Appendices

Appendix A: Sewer System Management Plan Adoption Documents

RESOLUTION NO. 09-04

A RESOLUTION OF THE SEASIDE COUNTY SANITATION DISTRICT ADOPTING SEWER SYSTEM MANAGEMENT PLAN (SSMP) ELEMENTS 3, 4, 6 AND 7

WHEREAS, on May 2, 2006, the State Water Resources Control Board Order No. 2006-0003–Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems was adopted and implemented; and

WHEREAS, the purpose of the WDR is to develop a regulatory mechanism to provide a consistent statewide approach for reducing sanitary sewer overflows (SSOs); and

WHEREAS, the Statewide General Waste Discharge Requirements (WDR) require preparation of a Sewer System Management Plan (SSMP) with eleven elements; and

WHEREAS, the SSMP Elements 3, "Legal Authority," 4, "Operations and Maintenance Plan," 6, "Overflow Emergency Response Plan," and 7, "Fats, Oil and Grease (FOG) Control Plan" are required elements for WDR compliance.

NOW, THEREFORE BE IT RESOLVED, the Seaside County Sanitation District approves the SSMP Elements 3, 4, 6 and 7 as required by the State Water Resources Control Board Order No. 2006-0003-Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

PASSED AND ADOPTED at a regular meeting of the Seaside County Sanitation District duly held on May 12, 2009, by the following vote:

AYES:	BOARD MEMBERS:	RUSSELL, PENDERGRASS
NOES:	BOARD MEMBERS:	
ABSENT:	BOARD MEMBERS:	
ABSTAIN:	BOARD MEMBERS:	

Joseph P. Russell
FOR Ralph Rubio, Chair
Seaside County Sanitation District

ATTEST:

Joseph P. Russell
Joseph P. Russell, Vice Chair
Seaside County Sanitation District

RESOLUTION NO. 14-08 (SCSD)

A RESOLUTION OF THE SEASIDE COUNTY SANITATION DISTRICT

APPROVING THE SEWER SYSTEM MANAGEMENT PLAN REVISION 2.0 FOR THE 2014 FIVE YEAR UPDATE.

WHEREAS, the State Water Resources Control Board in 2006 adopted Statewide General Waste Discharge Requirements (GWDR) for publicly owned sanitary sewer systems requiring the development and implementation of a system-specific local Sewer System Management Plan (SSMP) that documents a comprehensive program for sewer system operations, maintenance and repair;

WHEREAS, the first SCSD Sewer System Management Plan (SSMP) was created and certified by the SCSD Board on May 12, 2009 and August 11, 2009 as required by the 2006 GWDR ; and

WHEREAS, the Sewer System Management Plan (SSMP) shall be periodically reviewed, revised, and re-certified by the SCSD Board every five years; and

WHEREAS, the SCSD SSMP Revision 2.0 was updated to formally incorporate the 2013 State Water Resources Control Board Monitoring and Reporting Program amendment to the 2006 GWDR.

NOW THEREFORE, BE IT RESOLVED, that the Seaside County Sanitation District approve the five year update to the SCSD Sewer System Management Plan Revision 2.0.

PASSED AND ADOPTED at a joint meeting of the Seaside County Sanitation District duly held on the 9th day of September 2014, by the following vote:

AYES:	3	AGENCY MEMBERS	Cecilio, Pendergrass, Rubio
NOES:	0	AGENCY MEMBERS	None
ABSENT:	0	AGENCY MEMBERS	None
ABSTAIN:	0	AGENCY MEMBERS	None

Ralph Rubio, Chair

ATTEST:

Lesley E. Milton, District Clerk

RESOLUTION NO. 20-14

A RESOLUTION OF THE SEASIDE COUNTY SANITATION DISTRICT APPROVING AND CERTIFYING THE UPDATED 2020 SEWER SYSTEM MANAGEMENT PLAN

WHEREAS, on May 2, 2006, the State Water Resources Control Board Order No. 2006-0003–Statewide General Waste Discharge Requirements (GWDR) for Sanitary Sewer Systems was adopted and implemented; and

WHEREAS, pursuant to the statewide GWDR, public agencies that own and operate sanitary sewer systems greater than one mile in length must develop a Sewer System Management Plan (SSMP) and must update, recertify and have the governing body approve the SSMP every 5 years; and

WHEREAS, the Seaside County Sanitation District developed and certified an SSMP in August of 2009 in compliance with GWDR and has been audited and updated to meet requirements of the State Water Resources Control Board and General Waste Discharge Requirements; and

WHEREAS, the updated 2020 SSMP is certified as complete, fully implemented and in compliance with the GWDR.

NOW, THEREFORE BE IT RESOLVED, The Seaside County Sanitation District approves and certifies the updated 2020 SSMP as required by the State Water Resources Control Board Order No. 2006-0003-Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

PASSED AND ADOPTED at a regular meeting of the Seaside County Sanitation District duly held on December 8, 2020, by the following vote:

AYES:	**0**	BOARD MEMBERS: Blackwelder, Lintell, Wizard
NOES:	**0**	BOARD MEMBERS:
ABSENT:	**0**	BOARD MEMBERS:
ABSTAIN:	**0**	BOARD MEMBERS:

Jerry Blackwelder, Chair
Seaside County Sanitation District

ATTEST:

Lesley Milton, Clerk
Seaside County Sanitation District

Appendix B: Sewer System Management Audit Reports

Appendix C: Sewer System Management Audit Checklist

Seaside County Sanitation District
SSMP Audit Checklist
Report Form

The purpose of the SSMP Audit is to evaluate the effectiveness of the SCSD SSMP and sanitary sewer program and to identify any needed for improvement. The information identified here will be used to inform the possible findings and necessary information to be evaluated during the biannual Internal Audit of the SCSD SSMP.

Directions: Please rank each item below utilizing the following sufficiency ranking system and add any comments to explain the ranking to the Comment Section of each SSMP Element:

- *Complies (C) – complies with all WDR objectives*
- *Substantially Complies (SC) – complies mostly with all WDR objectives*
- *Partially Complies (PC) – complies with basic WDR objectives*
- *Marginal Compliance (MC) – complies minimally with basic objectives of the WDR*
- *Does Not Comply – does not comply with WDR objectives*

Element 0 – Introduction/Executive Summary	
A.	
B.	
C.	
D.	
Element I – Goals	**Rating**
A. Are the goals stated in the SSMP Element I still appropriate and accurate?	
Discussion:	
Element II – Organization	**Rating**
A. Is the List of Staff Responsible for SSMP Elements current?	
B. Is the Sanitary Sewer Overflow Responder List current?	
C. Is the Organization Chart current?	

D. Are the Staff position descriptions an accurate portrayal of staff responsibilities? Are the LRO and DSs properly identified in the position descriptions?	
E. Is the Chain of Communication for Reporting and Responding to SSOs section/flow chart accurate and up to date?	
Discussion:	

Element III – Legal Authority	**Rating**
Does the SSMP contain current references to the Gilroy Municipal Code documenting SCSDs legal authority to:	
A. Prevent illicit discharges?	
B. Require proper design and construction of sewers and connections?	
C. Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the SCSD?	
D. Limit discharges of fats, oils and grease?	
E. Enforce any violation of its sewer ordinances?	
F. Were any changes or modifications made in the past year to Sewer Ordinances, Regulations or standards?	
Discussion:	

Element IV – Operations & Maintenance	
Collection System Maps	**Rating**
A. Does the SSMP reference the current process and procedures for maintaining SCSD's wastewater collection system maps?	
B. Are the wastewater collection system maps complete, current and sufficiently detailed?	
C. Are storm drainage facilities of the City and County identified in the SCSD service area on the collection system maps? If not, are SSO responders able to determine locations of storm drainage inlets and pipes for possible discharge to waters of the state?	
Prioritized Preventive Maintenance	**Rating**
D. Does the SSMP describe current preventive maintenance activities and the system for prioritizing the cleaning of sewers?	

E. Based upon information in the Annual SSO Report, are the SCSDs preventive maintenance activities sufficient and effective in minimizing SSOs and blockages?	
Scheduled Inspections and Condition Assessments	**Rating**
F. Is there an ongoing condition assessment program sufficient to develop a capital improvement plan addressing the proper management and protection of infrastructure assets? Are the current components of this program documented in the SSMP?	
Contingency Equipment and Replacement Inventory	**Rating**
G. Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system and documents the procedures of inventory management?	
H. Are contingency and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?	
Training	**Rating**
I. Does the SSMP document current training expectations and programs for staff and contractors?	
Outreach to Plumbers and Building Contractors	**Rating**
J. Does the SSMP document current outreach efforts to plumbers and building contractors?	
Discussion:	
Element V – Design and Performance Standards	**Rating**
A. Does the SSMP reference current design and construction standards for the installation for new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?	
B. Does the SSMP document current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and the rehabilitation and repair of existing sewer lines?	
Discussion:	
Element VI – Overflow and Emergency Response Plan	**Rating**
A. Does the SCSD Sanitary Sewer Overflow Emergency Response Plan establish procedures for the emergency response, notification, and reporting of SSOs?	

B.	Are staff and contractor personnel appropriately trained on the procedures of the Sanitary Sewer Overflow Emergency Response Plan?	
C.	Considering SSO performance data, is the Sanitary Sewer Overflow Emergency Response Plan effective in handling SSOs in order to safeguard public health and the environment?	
D.	Are all SSO and claims reporting forms current or do they require revisions or additions?	
E.	Does all SSO event recordkeeping meet the SSS GWDR and MRP requirements? Are all SSO event files complete and certified in the CIWQS system?	
F.	Is all information in the CIWQS system current and correct? Have periodic reviews of the data been made during the year to assure compliance with SSS GWDR? Have all Technical Report and Water Quality Sampling requirements been met and uploaded to the CIWQS data management system?	
Discussion:		

Element VII – Fats, Oils and Grease (FROG) Control Program		**Rating**
A.	Does the FROG Control Program include efforts to educate the public on proper handling and disposal of FROG?	
B.	Does the FROG Control Program identify sections of the collection system subject to FROG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?	
C.	Are requirements for grease removal devices, best management practices (BMP), record keeping, and reporting established in the FROG Control Program?	
D.	Does SCSD have sufficient legal authority to implement and enforce the FROG Control Program?	
E.	Is the current FROG program effective in minimizing blockages of sewer lines resulting from discharges of FROG to the system	
F.	Was required training on SSMP and OERP completed and documented? Were field exercises with field staff on SSO volume estimation conducted and documented?	
G.	Did all public improvement plans and specifications that could impact collection system operations include requirements for OERP training or were contractor OERP programs at least as stringent as the SCSD OERP? Were regular items included in project meeting agendas to discuss emergency response procedures and communications?	

Discussion:	
Element VIII – System Evaluation and Capacity Assurance Plan	**Rating**
A. Does the SCSD Sewer System Master Plan evaluate hydraulic deficiencies in the system, establish sufficient design criteria and recommend both short and long-term capacity enhancement and improvement projects?	
B. Does the SCSD Capital Improvement Plan (CIP) establish a schedule of approximate completion dates for both short and long- term capacity improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity completed?	
Discussion:	
Element IX – Monitoring, Measurement and Program Modifications	**Rating**
A. Does the SSMP accurately portray the methods of tracking and reporting selected performance indicators?	
B. Is SCSD able to sufficiently evaluate the effectiveness of the SSMP elements based on relevant information?	
C. Do the performance metrics properly support the Goals in Element 1?	
Discussion:	
Element X – SSMP Audits	**Rating**
A. Will the SSMP Audit be completed, reviewed and filed in Appendix B based upon the required time intervals since the original SSMP adoption date?	
B. Was the last Audit Report certified by the SCSD LRO as required?	
C. Was the final Audit Report presented to the governing body at a publicly noticed meeting?	
D. Was the last Audit Report placed in the SSMP Appendix and added to the SCWD SSMP webpage?	
Discussion:	
Element XI – Community Program	**Rating**

A. Does SCSD effectively communicate with the public and other agencies about the implementation of the SSMP and continue to address any feedback?	
B. Did the SCSD Board receive and review the Annual Sewer System Report?	
C. Was the annual report uploaded to the SCSD Sewer Section website and added to Appendix C?	
D. Did staff conduct and document meetings with the Pebble Beach Community Services District's satellite collection systems?	
E. Are all agreements with satellite systems current or are changes necessary to these agreements?	
Discussion:	

Change Log	**Rating**
A. Is the SSMP Change Log current and up to date?	
Discussion:	

Audit Team: _____ **Date:** _____

Prepared By: _____ **Date:** _____

Reviewed By: _____ **Date:** _____

Certified By: _____ **Date:** _____

Approved for Filing On **Date:** _____

Seaside County Sanitation District
Sewer System Management Plan
Internal Audit Report
January 15, 2020
WDID: 3SSO10334

Audit Period: 8/3/17 to 8/2/19

Prepared By:
Causey Consulting
Walnut Creek, California 94598

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations

Scott Ottmar, P.E.
Acting District Engineer
Seaside County Sanitation District

Acronyms Used in the Audit Report

CCTV	Closed Circuit Television
CIP	Capital Improvement Program
CIWQS	California Integrated Water Quality System
CMMS	Computerized Maintenance Management System
DS	Data Submitter
EOP	Emergency Operations Procedure
FOG	Fats, Oils and Grease
FSE	Food Services Establishment
GIS	Geographic Information System
LRO	Legally Responsible Official
M1W	Monterey One Water (formerly Monterey Water Pollution Control Agency)
MRP	Monitoring and Reporting Program
MWPCA	Monterey Water Pollution Control Agency – see M1W
OERP	Overflow Emergency Response Plan
PS/FM	Pump Station/Force Main
R&R	Renewal and Replacement
RWQCB3	Regional Water Quality Control Board, Region 3
SCSD	Seaside County Sanitation District operated by City of Seaside staff
SMP	Sewer Master Plan
SOP	Standard Operating Procedure
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow

SSORP	Sanitary Sewer Overflow Response Plan
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
WDID	Waste Discharge Identification Number 3SSO10334
WDR	Sanitary Sewer Waste Discharge Requirements
WQMP	Water Quality Monitoring Plan

I. SSMP Audit

This internal audit (audit) reviews the Seaside County Sanitation District (SCSD) Sewer System Management Plan Revision 2 dated September 9, 2014 (SSMP) by the Wallace Group and approved by the District Board on September 9, 2014. The SCSD is a separate California special sanitation district managed by a three member Board of Directors appointed from the three cities in the SCSD service area. In addition, by Board agreement, the staffing of SCSD is provided by the City of Seaside. SCSD operates as a separate enterprise fund providing sewage collection services to the member agencies. SCSD owns or manages 73.8 miles of gravity sewer pipe, 0.5 miles of force mains and four sewage lift stations that are maintained by contract with Monterey One Water (M1W). The service area includes the three separate government agencies described in Table 1: Service Area Information from Wikipedia on November 10, 2019.

Table 1: SCSD Service Area Information

Topic/City	Del Rey Oaks	Sand City	Seaside	Total SCSD Service Area
Population	1,684 (2016 est)	383 (2016 est)	33,930 (2018 est)	35,997
Service Area, sq. mi	0.48	2.92	9.38	12.78
Incorporation date	9/3/53	5/31/60	10/13/54	1957
Elevation, Feet	82	72	33	33

The audit covers the period of August 3, 2017 to August 2, 2019. The audit is intended to meet State Water Resources Control Board (SWRCB) 2006 waste discharge requirements (WDR), State Water Board Order No. 2006-0003-DWQ, Section D13(x) for agencies that own or operate more than one mile of sanitary sewer collection systems discharging to a publicly owned treatment plant. In addition, the SWRCB also revised the Monitoring and Reporting Plan (MRP) requirements in September 9, 2013 in order number WQ 2013-0058-EXEC. This audit assesses the current state of compliance with WDR and the MRP provisions including effectiveness of the sewer program implementation, identifies "deficiencies" found in the SSMP along with recommendations for corrective actions to remedy those deficiencies. In addition, the audit also included a review of record keeping procedures supporting the certified overflow reports in the California Integrated Water Quality System (CIWQS) database.

Causey Consulting performed the audit on behalf of SCSD through evaluation of SSMP documentation provided by SCSD, review of the August 2, 2017 SSMP Internal Audit Report and deficiencies (See Attachment 2) by the Wallace Group, publicly available data sources such as the SCSD website and the CIWQS site using the SCSD Waste Discharge Identification Number (WDID) 3SSO10334, documents provided by SCSD and meetings and interviews with City, SCSD and M1W staff involved in the implementation of the SCSD SSMP and the SCSD sanitary sewer collection system program. The Table 1 lists the interviews conducted during the audit and Attachment 1 provides the schedule of the interviews.

This section provides historical fiscal year results of the sewer system operation and maintenance taken from the monthly sewer operations reports to the Board of Directors. The SCSD system contains 73.8 miles or 389,664 linear feet of gravity sewer pipes and approximately 2640 linear feet of force mains from the four lift stations. There currently is no defined maintenance program for these pressure mains and therefore no performance results to report.

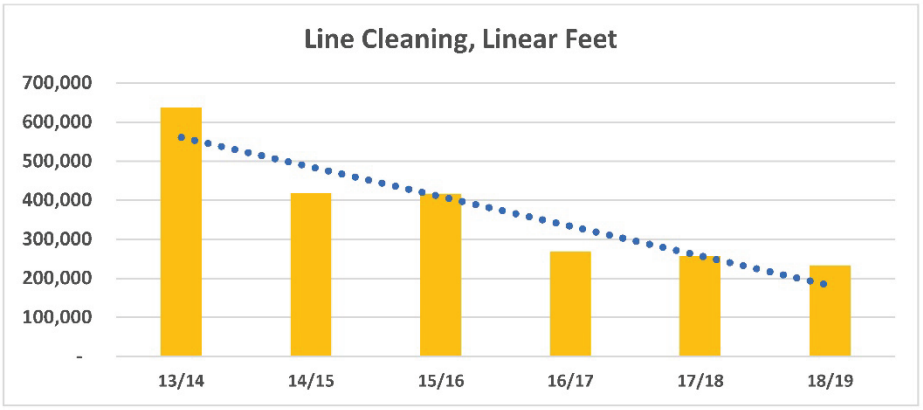


Figure 1: Summary of Historical Line Cleaning

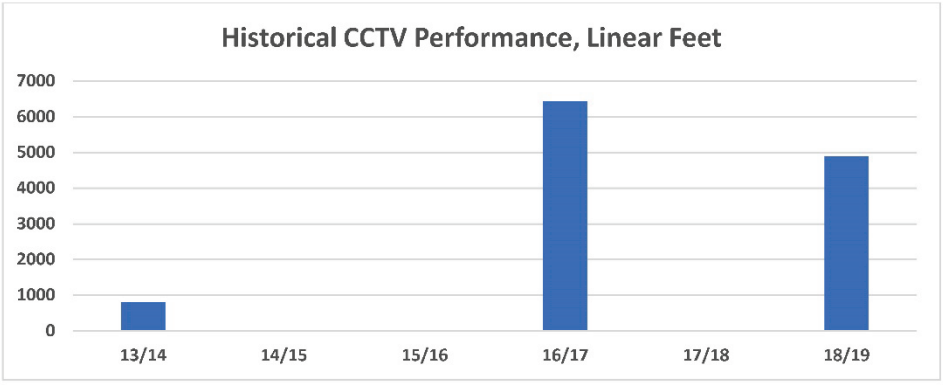


Figure 2: Historical Summary of Closed Circuit Television Assessments

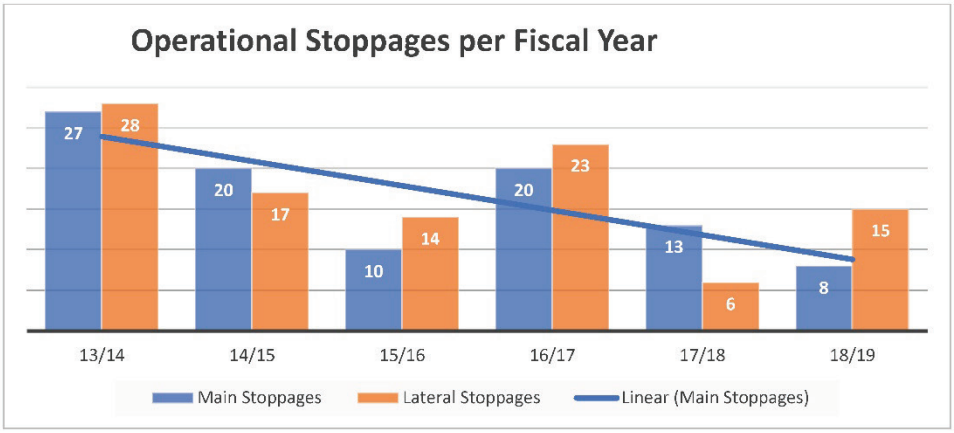


Figure 3: Summary of Collection System Blockages

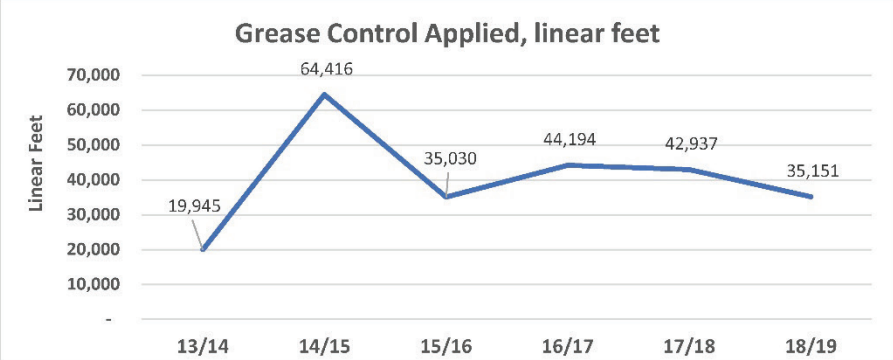


Figure 4: Summary of Historical Grease Control Applied

III-B. Historical Sanitary Sewer Overflow Performance Results

The following graphs provide calendar year historical summary of SCSD sanitary sewer overflow records from the State CIWQS certified overflow events database for each of the calendar years since the required reporting of all overflows to the SWRCB in 2007.

