational brochure, school programs (various), and the City's website (Sewage Spill Reference Guide).

## PIPE INSPECTION AND CONDITION ASSESSMENT

### Gravity Main Inspection

Describe Pipe Inspection Methods: CCTV; Inspection data converted to National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) coding procedures.

Miles of Pipe Inspected in the Last 10 Years and Planned Inspection Next 10 Years				
Date Range	Inspection Method	Miles of Pipe without repeats	Useable Condition Assessment	
			Miles of Pipe (without repeats)	% of System (System miles: )
2000 to 2001	CCTV	99 *	All	93%
19__ to present	Other			
2006 to 2007	CCTV	94	All	85%
Present to 20__	Other			

\* The total number of miles of gravity main in 2000 – 2001 was 107.

Describe Planned Pipe Inspection: Most recent inspection data is dated October 2007. Currently, there are no planned pipe inspections until recommended measures are implemented per the master plan.

Summary of Condition Assessment Findings: 35.5% of inspection had no deficiencies; 2.8% were found to be in severe condition; 1.7% were categorized as major deficient condition; 7.4% were categorized as moderate deficient condition; and 15.5% were categorized as minor deficient condition. 38.2% require ongoing maintenance to improve the condition, and 1.9% were categorized in need of replacement.

### Force Mains

Describe Force Main Inspection Methods: Force main pipe conditions are based on operating conditions of the upstream pumps and downstream manholes.

Describe Program for Inspecting Air Relief Valves: The City is not aware of any Air Relief Valves within the sanitary sewer system.

### Private Laterals

Does the Utility Inspect Private Laterals? No

Number of Private Laterals Inspected 19\_\_ to Present: None

Summary of Inspection Findings: N/A

Number of Private Laterals Planned for Inspection Present to 20\_\_ : N/A

## CAPACITY ASSURANCE

List Locations and Dates of Repeats Capacity Spills: None

List Locations of Known Capacity Bottlenecks:

Dry Weather: None

Wet Weather: None

Describe I&I Assessments Completed by the Utility (dates, area covered, findings, etc.): December 2010, Consultants performed a System Evaluation and Capacity Assurance Plan and Rehabilitation and Replacement Program (SECAP) in which the I&I was estimated based on the diameter and length of pipeline (100 to 400 gpd/in. dia./mile) or a percentage of the peak flow or pipeline capacity. A formula was developed by the consultant to account for inflow and infiltration.

Flow Meters (number, locations): None

Describe Flow Model Used by the Utility: Unit flow factors were developed based on the existing land uses and results of flow monitoring studies. The unit flow factors were used to generate average dry weather flows entering the collection system. Peak dry weather flow is estimated by converting the total average flow upstream to peak dry weather flow by an empirical peak to average relationship.

### Inflow

Does the Utility Prohibit Storm Water Connections to the Sanitary Sewer (roof drains, sump pumps, etc.)? Yes

Describe Program for Enforcing Ban on Illicit Connections: Combination of CCTV, FOG program, and public participation via illicit connection reporting hotline.

Describe Program for Locating Illicit Connections (smoke testing, etc.): Public participation via illicit connection reporting hotline.

Locations Subject to Street Flooding: Catalina (between Gertruda and Beryl); 1500 block of Beryl

Has the Utility Sealed Manholes in Locations Subject to Street Flooding: There are no manholes in flooded areas.

**I&I Control**

Describe I&I Control Projects (miles of pipe rehabilitated or replaced for I&I Control)

Recently Completed Projects: Lining of sewer lines along International Boardwalk.

Planned Projects: FY 12/13 Portofino Pump Station replacement; gravity lines in this area are subjected to infiltration due to the proximity of the line to the Pacific Ocean.

Describe Capacity Control Measures (relief sewers, storage, WWTP expansion, etc.)

Recently Completed Projects: None

Planned Projects: Per the Wastewater Master Plan, System Evaluation and Capacity Assurance Plan and Rehabilitation and Replacement Program, the following projects are planned to address capacity deficiency improvement projects:

Project C-1 Pacific Coast Highway, Irena Avenue to Agate Street (replacement increasing pipe size)

Project C-2 Manhattan Beach Boulevard and Inglewood Avenue (replacement increasing pipe size)

Project C-3 Rindge Lane, Ripley Avenue to Rindge Pump Station (replacement increasing pipe size)

**INFRASTRUCTURE RENEWAL AND CAPITAL IMPROVEMENTS**

Pipe Rehabilitation and Replacement Methods Used: Spot repair, cut and clean pipe, reline and replace pipe.