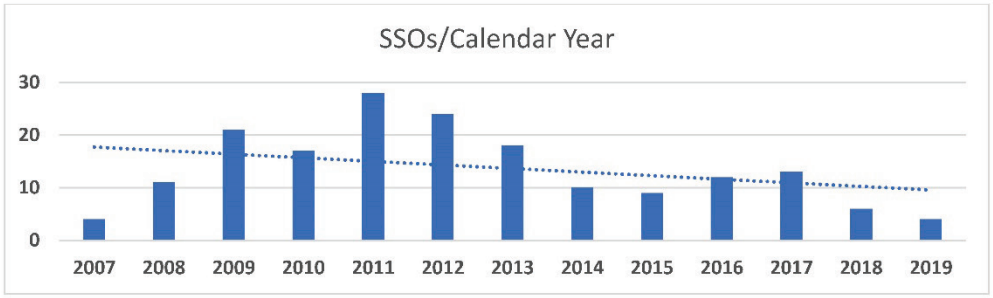


Figure 5: Summary of Sewage Overflow Events

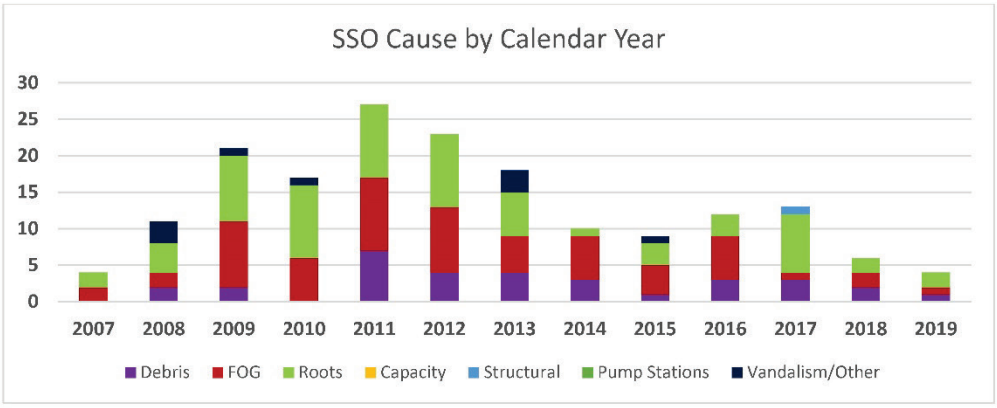


Figure 6: Summary of Causes of Sewage Overflow Causes

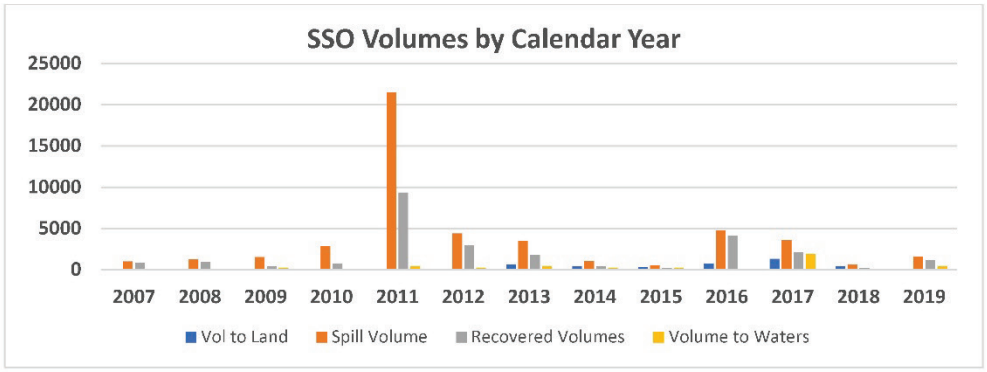


Figure 7: Summary of Spill, Recovered and to Water Overflow Volumes

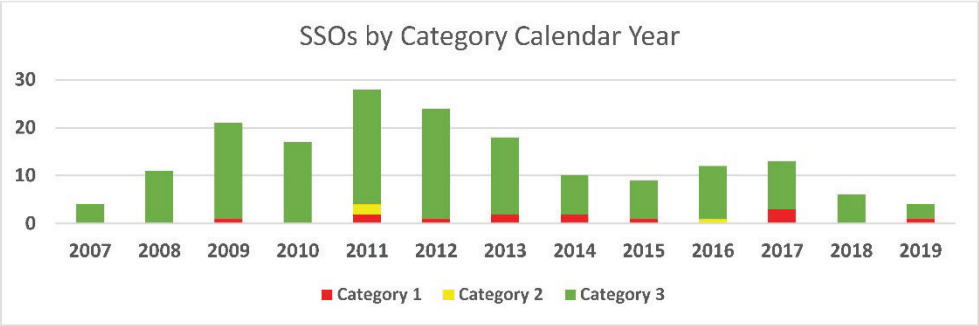


Figure 8: Summary by Year of State Overflow Categories

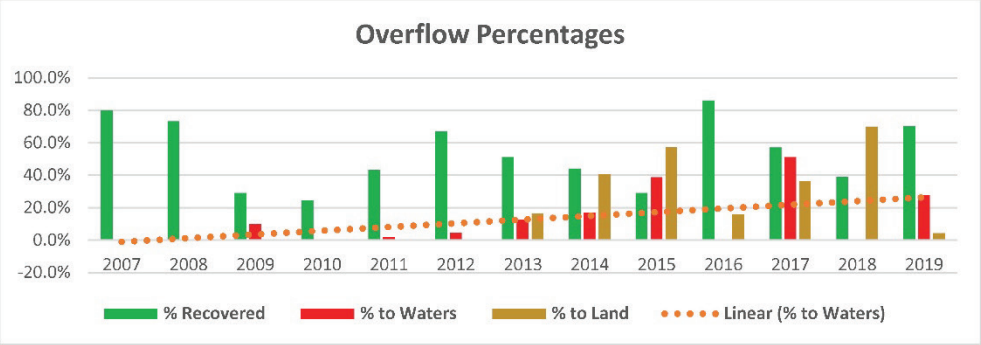


Figure 9: Summary of Overflow Locations per Year

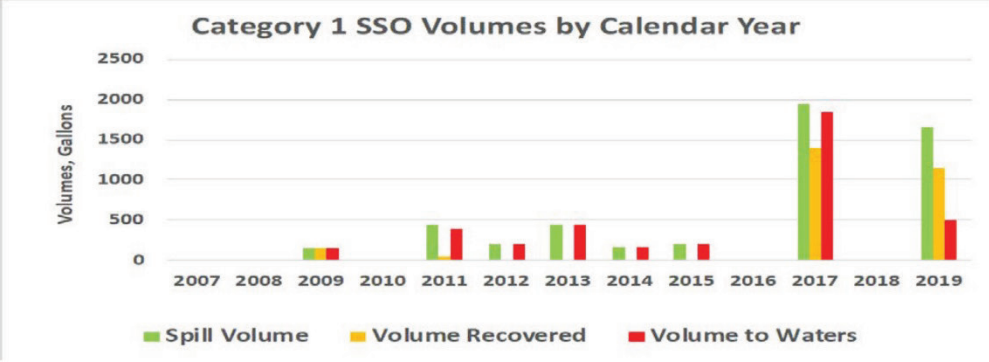


Figure 10: Summary of Category 1 Spill Volumes

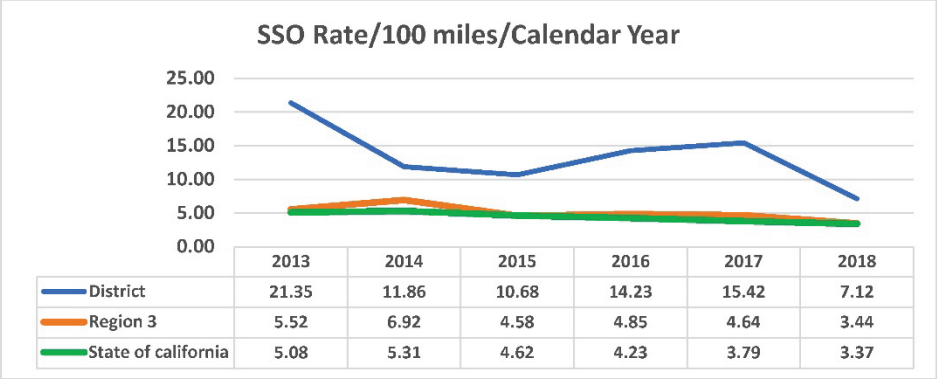


Figure 11: Comparison of SSO Rate to State and Regional Board SSO Rates

III-C. Audit Period SSO Results

Table 2: Audit Period Performance Results*

Sewer Overflow Metric	8/2/17 to 8/1/18	8/2/18 to 8/1/19	Total Audit Period
Category 1	1	2	3
Category 2	0	0	0
Category 3	5	6	11
SSO, each	6	8	14
Spill Volume, gallons	1971	2600	4571
Volume recovered, gallons	1551	1975	3526
Volume to Waters, gallons	1400	500	1900
Percent recovered	78	75	77
Percent to waters	71	19	41
SCSD SSO Rate	8.07	10.76	9.42
Region 2 SSO Rate	4.86	5.44	4.89
State SSO Rate	3.34	3.43	3.07

*CIWQS Database for WDID 3SSO10334

IV. SSMP Findings

The purpose of the Audit is to evaluate the effectiveness of the District's SSMP and sanitary sewer program, to identify the strengths and areas for improvement (deficiencies). The information identified below should be used to inform revisions and to evaluate program effectiveness to the 2014 SSMP. The findings and recommendations are broken into two categories, General and Element Specific. The general section deals with the entire SSMP and the support of that document by staff. The Element specific findings and recommendations

provide not only an assessment of necessary changes to the WDR Element but also a ranking of each SSMP Element as to its compliance with the WDR Section D13 stated requirements as well as regulatory expectations stated since 2006. While some of the recommendations exceed the WDR requirements, their inclusions are recommended as a result of presentations and statements by the SWRCB Office of Enforcement and settlement agreements from litigation and enforcement actions against sanitary sewer systems across the State. In addition, many of these recommendations include information that would be requested by the State prior to a field inspection or enforcement actions. It is hoped that the inclusion of this additional information should reduce potential enforcement liability and expensive settlement requirements if SCSD is involved in any litigation or enforcement action.

IV-1: General Findings and Recommendations

The following general findings and recommendations apply to the entire SSMP and all appendices and are intended to assist SCSD in revising and streamlining the SSMP to improve use and availability for the Board, staff, the public and regulators.

General Findings	General Recommendations
F1. The size of the SSMP, while compliant, is not user friendly or lead to regular use by staff and field crews.	R1. Streamline the SSMP and hyperlink most appendices from the SSMP and from the webpage if determined to be a critical supporting document.
F2. The SSMP contains many appendices and documents that are not required by the WDR.	R2. Eliminate non-required documents and hyperlinking remaining critical supporting documents (references) from webpage and document or submit to SWRCB per MRP Section 8(iv).
F3. The 2014 SSMP revisions did not follow the WDR format outline as stated in WDR Section 13.	R3. Assure that the SSMP follows the WDR and includes responses to all sub Element requirements.
F4. Element SSMP Change Logs were updated but do not include specific sections changed or all required approvals.	R4. At least annually update change log for changes in contacts or policies or procedures – assure that Log includes specific section or appendices modified and includes full approvals by staff or board.
F5. SSMP Change Logs included in each Element and not in a single form.	R5. Remove and consolidate all change logs into a single change log. Log should be regularly updated for significant changes to SCSD policies and procedures, contacts, planning or regulations between Board adoptions.
F6. References to MRWPCA need to be revised.	R6. Revise to Monterey One Water (M1W) throughout.
F7. Several new critical supporting documents completed but not included in the proper Element or in the change log.	R7. Assure change logs and Element narratives are updated and modified when completed for new information.
F8. Not all critical support documents(references) available on SSMP webpage as required by MRP Section 8(iv). They are only included in hardcopy in the SSMP as an appendix to each individual	R8. Add separate reference section at the end of each element to identify the reference(s), provide hyperlink and help manage critical supporting documents that must be available electronically.

Elements.	
F9. SSMP specifies unnecessary annual actions and activities for staff related to the SSMP– most of which are not being completed.	R9. Include only actions and activities that are necessary to satisfy the WRD and MRP; create separate checklist of actions and activates to assure timely tracking and completion -
F10. Contact information and data throughout dated from 2014 and not updated since.	R10. Update all contact information to current and add dates to the tables for the information at least annually.
F11. Board adoption records attached to Introduction as required but includes several minute actions from original SSMP development that are not required.	R11. Attach minute actions or adoption resolutions for SSMP readoption in an SSMP appendix; remove Board actions for intermediate completion of Elements developed in 2007, only include Board adoption documents of full SSMP.
F12. Emergency operating procedures (EOP) are too broad and conflict with OERP and are in many cases duplicative and are not available or trained on with staff.	R12. Eliminate EOPs or revise as SOPs removing much of the overlapping and multiple stated procedures.
F13. SSMP contains almost all critical supporting documents in hard copy.	R13. Hyperlink most from SSMP or from the SSMP webpage or send hardcopies to SWRCB as required by MRP Section 8(iv).
F14. Table and charts do not have reference dates included for ease of management and updating.	R14. Add dates of preparation on all charts and tables especially contact tables.

IV-2: Specific Element Findings and Recommendations

The specific findings and recommendations below follow the SSMP Elements stated in the WDR Section D13 in no particular priority. Each of the 2014 Draft SSMP Revision 2 Elements and supporting comments were evaluated against the WDR Section D13 requirements utilizing the following sufficiency ranking system and considering both the findings and the associated document narratives and supporting information:

- *Complies (C) – complies with all WDR objectives (2 each)*
- *Substantially Complies (SC) – complies mostly with all WDR objectives (4 each)*
- *Partially Complies (PC) – complies with basic WDR objectives (7 each)*
- *Marginal Compliance (MC) – complies minimally with basic objectives of the WDR (4 each)*
- *Does Not Comply – does not comply with WDR objectives (none)*

Finding	Recommendations
Element: Cover Page	**Sufficiency Ranking: PC**
F15. Cover page, missing basic agency information	R15. Add cover page with all agency logos, original adoption date of SSMP, revision adoption dates and CIWQS WDID.
Element: Table of Contents	**Sufficiency Ranking: PC**
F16. Complete revision required after streamlining of	R16. Update and create hyperlinks into the revised

SSMP.	SSMP Elements referenced.
Element: Acronyms and Abbreviations	**Sufficiency Ranking: SC**
F17. Not a complete listing of acronyms.	R17. Update and add missing acronyms
Element: Executive Summary	**Sufficiency Ranking: MC**
F18. Redundant information to remainder of the document. F19. Conflicting information with SSMP Elements especially Goals Element.	R18. Streamline and reduce information R19. Remove entirely and move important information to Introduction.
Element: Introduction	**Sufficiency Ranking: MP**
F20. Introduction does not properly describe assets under management in the SCSD sewer system. F21. Good basic member agency information. F22. Appendix 0A hardcopy unnecessary F23. Table 0-1 outdated F24. Asset tables outdated. F25. Pipe information should not combine both gravity and pressure. F26. Good service area map included.	R20. Remove references to 2011 Master Plan and Rate Study R21. Expand asset information to include City demographics, pipe material, lift stations and force main asset tables. Some now in Element 4 move here. R22. Remove and hyperlink all regulatory documents in Appendix 0A to the SCSD webpage. R23. Retain and revise Table 0-1 with current populations, service area size, and incorporation dates. R24. Asset tables should be updated with improvements since 2014 and completion dates for all projects in the CIP lists. R25. Create separate tables for asset information – move Tables 4-1 & 4-2 here. Add pump station and force main table and also expand size table for specific pipe sizes not ranges..
Element: I. Goals	**Sufficiency Ranking: C**
F27. Very limited number of goals – F28. Goals not consistent with goals stated in the Executive Summary or on the SCSD SSMP webpage.	R26. Create and conform around a single set of goals for the sewer operations supported by proper performance metrics in Element 9– see sample list in Attachment 3.
Element: II. Organization	**Sufficiency Ranking: SC**
F29. Element very out of date. F30. Figure 2-1 does not include PS/FM chain of communications. F31. Tables 2.1 and 2.2 out of date. F32. No statement of City staff role in managing SCSD sanitary sewer system facility. F33. Table 2-2 not required. F34. Organization charts outdated. F35. Exhibit 2B1 very outdated. F36. No identification of District designated LRO or DS positions. F37. No discussion of force main operations, maintenance or regular condition assessment. F38. Service contractors not discussed or included on organization charts. F39. No discussion of service contractors F40. Table 2A-1 Governing Board not required	R27. Complete update required. R28. Annually update and add changes to the Change Log especially contact information. R29. Consider adding simple table of responsibilities for all SSMP related Elements and appendices to replace Table 2.2 or update to current if to remain – see attachment 4. R30. Expand Figure 2-1 to include response requirements for pump station emergency response R31. Add discussion of City staffing for SCSD sewer program. R32. Add District organization chart as a figure in this Element rather than in appendix. R33. Add narrative description of each classification working in the sewer program and include designated classifications that are LROs or DS. R34. Add additional narratives on force mains O&M, etc. R35. Add discussion of service providers like City staff, M1W and Greenline, etc., to narratives and organization charts. R36. Remove Table 2A-1
Element: III. Legal Authority	**Sufficiency Ranking: PC**

F41. Table 3.1 not required or useful. F42. SSMP does not require the inclusion of all District ordinances. F43. Appendix 3Ato 3Q no longer appropriate since new District Code completed. F44. New District Code not included in the Element narrative or Change Log for this Element	R37. Revise for consolidated District code; remove all references to previous ordinances. R38. Complete revision required; replace with a simple table of the WDR requirements and the associated District code section that applies. R39. Create hyperlink in the reference section and from the SSMP webpage to the new District Code and remove all old ordinances R40. Change Log should include the new District Code adoption date and approval authority.
Element: IV. O&M Program	**Sufficiency Ranking: PC**
F45. No change log changes since 2014. F46. Tables 4-1 & 4-2 sewer asset info tables outdate and do not agree with CIWQS annual collection questionnaire information. F47. Excellent storm system information. F48. Figure 4.1 not required. F49. Figure 4.2 excellent. F50. Tables 4.1 and 4.2 require updating to be consistent with CIWQS data of 73.8 miles of gravity pipe. F51. No table of force main asset information. F52. Manhole, lamp hole information dated and not consistent with increased sewer miles sated above. F53. Table 4-3 should provide additional asset info. F54. Limited asset information of lift stations. F55. No force main asset information for lines. F56. Retain storm drain info and Figure 4.3 in future. F57. Section 4.3.1 CCTV not implemented as stated. No CCTV Inspection program currently. F58. Section 4.4 and Table 4-4 outdated. F59. Section 4.5 does not discuss WDR, EOP, SSMP, OERP, WQMP or field exercise training. F60. No formal training program developed as stated. F61. Section 4.5.1 outdated. F62. Appendix 4D missing MWPCA Agreement as stated. F63. No Appendix 4-A program definition. F64. Sewer Cleaning narrative not consistent with CIWQS operation performance statements - 53.2 milers vs 73.8 F65. Appendix B forms nor required in the SSMP. F66. Appendix 4C good. F67. Appendix 4E unnecessary. F68. Appendix 4F not current, F69. Appendix 4G outdated. F70. Appendix 4H not required. F71. Appendix 4I dated and does not include date of preparation of list.	R41. Change log should reflect changes in policies and procedures since 2014 along with asset improvements or additions. R42. Assure consistency between SSMP and Annual Collections Questionnaire in CIWQS. R43. Eliminate Figure 4.1 and replace with table of pipe ages from CIWQS in Introduction. Update Tables 4.1 and 4.2 to 73.8 miles and move to the Introduction Section of SSMP or conform CIWQS data; add reference dates for table. Move Figure 4.2 to Introduction Section with asset information. R44. Update appurtenances numbers below pipe tables. R45. Add tables of historical line maintenance, CCTV and high frequency maintenance results for at least five years. R46. Revise CCTV program information and define condition assessment program and include. R47. Completely revise Section 4.4 and Table 4-4 to current approved CIP for both short and long term capital; remove references to CCTV inspections program. R48. Revise Section 4.5 to include specific WDR and SSMP related training at least annually. R49. Remove list of SOPs especially ones never completed in Table 4.5. R50. Remove App 4B R51. Retain high frequency information from 4C R52. Develop a formal sewer related training matrix for all sewer and emergency response employee classifications. R53. Revise Section 4.5.1 for additional engineering staffing. Appendix 4A remove and discuss in narrative. R54. Hyperlink MWPCA Agreement remove Appendix 4D. R55. Remove Appendix 4E R56. Remove Appendix 4F in favor of simple table of CIP program for 5 and 10 years in future. Update and extend into future for 10 years from 19/20. R57. Remove Appendix 4H and just list BMPs actually used by staff not planned to be completed.

	R58. Update and add date of preparation to 4I if to be retained; update annually and indicate in change log.
Element: V. Design	**Sufficiency Ranking: SC**
F72. Green Book reference currently to 2009 edition. F73. SCSD requests for proposal states, "most current" Green Book. F74. Appendix 5A not required to be included.	R59. Establish process for regular updates of Green Book or just say most current version; adopt by resolution. R60. Conform narratives to actual use of the Green Book standards as most current version not 2009. R61. Hyperlink Green Book from SSMP and website – critical supporting document.
Element: VI. OERP	**Sufficiency Ranking: MC**
F75. Procedural conflicts exist between EOPs and OERP. F76. EOPs all overlap and not consecutive included in the appendices. F77. SCSD procedures in OERP and EOPs not followed in the field. F78. Section 6.3 not being followed and requires complete revision. F79. Emergency response roles for force mains and lift stations not properly defined. F80. No lift station or force main emergency response contingency plans available. F81. OERP or EOP or flow charts missing steps and responsibilities for lift station or force main emergency responses. F82 SCSD overflow file documentation does not comply with OERP or EOP requirements or use forms in EOPs nor provide adequate support for CIWQS certified reports. F83. SCSD support file not approved and/or signed off by the LRO. F84. No current direction or procedure for a properly documented overflow file. F85. EOP-7 WQMP through but does not include maps of water bodies in service area. F86. EOP-7 missing chain of custody form. F87. EOP-09 Training not followed.	R62. Create a single emergency response document (OERP) and place in appendix for ease of removal and use by emergency response personnel replacing Section 6.3 and the cumbersome EOPs. R63. Prepare lift station and force main contingency plans coordinated with M1W. Define responses and roles for emergency response to pump stations and force mains events for SCSD and M1W. R64. Require staff to follow/utilize specific forms or modify procedures to use current forms with additional direction. R66. Require final overflow file to be approved by the LRO prior to completion. R67. Consider use of a SCSD specific overflow file checklist (Attachment 5) to assure all required supporting documents are in the final approved support file for each CIWQS certified report. R68. Include all forms used in the WQMP. R69. Place WQMP in its own appendix so can be removed and placed in response vehicles. R70. WQMP needs to have map identifying all water bodies in the service area so proper sampling requirements are met based upon beneficial uses. R71. Revise training requirements to include SSMP, OERP, WQMP and field exercises regularly – create training matrix by employee classification.
Element: VII. FOG Program	**Sufficiency Ranking: PC**
F88. Webpage has hyperlink to Clogbusters with good information. F89. Figure 7.1 outdated. F90. FOG outreach program description dates to 13/14. F91. Appendix 7C not required F92. Section 7.4 outdated. F93. Table 7-1 to 7.3 no longer applicable. F94. Section 7.7 list of hot spots not required. F95. Appendix 7A not required. F96. Appendix 7B not required.	R72. Recommend addition of no wipes in pipes info on webpage. R73. Update and add reference date to Figure 7-1. R74. Update outreach program. R75. Remove or hyperlink. R76. Revision 7.4 for District Code and additions of M1W ordinance. R77. Revise Table 7-1 to 7.3 or preferably refer to Element 3. R78. Remove Appendix 7C. R79. Appendix 7A either remove or hyperlink from

F97. Appendix 7D not required. F98. Appendix 7E not required	webpage. R80. Refer legal authority to Element 3. R81. Appendix 7B & C documents should be hyperlinked or on FOG webpage. R82. Update and add outreach materials to FOG webpage. R83. App 7D and 7E remove or add to SSMP webpage b hyperlink.
Element: VIII. SHECAP	**Sufficiency Ranking: MC**
F99. Change log missing updated information and 2017 Rate Studies. F100. 2011 Sewer Master Plan and Capacity Study outdated and not being pursued as stated. F101. Element narratives outdated for activity since 2014 – check 2017 Audit F102. Capital program administration confusing and has many conflicting documents and plans with no explanation or updates to SSMP explaining changes or updates. F103. Element does not contain completed CIP information since 2011. F104. Section 8.2.9 Rate Study outdated and not required but if stated must be on webpage or hyperlinked. F105. 2017 Rate Study critical supporting document and not described or added to change log. F106. CIP ended in 2013/14 and dated 2008. F107. No long term capital program beyond 18/19 for five to ten years into the future.. F108. CIP on webpage updated beyond 18/19 but not in SSMP. F109. Projects not stated as capacity related or R&R. F110. Sewer Master Plan update scheduled for 21/22. F111. District CIP webpage not consistent with SSMP. F112. Capital program behind schedule and updates not described in the Element or in the change log. F113. Section 8.3 design criteria dates to 2009 with no changes. F114. Section 8.4 & 8.5 outdated	R84. Consider updating Master Plan earlier in CIP. R85. Complete revision of this Element necessary for current state of capital program. R86. Make regular updates following project completion at least annually. Assure that regular CIP updating is provided either in the SSMP change log or in the audits reports. R87. Consider updating lift station information. R88. Identify changes made in the SSMP change log. R89. Sections 8.3 to 8.5 require substantial updating.
Element: IX. Monitoring, Measurement and Modification	**Sufficiency Ranking: MC**
F1154. Table 9.1 nonresponsive to requirements – no define metrics supporting goals in Element 1. F116. Section 9.3 duplicative and nonresponsive. F117. MRWPCA TAC narrative out of date. Section 9.4 not complied with on the CCTV Program starting in 2014. F118. Section 9.6 not being followed and in conflict with Element 10 Program Audits. F119. All tables and graphs in Section 9.6 dated to only 2013 and not regularly updated since.	R90. Remove 9.1 and replace with appropriate metrics to support Goals in Element 1. R91. Eliminate 9.3. Update TAC information in Section 9.3.11. R92. Establish, define and implement SCSD CCTV assessment program for all assets – pipes, manholes, lift stations and force mains. R93. Remove statement of annual reviews in 9.6 of SSMP if not to be done. R94. Bring current all performance results and track

F120. Metrics do not support goals stated in three separate places. F121. Appendix 9A not required and very dated.	results at least annually – add maintenance metrics. R95. Consider preparation of annual collection system report for the Board of Directors using defined metrics and narratives accomplished during previous fiscal year. R96. Remove 9A in favor of updated metric tables and graphs only. Add WDID reference for readers want info in 9A currently.
Element: X. SSMP Audit	**Sufficiency Ranking: C**
F122. Change log not updated for 2017 and 2015 Audit Report and corrective actions completion from 2017. F123. Section 10.2 says every two years from "2015" – See Development Guide page 72 – not consistent with SSMP Section 9.5 F124. Biannual audits have been completed and provide proper review and deficiency findings. F125. SSMP Data & Records Request Appendix 10A form not utilized. F126. Only 2013 Audit Report in the SSMP and not online. F127. 2017 Audit Report completed but not publicly available on webpage or submitted to Board or included in SSMP appendix.. F128. Deficiency list did not include "plan and schedule for revisions" – see status of deficiencies in Attachment 2. Not all deficiencies resolved or completed during audit period. F129. Table 10.2 not required but not updated since 2013. F130. Recommended "quarterly or semiannual reviews and revisions not being conducted. F131. Appendix 10B does not include stated documents or recent 2015 and 2017 Audit Reports.	R97. Assure updating of change log upon acceptance of an audit report adding any corrective actions directed and made. R98. Revise 10.2 to say from "original SSMP adoption date" and revise Section 9.5. R99. Delete SSMP Data & Records request if not to be used – replace with SSMP Checklist including an Element ranking system as above. R100. Consider adding all audit reports to new SSMP appendix for ease of retrieval. R101. Present audit reports to Board and place on SSMP webpage upon acceptance. R102. Establish plan, schedules and responsible persons for all identified corrective actions (deficiencies) and complete prior to next audit.. R103. Remove Table 10.2 as not required especially if Audit Report attached in appendices. R104. Retain only biannual SSMP review statements that will be conducted. R105. Revise 10A to SSMP Checklist with proper ranking system and only completed as the first step in the biannual audit to inform interviews. R106. Develop tickler file to assure completion of action items in SSMP and audit report.
Element: XI. Communications Plan	**Sufficiency Ranking: PC**
F132. Table 11-1 References only City website and not SCSD F133. Appendix 11A dated materials back to 2011. F134. Section 11.2.2 states audit reports presented to Board – reports not found on previous agendas. F135. Excellent monthly collections operations reports provided to Board. F136. Section 11.3 outdated. F. Appendix 11A outdated and could be hyperlinked and deleted in hard copy. – all webpages have been replaced. F137. District claim form in Appendix 11A not referenced or referred to in SSMP. F138. Relationship between City and SCSD not properly stated in Element 11.	R107. Include direct SCSD link to District webpage. R108. Update and hyperlink documents from webpage. R109. Assure all audit reports presented on Board agendas. R110. Replace all web screen shots with simple hyperlinks to two or three webpages and remove hard copies. R111. Consider development of an annual collection system report for the Board including updates of all performance metrics. R112. Remove Appendix 11A or move to OERP. R113. Add information that City staff provides SCSD staffing.
Element: Appendices	**Sufficiency Ranking: C**
F139. All appendices are included at the end of each Element.	R114. Limit formal appendices to only major documents like OERP, WQMP, Adoption

	documents, Change Log and audit reports not with each element.

V. SSMP Effectiveness

The SCSD operation and maintenance program has traditionally cleaned the entire system annually (Figure 1) and has developed a very effective grease control program (Figure 4) of approximately 10% of the entire collection system. This later program has resulted in both a reduction of operational stoppages (Figure 3) and sewage overflow. The single greatest weakness in the sewer program relates to the condition assessment of all sewer assets by both CCTV and annual assessments of both lift stations and force mains. SCSD had included the definition of a full CCTV program for the pipes in 2017 Audit Report but had not completed that effort during the current audit period as expected. SCSD has recently purchased CCTV equipment and now must define a CCTV program that includes both pipeline condition assessment as well as a cleaning program QA/QC procedure. The CCTV program definition should enhance both the cleaning frequencies as well as informing the priority program for capital renewal and replacement not previously included in the CIP project definitions. These result will also be important to the evaluation of staffing levels current and future especially if the challenges to hiring and retention continue at SCSD. One additional area for possible improvement deals with the clarification of responsibilities between SCSD and M1W on force mains and development of a pump station force main inspection and assessment program

The WDR requires that the internal audit evaluate the effectiveness of the SSMP and the sanitary sewer program implementation as defined in the SSMP. SCSD has depended on the services of consultants to define and describe SCSDs sanitary sewer program in the past. The 2014 SSMP is comprehensive and contains critically supporting documents all in hard copy which has created a document that is not user friendly and of limited value to staff. It however does not properly mirror field actions and activities. The SSMP also contains an extensive list of staff required annual reviews and evaluations that are not being supported by the staff available in the sewer system operations and should be removed if not to be completed as stated.

The actual sewer program in the field however has been effective in reducing the numbers (Figure 5), volumes (Figure 7) and comparative SSO rate per 100 miles per year (Figure 11) of sewage overflows since the inception of reporting in the State database in 2007. Figure 6, Historical Causes of SSO does not reveal any one specific cause that should be evaluated and shows a significant reduction in overflows during the audit period. Interestingly the overflow trends in the figures appear to have come from an emphasis on quality and quantity in line cleaning annually especially in the past three fiscal years even without a comprehensive pipeline condition assessment program to visually confirm the quality of the cleaning operations. This is probably due to the underlying staff commitment to proactive maintenance, customer satisfaction and response and the continuing commitment to grease control as shown in Figure 4.

The SSO Rate/100 miles per year has dropped from a high of 21+ to 7+ over the last twelve years. SCSDs SSO rate however is still above the RWQCB3 and State rates. This is not a surprise because SCSD has less than 100 miles of lines. The trend in the reduction of the SSO rate is a very positive indicator of the results of the sewer program. However, the trend in

overflows reaching water of the state (Figure 9) appears to be increasing which suggests the need for more timely response, additional staffing, additional training on spill response or some combination of these areas. From across the State and collection system enforcement and litigation actions, it appears that an SSO Rate of 3.0 or lower is considered by some to be a well performing sewer system emergency response operation. For small agencies with less than 100 miles of pipe, it is difficult to directly compare them to larger systems because the divisor for the small agency becomes a decimal and not a whole number. This means that for SCSD any more than 2 overflows per year places them above the artificial target SSO rate, while an agency with 500 miles of pipe could experience 15 annual events and still report an SSO Rate below 3.0 per 100 miles per year. The fact that SCSDs SSO Rate is trending down is a positive indicator of program effectiveness and commitment to meeting the WDR goals and the SCSD goals.

During the SSMP audit period the SCSD staff has been very effective with the operations and maintenance program resulting in very low incidents of sewage overflows. 78.5% of the overflows have been at the Category 3 level and therefore very small and not impacting waters of the US while experiencing three Category 1 overflows. Total spill volume of 4571 gallons remains very small compared to total sewage discharged to the SCSD sewer system over the audit period. Of particular note is the fact that SCSD staff was able to recover 3526 or 77% of the spilled volumes from the 14 overflow events. All of these numbers are significantly below the SCSD experience in the years prior to the audit period.

SCSD has recently been experiencing challenges in recruiting and retaining collection system employees resulting in two current unfilled positions. This has a significant impact on both cleaning and condition assessment of the sewer program. This issue needs further evaluation and consideration of alternative means to continue to accomplish the desired level of collection operations and maintenance program if positions cannot be filled.

On the other hand, SCSD has been able to expand the technical staff, which will have a positive impact on the future prosecution of the capital program for sanitary sewers. Additionally, the District has also hired outside professional project support assistance for the design and construction management of capital replacement projects. This should enhance completion of the delayed capital program. Finally, it is SCSDs intentions, when a full complement of staff are available, to define and pursue an in house condition assessment program having recently purchased CCTV equipment to support this activity. The Board has also been proactive in funding upgraded equipment in the sewer maintenance operations which has increased the efficiency and effectiveness of the maintenance program.

As far as the 2014 SSMP is concerned, while compliant, it contains much information and many attachments that can be eliminated or hyperlinked from the SSMP and from the SSMP webpage to significantly reduce the size and use of future SSMPs. SCSD needs to determine what are critical supporting documents and hyperlink only those. This change alone will reduce the size of the SSMP by two-thirds and make it much more user friendly for management and the field staff. In addition, reducing the number of appendices to five or six at the end of the SSMP and by placing documents like the OERP and the WQMP in separate appendices and be separated and available to emergency response personnel in the field. In addition, revisions to the SSMP must remove many if not all of the annual requirements for the management and the annual reviews

especially if the staff is not able to comply with these stated actions. The SSMP Change Log must be used to assist the public, regulators and other interested parties to understand changes in SCSD policies, procedures and staffing made between Board considerations of the SSMP at least every five years. The findings and recommendations above are intended to assist SCSD in streamlining and establishing an SSMP that not only meets the regulatory requirements but also is useful for management and staff to understand SCSD policies for meeting the WDR requirements but does not require staff attention to unnecessary reviews and evaluations.

Finally, the review of the overflow record keeping and documentation of CIWQS certified reports needs improvement and more management oversight at the end of an overflow event. Current documentation does not follow the SCSD OERP or the EOP procedures nor is the final file complete or approved by the LRO upon completion. SCSD documentation should follow the procedures used in the field and must include SCSD forms that are to be used in documenting the overflow event. This process can be much more effective by the development of an SSO Document Checklist that identifies and states all records expected to be included in a properly documented supporting file. Of particular importance are the needs for enhanced start time documentation and spill and recovered volume calculations and associated assumptions leading to the certified statements in CIWQS. These two areas should be discussed and used as training during debrief and failure analysis of all overflow events.

VI. District Sewer System Program Strengths

During the interviews conducted of staff and outside consultants, the following sewer program strengths during the audit period were identified and are listed in no particular order.

A. Improved management and board commitments to sanitary sewer system program.
B. Purchase of CCTV equipment for the condition assessment program for the future.
C. Replacement of major cleaning equipment at end of useful life
D. New generator available at lift station 19.
E. Emergency response shed completed with necessary response equipment.
F. Strong, professional, long term dedicated collections staff that work well together
G. Staff training both in house and outside available as needed.
H. SSMP generally complete but much information outdated
I. SSMP contains all identified hard copy critical supporting documents as required
J. Updated sewer rate study completed in January 2017.
K. Hiring outside professional support for capital program
L. Additional engineering staff support for collections system capital program
M. Improved communication and coordination with other City departments
N. Regular meetings and training with M1W regarding lift station operations and joint outreach.
O. Effective grease control program.
P. All overflow events were certified well in advance of required deadlines.

VII. District Opportunities for Improvement/Deficiencies

The following list, in no priority order, were determined from the interviews and from the review of documents and information provided by staff of SCSD as program opportunities for improvement in the sewer program.

1. Challenges filling two vacant positions
2. Ability to hire and retain collections employees
3. Consideration of outside cleaning support for inability to find staff
4. No collection system new employee defined orientation program
5. No comprehensive training matrix by classification for collection system operations.
6. Staff responsibilities split across many public works functions
7. SSMP not user friendly, seldom used by staff
8. Lack of condition assessment program for sewer system, lift stations and force mains
9. No defined condition assessment program or prioritization process for projects
10. Capital program progress and funding behind schedule
11. Field crews have limited input to capital project priorities.
12. Prioritization processes for capital project selection not well documented or understood
13. No computerized work order system purely paper system currently
14. Emergency response roles for lift stations and force mains not well understood.
15. District EOPs not proactively used or even fully available to field staff
16. EOPs long, duplicative, outdated and staff not regularly training on them OERP and EOPs not being utilized or followed by field staff.
17. Enhanced overflow event documentation required especially for start times and all volumes associated with a spill event. Greater emphasis on volume estimation and overflow reporting training needed.
18. Photos taken of only Category 1 spills
19. No agency specific water quality monitoring program as required by MRP Section D.
20. No annual performance reports provided to Board
21. Not all Audit Reports presented to the Board of Directors.
22. No customer complaint or overflow post event follow-up with impacted complainants
23. No overflow event debrief or failure analysis evaluations
24. Potential growth in the service area including impacts on staffing requirements in the future
25. Addition of portions of Fort Ord presents additional challenges for the future O&M program
26. Consider FOG permitting program to reduce SSOs related to FOG
27. No force main condition assessment or regular maintenance program or field inspection – no clear responsibility for maintenance and emergency response responsibilities
28. No lift station emergency response and contingency plans as expected by WDR and regulators
29. Station 20 generator issues and concerns.

VIII. Corrective Actions

The following corrective actions are necessary as a rssult of the findings and recommendations from the internal audit. These actions require further evaluation and scheduling and should be resolved prior to the next internal audit if at all possible. Each corrective action should be assigned to a responsible person along with an estimated completion schedule for the action. Final statements of completion and a description of the final disposition should be included in

the final report or in the next internal audit. All modifications resulting to the SSMP should also be stated in the SSMP Change Log upon completion.

A. 2014 SSMP Revision 2 is not frequently used and contains annual actions and activities that are not being accomplished. Some activities are not required by the WDR. The SSMP is generally compliant with the regulations.
Corrective Action: During preparation of five year SSMP revision, streamline and reduce SSMP size by hyperlinking only critical supporting documents and adding expanded narratives, graphs and tables to explain status of sewer program. Remove any annual or other review and update requirements that will not be properly accomplished and documented by staff.

B. Sewer program effectiveness may be jeopardized by inability to hire and retain collection system employee positions.
Corrective Action: Evaluate methods or programs to assure continued program performance either by improved hiring and retention or by utilizing service contractors. Establish a well-defined new employee orientation and annual training program matrix for sewer collection system workers and emergency response employees.

C. Current EOPs and the OERP (Element 6) conflict with actual field operations and emergency response activities.
Corrective Action: Eliminate the EOPs and prepare a single, stand-alone OERP to describe City response actions and activities during and following an event and train at least annually including field response exercises. Assure staff utilizes only proper SCSD forms for overflow documentation from the OERP.

D. Current overflow record keeping documentation of CIWQS certified reports and form utilization not being followed or properly documented or approved upon completion of the event.
Corrective Action: Develop an agency specific SSO Overflow Checklist (See attached) to coordinate and assure complete supporting documentation of an overflow event. Require LRO approval and certification of the final overflow event file.

E. Limited and inconsistent implementation of CCTV and condition assessments of pipeline and force main infrastructure necessary to assure effectiveness and efficiency of maintenance activities and proper capital program prioritization based upon asset needs.
Corrective Action: Define and conduct regular CCTV and condition assessment program for sewer collection system assets (gravity, pressure and lift station) based upon risk and consequence factors and for capital program prioritization. Develop regular QA/QC evaluation of pipeline cleaning efforts.

F. Currently there is no FOG permitting program for food service establishments in the SCSD service area.
Corrective Action: Prepare a written District standard operating procedure and implement an FSE permitting program with annual permits funded from FSE fees and charges.

G. SCSD 2011 Sewer Master Plan is old and outdate and behind the implementation schedule.
Corrective Action: Consider authorization of a revised sewer collection system master plan earlier than 2022 along with a full supporting baseline pipe system CCTV assessment.

H. Lack of clear documented emergency response contingency plans for lift station or force main emergency response. Roles and responsibilities not well defined.
Corrective Action: Prepare separate lift station emergency response contingency plans for each station and force main overflow events similar to M1W pump station contingency plans. Clarify roles and responsibilities between SCSD and M1W for both maintenance and emergency response especially related to force mains.

I. Current use of a paper recordkeeping systems makes evaluation of maintenance system operations difficult and ineffective.
Corrective Action: Consider the acquisition of a small computerized maintenance management system for both work order management and customer complaint management to demonstrate effective recordkeeping as required by the WDR and MRP.

J. Current procedures for photographing of only Category 1 overflows does not provide proper documentation of the other categories of overflows which can be as environmentally damaging as Category 1 overflows.
Corrective Action: Modify emergency response procedures to require photographs or video evidence (photographer, dates, photo direction, etc.) of all overflow events, signs placed to protect the public, overflow sampling locations and cleanup activities. File in the approved overflow file

K. While the SCSD Board receives regular monthly collection system maintenance reports, there is not regular reporting of final fiscal year performance results or audit report action items for corrective actions from the Audit Reports.
Corrective Action: Consider the preparation of an Annual Collection System Performance Summary Report to the Board of Directors. Assure that all Audit Reports and Corrective Action activities are included on regular Board agendas.

L. Previous biannual audit deficiencies not clearly evaluated or completed. SSMP Change Logs not consistently updated.
Corrective Action: Establish process, assign responsible parties and create schedule for review and completion of the corrective actions identified herein. Assure regular updates to the SSMP Change Log between SSMP Board adoptions.

IX. Conclusions

While the SCSD 2014 SSMP Revision 2 is technically complete and included a comprehensive and aggressive description of the SCSD sewer program including critical supporting documents, it does appear that it has committed SCSD to procedures not being followed in the field and to

many annual actions that are not required by the regulations and/or do not bring operational value to the sewer program. The size of the document is cumbersome and not used by the staff responsible for the implementation of the sewer program. SCSD has been effective in reducing both the numbers and volumes of sewage overflows as a result of a long standing and very committed work force. Those efforts have recently been impacted by the inability to retain and recruit staff for the sewer operations. This is not true of the technical support for sewers as both additional staff and outside professional support have been added to expand the scope and results of the current and future sewer capital program. These changes should improve the prosecution of the capital improvement program projects,

In addition, the next revision of the SSMP should include the recommendations identified in Section V A. to C. for a complete and well documented SSMP. The actions and revisions described in the Audit Report should result in a fully compliant and user friendly plan that includes information expected by regulators and which can help reduce liability for enforcement or legal actions.

Finally, the staff should develop a schedule and assign responsibility for the completion of each of the correction action items along with regular reporting and documentation of the activities to complete the action items until complete or a determination is made to not implement the corrective action.

Attachment 1: Audit Schedule

	Wednesday	Thursday
	9/25/19	9/26/19
8:00	Dave Fortune	
8:30		Travis Edwards. Roy Tilley
9:00	Rosa Salcedo; Leslie Milton-Rerig	
9:30		Jacque Tulva
10:00	~~SSO Record Keeping Evaluation~~	Scott Ottmar; Misty Bradshaw
10:30		
11:00		
11:30		
12:00		
12:30		
1:00		Edward Pestrano, M1W
1:30	Rick Riedl	
2:00		
2:30		
3:00	CIWQS Data Training	
3:30		
4:00		
4:30		

Attachment 2: 2017 Deficiencies Status

Element	2017 Audit Recommendation	Current Status	Comments
1	Revise the Goal Section in the next 5 year SSMP Update	In progress	Several CIP projects are in design or construciton. Goals will be evaluated once firm construction costs are understood.
2	Continue to update the Organization Section and keep CIWQS current	Completed	Org Chart updated.
3	Continue to update the Legal Authority Section when there are future updates to District Ordinances.	Completed	Ordinance 20 & 21 uploaded to website.
4	Update and implement the deficient portions of the Operations and Maintenance Program Section by the end of 2017.	In progress	Maintenance crews and engineering staff continutally monitor SSOs and adjust O&M as needed.
6	Consider training every 2 years in tandem with the SSMP Audit.	In progress	Staff receives frequent training on safety thoughout the year as part of weekly tail gate meetings. Staff recently receive training on SSO response/reporting , volume estimation and bypass procedures.
7	Revise the FOG Program section with MRWPCA FOG Inspection results in 2017.		
8	Provide annual updates on the status of CIP in the SSMP		SCSD has issued contracts for upgrades to the Del Monte, Rosita, and Military lift stations. SCSD is in design for sewer main replacements within Canyon Del Rey and Del Monte Boulevard.
9	Develop a plan to implement goals/commitments and evaluate O&M activities by the end of 2017. Document these activities.	In progress	O&M activities are reviewed presented at each monthly board meeting. Specifically, the length of lines jetted and the number and location of SSO are reported monthly.
10	Conduct next SSMP Audit prior to August 2, 2019.	In progress	
11	Continue to advocate for the return of a Collection System Satellite Agency meeting with MRWPCA	In progress	Staff currently meets with representatives of Monterey 1 Water (formerly MRWPCA) on a quarterly basis.
	2017 Audit Report Deficiency Recommendations		
2	Revise this section when new staff is assigned responsibilities that would require inclusion in this section.	Compliant	Org chart has been updated
3	Upload Ordinance 20 and 21 to the District website.	In progress	Completed 9/19/19
4	Deficient sections of the O&M Program to be created and documented in the next SSMP revision include:		
4	Implement a formal plan and schedule that documents manhole inspections.	In progress	District recently purchased video inspection van and equipment. Next step is to train staff to NASSCO MACP, LACP, PACP standards in Nov, 2019 and begin manhole inspections along with inspections of sewer mains. To be incorporated into CCTV program
4	Develop a formal Rehabilitation and Replacement (R&R) plan that incorporates CCTV sewer line condition assessments and future manhole inspection data. Include the proposed short- and long-term CIP completion schedule from the 2011 SMP.	Not started	See immedately above
4	Develop procedures specific to SCSD O&M activities and train on these procedures annually. Maintain documentation of this training.	In progress	See Audit Recommendations #6. Staff has received recent training on SSO reporting and volume estimation.
4	Develop a plan to incorporate and train new staff as current staff nears retirement to insure SCSD "institutional knowledge" is maintained and there is adequate staffing to maintain compliance with requirements found in the SSWDRs.	In progress	Difficulty recruiting new staff. Cross training has started.
6	Consider training every 2 years in tandem with the SSMP Audit.		See Audit Recommendations #6. Staff has received recent training on SSO reporting and volume estimation.
7	Re-start FOG inspections which was accomplished by hiring MRWPCA in January 2017.		Started inspections in late 2017. Approx 50 completed through 2018. Goal is to use in house staff to complete inspections
8	Track and update projects identified in the CIP project plan and schedule into annual updates to the SSMP.		See Audit recommendations #8 response.
10	Schedule future SSMP Audits and revise the SSMP with the dates of future audits which are to be conducted.	in progress	
11	Continue to advocate for the return of a Collection System Satellite Agency meeting with MRWPCA.	done	Staff meets quarterly with M1W.
Change Log	Completely deficient no updates since 9/9/2014 to any Elements of the SSMP.		Suggest revisions to SSMP. Incorporate new methods to track changes.