Miles of Pipe Rehabilitated or Replaced: Last 10 Years and Planned Next 10 Years		
Date Range	Miles of Pipe	% of System (System miles: )
2002 to present	Phases 1 – 8 (unavailable)	5.75% *
Present to 2012	Phase 9A -- 0.40 miles	0.4%

\* 33,439 linear feet, or 6.33 miles

Describe Capacity Improvement Program: Based on the hydraulic analysis conducted by the Wastewater Master Plan (SECAP), priority projects were identified for pipe replacement, pump station rehabilitation, and upkeep of existing infrastructure.

List Major Planned Improvements: SCADA System Upgrade and Repair; Rindge Pump Station Repair / Upgrade; Portofino Pump Station Replacement; Sewer Facilities Rehabilitation Program.

Describe Master Plan: The City's master plan is the System Evaluation and Capacity Assurance Plan and Rehabilitation and Replacement Program (SECAP) document. The said document evaluated the City's sewer collection system to provide a framework for undertaking the construction of new and replacement facilities for the service area in an efficient and cost effective manner. The recommendations provided by the document take into consideration the requirements of the Statewide General Waste Discharge Requirements issued by the California Regional Water Quality Control Board.

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Alta Vista Ball Field, 801 Camino Real

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ Barnes	Submersible	75 gpm	Constant	Yes
2/ Barnes	Submersible	75 gpm	Constant	Yes

### Pump Station Information:

- A. Average flow: 4.56 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:  
 Peak Dry Weather Flow: Yes  No   
 Peak Wet Weather Flow: Yes  No
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes  No
- I. How often is pump station inspected? Weekly
- J. Back up power sources and type:



On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No \_\_\_\_\_

b) Alarm signal sent to: On-call staff, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vactor, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Alta Vista Community Center, 801 Camino Real, north of Alta Vista Park

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ N/A	Submersible	75 gpm	Constant	Yes
2/ N/A	Submersible	75 gpm	Constant	Yes

### Pump Station Information:

- A. Average flow: 4.80 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:
- Peak Dry Weather Flow: Yes  No
- Peak Wet Weather Flow: Yes  No
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes  No
- I. How often is pump station inspected? Weekly

**J. Back up power sources and type:**

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call staff, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vactor, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: American Legion, 412 Camino Real, north of Pearl St.

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ ABS	Submersible	123 gpm	Constant	Yes
2/ ABS	Submersible	123 gpm	Constant	Yes

### Pump Station Information:

- A. Average flow: 11.63 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:  
Peak Dry Weather Flow: Yes X No \_\_\_\_\_  
Peak Wet Weather Flow: Yes X No \_\_\_\_\_
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes X No \_\_\_\_\_
- I. How often is pump station inspected? Weekly

**J. Back up power sources and type:**

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call staff, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vector, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No



## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Armour/Goodman, Goodman Avenue, north of Armour Lane

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ ESSCO	Submersible	370 gpm	Constant	Yes
2/ ESSCO	Submersible	370 gpm	Constant	Yes

### Pump Station Information:

- A. Average flow: 35.12 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:  
Peak Dry Weather Flow: Yes X No \_\_\_\_\_  
Peak Wet Weather Flow: Yes X No \_\_\_\_\_
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes X No \_\_\_\_\_
- I. How often is pump station inspected? Weekly
- J. Back up power sources and type:

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call staff, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vector, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Basin III, Redondo Beach Pier Parking Structure

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ ABS	Submersible	400 gpm	Variable	Yes
2/ ABS	Submersible	400 gpm	Variable	Yes

### Pump Station Information:

A. Average flow: 59.19 gpm

B. Holding Time: N/A

C. Does station have sufficient pumping capacity with the largest pump out of service during:

Peak Dry Weather Flow: Yes X No \_\_\_\_\_

Peak Wet Weather Flow: Yes X No \_\_\_\_\_

D. Dry weather capacity limitations? Y/N (if yes, describe) N

E. Wet weather capacity limitations? Y/N (if yes, describe) N

F. Number of failures resulting in overflows/bypass or backup, in the last five years No

G. Total quantity of overflow/bypass: Gallons or MG 0

H. Is dry well protected from wet well overflow? Yes X No \_\_\_\_\_

I. How often is pump station inspected? Weekly

J. Back up power sources and type:

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No \_\_\_\_\_

b) Alarm signal sent to: On-call staff, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vector, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Carnegie, 2019 Carnegie Lane, west of Blossom Ln