Attachment 3: Sample SSMP Goals

Possible Goals for Sanitary Sewer Management Plans Element 1

1. To properly manage, operate, and maintain all portions of the agency's wastewater collection system.
2. Provide adequate capacity to convey the peak wastewater flows associated with the design storm event. Adequate capacity, for the purposes of this SSMP, is defined as the capacity to convey the peak wastewater flows that are associated with the design storm event.
3. Prevent or minimize the frequency of SSOs.
4. Reduce the number of SSOs and to achieve the greatest reasonable reduction in SSOs.
5. To mitigate the impacts that are associated with any SSO that may occur.
6. Eliminate or minimize preventable SSOs.
7. Minimize and mitigate the adverse impacts of SSOs that may occur despite best efforts.
8. Minimize the frequency of SSOs
9. Reduce, prevent, and mitigate the impacts of SSOs
10. To meet all applicable regulatory notification and reporting requirements.
11. To provide adequate capacity to convey the peak wastewater flows.
12. To measure progress through performance measures so the plan can be adjusted as needed.
13. To Protect public health and safety, and the environment.
14. Prevent unnecessary property damage.
15. Provide a safe work environment for employees and contractors.
16. To effectively identify and remedy design, construction, and operational deficiencies.
17. To perform all operation and maintenance activities in a safe manner.
18. Prevent adverse impacts to waters of the U.S., and their beneficial uses.
19. Ensure corrective action is taken in a timely manner.
20. Ensure compliance with current regulatory requirements.
21. Document and define procedures to address SSO prevention and response.
22. Prepare for emergencies.
23. Be a part of the community and be a responsive public agency.
24. Involve employees in the strategic planning process for the Collection System.
25. Effectively plan system expansion to meet the capacity needs of the agency served.

26. Set high, yet achievable standards for the construction of new infrastructure.
27. Cost effectively minimize infiltration/ inflow (I/I).
28. Maintain and improve the condition and performance of the agency's wastewater collection system.
29. Understand the condition of and maintain infrastructure to maximize the life of the collection system.
30. Properly operate and maintain the collection system to minimize financial impacts on customers.
31. Responsibly manage, operate, and maintain all parts of the wastewater collection
32. Adhere to the components of the SSMP.
33. Provide adequate capacity to.
34. Be available and responsive to the needs of the public and work cooperatively with local, state and federal agencies to reduce, mitigate the impacts of, and properly report SSOs.
35. Identify, prioritize and continuously renew and replace sewer system facilities to maintain reliability.
36. Implement regular, proactive maintenance of the system to remove roots, debris, and fats, oils and grease (FOG) in areas prone to blockages that may cause sewer backups or SSOs.
37. Uphold high standards and specifications on newly constructed and/or rehabilitated public and private sewers.

Attachment 4: Sample Table of Responsibilities

Table 2-1 List of Responsible Staff for SSMP

SSMP Element	Responsible City Official	Phone Number	Email Address
Introduction			
I – Goal			
II – Organization			
III – Legal Authority			
IV – O&M Program			
V – Design & Performance Provisions			
VI – Overflow Emergency Response Program			
VII – FOG Control Program			
VIII – System Evaluation and Capacity Assurance Plan			
IX – Monitoring, Measurement, and Program Modifications			
X – SSMP Program Audits			
XI – Communication			
App A – SSMP Change Log			
App B – SSMP Adoption Documents			
App C – Audit Reports			

Attachment 5: Sample SSO File Checklist

SSO Event Checklist

Date of SSO_____ SSO Location/Name _____
CIWQS Event ID # _____ Category? □ 1 □ 2 □ 3 OES#_____
Property Damage? □ Yes □ No Service Request #_____

- □ Effort made to contain and return a portion to the sanitary sewer
- □ Pictures/video taken of overflow
- □ Pictures taken of affected/unaffected area
- □ If Property Damage, start that process
- □ Pictures taken of containment efforts
- □ If Cat 1 >1000 gals OES Control #_____
- □ Impacted waters identified?
- □ No impacted waters?
- □ Field Report Form Complete (includes fields for all required fields in CIWQS, and a sketch of SSO)
- □ Volume Estimation Worksheet Done
- □ Start Time Determination Form Done
- □ Initial review of Forms is complete (ensure consistency with dates, times, volumes, and other data)
- □ Review of pics and vids (label/date)
- □ Start Folder for all documentation for this SSO event. Put everything in it (SR, Field Reports, Worksheets/Forms, follow-up work orders, notes, pics, drawings, etc. CIWQS print outs and emails)
- □ Failure Analysis
  - o TV to determine cause
  - o Review Asset History
- □ Determine next steps to prevent recurrence
- □ Document findings and next steps on Field Report
- □ Submit Draft in CIWQS w/in 3 business days (for Cat 1 and 2 only)
- □ Print CIWQS Draft Hard Copy and email
- □ Review CIWQS, Field Reports, Worksheets, CMMS, and any other documentation to ensure data is consistent ie dates, times, volumes, cause, follow-up action etc.
- □ Submit Ready to Certify in CIWQS (with sufficient time for LRO review)
- □ Print CIWQS Ready to Certify and email
- □ Hand Folder to LRO
- □ LRO review folder and CIWQS verify accurate and consistent data
- □ Certify in CIWQS (w/in 15 Calendar days for 1 & 2, 30 days after the month for Cat 3)
- □ Print Certified CIWQS and email
- □ Any changes? Change in CIWQS and hard copies and explain changes, print our current version
- □ Move completed folder to SSO Binder

For 50, 000 Gallons or larger

- □ Follow Water Quality Monitoring and Sampling procedures
- □ Map of where samples were taken
- □ Sampling results
- □ Write Technical Report
- □ Attach to CIWQS
- □ Add to SSO Folder/Binder

If any changes are made to SSMP

- □ Update SSMP and link on CIWQS to SSMP
- □ Add to SSMP Change Log
- □ If change is substantive, re-certify SSMP

Appendix D: Sewer System Management Plan Change Log

LOG OF SSMP CHANGES			
Date	**SSMP Element #**	**Description of Change / Revision Made**	**Person Authorizing Change**

Appendix E: Overflow Emergency Response Plan (OERP)

SEASIDE COUNTY SANITATION DISTRICT

Overflow Emergency Response Plan

Effective Date: December 8, 2020

Revised Date: _____

Approved by: Board of Directors

Signature: _____

Date: _____

Prepared by David Patzer, DKF Solutions Group
(707) 373-9709 dpatzer@dkfsolutions.com

Seaside County Sanitation District: Overflow Emergency Response Plan

Table of Contents

Sanitary Sewer Overflow Emergency Response Plan (OERP)

(continued)

(Table of Contents continued)

Sanitary Sewer Overflow Emergency Response Plan

1. Purpose

The purpose of the Seaside County Sanitation District's (District) Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). The OERP provides guidelines for District personnel to follow in responding to, cleaning up, and reporting SSOs that may occur within the District's service area. This OERP satisfies the SWRCB Statewide General Waste Discharge Requirements (GWDR), which require wastewater collection agencies to have an Overflow Emergency Response Plan.

2. Policy

The District's employees are required to report all wastewater overflows found and take the appropriate action to secure the wastewater overflow area, properly report to the appropriate regulatory agencies, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The District's goal is to respond to sewer system overflows as soon as possible following notification. The District will follow reporting procedures in regards to sewer spills as set forth by the Central Coast Regional Water Quality Control Board (*RWQCB)* and the California State Water Resources Control Board (*SWRCB)*.

3. Definitions as Used in This OERP

CALIFORNIA INTEGRATED WATER QUALITY SYSTEM (CIWQS): Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system.

FROG – Fats, Roots, Oils, and Grease: Refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system. These blockages can be exacerbated by tree and shrub roots entering through cracks in underground pipes.

LEGALLY RESPONSIBLE OFFICIAL (LRO): Refers to an individual who has the authority to certify reports and other actions that are submitted through CIWQS.

MAINLINE SEWER: Refers to District wastewater collection system piping that is not a private lateral connection to a user.

MAINTENANCE HOLE OR MANHOLE: Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

MAJOR SPILL: A spill of whatever size that, based on a reasonable assessment of the spill size, location, and potential impacts, is deemed to pose an imminent and substantial endangerment to public health or the environment.

NOTIFICATION OF AN SSO: Refers to the time at which the District becomes aware of an SSO event through observation or notification by the public or other source.

NUISANCE - California Water Code section 13050, subdivision (m), defines nuisance as anything that meets all of the following requirements:

a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

c. Occurs during, or as a result of, the treatment or disposal of wastes.

PREVENTATIVE MAINTENANCE: Refers to maintenance activities intended to prevent failures of the wastewater collection system facilities (e.g. cleaning, CCTV, inspection).

PRIVATE LATERAL SEWAGE DISCHARGES – Sewage discharges that are caused by blockages or other problems within a privately-owned lateral.

SANITARY SEWER OVERFLOW (SSO) - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;

(ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and

(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

SSOs that include multiple appearance points resulting from a single cause will be considered one SSO for documentation and reporting purposes in CIWQS.

NOTE: Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned are not SSOs.

SSO Categories:

Category 1: Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or
- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:

- Does not reach surface water, a drainage channel, or an MS4, or
- The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition.

SANITARY SEWER SYSTEM: Any publicly-owned system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

SENSITIVE AREA: Refers to areas where an SSO could result in a fish kill or pose an imminent or substantial danger to human health (e.g. parks, aquatic habitats, etc.)

SEWER SERVICE LATERAL: Refers to the piping that conveys sewage from the building to the District's wastewater collection system.

UNTREATED OR PARTIALLY TREATED WASTEWATER: Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

WATERS OF THE STATE*:* Waters of the State (or waters of the United States) means any surface water, including saline waters, within the boundaries of California. In case of a sewage spill, storm drains are considered to be waters of the State unless the sewage is completely contained and returned to the wastewater collection system and that portion of the storm drain is cleaned.

4. State Regulatory Requirements for Element 6, Overflow Emergency Response Plan

GWDR Requirement

The collection system agency shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

(a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
(b) A program to ensure appropriate response to all overflows;
(c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System (NPDES) permit requirements. The Sewer System Management Plan should identify the officials who will receive immediate notification;
(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
(f) A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to Waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The Sewer System Management Plan and critical supporting documents are made available to the public on the District website.

5. Goals

The District's goals with respect to responding to SSOs are:

- Work safely;

- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Prevent sewage system overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO;
- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to certain SSOs; and
- Revise response procedures resulting from the debrief and failure analysis of certain SSOs.

6. SSO Detection and Notification

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(a)

The processes that are employed to notify the District of the occurrence of an SSO include: observation by the public, receipt of an alarm, or observation by District staff during the normal course of their work.

The District owns three (3) wastewater pump station that is operated and maintained by Monterey One Water (M1W). In the event of any pump failure, the high-level sensor activates the SCADA alarm system and M1W and the District are contacted. To prevent overflow, wastewater from the wet well can either be pumped into a vacuum truck for disposal to a nearby sanitary sewer manhole or bypassed around the station into the sanitary sewer system.

6.1 PUBLIC OBSERVATION

Public observation is the most common way that the District is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are in the phone book and on the District's website: https://scsdonline.org/.

The District's telephone number for reporting sewer problems is (831) 899-6825.

Normal Work Hours
During normal business hours, a District staff will receive the call and then they will enter the caller's information into the District's work order tracking system. The Office Staff will then dispatch an available crew. The Crew will document findings and any actions taken, regardless of whether or not the service request was for a sanitary sewer overflow (SSO). The Operations Supervisor will either document the event or have the Field Crew complete the initial SSO forms.

After Hours
After hours call non-emergency communications at 831-394-6811 who will contact District staff to respond.

When calls are received, either during normal work hours or after hours, the individual receiving the call will collect the following information:

- Time and date of call
- Specific location of potential problem
- Nature of call
- In case of SSO, estimated start time of overflow
- Caller's name and telephone number

- Caller's observation (e.g., odor, duration, location on property, known impacts, indication if surface water impacted, appearance at cleanout or manhole)
- Other relevant information

If the overflow/backup is not in the District's service area they provide the customer with the contact information for the responsible agency.

If the overflow/backup is in the District's service area, the Field Crew is dispatched and instructed to complete the Sanitary Sewer Overflow/Backup Response Form.

6.2 DISTRICT STAFF OBSERVATION

District staff conducts periodic inspections of its sewer system facilities as part of their routine activities. Any problems noted with the sewer system facilities are reported to appropriate District staff that, in turn, responds to emergency situations. Work orders are issued to correct non-emergency conditions.

6.3 CONTRACTOR OBSERVATION

The following procedures are to be followed in the event that a contractor/plumber causes or witnesses a Sanitary Sewer Overflow. If the contractor/plumber causes or witnesses an SSO they should:

1. Immediately notify the District.
2. Protect storm drains.
3. Protect the public.
4. Provide information to the District Engineer, Senior Engineer or Maintenance and Utilities Superintendent such as start time, appearance point, suspected cause, weather conditions, etc.
5. Direct ALL media and public relations requests to the Community Relations Specialist or the District Manager.

6.4 NO OBSERVATION

If there are no witnesses or no call was received for an SSO, the District staff will contact nearby residents or business owners in the vicinity of the SSO, in an attempt to obtain information that brackets a given start time that the SSO began. This information will be collected and placed with records for the specific SSO.

7. SSO Response Procedures

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(b)

7.1 Sewer Overflow/Backup Response Summary

The District will respond to SSOs as soon as feasible following notification of an overflow/backup or unauthorized discharge.

If it is not possible that the overflow/backup is due to a failure in the District-owned/maintained sewer lines the Field Crew performs the following:

- Follows the instructions in the Sanitary Sewer Overflow/Backup Response Workbook.
- If the customer is not home the Field Crew completes the Door Hanger and leaves it on the customer's door.
- If the customer is home the Field Crew:
    - Explains that the blockage is in the customer's lateral and the District does not have legal authority to maintain or perform work on privately owned laterals.
    - Recommends to the customer that they hire a contractor to clear their line.
    - Gives the customer the Sewer Spill Reference Guide pamphlet.

If it is possible that the overflow/backup is due to a failure in the District-owned/maintained sewer lines the Field Crew:

- Follows the instructions in the Sanitary Sewer Overflow/Backup Workbook.
- Notifies Maintenance and Utilities Superintendent or designee of the incident.
- Relieves blockage and cleans impacted areas.
- Forwards the completed Sanitary Sewer Overflow Workbook to the Maintenance and Utilities Superintendent or designee.

The Senior Engineer, or designee performs required regulatory reporting in accordance with the Sanitary Sewer Overflow/Backup Workbook's Regulatory Reporting section.

If the overflow has impacted private property, the Field Crew:

- Follows the instructions in the Sanitary Sewer Overflow/Backup Workbook.
- Provides the customer with forms and information as indicated in the Sanitary Sewer Overflow/Backup Workbook.
- Forwards the completed Sanitary Sewer Overflow/Backup Workbook to the Maintenance and Utilities Superintendent or designee.

The Maintenance and Utilities Superintendent or designee notifies the Senior Engineer or the District Engineer of the incident.

The District Clerk or designee:

- Reviews incident reports, claim form and other incident information and forwards, as appropriate, to:

    California Joint Powers Insurance Authority (CAJPIA)
    Tel: (562) 631-9782 or (800) 229-2343

- Communicates with claimant as appropriate.
- Communicates with CAJPIA to adjust and administer the claim to closure.

7.2 District First Responder Priorities

The first responder's priorities are:

- To follow safe work practices.
- To respond promptly with the appropriate and necessary equipment.
- To contain the spill wherever feasible.
- To restore the flow as soon as practicable.
- To minimize public access to and/or contact with the spilled sewage.
- To promptly notify the Maintenance and Utilities Superintendent in event of major SSO.
- To return the spilled sewage to the sewer system.
- To restore the area to its original condition (or as close as possible).

7.3 Safety

The first responder is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work. There may be times when District personnel responding to a sewer system event are not familiar with potential safety hazards peculiar to sewer work. In such cases it is appropriate to take the time to discuss safety issues, consider the order of work, and check safety equipment before starting the job.

7.4 Initial Response

The first responder must respond to the reporting party/problem site and visually check for potential sewer stoppages or overflows.

The first responder will:

- Note arrival time at the site of the overflow/backup.
- Verify the existence of a public sewer system spill or backup.
- Take photos of overflowing manhole(s)/cleanout(s).
- Determine if the overflow or blockage is from a public or private sewer.
- Identify and assess the affected area and extent of spill.
- If unavailable, contact the District Engineer.
- Contact caller if time permits.
- Document conditions upon arrival with photographs. Decide whether to proceed with clearing the blockage to restore the flow or to initiate containment measures. The guidance for this decision is:
    - Small spills (i.e., spills that are easily contained) – proceed with clearing the blockage.

  - Moderate or large spill where containment is anticipated to be simple – proceed with the containment measures.
  - Moderate or large spills where containment is anticipated to be difficult – proceed with clearing the blockage; however, whenever deemed necessary, call for additional assistance and implement containment measures.
- Take steps to contain the SSO. For procedures refer to the Sanitary Sewer Overflow/Backup Response Workbook.

7.5 Initiate Spill Containment Measures

The first responder will attempt to contain as much of the spilled sewage as possible using the following steps:

- Determine the immediate destination of the overflowing sewage.
- Plug storm drains using air plugs, sandbags, and/or plastic mats to contain the spill, whenever appropriate. If spilled sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging downstream storm drainage facilities.
- Contain/direct the spilled sewage using dike/dam or sandbags.
- Pump around the blockage/pipe failure.

For procedures refer to the Sanitary Sewer Overflow/Backup Response Workbook.

7.6 Restore Flow

Using the appropriate cleaning equipment, set up downstream of the blockage and hydro-clean upstream from a clear manhole. Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not reoccur downstream. If the blockage cannot be cleared within a reasonable time from arrival, or sewer requires construction repairs to restore flow, then initiate containment and/or bypass pumping. If other assistance is required, immediately contact the Maintenance and Utilities Superintendent or designee. For procedures refer to the Sanitary Sewer Overflow/Backup Response Workbook.

7.7 Equipment

This section provides a list of specialized equipment that is required to support this Overflow Emergency Response Plan.

- *Closed Circuit Television (CCTV) Inspection Unit* – A CCTV Inspection Unit is required to determine the root cause for all SSOs from gravity sewers.
- *Camera* -- A digital camera is required to record the conditions upon arrival, during clean up, and upon departure.
- *Emergency Response Trucks* -- A utility body pickup truck, or open bed is required to store and transport the equipment needed to effectively respond to sewer emergencies. The equipment and tools will include containment and clean up materials.
- *Portable Generators, Portable Pumps, Piping, and Hoses* – Equipment used to bypass pump, divert, or power equipment to mitigate an SSO.

- *Combination Sewer Cleaning Trucks* -- Combination high velocity sewer cleaning trucks with vacuum tanks are required to clear blockages in gravity sewers, vacuum spilled sewage, and wash down the impacted area following the SSO event.
- *Air plugs, sandbags, plastic mats, and rubber barriers/dikes.*
- *SSO Sampling Kits*
- *Portable Lights*

Standard operating procedures for equipment that may be necessary in the event of a sanitary sewer overflow or backup can be found in the office.

8. Recovery and Cleanup

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(e)

The recovery and cleanup phase begins immediately after the flow has been restored and the spilled sewage has been contained to the extent possible. The SSO recovery and cleanup procedures are:

8.1 Estimate the Flow and Volume of Spilled Sewage

To estimate the flow rate, District Staff will use the Volume Estimation Technique if the same style of manhole cover is observed overflowing. A variety of approaches exist for estimating the volume of a sanitary sewer spill. Crew members should use the method most appropriate to the sewer overflow in question and reference the Sanitary Sewer Overflow/Backup Response Workbook which provides three (3) methods:

- Eyeball Estimation Method
- Duration and Flow Rate Calculation Method
- Area/Volume Method

In addition, wherever and whenever possible, document the estimate using photos and/or video of the SSO site before and during the recovery operation.

8.2 Recovery of Spilled Sewage

Vacuum up and/or pump the spilled sewage and rinse water and discharge it back into the sanitary sewer system.

8.3 Clean-up and Disinfection

Clean up and disinfection procedures will be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and will be modified as required for wet weather conditions. Where cleanup is beyond the capabilities of District staff, a cleanup contractor will be used.

Private Property

District crews are responsible for the cleanup when the property damage is minor in nature and is outside of private building dwellings, such as in front, side and backyards, easements, etc. In all other cases, affected property owners can call a water damage restoration contractor to complete the cleanup and restoration. If the overflow into property is the definite cause of District

system failure, the property owner can call out a water damage restoration contractor to complete the cleanup and restoration. In both cases, property owners may submit a claim for damages to the District Clerk.

Hard Surface Areas
Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water and/or deozyme or similar non-toxic biodegradable surface disinfectant until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Take reasonable steps to contain and vacuum up the wastewater. Allow area to dry. Repeat the process if additional cleaning is required.

Landscaped and Unimproved Natural Vegetation
Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Either contain or vacuum up the wash water so that none is released. Allow the area to dry. Repeat the process if additional cleaning is required.

Natural Waterways
The Department of Fish and Wildlife will be notified by CalOES for SSOs greater than or equal to 1,000 gallons.

Wet Weather Modifications
Omit flushing and sampling during heavy storm events (i.e., sheet of rainwater across paved surfaces) with heavy runoff where flushing is not required and sampling would not provide meaningful results.

8.4 Public Notification

Signs will be posted and barricades put in place to keep vehicles and pedestrians away from contact with spilled sewage. County of Monterey Health Services Department (HSD) instructions and directions regarding placement and language of public warnings will be followed. Additionally, the Maintenance and Utilities Superintendent will use their best judgment regarding supplemental sign placement in order to protect the public and local environment. Signs will not be removed until directed by County Environmental Health Services Department or the District Engineer.

Creeks and streams that have been contaminated as a result of an SSO will have signs posted at visible access locations until the risk of contamination has subsided to acceptable background bacteria levels. The area and warning signs, once posted, will be checked every day to ensure that they are still in place. Photographs of sign placement will be taken.

In the event that an overflow occurs at night, the location will be inspected first thing the following day. The field crew will look for any signs of sewage solids and sewage-related material that may warrant additional cleanup activities.

When contact with the local media is deemed necessary, the Community Relations Specialist or the District Manager will provide the media with all revelvant information.

9. Water Quality

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(f)

9.1 Water Quality Sampling and Testing

Water quality sampling and testing will be performed for Category 1 SSOs greater than 50,000 gallons or if it is determined by the District Engineer that environmental impairment may result to determine the extent and impact of the SSO to surface waters. The water quality sampling procedures must be implemented within 48 hours and include the following:

- The first responders will collect samples as soon as possible after the discovery and mitigation of the SSO event.
- The water quality samples will be collected from upstream of the spill, from the spill area, and downstream of the spill in flowing water (e.g. creeks). The water quality samples will be collected near the point of entry of the spilled sewage.
- The samples shall then be brought to one of the following labs:

  Monterey Bay Analytical Services

  4 Justin Court

  Monterey, CA 93940

  831-375-6227

9.2 Water Quality Monitoring Plan

The District Water Quality Monitoring Plan (WQMP) will be implemented immediately upon discovery of any Category 1 SSO greater than 50,000 gallons or if it is determined by the District Engineer that environmental impairment may result in order to assess impacts from SSOs to surface waters. The SSO Water Quality Monitoring Plan will:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, legal right to access, etc.)
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the District becoming aware of the SSO, require water quality sampling for fecal coliform, E. Coli, biochemical oxygen demand (BOD), and ammonia.
6. Observe proper chain of custody procedures.
7. If the District's current OERP cannot fully mitigate an SSO and if it is determined that the SSO may pose an imminent and substantial endangerment to public health or the environment, the District shall consult a qualified biologist, health care specialist or equivalent professional to assist.

9.3 SSO Technical Report

The District will submit an SSO Technical Report to the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO spilled to surface waters equal to or greater than 50,000 gallons. The Maintenance and Utilities Superintendent in conjunction with the District Engineer will supervise the preparation of this report and the LRO will upload and certify this report in CIWQS. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

Causes and Circumstances of the SSO:

- Complete and detailed explanation of how and when the SSO was discovered.
- Diagram showing the SSO failure point, appearance point(s), and final destination(s).
- Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
- Detailed description of the cause(s) of the SSO.
- Copies of original field crew records used to document the SSO.
- Historical maintenance records for the failure location.

District's Response to SSO:

- Chronological narrative description of all actions taken by the District to terminate the spill.
- Explanation of how the SSMP Overflow Emergency Response Plan was implemented to respond to and mitigate the SSO.
- Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

Water Quality Monitoring:

- Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
- Detailed location map illustrating all water quality sampling points.