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ ABS	Submersible	380 gpm	Variable	Yes
2/ ABS	Submersible	380 gpm	Variable	Yes

### Pump Station Information:

A. Average flow: 44.52 gpm

B. Holding Time: N/A

C. Does station have sufficient pumping capacity with the largest pump out of service during:

Peak Dry Weather Flow: Yes  No

Peak Wet Weather Flow: Yes  No

D. Dry weather capacity limitations? Y/N (if yes, describe) N

E. Wet weather capacity limitations? Y/N (if yes, describe) N

F. Number of failures resulting in overflows/bypass or backup, in the last five years No

G. Total quantity of overflow/bypass: Gallons or MG 0

H. Is dry well protected from wet well overflow? Yes  No

I. How often is pump station inspected? Weekly

J. Back up power sources and type:



On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call staff, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vector, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Emergency Operations Center (EOC), 415 Diamond St.

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ ESSCO	Submersible	120 gpm	Constant	Yes
2/ ESSCO	Submersible	120 gpm	Constant	Yes

### Pump Station Information:

A. Average flow: N/A

B. Holding Time: N/A

C. Does station have sufficient pumping capacity with the largest pump out of service during:

Peak Dry Weather Flow: Yes  No

Peak Wet Weather Flow: Yes  No

D. Dry weather capacity limitations? Y/N (if yes, describe) N

E. Wet weather capacity limitations? Y/N (if yes, describe) N

F. Number of failures resulting in overflows/bypass or backup, in the last five years No

G. Total quantity of overflow/bypass: Gallons or MG 0

H. Is dry well protected from wet well overflow? Yes  No

I. How often is pump station inspected? Weekly

J. Back up power sources and type:

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call staff, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vactor, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Flagler, 1507 Flagler Lane, north of Huntington Lane

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ Flygt	Wet/Dry Well	480 gpm	Variable	Yes
2/ Flygt	Wet/Dry Well	480 gpm	Variable	Yes

**Pump Station Information:**

A. Average flow: 147.44

B. Holding Time: N/A

C. Does station have sufficient pumping capacity with the largest pump out of service during:

Peak Dry Weather Flow: Yes X No \_\_\_\_\_

Peak Wet Weather Flow: Yes X No \_\_\_\_\_

D. Dry weather capacity limitations? Y/N (if yes, describe) N

E. Wet weather capacity limitations? Y/N (if yes, describe) N

F. Number of failures resulting in overflows/bypass or backup, in the last five years No

G. Total quantity of overflow/bypass: Gallons or MG 0

H. Is dry well protected from wet well overflow? Yes X No \_\_\_\_\_

I. How often is pump station inspected? Weekly

J. Back up power sources and type:

US EPA ARCHIVE DOCUMENT

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call staff, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vactor, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Marina Way, Marina Way West of North Harbor Drive

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ Essco	Submersible	330 gpm	Constant	Yes
2/ Essco	Submersible	330 gpm	Constant	Yes

### Pump Station Information:

- A. Average flow: 12.48 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:  
Peak Dry Weather Flow: Yes X No \_\_\_\_\_  
Peak Wet Weather Flow: Yes X No \_\_\_\_\_
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes X No \_\_\_\_\_
- I. How often is pump station inspected? Weekly
- J. Back up power sources and type:



On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

Vactor, sandbags, by-pass pumps

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Morgan, 1622 Morgan Lane, West of Goodman Ave

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ ABS	Submersible	103 gpm	Constant	Yes
2/ ABS	Submersible	103 gpm	Constant	Yes

### Pump Station Information:

- A. Average flow: 19.15 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:  
Peak Dry Weather Flow: Yes X No \_\_\_\_\_  
Peak Wet Weather Flow: Yes X No \_\_\_\_\_
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes X No \_\_\_\_\_
- I. How often is pump station inspected? Weekly
- J. **Back up power sources and type:**

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

Vector, sandbags, by-pass pumps

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Portofino Way, Portofino Way, West of North Harbor Drive

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ ABS	Submersible	103 gpm	Constant	Yes
2/ ABS	Submersible	103 gpm	Constant	Yes