10. Sewer Backup Into/Onto Private Property Claims Handling Policy

It is the policy of the District that a District or City of Seaside Claim Form (Claim Form) shall be offered to anyone wishing to file a claim. The following procedures will be observed for all sewer overflows/backups into/onto private property:

- District staff will offer a District/City claim form irrespective of fault whenever it is possible that the sanitary sewer backup may have resulted from an apparent blockage in the District-owned sewer lines or whenever a District customer requests a claim form. The claim may later be rejected if subsequent investigations into the cause of the loss indicate the District was not at fault.
- It is the responsibility of the Field Crew to gather information regarding the incident and notify the Maintenance and Utilities Superintendent or his/her designee.
- It is the responsibility of the District Clerk to review all claims and to oversee the adjustment and administration of the claim to closure.

11. Notification, Reporting, Monitoring and Recordkeeping Requirements

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(c)

In accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS GWDRs), the Seaside County Sanitation District maintains records for each sanitary sewer overflow. Records

include:

- Documentation of response steps and/or remedial actions
- Photographic evidence to document the extent of the SSO, field crew response operations, and site conditions after field crew SSO response operations have been completed. The date, time, location, and direction of photographs taken will be documented.
- Documentation of how any estimations of the volume of discharged and/or recovered volumes were calculated including all assumptions made.
- Regulator required notifications are outlined in Section 11.1 on the following page.

11.1 Regulator Required Notifications

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION	Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, the District will notify the California Office of Emergency Services (CalOES) and obtain a notification control number.	Call Cal OES at: **(800) 852-7550**
NOTIFICATION	Notify County Health of all spills regardless of category.	Call County Health at: Mon-Fri: **(831) 647-7654** After Hours: **(831) 769-8897**
REPORTING	• Category 1 SSO: The District will submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. • Category 2 SSO: The District will submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. • Category 3 SSO: The District will submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: The District will submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: The District will certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred. • Collection System Questionnaire: The District will update and certify every 12 months	Enter data into the CIWQS Online SSO Database[1] (http://ciwqs.waterboards.ca.gov/)certified by the Legally Responsible Official(s)[2]. All information required by CIWQS will be captured in the Sanitary Sewer Overflow Report. Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the State SSO Program Manager must be contacted to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days.
WATER QUALITY MONITORING	The District will conduct water quality sampling within 48 hours after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results will be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING	The District will maintain the following records: • SSO event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to	Self-maintained records shall be available during inspections or upon request.

[1] In the event that the CIWQS online SSO database is not available, the Maintenance and Utilities Superintendent will notify SWRCB by phone and will fax or e-mail all required information to the RWQCB office at (805) 543-0397 Central Coast in accordance with the time schedules identified above. In such an event, the District will submit the appropriate reports using the CIWQS online SSO database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the SSO file.

[2] The District always has at least one LRO. Any change in the LRO(s) including deactivation or a change to contact information, will be submitted to the SWRCB within 30 days of the change by calling (866) 792-4977 or emailing help@ciwqs.waterboards.ca.gov.

	document and/or estimate SSO Volume.	

For reporting purposes, if one SSO event of whatever category results in multiple appearance points in a sewer system, a single SSO report is required in CIWQS that includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that cause the SSO, and descriptions of the locations of all other discharge points associated with the single SSO event.

11.2 Complaint Records

The District maintains records of all complaints received whether or not they result in sanitary sewer overflows. These complaint records include:

- Date, time, and method of notification
- Date and time the complainant or informant first noticed the SSO or occurrence related to the call
- Narrative description describing the complaint
- A statement from the complainant or informant, if they know, of whether or not the potential SSO may have reached waters of the state
- Name, address, and contact telephone number of the complainant or informant reporting the potential SSO (if not reported anonymously)
- Follow-up return contact information for each complaint received (if not reported anonymously)
- Final resolution of the complaint with the original complainant
- Work service request information used to document all feasible and remedial actions taken

All complaint records will be maintained for a minimum of five years whether or not they result in an SSO. SSO records are kept under the direction and control of the Maintenance and Utilities Superintendent.

12. Post SSO Event Debriefing

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)

Every SSO event is an opportunity to evaluate the District response and reporting procedures. Each overflow event is unique, with its own elements and challenges including volume, cause, location, terrain, climate, and other parameters.

As soon as possible after Category 1 and Category 2 SSO events all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss what worked and where improvements could be made in preventing or responding to and mitigating future SSO events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

13. Failure Analysis Investigation

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)

The objective of the failure analysis investigation is to determine the "root cause" of the SSO and to identify corrective action(s) needed that will reduce or eliminate future potential for the SSO to recur or for other SSOs to occur.

The investigation will include reviewing all relevant data to determine appropriate corrective action(s) for the line segment. The investigation will include:

- Reviewing and completing the Sanitary Sewer Overflow Report and any other documents related to the incident
- Reviewing the incident timeline and other documentation regarding the incident
- Reviewing communications with the reporting party and witness
- Reviewing volume estimate, volume recovered estimate, volume estimation assumptions and associated drawings
- Reviewing available photographs
- Interviewing staff that responded to the spill
- Reviewing past maintenance records
- Reviewing past CCTV records,
- Conducting a CCTV inspection to determine the condition of all line segments immediately following the SSO and reviewing the video and logs,
- Reviewing any Fats, Oils, Roots and Grease (FROG) related information or results
- Post SSO debrief records
- Interviews with the public at the SSO location

The product of the failure analysis investigation will be the determination of the root cause and the identification and scheduling of the corrective actions. The Collection System Failure Analysis Form (in Sanitary Sewer Overflow/Backup Response Workbook) will be used to document the investigation.

14. SSO Response Training

ref. SWRCB Order No. 2006-0003-DWQ D.13vi(d)

This section provides information on the training that is required to support this Overflow Emergency Response Plan.

14.1 Initial and Annual Refresher Training

All District personnel who may have a role in responding to, reporting, and/or mitigating a sewer system overflow will receive training on the contents of this OERP. All new employees will receive training before they are placed in a position where they may have to respond. Current employees will receive annual refresher training on this plan and the procedures to be followed. The District will document all training.

Affected employees will receive annual training on the following topics by knowledgeable trainers:

- The District's Overflow Emergency Response Plan and Sanitary Sewer Management Plan
- Sanitary Sewer Overflow Volume Estimation Techniques
- Researching and documenting Sanitary Sewer Overflow Start Times
- Impacted Surface Waters: Response Procedures
- State Water Resources Control Board Employee Knowledge Expectations
- Employee Core Competency Evaluations on Sanitary Sewer Operations
- Water Quality Monitoring Plan

The District will verify that annual safety training requirements are current for each employee, and that employees are competent in the performance of all core competencies. This will be verified through any of the following: electronic testing, interviews and/or observations. The District will address, through additional training/instruction, any identified gaps in required core competencies.

Through SWRCB Employee Knowledge Expectations training the employee will be able to answer the following:

1. Please briefly describe your name and job title.
2. Please describe for us approximately when you started in this field and how long you have worked for the District.
3. Please expand on your current position duties and role in responding in the field to any SSO complaints.
4. Please describe your SOPs used to respond/mitigate SSOs when they occur.
5. Describe any training the District provides or sends you to for conducting spill volume estimates.
6. We are interested in learning more about how your historical SSO response activities have worked in the field. We understand from discussions with management earlier that you use the OERP from the SSMP. Please elaborate on how you implement and utilize the procedures in the plan.
7. Historically, before any recent changes, can you please walk us through how you would typically receive and respond to any SSO complaints in the field?
8. Can you tell us who is responsible for estimating SSO volumes discharged? If it is you, please describe how you go about estimating the SSO volume that you record on the work order/service request forms?
9. What other information do you collect or record other than what is written on the work order form?
10. Describe if and when you ever talk with people that call in SSOs (either onsite or via telephone) to further check out when the SSO might have occurred based on what they or others know? If you do this, can you tell us where this information is recorded?
11. We understand you may be instructed to take pictures of some sewer spills/backups into structures. Other than these SSOs, when else would you typically take any pictures of an SSO?
12. Please walk us through anything else you'd like to add to help us better understand how your field crews respond and mitigate SSO complaints.

14.2 SSO Response Drills

Periodic training drills or field exercises will be held to ensure that employees are up to date on these procedures, equipment is in working order, and the required materials are readily available. The training drills will cover scenarios typically observed during sewer related emergencies (e.g. mainline blockage, mainline failure, and lateral blockage). The results and the observations during the drills will be recorded and action items will be tracked to ensure completion.

14.3 SSO Training Record Keeping

Records will be kept of all training that is provided in support of this plan. The records for all scheduled training courses and for each overflow emergency response training event will include date, time, place, content, name of trainer(s), and names and titles of attendees.

14.4 Contractors Working On District Sewer Facilities

All construction contractors working on District sewer facilities will be required to develop a project-specific OERP, will provide project personnel with training regarding the content of the contractor's OERP and their role in the event of an SSO, and to follow that OERP in the event that they cause or observe an SSO. Emergency response procedures shall be discussed at project pre-construction meetings, regular project meetings and after any contractor involved incidents.

All service contractors performing work on District sewer lines will be provided wth Appendix D: Contractor Orientation and will be required to observe contractor procedures.

15. Authority

- Health & Safety Code Sections 5410-5416
- CA Water Code Section 13271
- Fish & Wildlife Code Sections 5650-5656
- State Water Resources Control Board Order No. 2006-0003-DWQ
- State Water Resources Control Board Order No. WQ 2013-0058-EXEC effective September 9, 2013

16. Appendices

- Appendix A: Sample Public Notification Sign
- Appendix B: Sewer Spill Reference Guide: Your Responsibilities as a Private Property Owner
- Appendix C: Door Hanger
- Appendix D: Sanitary Sewer Overflow and Backup Response Workbook

APPENDIX A:
Sample Public Notification Sign

Overflow Emergency Response Plan
Public Posting

DANGER

RAW SEWAGE • AVOID CONTACT

PELIGRO

AGUA CONTAMINADA • EVITE TODO CONTACTO

For more information:

Seaside County Sanitation District
(831) 899-6825

APPENDIX B:
Sewer Spill Reference Guide Pamphlet:
Your Responsibilities as a Private Property Owner

INSERT
Pamphlet

APPENDIX C:
Door Hanger

Seaside County Sanitation District

On (date) _____, at (location) _____,
we responded to a reported blockage of the sanitary sewer service to your property.

We discovered a blockage in:

- ☐ The sanitary sewer main and cleared the line
- ☐ Your sanitary sewer lateral, which is your responsibility to maintain.

If you require assistance to clear your portion of the lateral you can search the internet for "Sewer Contractors" or "Plumbing Drains & Sewer Cleaning." If you plan to hire a contractor, we recommend getting estimates from more than one company.

SCSD Representative notes: _____

_____

_____

SCSD Representative:

_____

For questions or comments, please call

Seaside County Sanitation District
(831) 899-6825

Distrito de Saneamiento del Condado de Seaside
(Seaside County Sanitation District)

El (fecha) _____,en (ubicación) _____,
respondimos a un bloqueo informado del servicio de alcantarillado sanitario a su propiedad.

Descubrimos un bloqueo en:

- ☐ El alcantarillado sanitario principal y despejó la línea
- ☐ Su alcantarillado sanitario lateral, que es su responsabilidad mantener.

Si necesita ayuda para limpiar su parte del lateral, puede buscar en Internet "Contratistas de alcantarillado" o "Limpieza de desagües y alcantarillado". Si planea contratar a un contratista, le recomendamos obtener presupuestos de más de una compañía.

Notas del Representante del Distrito: _____

_____

_____

Representante del Distrito:

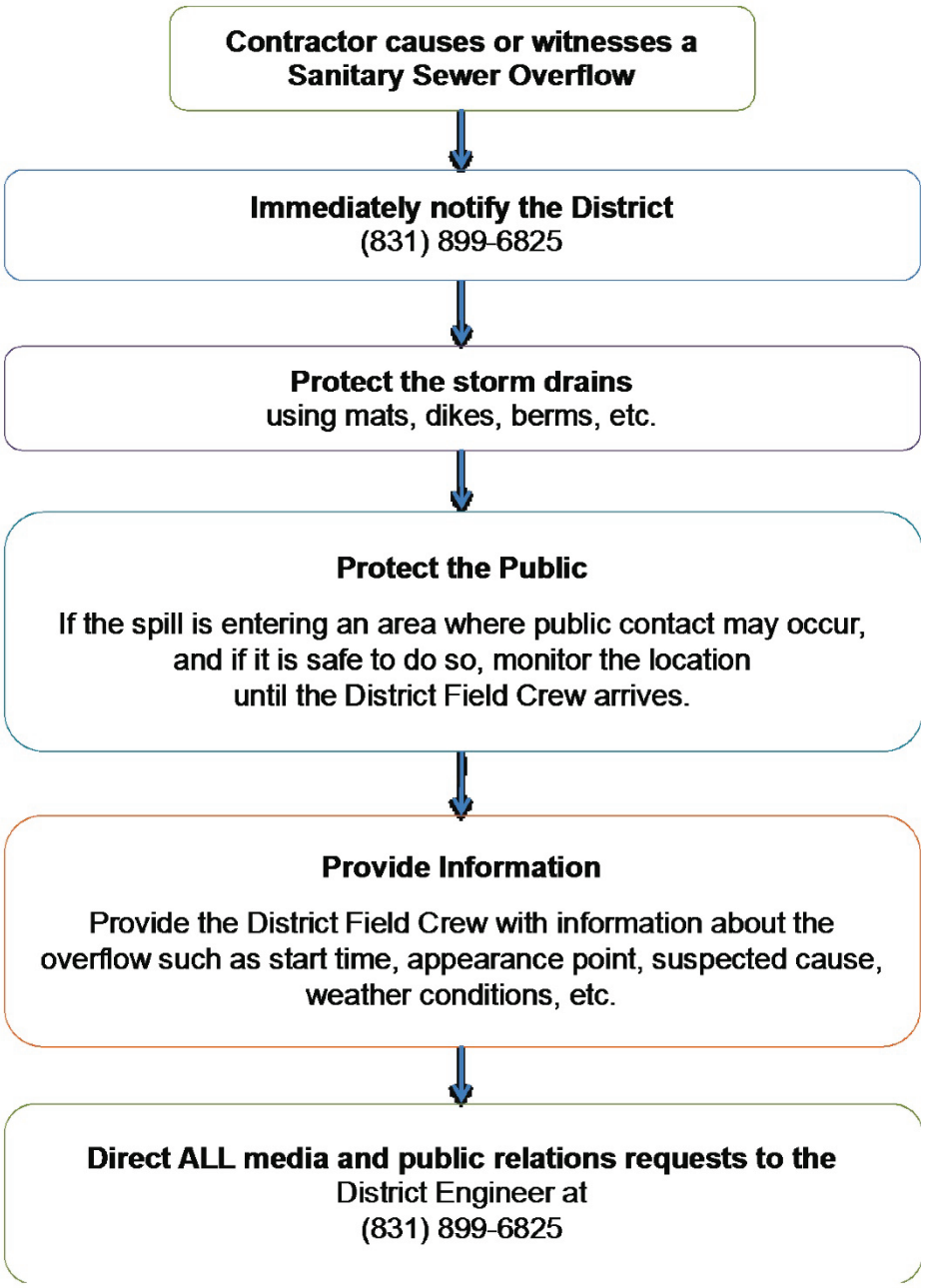
_____

Para preguntas o comentarios, por favor llame
Distrito de Saneamiento del Condado de Seaside
(831) 899-6825

APPENDIX D:
Contractor Orientation

Seaside County Sanitation District Overflow Emergency Response Plan

Contractor Orientation



APPENDIX E:
Sanitary Sewer Overflow/Backup Response Workbook

Seaside County Sanitation District

Overflow Emergency Response Plan

Sanitary Sewer Overflow and Backup Response Workbook

Sanitary Sewer Overflow/Backup Response Workbook

- ❑ If this is a Category 1 SSO greater than or equal to 1,000 gallons, **immediately notify the Maintenance and Utilities Superintendent** at (831) 899-6829 to make the 2-hour notification to CALOES.
- ❑ **Refer to the Regulatory Reporting Guide** for additional reporting requirements
- ❑ **If there is a backup into a residence or business:**
  - Notify Maintenance and Utilities Superintendent or designee at (831) 899-6829
  - If reachable, contact the District Engineer or designee at (831) 899-6885
- ❑ **For any media inquiries/requests:** Public Outreach Coordinator (831) 645-4623

Don't forget to take photos!

Field Crew: ❑ Follow the instructions on the Overflow/Backup Response Flowchart and complete forms in this workbook as indicated. ❑ Complete the chain of custody record (to the right) and deliver this workbook to the Utilities Field Supervisor.	Print Name: _____ Initial: _____ Date: _____ Time: _____
Utilities Field Supervisor: ❑ Review the SSO Event Checklist and the forms in this booklet. Contact the Field Crew for additional information if necessary. ❑ Confirm all required regulatory notifications have been made. ❑ If this was a Sewer Backup, complete the Backup Forms Checklist (F-1). ❑ Complete the Chain of Custody record (right) and forward this booklet to the Senior Engineer.	Print Name: _____ Initial: _____ Date: _____ Time: _____
Senior Engineer: ❑ Complete the Collection System Failure Analysis Form (G-1). ❑ Associate Engineer enters data into CIWQS; LRO certifies report. ❑ Complete the Chain of Custody record (right) and file this booklet. ❑ Complete District's Internal Incident Report and forward to the District Engineer.	Print Name: _____ Initial: _____ Date: _____ Time: _____
District Engineer: ❑ Review District's Internal Incident Report. ❑ Certify District's Internal Incident Report.	Print Name: _____ Initial: _____ Date: _____ Time: _____

Seaside County Sanitation District Overflow Emergency Response Plan

SSO Event Checklist A-2

Date of SSO: _____ SSO Location/Name: _____

CIWQS Event ID #: _____ Category? ☐ 1 ☐ 2 ☐3 OES#: _____

Property Damage? ☐ Yes ☐ No Service Request #: _____

- ☐ ___ Effort made to contain and return a portion/all to the sanitary sewer
- ☐ ___ Pictures/video taken of overflow
- ☐ ___ Pictures taken of affected/unaffected area
- ☐ ___ If property damage, start that process
- ☐ ___ Pictures taken of containment efforts
- ☐ ___ If Cat 1 > 1000 gals:
  OES Control #_____
- ☐ ___ Impacted waters identified?
- ☐ ___ No impacted waters?
- ☐ ___ SSO Report Form Complete (includes fields for all required fields in CIWQS, and a sketch of SSO)
- ☐ ___ Volume Estimation Worksheet(s) done
- ☐ ___ Start Time Determination Form done
- ☐ ___ Initial review of forms is complete (ensure consistency with dates, times, volumes, and other data)
- ☐ ___ Review of photos and videos (label/date)
- ☐ ___ Start Folder for all documentation for this SSO event. Put everything in it (SSO Report, Worksheets/Forms, follow-up work orders, notes, pics, drawings, etc. CIWQS print outs and emails)
- ☐ ___ Failure Analysis
  - CCTV to determine cause
  - Review Asset History
- ☐ ___ Determine next steps to prevent recurrence
- ☐ ___ Document findings and next steps on SSO Report
- ☐ ___ Submit Draft in CIWQS w/in 3 business days (for Categories 1 and 2 only)
- ☐ ___ Print CIWQS Draft hard copy and email
- ☐ ___ Review CIWQS, SSO Report, Worksheets, CMMS, and any other documentation to ensure data is consistent (e.g. dates, times, volumes, cause, follow-up action, etc.
- ☐ ___ Attach photos, forms etc. to CIWQS
- ☐ ___ Submit Ready to Certify in CIWQS (with sufficient time for LRO review)
- ☐ ___ Print CIWQS Ready to Certify and email
- ☐ ___ Hand folder to LRO
- ☐ ___ LRO review folder and CIWQS verify accurate and consistent data
- ☐ ___ Certify in CIWQS (within 15 calendar days for Categories 1 & 2, 30 days after the month for Category 3)
- ☐ ___ Print Certified CIWQS and email
- ☐ ___ Any changes? Change in CIWQS and hard copies and explain changes, print our current version
- ☐ ___ Move completed folder to SSO Binder
- ☐ ___ For 50,000 gallons or larger
  - ☐ Follow Water Quality Monitoring and Sampling procedures
  - ☐ Map of where samples were taken
  - ☐ Sampling results
  - ☐ Write Technical Report Certify w/in 45 days
  - ☐ Attach to CIWQS
  - ☐ Add to SSO Folder/Binder
  - ☐ If any changes are made to SSMP
    - Update SSMP and link on CIWQS to SSMP
    - Add change to SSMP Change Log
    - If change is substantive, re-certify SSMP

Seaside County Sanitation District Overflow Emergency Response Plan

Regulatory Reporting Guide B-1

Deadline	Category 1 SSO	Category 2 SSO	Category 3 SSO	Private Lateral Sewage Discharge
2 hours after awareness of SSO	If the spill is greater than or equal to 1,000 gallons, call CalOES.	-	-	-
As soon as possible	If SSO impacts private property that may be a failure of the sewer main and/or if a claim for damages may be submitted against the District, notify the District Clerk.			-
48 Hours after awareness of SSO	If 50,000 gal or more were not recovered, begin water quality sampling.	-	-	-
3 Business Days after awareness of SSO	Submit Draft Spill Report in the CIWQS database.	Submit Draft Spill Report in the CIWQS database.	-	-
15 Days after response conclusion	Certify Spill Report in CIWQS. Update as needed until 120 days after SSO end date.	Certify Spill Report in the CIWQS database. Update as needed until 120 days after SSO end time.	-	-
30 Days after end of calendar month in which SSO occurred	-	-	Certify Spill Report in CIWQS. Update as needed until 120 days after SSO end date.	(Voluntary) Certify Spill Report in CIWQS. Update as needed until 120 days after SSO end date.
45 days after SSO end date	If 50,000 gal or more were not recovered, submit SSO Technical Report in CIWQS.	-	-	

Note: For reporting purposes, if one SSO event results in multiple appearance points, complete one SSO report in the CIWQS SSO Online Database, and report the location of the SSO failure point, blockage or location of the flow condition that caused the SSO, including all the discharge points associated with the SSO event.

Category	Definition
1	Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that: • Reach surface water and/or reach a drainage channel tributary to a surface water; or • Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
2	Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

Private Lateral Sewage Discharge (PLSD)	Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately-owned sewer lateral** connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be **voluntarily** reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

Seaside County Sanitation District Overflow Emergency Response Plan

Regulatory Reporting Contacts and Authorization B-2

Authorized Personnel:

The District Engineer is the District's Legally Responsible Official (LRO) and is authorized to perform regulatory reporting of SSOs electronically and to sign and certify SSO reports in CIWQS.

Contact	Telephone/Email
Monterey County Health	(831) 647-7654 After hours: (831) 769-8897
CAL OES	Tel: (800) 852-7550
District Clerk	Email: lmilton@ci.seaside.ca.us Tel: (831) 899-6707
Tim Karcz, Senior Risk Manager **California Joint Powers Insurance Authority (CAJPIA)** **Property & Liability Claims Department**	Tel: (562) 631-9782
Central Coast Regional Water Quality Control Board	Main: (805) 549-3147 Fax: (805) 543-0397 **Howard Kolb** Direct: (805) 549-3332 Email: howard.kolb@waterboards.ca.gov
State Water Resources Control Board **Walter Mobley**	Tel: (916) 323-0878 Email: Walter.Mobley@waterboards.ca.gov
City of Del Rey Oaks	(831) 394-8577
City of Sand City	(831) 394-6700 ext 22

Seaside County Sanitation District Overflow Emergency Response Plan

Regulatory Reporting Checklist B-3

NOTIFICATIONS	
CAL OES (800) 852-7550	
Notification Date/Time:	
Name of Who You Spoke To:	
OES Control Number:	
District Engineer, if applicable	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
CAJPIA, if applicable	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
Central Coast Regional Water Quality Control Board	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	
State Water Resources Control Board	
Notification Date/Time:	
Name of Who You Spoke To: Left Message: ☐	

Seaside County Sanitation District Overflow Emergency Response Plan

Overflow/Backup Response Flowchart

C-1: Page 1

Start Here

Does the SSO/backup appear to be due to a problem in the **District-owned/maintained** sewer line?

NO

This is a Private Lateral Sewage Discharge (PLSD)

1. Notify the property owner that the blockage is in their lateral and that the District does not have legal authority to maintain or perform work on privately-owned laterals.
2. Give customer the "Your Responsibilities as a Private Property Owner" pages.
3. Recommend to customer they hire a contractor to clear their line.
4. If customer is not home:
   - Complete Door Hanger and leave on customer's door.
   - Leave a message on the customer's voicemail.
5. If the property owner is unable or unwilling to address the cause of the overflow, immediately contact your supervisor and discuss whether Code Enforcement, the County Department of Environmental Health or Regional Water Quality Control Board should be notified.
6. If you are directed to break the stoppage and clean up the PLSD, Be sure to document District staff time and equipment used for potential billing purposes, and take pictures.

YES

1. Document arrival time.
2. Consider the need to call out additional staff, contractor or mutual aid assistance.
3. If it is possible that this is a Category 1 SSO greater than or equal to 1,000 gallons, immediately notify the Maintenance and Utilities Superintendent make the 2-hour notification to CalOES.

1. **Document the service call according to District procedures.**
2. **STOP. Do not continue to PAGE 2**

BEGIN DIVERSION AND CONTAINMENT, AS NECESSARY

1. DIVERT AWAY FROM SENSITIVE AREAS:

a. Cover unplugged storm drains w/mats, or use dirt/other material to divert sewage away from sensitive areas (e.g., schools, playgrounds, intersections, etc.)

b. ENSURE PUBLIC CONTACT DOES NOT OCCUR. Use cones/barricades to isolate area.

2. CONTAIN SSO & RETURN TO SYSTEM, IF POSSIBLE:

a. Plug storm drain catch basins or use rubber mats to cover basin inlet and divert flow to catch basin

b. Build/excavate a berm to channel flow to downstream sanitary sewer manhole (*barricade manhole if left open)*

c. Use bypass pumps to pump around blockage until it can be removed

d. Divert to low area of ground where it can be collected later

3. PHOTOGRAPH HOW THE SSO WAS DIVERTED/CONTAINED, AS APPROPRIATE

ADDRESS CAUSE OF SSO/BACKUP ASAP

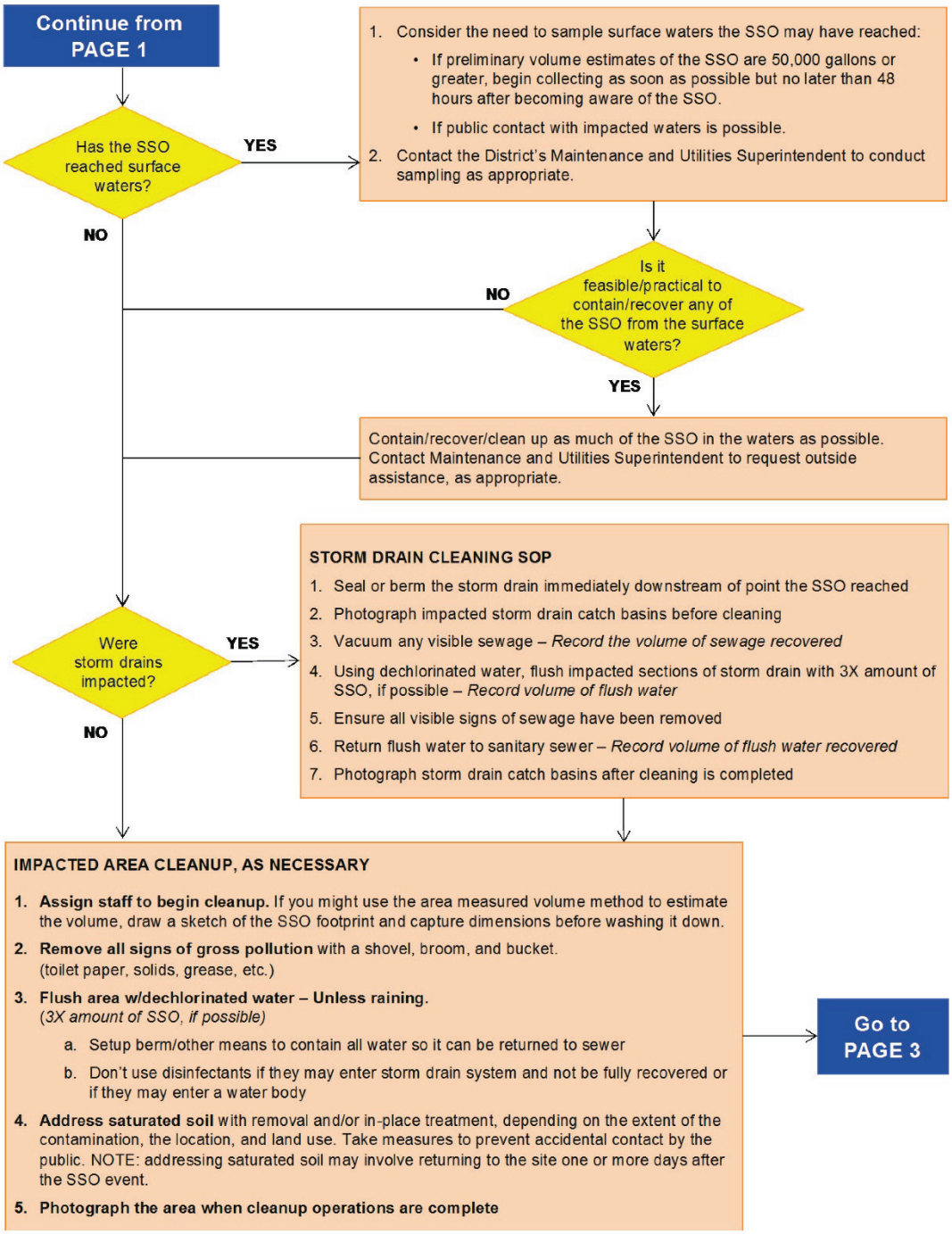
1. For lift station related SSO/Backups, contact the District Engineer and/or Monterey One Water.
2. For SSO/Backups not related to a pump station, relieve the stoppage. Note the distance from the manhole and catch/remove debris that could cause another stoppage. After flow has returned to normal, clean the pipe thoroughly.
3. Photograph staff activities while clearing the blockage, as appropriate.

Go to PAGE 2

Seaside County Sanitation District Overflow Emergency Response Plan

Overflow/Backup Response Flowchart

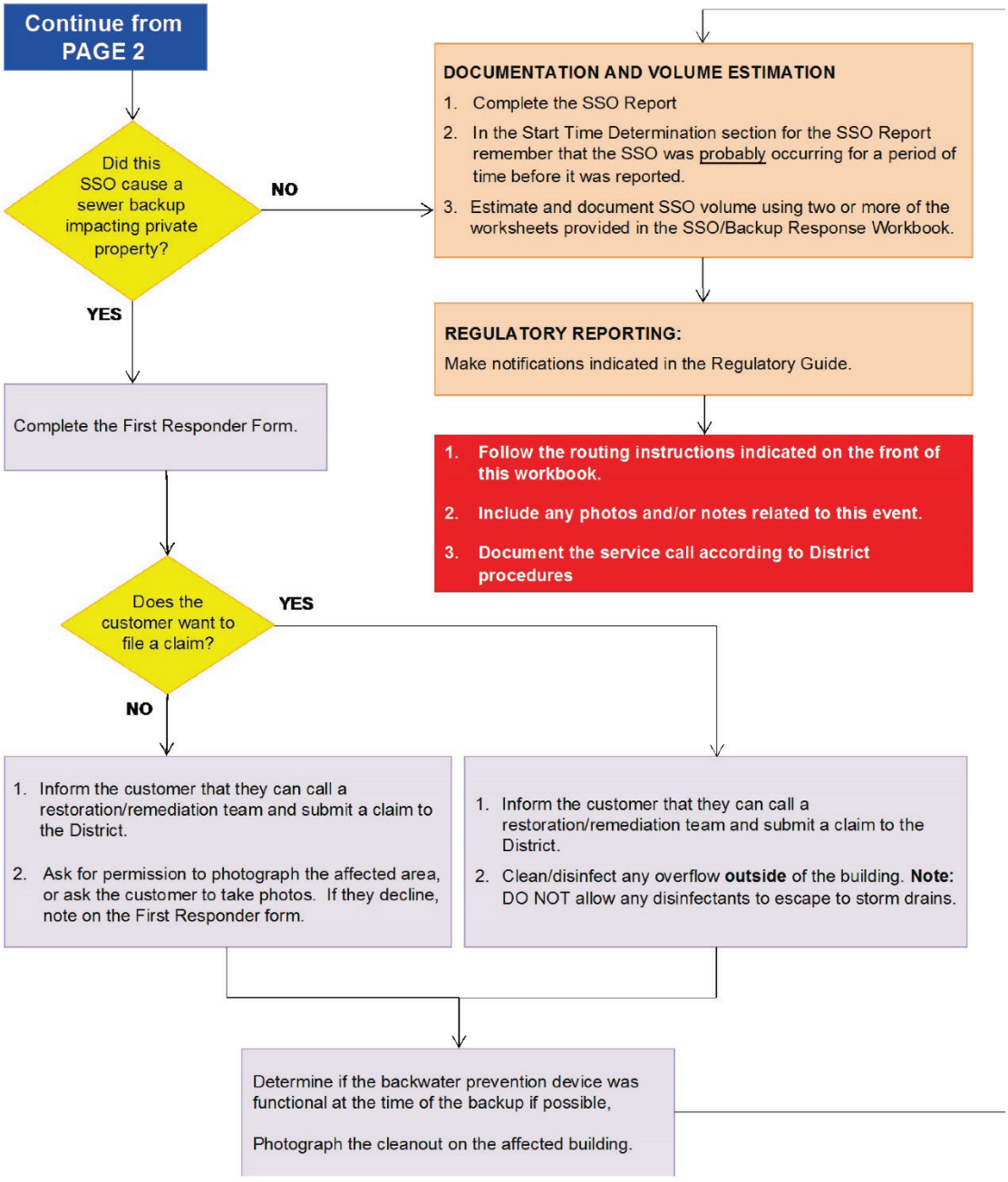
C-1: Page 2



Seaside County Sanitation District Overflow Emergency Response Plan

Overflow/Backup Response Flowchart

C-1: Page 3



Seaside County Sanitation District Overflow Emergency Response Plan

Sanitary Sewer Overflow Field Report

D-1: Page 1

PHYSICAL LOCATION DETAILS		
Spill location name		
Latitude of spill location		
Longitude of spill location		
County		
Regional Water Quality Control Board		
VOLUMES BY DESTINATION	**Volume Spilled (Gallons)**	**Volume Recovered (Gallons)**
2.a/2.b Estimated spill volume that reached a separate storm drain that flows to a surface body of water? (If not all recovered, this is a Category 1)		
2.c/2d Estimated spill volume that directly reached a drainage channel that flows to a surface water body? (Any volume spilled is a Category 1)		
2.e/2.f Estimated spill volume discharged directly to a surface water body? (Any volume spilled is a Category 1)		
2.g/2.h Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location. Also, includes backups to building structures).		
	Volume Spilled	**Volume Recovered**
Total Volume Spilled (Verify this matches the table in between 2.h and 3 in CIWQS)		

Seaside County Sanitation District Overflow Emergency Response Plan

Sanitary Sewer Overflow Field Report

D-1: Page 2

DATE/TIME DETERMINATIONS		
	DATE	**TIME**
Start of SSO (Use Start Time Determination/Notes Below)		
District Notified		
Collection System Operator Dispatched		
Collection System Operator Arrived		
End of SSO		
End of Spill Response		

SSO FIELD REPORT
Spill location description:
Number of appearance points:
Spill appearance points: (Check all that apply) ☐ Backflow Prevention Device ☐ Force Main ☐ Gravity Mainline ☐ Inside Building/Structure ☐ Lateral Clean Out (Private/Public) ☐ Lower Lateral (Private/Public) ☐ Manhole Pump Station ☐ Upper Lateral (Private/Public) ☐ Other Sewer System Structure
Spill appearance point explanation. (Enter information here if "Other" or multiple appearance points were selected):
Final spill destination: (Check all that apply) ☐ Building/Structure ☐ Combined Storm Drain ☐ Drainage Channel ☐ Other (Specify Below) ☐ Paved Surface ☐ Separate Storm Drain ☐ Street/Curb and Gutter ☐ Surface Water ☐ Unpaved Surface
Explanation of final spill destination. (Enter information if "Other" was selected.

Seaside County Sanitation District Overflow Emergency Response Plan

Sanitary Sewer Overflow Field Report

D-1: Page 3

SSO FIELD REPORT
Spill cause: (Check One) ☐ Air Relief Valve (ARV)/Blow Off Valve (BOV)/Backwater Valve Failure ☐ Construction Diversion Failure ☐ CS Maintenance Caused Spill/Damage ☐ Damage by Others Not Related to CS Construction/Maintenance (Specify Below) ☐ Debris from Construction ☐ Debris from Lateral ☐ Debris-General ☐ Debris-Rags ☐ Debris Wipes/Non-Dispersible ☐ Flow Exceeded Capacity (Separate CS Only) ☐ Grease Deposition (FOG) ☐ Inappropriate Discharge to CS ☐ Natural Disaster ☐ Operator Error ☐ Other (Specify Below) ☐ Pipe Structural Problem/Failure ☐ Pipe Structural Problem/Failure – Installation ☐ Pump Station Failure – Controls ☐ Pump Station Failure – Mechanical ☐ Pump Station Failure – Power ☐ Rainfall Exceeded Design, I and I (Separate CS Only) ☐ Root Intrusion ☐ Siphon Failure ☐ Surcharged Pipe (Combined CS Only) ☐ Vandalism
Spill cause explanation: (Required if Spill Cause is “Other”)

Seaside County Sanitation District Overflow Emergency Response Plan

Sanitary Sewer Overflow Field Report

D-1: Page 4

SSO FIELD REPORT		
Where did failure occur? ☐ Air Relief Valve (ARV)/Blow Off Valve (BOV) Failure ☐ Force Main ☐ Gravity Mainline ☐ Lower Lateral (Public) ☐ Manhole ☐ Other (Specify Below) ☐ Pump Station Failure – Controls ☐ Pump Station Failure – Mechanical ☐ Pump Station Failure – Power ☐ Siphon ☐ Upper Lateral (Public)		
Explanation of where failure occurred: (Required if Where Failure Occurred is "Other")		
Was spill associated with a storm event?	YES	NO
Diameter of sewer pipe at the point of blockage or failure:		inches
Material of sewer pipe at the point of blockage or failure:		
Estimated age of sewer asset at the point of blockage or failure (if applicable):		years
Spill Response Activities. (Check all that apply) ☐ Cleaned-Up ☐ Mitigated Effects of Spill ☐ Contained All or Portion of Spill ☐ Other (Specify Below) ☐ Restored Flow ☐ Returned All Spoil to Sanitary Sewer System ☐ Property Owner Notified ☐ Other Enforcement Agency Notified		
Explanation of spill response activities: (Required if spill response activities is "Other"):		

Seaside County Sanitation District Overflow Emergency Response Plan

Sanitary Sewer Overflow Field Report

D-1: Page 5

SSO FIELD REPORT		
Spill corrective action taken: (Check all that apply) ☐ Add location to, or increase frequency check, in Preventive Maintenance Program ☐ Adjusted Schedule/Method of Preventive Maintenance ☐ Enforcement Action Against FOG Source ☐ Inspected Sewer Using CCTV to Determine Cause ☐ Other (Specify Below) ☐ Plan Rehabilitation or Replacement of Sewer ☐ Repaired Facilities or Replaced Defect		
Explanation of corrective action taken: (Required if spill corrective action is "Other")		
Is there an ongoing investigation?	YES	NO
Health warnings posted?	YES	NO
Name of impacted surface waters, if any:		

Seaside County Sanitation District Overflow Emergency Response Plan

Sanitary Sewer Overflow Field Report **D-1: Page 6**

SSO FIELD REPORT
Water quality samples analyzed for: (Circle all that apply) ☐ Dissolved Oxygen ☐ Other Chemical Indicators(s) – Specify Below ☐ Biological Indicator(s) – Specify Below ☐ No Water Quality Samples Taken ☐ Not Applicable to the Spill ☐ Other (Specify Below)
Explanation of water quality samples analyzed for: (Required if water quality samples analyzed for is "Other chemical indicator(s)", "Biological indicator(s)", or "Other")
Water quality sample results reported to: (Check all that apply) ☐ County DEHS ☐ Regional Water Quality Control Board ☐ Other (Specify below) ☐ No Water Quality Samples Taken ☐ Not Applicable to this Spill
Explanation of water quality sample results reported to: (Required if water quality sample results reported to is “Other”)
Method and explanation of volume estimation methods used: (Check all that apply) ☐ Eyeball Estimate ☐ Measured Volume ☐ Duration and Flow Rate ☐ Counting Upstream Connections ☐ Other (Explain):

Seaside County Sanitation District Overflow Emergency Response Plan

Volume Estimation Computations & Examples

E-1: Page 1

Miscellaneous Computations & Examples

To convert inches to feet (NOTE: for the purposes of this worksheet, the unit of measurement will be in feet for formula examples)	Divide the inches by 12 or use the chart on the right. **Example 1:** 27" ÷ 12 = 2.25' **Example 2:** 1¾" = ?' 1" (0.08') + ¾" (0.06') = 0.14'
Volume of one cubic foot	7.48 gallons of liquid
Area: Two-dimensional measurement represented in square feet (SQ/FT or ft^2)	Square/rectangle: Area = Length x Width Circle: Area = π x r^2 = π x r x r (where π ≈ 3.14 and r = radius = ½ diameter) Triangle: Area = ½ (Base x Height) = 0.5 (Base x Height)
Volume: Three-dimensional measurement represented in cubic feet (CU/FT or ft^3)	Rectangle/square footprint: Volume = Length x Width x Depth Circle footprint (cylinder): Volume = π x r^2 x Depth (where π ≈ 3.14 and r = radius = ½ diameter) Triangle footprint: Volume = ½ (Base x Height) x Depth
Depth: Wet Stain on Concrete or asphalt surface	If the depth is not measurable because it is only a wet stain, use the following estimated depths: Depth of a wet stain on concrete surface: 0.0026' (1/32") Depth of a wet stain on asphalt surface: 0.0013' (1/64") These were determined to be a reasonable depth to use on the respective surfaces through a process of trial and error. One gallon of water was poured onto both asphalt and concrete surfaces. Once the area was determined as accurately as possible, different depths were used to determine the volume of the wetted footprint until the formula produced a result that (closely) matched the one gallon spilled. This process was repeated several times.
Depth: Contained or "Ponded" sewage	Measure actual depth of standing sewage whenever possible. When depth varies, measure several representative sample points and determine the average. Use that number in your formula to determine volume.

Convert Inches to Feet

Inches	Feet
1/8"	0.01'
1/4"	0.02'
3/8"	0.03'
1/2"	0.04'
5/8"	0.05'
3/4"	0.06'
7/8"	0.07'
1"	0.08'
2"	0.17'
3"	0.25'
4"	0.33'
5"	0.42'
6"	0.50'
7"	0.58'
8"	0.67'
9"	0.75'
10"	0.83'
11"	0.92'
12"	1.00'

Seaside County Sanitation Overflow Emergency Response Plan

Volume Estimation: Eyeball Estimation Method (for ≤100 gallons) E-2

STEP 1: Position yourself so that you have a vantage point where you can see the entire SSO.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

	A	B	C
Size of bucket(s) or barrel(s)	**How many of this size?**	**Multiplier**	**Estimated SSO Volume (gallons)**
1 gallon water jug		x 1 gallons	
5 gallon bucket		x 5 gallons	
32 gallon trash can		x 32 gallons	
55 gallon drum		x 55 gallons	
Other: _____ gallons		x _____ gallons	
		Estimated Total SSO Volume:	

STEP 5: Is rainfall a factor in the SSO? ☐ Yes ☐ No

If yes, what volume of the observed spill volume do you estimate is rainfall? _____ gallons

If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:

_____ gallons − _____ gallons = _____ gallons

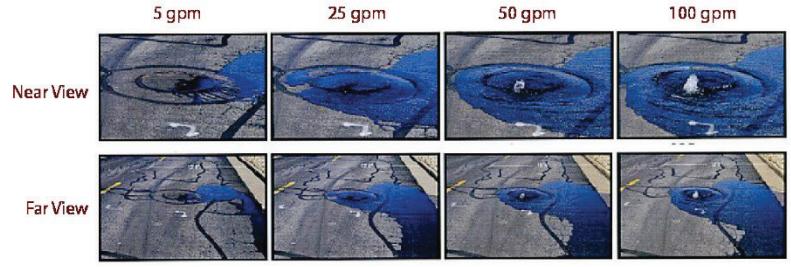
Estimated SSO Volume — Rainfall — **Total Estimated SSO Volume**

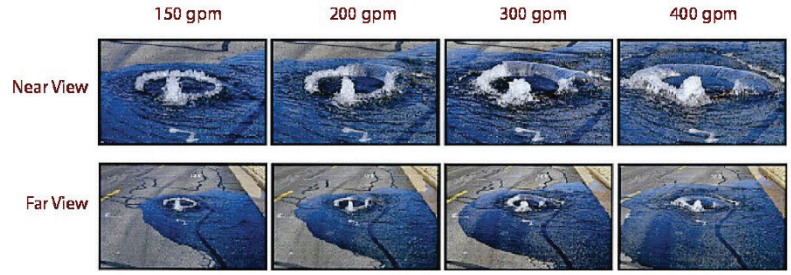
Seaside County Sanitation District Overflow Emergency Response Plan

Volume Estimation: Duration and Flow Rate Comparison Method E-3

Compare the SSO to reference images below to estimate flow rate of the current overflow. **NOTE: If the manhole cover in your picture has vent holes or more than one pry hole, do not use these pictures for comparison.**

Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual SSO:





SSCSC Manhole Overflow Gauge: CWEA Southern Section Collections Systems Committee
Overflow Simulation courtesy of Eastern Municipal Water District

Flow Rate Based on Photo Comparison: _____ gallons per minute (gpm)

Start Date and Time	1.
End Date and Time	2.
SSO Event Total Time Elapsed (subtract Line 1 from Line 2. Show in minutes.)	3.
Average Flow Rate GPM (Account for diurnal flow pattern)	4.
Total Volume Estimated Using Duration and Flow Method (Line 3 x Line 4)	5.

Seaside County Sanitation District Overflow Emergency Response Plan

Volume Estimation: Area/Volume Method

E-4: Page 1

SSO Date: _____ Location: _____

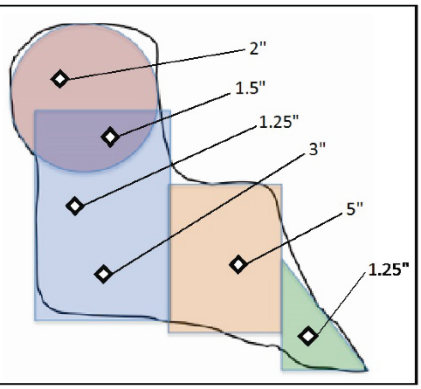
STEP 1: Describe spill area surface: ☐ Asphalt ☐ Concrete ☐ Dirt ☐ Landscape ☐ Inside Building

☐ Other: _____

STEP 2: Draw/sketch the outline (footprint) of the spill. Then break the footprint down into recognizable shapes. See example below.

1. Sketch the outline of the spill (black line)
2. Break the sketch down into recognizable shapes (circles, squares, etc.) as well as you can.
3. Determine the volume of each shape. (note: in this example, after the volume of the cirle is determined, multiply it by approximately 65% so that the overlap area won't be counted twice.
4. If the spill is of varying depths, take several measurements at different depths and find the average. If the spill affects a dry unimproved area such as a field or dirt parking lot, determine the aread of the wetted ground in the same manner as you would on a hard surface. Using a round-point shovel, dig down into the soil until you find dry soil. Do this in several locations within the wetted area and measure the depth of the wet soil. Average the measurement/thicknes of the wet soil and determine the average depth of the wet soil.