### Pump Station Information:

- A. Average flow: 39.41 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:  
Peak Dry Weather Flow: Yes  No   
Peak Wet Weather Flow: Yes  No
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes  No
- I. How often is pump station inspected? Weekly
- J. Back up power sources and type:

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No \_\_\_\_\_

b) Alarm signal sent to: On-call, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

Vector, sandbags, by-pass pumps

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Rindge, 752 Rindge Lane

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ Fairbanks	Dry	1520 gpm	Variable	Yes
2/ Fairbanks	Dry	1520 gpm	Variable	Yes

### Pump Station Information:

- A. Average flow: 265.12 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:  
Peak Dry Weather Flow: Yes X No \_\_\_\_\_  
Peak Wet Weather Flow: Yes X No \_\_\_\_\_
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes X No \_\_\_\_\_
- I. How often is pump station inspected? Weekly
- J. Back up power sources and type:



On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vactor, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Harbor Drive, Northwest of the Harbor Drive & Esplanada Intersection

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ WEMCO	Dry	600 gpm	Constant	Yes
2/ WEMCO	Dry	600 gpm	Constant	Yes

### Pump Station Information:

- A. Average flow: 51.87 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:  
Peak Dry Weather Flow: Yes  No   
Peak Wet Weather Flow: Yes  No
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes  No
- I. How often is pump station inspected? Weekly
- J. Back up power sources and type:

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

Victor, sandbags, by-pass pumps

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Wylie, 1738 Steinhart Avenue, north Wylie Ln

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ ABS	Dry	250 gpm	Constant	Yes
2/ ABS	Dry	250 gpm	Constant	Yes

### Pump Station Information:

- A. Average flow: 42.85 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:
- Peak Dry Weather Flow: Yes X No
- Peak Wet Weather Flow: Yes X No
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes X No
- I. How often is pump station inspected? Weekly
- J. Back up power sources and type:

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

Weekly

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

Vector, sandbags, by-pass pumps

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Yacht Club Way, west of Harbor Dr

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ ABS	Dry	400 gpm	Variable	Yes
2/ ABS	Dry	400 gpm	Variable	Yes

### Pump Station Information:

- A. Average flow: 10.84 gpm
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:  
Peak Dry Weather Flow: Yes  No   
Peak Wet Weather Flow: Yes  No
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes  No
- I. How often is pump station inspected? Weekly
- J. Back up power sources and type:



On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vactor, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

## PUMP STATIONS

(Please complete one sheet for EACH pump station)

Name and Location of Pump Station: Performing Arts Center, 1935 Manhattan Beach Blvd

### Pump Information

Pump #/Name	Dry or Submersible	Capacity	Constant or Variable	In Service?
1/ N/A	Submersible	N/A	Constant	Yes
2/ N/A	Submersible	N/A	Constant	Yes

### Pump Station Information:

- A. Average flow: N/A
- B. Holding Time: N/A
- C. Does station have sufficient pumping capacity with the largest pump out of service during:
- Peak Dry Weather Flow: Yes  No
- Peak Wet Weather Flow: Yes  No
- D. Dry weather capacity limitations? Y/N (if yes, describe) N
- E. Wet weather capacity limitations? Y/N (if yes, describe) N
- F. Number of failures resulting in overflows/bypass or backup, in the last five years No
- G. Total quantity of overflow/bypass: Gallons or MG 0
- H. Is dry well protected from wet well overflow? Yes  No
- I. How often is pump station inspected? Weekly
- J. **Back up power sources and type:**

On-site generators	Portable Generators	Back-Up Line from same grid?	Back-up Line from different grid?	Other (describe)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

If generators on-site, describe testing and maintenance procedures: \_\_\_\_\_

\_\_\_\_\_ Weekly \_\_\_\_\_

**K. Station Alarms:**

Low Wet Well	High Wet Well	Power Loss	Unauthorized Entry	Other (describe)
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

a) Is there 24 hour coverage for alarms? Yes  No

b) Alarm signal sent to: On-call, supervisor during working hours

L. What equipment is available for emergency response? \_\_\_\_\_

\_\_\_\_\_ Vactor, sandbags, by-pass pumps \_\_\_\_\_

M. Are there SCADA controls? Yes \_\_\_\_\_ No

If yes, ability to operate station remotely? Yes \_\_\_\_\_ No