Example (right): 2" + 1.5" + 1.25" + 3" + 5" + 1.25" = 14.0"
14.0" ÷ 6 measurements = 2.33"
Average Depth = 2.33" (0.194')



Seaside County Sanitation District Overflow Emergency Response Plan

Volume Estimation: Area/Volume Method

STEP 3: Calculate the area of the footprint by completing the table below for each shape in Step 2.

If two shapes overlap, select one of the two shapes and estimate the percentage of that shape that does not overlap. Enter that percentage in the % Not Overlapping column. This will ensure that the overlap area is only counted once. Refer to the example on the previous page.

	Length	X	Width	X	% Not Overlapping*	=	Area	X	Depth	=	Volume
Rectangles	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3

	Base	X	Height	÷	X	% Not Overlapping*	=	Area	X	Depth	=	Volume
Triangles	ft	X	ft	÷ 2	X	%	=	ft^2	X	ft	=	ft^3
	ft	X	ft	÷ 2	X	%	=	ft^2	X	ft	=	ft^3
	ft	X	ft	÷ 2	X	%	=	ft^2	X	ft	=	ft^3

	π	X	Radius	X	Radius	X	% Not Overlapping*	=	Area	X	Depth	=	Volume
Circles	3.14	X	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	3.14	X	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3
	3.14	X	ft	X	ft	X	%	=	ft^2	X	ft	=	ft^3

Total Spill Volume (sum of all three tables above): _____ ft^3

STEP 4: Convert from cubic feet to gallons by multiplying by 7.48.

_____ ft^3 x 7.48 gallons = _____ gallons

spill volume in cubic feet — **Total estimated volume**

Seaside County Sanitation District Overflow Emergency Response Plan

Volume Estimation: Upstream Connections Method E-5

SSO Date: _____ Location: _____

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this SSO: _____ EDUs
NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to District documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily of usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the SSO was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated SSO Volume per EDU.

	Flow Rate Per EDU				SSO	
	A	B	C	D	E	F
Time Period	Gallons per Period	Hours per period	A ÷ B = Gallons per Hour	C ÷ 60 = Gallons per Minute	Minutes SSO was active during period	D × E = Gallons spilled per period
6am-noon	72	6	12	0.20		
noon-6pm	36	6	6	0.10		
6pm-midnight	54	6	9	0.15		
midnight-6am	18	6	3	0.05		
Total Estimated SSO Volume per EDU:						

STEP 3: Multiply the Estimated SSO Volume per EDU from Step 2 by the number of EDUs from Step 1.

_____ gallons	X	_____	=	_____ gallons
Volume per EDU		# of EDUs		Estimated SSO Volume

STEP 4: Adjust SSO volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted SSO estimate (attach a separate page if necessary).

Total Estimated SSO Volume: _____ gallons

Seaside County Sanitation District Overflow Emergency Response Plan

Drawing Worksheet **E-6**

Seaside County Sanitation District Overflow Emergency Response Plan

Backup Forms Checklist (Backup Only) F-1

******* FOR DISTRICT USE ONLY *******

Complete this form only if there is a backup into a residence or business.

Instructions to Field Crew:

1. Take photo of each form before giving it to the customer for documentation.
2. Tear forms F-2 and F-3 listed below out of this workbook and hand to customer.
3. Check each item that was provided to the customer.
4. Have customer sign below.

Forms/Documents:

☐ Form F-2: Customer Information Letter

☐ Form F-3: Your Responsibilities as a Private Property Owner

Forms Provided to: _____
Customer Name

_____

Forms Provided by: _____ _____
Employee Name Initial

Instruction to Maintenance and Utilities Superintendent:

Send photos, including the photo of the forms/documents,
and a copy of the First Responder form to the District Clerk.

Seaside County Sanitation District Overflow Emergency Response Plan

Customer Information Letter (Backup Only) F-2 (English)

Dear Property Owner:

We recognize that sewer backup incidents can be stressful and require immediate response while all facts concerning how an incident occurred are still unknown. Rest assured that we do all we can to prevent this type of event from occurring in the first place.

If the District is found to be responsible for the incident, we are committed to cleaning and restoring your property, and to protecting the health of those affected during the remediation process.

The cleaning contractor contacted by the District has been selected because of their adherence to established protocols that are designed to assure to all parties thorough, cost-effective and expeditious cleaning services. You also have the right to select your own cleaning contractor, but the District does not guarantee payment of fees/expenses incurred and reserves the right to dispute fees/expenses deemed not usual and customary.

To discuss this matter, contact the Maintenance and Utilities Superintendent at (831) 899-6829. To submit a claim for damages, complete the Claim Form and contact the District Clerk at (831) 899-6707.

Sincerely,
Seaside County Sanitation District

What you need to do now:

- Minimize the impact of the loss by responding promptly to the situation.
- Do not attempt to clean the area yourself, let the cleaning and restoration company handle this.
- Keep people and pets away from the affected area(s) until cleanup has been completed.
- Turn off any appliances that use water.
- Turn off heating/air conditioning systems.
- Do not remove items from the area – the cleaning and restoration company will handle this.
- If you had recent plumbing work done, contact your plumber or contractor and inform them of this incident.

Seaside County Sanitation District Overflow Emergency Response Plan

Carta de Información del Cliente (Backup Only) F-2 (en español)

Estimado propietario:

Reconocemos que los incidentes de respaldo de alcantarillado pueden ser estresantes y requieren una respuesta inmediata, mientras que todos los hechos sobre cómo ocurrió un incidente aún se desconocen. Tenga la seguridad de que hacemos todo lo posible para evitar que este tipo de evento ocurra en primer lugar.

Si se determina que el Distrito es responsable del incidente, nos comprometemos a limpiar y restaurar su propiedad, y a proteger la salud de los afectados durante el proceso de reparación.

El contratista de limpieza contactado por el Distrito ha sido seleccionado debido a su adhesión a los protocolos establecidos que están diseñados para garantizar a todas las partes servicios de limpieza exhaustivos, rentables y rápidos. También tiene derecho a seleccionar su propio contratista de limpieza, pero el Distrito no garantiza el pago de los honorarios / gastos incurridos y se reserva el derecho de disputar los honorarios / gastos que no se consideran habituales y habituales.

Para discutir este asunto, comuníquese con el Superintendente de Mantenimiento y Servicios Públicos al (831) 899-6829. Para presentar un reclamo por daños, complete el Formulario de reclamo y comuníquese con el Secretario del Distrito al (831) 899-6707.

Sinceramente,
Distrito de Saneamiento del Condado de Seaside

Lo que debes hacer ahora:

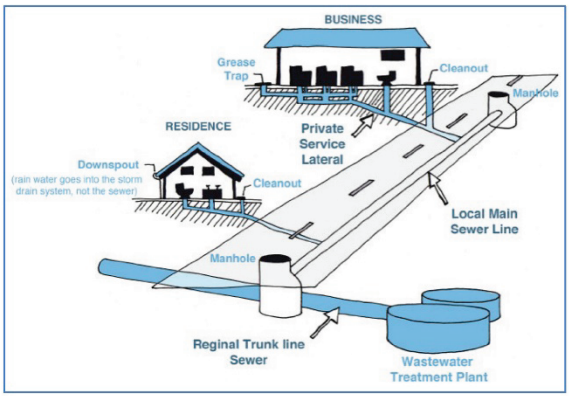
- Minimice el impacto de la pérdida respondiendo rápidamente a la situación.
- No intente limpiar el área usted mismo, deje que la empresa de limpieza y restauración se encargue de esto.
- Mantenga a las personas y las mascotas alejadas de las áreas afectadas hasta que se complete la limpieza.
- Apague cualquier aparato que use agua.
- Apague los sistemas de calefacción / aire acondicionado.
- No retire elementos del área; la empresa de limpieza y restauración se encargará de esto.
- Si ha realizado trabajos recientes de plomería, comuníquese con su plomero o contratista e infórmeles sobre este incidente.

Seaside County Sanitation District Overflow Emergency Response Plan

Your Responsibilities as a Private Property Owner (Backup Only) F-3: Page 1

How a Sewer System Works

A property owner's sewer pipes are called ***service laterals*** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the District's sewer system. These laterals are the responsibility of the property owner and must be maintained by the property owner.



How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches. Common causes of sewage spills include grease build-up, tree roots, broken/cracked pipes, missing or broken cleanout caps, undersized sewers, and groundwater/rainwater entering the sewer system through pipe defects and illegal connections.

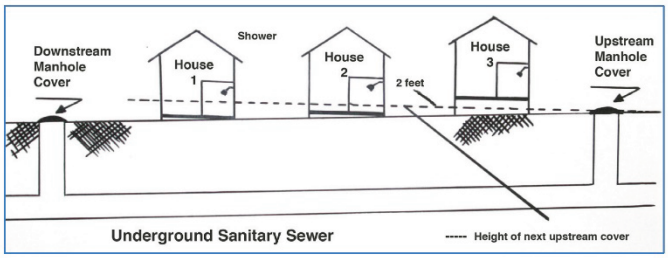
Prevent most sewage backups with a Backflow Prevention Device

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: *"Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping **shall** be protected from backflow of sewage by installing an approved type of backwater valve."* The intent of Section 710.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 710.6 states: *"Backwater valves **shall** be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover."*



Seaside County Sanitation District Overflow Emergency Response Plan

Your Responsibilities as a Private Property Owner (Backup Only) F-3: Page 2

Spill cleanup inside the home:

For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas, If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean up.

Seek immediate attention if you become injured or ill during or after the cleanup process.

Other Tips:

- Keep children and pets out of the affected area.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water & detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.

Spill cleanup outside the home:

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solution, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a laundromat until your onsite wastewater system has been professionally inspected and serviced.

Seaside County Sanitation District Overflow Emergency Response Plan

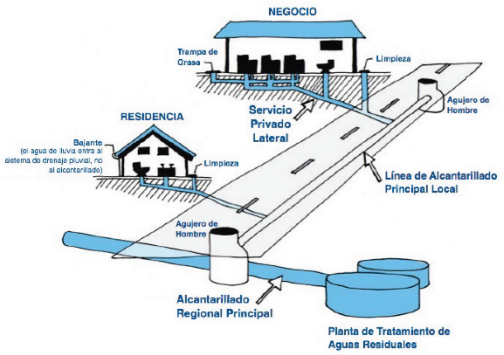
Sus Responsabilidades Como Propietario de Una Propiedad Privada **F-3 Página 1: en español**

Cómo funciona un sistema de alcantarillado

Las tuberías de alcantarillado de un propietario se denominan servicios laterales y están conectadas a líneas troncales principales y regionales locales más grandes. Los servicios laterales se ejecutan desde la conexión en el hogar hasta la conexión con el sistema de alcantarillado del Distrito. Estos laterales son responsabilidad del propietario y deben ser mantenidos por el propietario.

¿Cómo ocurren los derrames de aguas residuales?

Los derrames de aguas residuales ocurren cuando las aguas residuales en las tuberías subterráneas se desbordan a través de un pozo de acceso, limpieza o tubería rota. La mayoría de los derrames son relativamente pequeños y se pueden detener y limpiar rápidamente, pero si se los deja desatendidos, pueden causar riesgos para la salud, dañar viviendas y negocios y amenazar el medio ambiente, las vías fluviales locales y las playas. Las causas comunes de derrames de aguas residuales incluyen acumulación de grasa, raíces de árboles, tuberías rotas / agrietadas, tapas de limpieza faltantes o rotas, alcantarillas de tamaño insuficiente y aguas subterráneas / pluviales que ingresan al sistema de alcantarillado a través de defectos en las tuberías y conexiones ilegales.



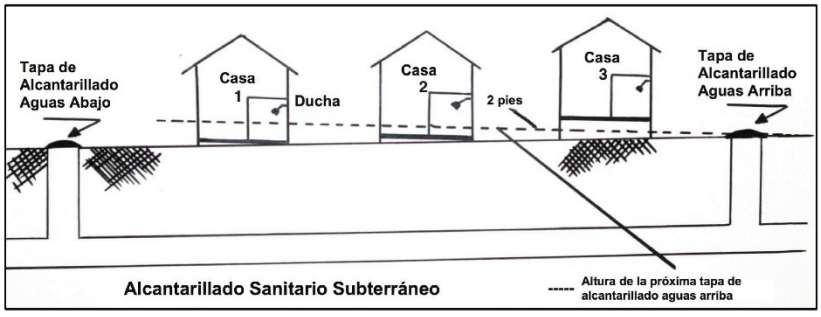
Prevenga la mayoría de las copias de seguridad de aguas residuales con un dispositivo de prevención de reflujo

Este tipo de dispositivo puede ayudar a prevenir las copias de seguridad de aguas residuales en hogares y empresas. Si aún no tiene un dispositivo de prevención de reflujo, comuníquese con un plomero o contratista profesional para instalar uno lo antes posible.

¿Se requiere que mi hogar tenga un dispositivo de prevención de reflujo?

La Sección 710.1 del Código Uniforme de Plomería (UPC) establece: "Los accesorios de tuberías de drenaje que tienen llantas de nivel de inundación ubicadas debajo de la elevación de la siguiente boca de alcantarilla corriente arriba o la alcantarilla privada que atiende dicha tubería de drenaje deben protegerse contra el reflujo de aguas residuales al instalar un tipo de válvula de evacuación ". La intención de la Sección 710.1 es proteger el interior del edificio de los desagües o sobrecargas de alcantarillado de la línea principal.

Adicionalmente, U.P.C. 710.6 dice: Las válvulas de aguas residuales deben ubicarse donde puedan ser inspeccionadas y reparadas en todo momento y, a menos que estén continuamente expuestas, deben estar encerradas en un pozo de mampostería equipado con una cubierta removible del tamaño adecuado.



Seaside County Sanitation District Overflow Emergency Response Plan

Sus Responsabilidades Como Propietario de Una Propiedad Privada **F-3 Página 2: en español**

Limpieza de derrames dentro de la casa:

Para grandes limpiezas, se debe contactar a una empresa de limpieza profesional para limpiar las áreas afectadas. Si contrata a un contratista, se recomienda obtener estimaciones de más de una compañía. A veces, el seguro del propietario de vivienda pagará la limpieza necesaria debido a las reservas de alcantarillado. No todas las pólizas tienen esta cobertura, así que consulte con su agente.

Si decide limpiar un pequeño derrame dentro de su casa, protéjase de la contaminación observando las siguientes medidas de seguridad. Aquellas personas cuya resistencia a la infección esté comprometida no deben intentar este tipo de limpieza.

Busque atención inmediata si se lesiona o se enferma durante o después del proceso de limpieza.

Otros consejos:

- Mantenga a los niños y mascotas fuera del área afectada.
- Apague los sistemas de calefacción / aire acondicionado
- Use botas de goma, guantes de goma y gafas durante la limpieza.
- Deseche los artículos que no se puedan lavar y desinfectar (como: colchones, alfombras, cosméticos, juguetes, etc.)
- Retire y deseche los paneles de yeso y el aislamiento contaminado con aguas residuales o aguas de inundación.
- Limpie a fondo todas las superficies duras (como pisos, concreto, molduras, muebles de madera y metal, mostradores, electrodomésticos, fregaderos y otros accesorios de plomería) con agua caliente y ropa o detergente para platos.
- Ayude al proceso de secado con ventiladores, unidades de aire acondicionado y deshumidificadores.
- Después de completar la limpieza, lávese las manos con agua y jabón. Use agua que haya sido hervida por 1 minuto (deje que el agua se enfríe antes de lavarse las manos) O use agua que haya sido desinfectada (solución de 1/8 cucharadita de lejía doméstica por 1 galón de agua). Dejar reposar durante 30 min. Si el agua está turbia, use ¼ cucharadita de lejía de uso doméstico por 1 galón de agua.
- Lave la ropa usada durante la limpieza con agua caliente y detergente (lave aparte de la ropa no contaminada).
- Lavar la ropa contaminada con aguas residuales en agua caliente y detergente. Considere usar una lavandería hasta que su sistema de aguas residuales en el sitio haya sido inspeccionado y reparado profesionalmente.

Limpieza de derrames fuera de la casa:

- Mantenga a los niños y las mascotas fuera del área afectada hasta que se haya completado la limpieza.
- Use botas de goma, guantes de goma y gafas protectoras durante la limpieza del área afectada.
- Limpie los sólidos de alcantarillado (material fecal) y colóquelos en un inodoro o bolsa doble que funcione correctamente y colóquelos en un contenedor de basura.
- En áreas de superficies duras como el asfalto o el concreto, es seguro usar una solución de lejía al 2%, o ½ taza de lejía a 5 galones de agua, pero no permita que llegue a un drenaje de tormenta ya que la lejía puede dañar la ambiente.
- Después de la limpieza, lávese las manos con agua y jabón. Use agua que haya sido hervida por 1 minuto (deje enfriar antes de lavarse las manos) O use agua que haya sido desinfectada (solución de 1/8 cucharadita de cloro por 1 galón de agua). Dejar reposar durante 30 min. Si el agua está turbia, use ¼ cucharadita de lejía de uso doméstico por 1 galón de agua.
- Lave la ropa usada durante la limpieza con agua caliente y detergente (lave aparte de la ropa no contaminada).
- Lavar la ropa contaminada con aguas residuales en agua caliente y detergente. Considere usar una lavandería hasta que su sistema de aguas residuales en el sitio haya sido inspeccionado y reparado profesionalmente.

Seaside County Sanitation District Overflow Emergency Response Plan

Collection System Failure Analysis

G-1: Page 1

OFFICE USE ONLY

Incident Report #		Prepared By	
SSO/Backup Information			
Cause			
Summary of Historical SSOs/Backups/Service Calls/Other Problems			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	
Summary of CCTV Information			
CCTV Inspection Date		File Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			

Go to Side B

Seaside County Sanitation District Overflow Emergency Response Plan

Collection System Failure Analysis

G-1: Page 2

Recommendations					
☐	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Overflow Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Reviewed by:			Review Date:		

Appendix F: Water Quality Monitoring Plan

Seaside County Sanitation District

Water Quality Monitoring Plan

December 8, 2020

Table of Contents

1. PURPOSE OF PROGRAM PLAN

The purpose of this Water Quality Monitoring Program Plan (WQMP or Plan) is to implement the recent requirements for sampling of sanitary sewer overflows (SSOs) greater than 50,000 gallons that reach surface waters. This plan conforms to the State Water Resources Control Board Waste Discharge Requirements Order No. 2006-0003-DWQ, Section D.7(v) and Monitoring and Reporting Program (MRP) Section D, Water Quality Monitoring Requirements issued by executive order number WQ 2013-0058-EXEC effective on September 9, 2013. This WQMP provides the Seaside County Sanitation District (District) policies and procedures to assure consistent conformance to the regulatory requirements and to establish procedures for District staff and contractors in their responses to large releases of sanitary sewage that reach surface waters. This WQMP is consistent with and supplemental to the District Overflow Emergency Response Plan, Element VI of its SSMP. Finally, this document will be used to coordinate training for the District's new employees and regular refresher training for existing employees.

This Plan is also used as a guideline for monitoring and sampling requirements that are self–imposed or may be imposed upon the District from citizen suits under the Clean Water Act (CWA) resulting in settlement agreements, stipulated orders or consent decrees that can require monitoring and sampling of sanitary sewer overflows of any kind or size. It should be noted, however, that this Plan is specifically tailored to meet the requirements of the SWRCB and any lesser requirements for SSOs less than 50,000 gallons and or specifically cited in settlement agreements, stipulated orders or consent decrees, still remain in effect and are not enhanced by this Plan. This Plan establishes procedures for the identification of sampling locations, protocols for the proper collection of samples, the chain of custody for sample collections, the handling of samples, the reporting and recordkeeping to assure the legal integrity of monitoring for compliance with regulatory requirements. The plan will also establish policies and procedures that will be used to assure proper coordination between the taking and testing of samples, as well as assure that samples taken will satisfy the local regulatory agency's Basin Plan and the unique character of the District's local service area and surface waters.

This Plan is intended to establish protocols for all sampling including when, where and how; establish the required water quality sample analyses that will be conducted; identify the access and safety requirements related to sampling considerations; and identify any local concerns that this monitoring plan should address. In addition, the Plan establishes the requirements for equipment calibration, notification requirements related to an overflow, recordkeeping requirements, staff training issues and requirements for regular reviews and audits. Finally, all District forms used for water quality monitoring are included and available for use in any SSO incident.

2. DEFINITIONS

The following definitions and acronyms are used in this Plan:

BACTERIA	Probaryotic microorganisms typically a few micrometers in length, with shapes from spheres to rods and spirals
CalOES	State of California Office of Emergency Services
CALOSHA	California Division of Occupational Safety and Health
CFR	Code of Federal Regulations
CFS	Cubic feet per second

CIWQS	California Integrated Water Quality System
CSRMA	California Sanitation Risk Management Association
CWA	Clean Water Act
DH2O	Distilled Water
DEET	N,N-Diethyl-meta-toluamide
DOHS	California Department of Health Services
E. Coli	Escherichia coli (bacteria)
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
Field QC	Field Quality Control
GPM	Gallons per minute
GWDR	General Waste Discharge Requirements or WDR
GIS	Geographic Information System
LIMS	Laboratory Information Management System
LRO	Legally Responsible Official
mg/l	Milligrams per liter
ml	Milliliter
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
NH3	Ammonia
NH3-N	Ammoniacal Nitrogen
NPDES	National Pollution Discharge and Elimination System
OERP	Overflow Emergency Response Plan
OES	See CalOES
PPE	Personal Protective Equipment
ppm	Parts per Million
QA/QC	Quality Assurance/Quality Control

RWQCB	Regional Water Quality Control Board (Region 3, Central Coast)
SOP	Standard Operating Procedure
SSC	Sewer Service Charge
SSMP	Sanitary Sewer Management Plan
SSO	Sanitary Sewer Overflow
SSO GWDR	Sanitary Sewer Overflow General Waste Discharge Requirements
SURFACE WATER	All waters whose surface is naturally exposed to the atmosphere; for example, rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc., and all springs, wells, or other collectors directly influenced by surface water.
SWRCB	State Water Resources Control Board
WQMP	Water Quality Monitoring Plan
WQ	Water Quality
WDR	Waste Discharge Requirements
VOC	Volatile Organic Compound

3. RESPONSIBILITY

The District shall designate responsibility for all WQMP roles to appropriate classifications in the District's organizational structure to assure conformance of all activities for the monitoring of SSOs greater than 50,000 gallons reaching surface waters (Category 1 SSO), to reduce potential liability, protect public-health, and to assure those responsible for this Plan are trained in their roles and responsibilities for the performance of proper protocols. It is further recognized that the proper application of this Plan will assure that all monitoring can withstand regulatory or legal scrutiny of the State, Regional Board, or from the actions of a citizen lawsuit. These roles and responsibilities are intended to be compliant with WDR Sections D.13 (vi), G and Section C.5 and D of the September 9, 2013 MRP.

The following table contains the roles and responsibilities as assigned by the District to individual classifications or service contractors of the District:

Roles and Responsibility	Responsible Classification
Provide and document regular training on WQMP for all District classifications that have a role or responsibility in the WQMP and identified herein	District Engineer & Maintenance & Utilities Superintendent
Identification and assessment of potential impacts to local areas with surface waters that may require WQMP (i.e. aerial crossings, creeks, waterways, rivers, bays, estuaries, etc.)	District Engineer or Maintenance & Utilities Superintendent

Roles and Responsibility	Responsible Classification
Certification of calibration of sampling equipment and maintenance of calibration records	Senior Engineer Maintenance & Utilities Supervisor
Determination of specific sampling protocols and analytic methods to be used for the District-required testing	District Engineer or Maintenance & Utilities Superintendent
Determination of appropriate bacterial indicators for sampling	District Engineer or Maintenance & Utilities Superintendent
Quarterly completion of the monitoring and sampling kit checklist from Appendix E	Maintenance & Utilities Supervisor or Senior Engineer
Annual review of all standard operating procedures related to this WQMP especially the Sample Collection procedures	Senior Engineer or Maintenance & Utilities Superintendent
Decision to invoke a WQMP and direct the monitoring program to conclusion	District Engineer or Maintenance & Utilities Superintendent
Selection of sampling locations	District Engineer, Senior Engineer or Maintenance & Utilities Superintendent
Coordination of field sampling	Maintenance & Utilities Supervisor, Maintenance & Utilities Superintendent or Senior Engineer
Conduct field sampling per District protocols	Any properly trained Maintenance & Utilities or Engineering staff
Authorization and direction for placement of public notifications and signage	Any properly trained Maintenance & Utilities or Engineering staff
Photographs of sampling and signage placed to protect public health and safety	Any properly trained Maintenance & Utilities or Engineering staff
Preparation of Chain of Custody for all samples taken including proper labeling	Any properly trained Maintenance & Utilities or Engineering staff
Determination of spill travel time, if applicable.	District Engineer, Senior Engineer or Maintenance & Utilities Superintendent or their designee
Review and evaluate lab results for termination of sampling and to determine the nature and impact of the release	Associate Engineer or Maintenance & Utilities Superintendent
Decision to terminate sampling	District Engineer and Senior Engineer
Preparation of detailed sampling location map	Senior Engineer and Maintenance & Utilities Superintendent
Conduct sample analysis	Monterey Regional Lab or Contracted Lab
Preparation of water quality sampling activities narrative for Technical Report	Senior Engineer or Associate Engineer and Maintenance & Utilities Supervisor
Review and Approval of Technical Report	District Engineer
Certification and placement of Technical report in the CIWQS spill reporting system.	District Engineer or Senior Engineer
Failure Analysis Investigation of all water quality monitoring from the SSO event to determine all necessary changes or modifications to the WQMP	District Engineer or Maintenance & Utilities Superintendent
Audits of the WQMP as required by District SSMP Element 10, Audit.	Senior Engineer
Management of Change responsibilities for the WQMP and all associated forms and documents required for use during an incident	Senior Engineer

It is recommended that this list of responsibilities be placed on a laminated card and kept in the Monitoring and Sampling Kit for easy access during an SSO sampling incident.

4. AUTHORITY AND REFERENCES

The authority and or requirements for the monitoring and sampling of sanitary sewer overflows are contained in the following:

1. State Water Resources Control Board Waste Discharge Requirements Order No. 2006-0003-DWQ, Section D.7 (v).
2. State Water Resources Control Board Monitoring and Reporting Program (MRP) Sections C.5 D, Executive Order number WQ 2013-0058-EXEC effective September 9, 2013
3. Standard Methods for the Examination of Water and Wastewater, 22nd Edition, American Public Health Organization et al.
4. Clean Water Act Sections 301(a), 304(h), and 501(a).
5. Code of Federal Regulations, Title 40, Part 136.

There are a number of applicable references that are available to assist with the Water Quality Monitoring Program as follows:

A. Basin Plan of the Regional Water Quality Control Board (Central Coast, September 2017)
B. Best Management Practices for Sanitary Sewer Overflow (SSO) Reduction Strategies, Central Valley Clean Water Associates and Bay Area Clean Water Agencies, December 2009
C. District Overflow Emergency Response Plans
D. Field Guide for Surface Water Sample and Data Collection, Air Program, USDA Forest Service, June 2001
E. Standard Operating Procedures for Surface Water Quality Sampling, Arizona Department of Environmental Quality, Surface Water Section, September 2012.
F. Surface Water Sampling AF.R3, Document Number SESDPROC-201-R3, Region 4, Environmental Protection Agency, Science and Ecosystem Support Division, Athens, Georgia, February 28, 2013
G. Water Quality Control Plan - Ocean Waters of California (California Ocean Plan), revised 2019

5. IDENTIFICATION OF LOCAL SURFACE WATERS AND CHARACTERISTICS

An important element of any water quality monitoring program is the proper and thorough understanding of the service area and the various challenges the geography and sanitary sewer infrastructure of the service area present for the potential of wastewater reaching surface waters or storm water facilities. By evaluating the areas of concern in a service area such as lakes, rivers, dry creeks, aerial pipeline crossings over water ways and all storm water related infrastructure, the District can be better prepared to timely respond to any SSO reaching surface waters and to minimize the impacts of an SSO in or around local surface waters and storm water infrastructure.

A. Surface Waters of Concern

For the purposes of this Plan, surface waters are defined as all waters whose surface is naturally exposed to the atmosphere, for example, rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc., and all springs, wells, or other collectors directly influenced by surface water. In addition, the District will also identify and evaluate areas where collection system pipelines and force mains cross over or under waterways as these crossings can require additional resources and equipment to properly address any SSO from these collection system assets.

Surface waters of concern are those surface waters within the District's service area that may be impacted by a sanitary sewer overflow from the District's sanitary sewer collection system. Prior planning, review and evaluation of potential failure mechanisms can help minimize any potential impacts to surface waters or storm water infrastructure when and if the WQMP must be invoked. Any review of these important areas of potential surface water contamination in advance of an SSO should allow the District to be better prepared to respond to an SSO with the proper equipment and a better understanding of the procedures that may need to be invoked during the SSO such as flow rate of a creek or stream, and potential areas of significant environmental concern such as shell fish beds or fish habitats.

The following (Table 5.1) are the surface waters of concern within the District's jurisdiction:

Name	Type (see legend, below)	Background Monitoring?	Access Considerations	Safety Considerations
Monterey Bay	Ocean	Not applicable	Limited	Trip/fall, drowning
Laguna Grande	ES, DC, CU	"	Limited, vegetation,	Trip/fall, drowning
Roberts Lake	ES, DC, CU	"	Limited, vegetation,	Trip/fall, drowning
Del Rey Oaks Creek	ES, DC, CU	"	Limited, vegetation,	Trip/fall, poison oak, drowning

Bog: Freshwater wetlands that are poorly drained and characterized by a buildup of peat.

Brackish Water: Generally, water containing dissolved minerals in amounts that exceed normally acceptable standards for municipal, domestic, and irrigation uses. Considerably less saline than sea water. Also, Marine and Estuarine waters with Mixohaline salinity (0.5 to 30 due to ocean salts). Water containing between 1,000-4,000 parts per million (PPM) Total Dissolved Solids TDS). The term brackish water is frequently interchangeable with Saline Water. The term should not be applied to inland waters.

Brook: A natural stream of water, smaller than a river or creek; especially a small stream or rivulet which breaks directly out of the ground, as from a spring or seep; also, a stream or torrent of similar size, produced by copious rainfall, melting snow and ice, etc.; a primary stream not formed by tributaries, though often fed below its source, as by rills or runlets; one of the smallest branches or ultimate ramifications of a drainage system.

Canal: A constructed open channel for transporting water.

Channel (CH): An area that contains continuously or periodically flowing water that is confined by banks and a stream bed.

Culvert (CU): A buried pipe that allows streams, rivers, or runoff to pass under a road.

Ditch: A long narrow trench or furrow dug in the ground, as for irrigation, drainage, or a boundary line.

Diversion channel: (1) An artificial channel constructed around a town or other point of high potential flood damages to divert floodwater from the main channel to minimize flood damages. (2) A channel carrying water from a diversion dam.

Drainage Channel (DC): For the purposes of complying with the Statewide Sanitary Sewer Order, (1) a man-made canal used to transport storm water as part of a municipal separate storm sewer system, or (2) an intermittent or perennial stream bed.

Dry Wash: A streambed that carries water only during and immediately following rainstorms.

Ephemeral Streams (ES): Streams which flow only in direct response to precipitation and whose channel is at all times above the water table.

Freshwater marsh: Open wetlands that occur along rivers and lakes.

Intermittent stream: Any nonpermanent flowing drainage feature having a definable channel and evidence of scour or deposition. This includes what are sometimes referred to as ephemeral streams if they meet these two criteria.

Ocean: Sea, salt water

Perennial streams (PS): Streams which flow continuously.

Pipe crossing: Crossing of a pipe or force main over or under a surface water body.

Riverine: Relating to, formed by, or resembling a river including tributaries, streams, brooks, etc.

Slough: A shallow backwater inlet that is commonly exposed at low tide.

Stream: A general term for a body of flowing water; natural water course containing water at least part of the year. In Hydrology, the term is generally applied to the water flowing in a natural channel as distinct from a canal. More generally, as in the term Stream Gaging, it is applied to the water flowing in any channel, natural or artificial.

For additional definitions refer to the glossary at http://www.streamnet.org/glossarystream.html.

6. LAB SELECTION

A. Analytical Lab

Samples collected for monitoring purposes will be analyzed at Monterey Bay Analytical Services. The laboratory is accredited through California's Department of Public Health Environmental Laboratory Accreditation Program (ELAP). ELAP provides evaluation and accreditation of environmental testing laboratories to ensure the quality of analytical data used for regulatory purposes to meet the requirements of the State's drinking water, wastewater, shellfish, food, and hazardous waste programs. The State agencies that monitor the environment use the analytical data from these accredited labs. The ELAP-accredited laboratories have demonstrated capability to analyze environmental samples using approved methods. The lab at Monterey One Water will serve as a backup laboratory.

B. Getting Samples to the Lab

At all times, sample hold times identified below will be observed in accordance with Section 7.0. Once samples are collected and coordination is made with the laboratory to receive the samples, they will be transported to the laboratory by District staff.

C. Lab Contact Info

Primary

Name: Monterey Bay Analytical Services

Contact: David Holland, President/Lab Director

Address: 4 Justin Court, Suite D, Monterey, CA

Hours Samples Are Accepted: M-F 8 AM to 5:00 PM except holidays

Phone: (831) 875-6227

Alternate or After Hours Phone: (831) 277-1352

Secondary

Name: Monterey Bay Water One Laboratory

Contact: Patrice Parson, Lab Supervisor

Address: 5 Harris Ct., Bldg. D Monterey, CA 95134

Hours Samples are Accepted: M–F 8:00AM to 3:00PM except holidays (after hours by arrangement)

Phone: (831) 883-1118 or 831-883-6121

Alternate or After Hours: 831-422-1001

7. SAMPLING PARAMETERS

A. Required Sampling Parameters

The RWQCB Basin Plan and/or NPDES permit set the water quality standards against which one can judge the levels of impacts of an SSO on surface waters.

In accordance with the SWRCB Revised MRP WQ 2013-0058, the following parameters will be sampled:

1. Ammonia

   Ammonia-N, is a key indicator of the extent of the gross pollution of the receiving water from a SSO. Untreated wastewater or partially-treated wastewater is generally high in ammonia-N (typical 20-30 mg/L). In comparison, the natural background concentration of most surface waters is low, typically, less than 0.5 mg/L. Therefore, the elevated concentration of ammonia of the surface water downstream or at the site of the SSO, as compared to that upstream of the site is a reasonable indication of the extent of contamination from the SSO.

2. Bacteriological Indicator as specified in the local Basin Plan

   Total coliform, fecal coliform, E coli. and enterococci count are indicators of potential public health impacts of an SSO on the receiving waters. If the concentrations of these groups of bacteria are elevated above and beyond the natural background and/or above the RWQCB Basin Plan Water Quality Standards (objective), public notification and posting may be necessary.

   It should be noted that there may be non-SSO related causes of elevated bacteria in surface water, for example, animal sources, storm drain discharge, homeless encampments, private laterals, septic system/leach field malfunctions. Any or all samples taken may reflect the extent of bacterial contamination from these other sources. Sometimes the extent of the SSO may be indistinguishable from the other natural sources beyond the District's control. This is especially true when taking Source samples based on an estimated downstream location of the SSO plume (Reference Section 7F).

   Generally, if the concentrations of these groups of bacteria at the downstream or at the site of impact are within the range of the non-impacted site (i.e. upstream) or levels indicated in historical background monitoring levels, the water quality impacts of the SSO are considered insignificant.

   The surface water quality objectives of these groups of bacteria are shown in Table 7.1 and 7.2, below. For this District, the highest beneficial use of surface waters would be considered as contact water recreation on the Pacific Ocean and fecal coliform standard has historically been the bacteria standard used to determine compliance. Otherwise, there is no beneficial use of surface waters in any other creek within the District.

Table 7.1: Water Quality Objectives for Coliform Bacteria[a]		
Beneficial Use	**Fecal Coliform (MPN/100ml)**	**Enterococci (cfu/100ml)**
Water Contact Recreation	Geometric Mean < 200* 90th percentile < 400	Geometric Mean (GM) < 30 ** STV > 110 **
Shellfish Harvesting[b]	Median < 14 90th percentile < 43	Median < 70 90th percentile < 230
Non-contact Water Recreation[d]	Mean < 2000 90th percentile < 4000	
Municipal Supply: • Surface Water[c] • Groundwater	Geometric Mean < 20	Geometric Mean < 100 < 1.1[e]

NOTES:

a. Based on a minimum of five consecutive samples equally spaced over a 30-day period.

b. Source: National Shellfish Sanitation Program.

c. Based on a five-tube decimal dilution test or 300 MPN/100ml when a three-tube decimal dilution test is used.

d. Source: Report of the Committee on Water Quality Criteria, National Technical Advisory Committee, 1968.

e. Based on multiple tube fermentation technique; equivalent test results based on other analytical techniques, as specified in the National Primary Drinking Water Regulation, 40 CFR, Part 1421.21 (f), revised June 10, 1992, are acceptable.

* Based on five (5) most recent samples.

** The waterbody GM shall not be greater than the GM magnitude in any 6-week interval, calculated weekly. The STV shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner (per 2019 Ocean Plan).

Source: Central Coastal Basin (Region 3), California Ocean Plan, 2019 revision
Water Quality Control Plan (Basin Plan)
California RWQCB, Central Coastal Basin
September 2017

Table 7.2 – U.S. EPA Bacteriological Criteria for Water Contact Recreation[1, 2, 3]
(in colonies per 100 ml)

Steady State (all areas)	Fresh Water		Salt Water
	Enterococci	E. Coli	Enterococci
	33	126	35 /30
Maximum at:			
• Designated beach	61	235	104/110
• Moderately used area	89	298	124
• Lightly used area	108	406	276
• Infrequently used area	151	576	500

NOTES:

1. The criteria were published in the Federal Register, Vol. 51, No. 45 / Friday, March 7, 1986 / 8012-8016. The criteria are based on:
   a. Cabelli, V.J. 1983. Health Effects Criteria for Marine Recreational Waters, U.S. EPA, EPA 600/1-80-031, Cincinnati, Ohio, and
   b. Dufour, A.P. 1984, Health Effects Criteria for Fresh Recreational Waters, U.S. EPA, EPA 600/1-84-004, Cincinnati, Ohio.

2. The U.S. EPA criteria apply to water contact recreation only. The criteria provide for a level of production based on the frequency of usage of a given water contact recreation area. The criteria may be employed in special studies within this region to differentiate between pollution sources or to supplement the current coliform objectives for water contact recreation.

3. Based on 2019 California Ocean Plan (refers to the second figures in the "Salt Water Enterococci" column, for Steady State and Designated Beach rows.

B. Sampling Parameters for Seaside County Sanitation District

1. Ammonia
   - Discussion: See Section 7A
   - Sample Container: Plastic/glass
   - Sample Type: Grab
   - Sample Volume Required: 200 ml. minimum
   - Hold Time: 28 days
   - Preservative: Sulfuric acid
   - Analytical Method: Method 4500-XX R and C, Standard Methods for the Examination of Water or Wastewater, 21st Edition

2. Total Coliform, E. coli., Fecal coliform
   - Discussion: See Section 7A.2
   - Sample Container: Plastic (sterile)
   - Sample Type: Grab
   - Sample Volume Required: 100 ml. minimum
   - Hold Time: 8 hours
   - Preservative: None if waters are not chlorinated
   - Analytical Method: Method 9221 B, C and E, Standard Methods for the Examination of Water or Wastewater, 21st Edition

3. Enterococcus
   - Discussion: See Section 7A.2
   - Sample Container: Plastic (sterile)
   - Sample Type: Grab
   - Sample Volume Required: 100 ml. minimum
   - Hold Time: 8 hours
   - Preservative: None if waters are not chlorinated
   - Analytical Method: IDEXX Enterolert® Test Kit, Method 9230D, Standard Methods for the Examination of Water or Wastewater, 21st Edition

8. SAMPLING EQUIPMENT AND CALIBRATION

A. Sampling Equipment Used At Seaside County Sanitation District

The following are the sampling equipment used by the District, and is detailed in Section 9G. on page 22.

- Sampling pole with fixed container
- Sampling pole with removable container
- Portable pH, temperature, and DO probes
- Sampling pail and rope
- Sample Equipment Kit containing:
  - Ice pack
  - Waterproof pen
  - Sample labels
  - Camera
  - Sample bottles
  - Personal Protective Equipment (PPE) – life jacket, gloves, hip waders &/or rubber boots, etc.
  - Etc.

B. Calibration and Record Keeping

Each piece of equipment is required to have an up-to-date calibration and maintenance logbook. The logbook will be maintained to have consecutively numbered pages and shall contain at least the following:

- Date
- Calibration Results
- Calibration comments
- Initials of the individual calibrating the instrument

Each instrument must be clearly identified (*e.g.,* the make, model, serial and/or ID number) to differentiate among multiple meters.

The appropriate calibration procedure must be followed pursuant to the manufacturer's recommended standard calibration operating procedure and if the instrumentation does not have an electronic program that maintains a running calibration log, then the results must be recorded in the logbook each time a piece of field equipment is used, along with the date and name/initials of the person performing the calibration.

If difficulty is encountered in calibrating an instrument, or if the instrument will not hold calibration, this information must also be recorded. Malfunctioning equipment should not be used to collect data. Steps should be taken to correct the problem as soon as possible. All equipment maintenance should be recorded in the logbook indicating what was done to correct the problem, along with the date and signature/initials of the staff person that corrected the problem.

B. Sample Types:

Grab samples are appropriate for the characterization of surface waters at a particular time and place, to provide information about minimum and maximum concentrations, to allow for the collection of variable sample volume.

Grab samples may be collected directly into the sample container, or a clean decontaminated intermediate container may be used if a wading sample is not possible or safe. If an intermediate container is used, when in the field, double rinse the sampling device (bucket, automatic sampler) with sample water prior to collecting the sample and be sure to discard rinse water downstream of where sample will be collected. If samples are collected in a bucket and distributed a consolidation collection container, swirl the contents of the bucket as it is being poured into the consolidation collection container to avoid settling of solids (and pour in back and forth pattern – *e.g.*, 1-2-3-3-2-1).

Grab Sample: A grab sample is defined as an individual sample collected at a given time. Grab samples represent only the condition that exists at the time the sample is collected (US EPA 1977).

Surface Grab Sample: A sample collected at the water surface (i.e., skimming) directly into the sample container or into an intermediate container such as a clean bucket. A single or discrete sample collected at a single location.

Field Blanks are used to evaluate the potential for contamination of a sample by site contaminants from a source not associated with the sample collected (e.g., airborne dust, etc.). Sterile, deionized water is taken into the field in a sealed container. This is the stock water. The stock water is then poured into the sample container. The containers and sample submission forms are labeled as "Field Blank". The same template selected for the test samples should be used. Field blanks are subject to the same holding time limitations as samples. The appropriate FIELD QC box on the sample Chain of Custody form should be checked.

C. Decontamination Procedures

Removing or neutralizing contaminants from sampling equipment minimizes the likelihood of sample cross contamination, reduces or eliminates transfer of contaminants to clean areas, and prevents the mixing of incompatible substances.

Gross contamination can be removed by physical decontamination procedures. These abrasive and non-abrasive methods include the use of brushes, air and wet blasting, and high and low pressure water cleaning.

The decontamination procedure described above may be summarized as follows:

1. Physical removal
2. Non-phosphate detergent wash
3. Tap water rinse
4. Distilled/deionized water rinse
5. 10% nitric acid rinse
6. Distilled/deionized water rinse
7. Solvent rinse (pesticide grade)

8. Air dry
9. Distilled/deionized water rinse

D. Sample Labeling and Chain of Custody Procedures

A sample is a physical evidence of a facility or the environment. An essential part of all enforcement investigations is that evidence gathered be properly documented. To accomplish this, the following sample identification and chain of custody procedures are established.

1. The method of sample identification depends on the type of measurement or analyses performed. When in-situ measurements are made, the data are recorded directly in Field Data Worksheets with identifying information, field observations, and remarks. Examples of in-situ measurements are:
    - pH
    - Temperature
    - Dissolved Oxygen
    - Stream Flow Measurement

    Samples other than in-situ measurements, must be identified by a sample label. These samples are removed from the sample location and transported to a laboratory for analyses. Before removal, however, a sample is often separated into portions depending upon the analyses to be performed. Each portion is preserved in accordance with applicable procedures and each sample container is identified by a sample label.

2. At a minimum, the following grab samples will be collected, in duplicate:
    - Field Blank: See Section 9.B for discussion.
    - Upstream: This sample will be collected far enough upstream of the SSO's point of entry into the surface water as to be free of contaminants from the SSO. Typically, 50-feet is sufficient, but this may vary on circumstances of the spill.
    - Source: Immediate vicinity where the SSO entered the surface water. This point will actually be downstream of the actual SSO entry point for SSO's that have stopped entering the surface water to be sampled. If the SSO has stopped, calculate the approximate downstream distance from the original SSO location by dividing the time since the SSO occurred by the estimated velocity. This is the approximate downstream distance from the SSO discharge point to the "source" sampling location.
        - Due to possible tidal action in the surface water or other factors, another method may be used to determine the "source" location at the discretion of the Director of Engineering, Senior Engineer or Maintenance & Utilities Superintendent.
        - See Section 9.F for information on determining velocity of the surface water in order to determine the Source sample location.
    - "Downstream" of SSO: This sample will be collected far enough downstream to be representative of the water quality of the surface water after adequate mixing of the surface water and the SSO have occurred. Typically, this location will be 50-feet downstream of the Source sample, but this may vary on the size and velocity of the surface water to be sampled.
        - NOTE: The terms "upstream" and "downstream" may depend on the tidal cycle if the water body is tidally influenced. Check the tide chart(s) and table at the

following link: http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9415623.

3. Sample labels shall be completed for each sample, using waterproof ink. The information recorded on the sample tag/label includes:
    - Date: a six-digit number indicating the year, month, day of collection
    - Time: a four-digit number indicating military time of collection (e.g., 0954)
    - Sample Location: sampling location description as either Upstream, Source, or Downstream
    - Samplers: each sampler is identified
    - Parameter/preservative: the analysis to be conducted for the sample /sample preservation

4. Photos or video of each sample location will be taken, properly labeled with date, time, and view direction and a map of the photo locations completed. Photos and videos shall include relevant landmarks to identify sampling locations and their surroundings.

    Due to the evidentiary nature of samples collected during enforcement investigations, possession must be traceable from the time the samples are collected until they are analyzed. To document sample possession, a Surface Water Sample Chain of Custody Record (Attachment C) must be completed. A sample is under your custody if:
    - It is in your possession, or
    - It is in your view, after being in your possession, or
    - It was in your possession and under your control to prevent tampering, or
    - It is in a designated secure area.

5. As few people as possible should handle samples. The person taking the samples is personally responsible for the care and custody of the samples collected until they are transferred or dispatched properly.

6. Samples are accompanied by a chain of custody record. When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the record. This record documents sample custody transfer from the sampler, often through another person, to the analyst at the laboratory. The samples are typically transferred to the sample-receiving custodian at the laboratory.

E. Safety Considerations

Personal safety of staff engaged in any fieldwork activity (e.g., in transit, walking or hiking, and any field activities while at the sample site) is of primary importance. Staff should never place themselves in dangerous or risky situations. Any hazards that are known by field personnel should be communicated to other members of the field crew.

Fieldwork should be postponed if there is indication that engagement in the field activity could cause bodily harm. Working during lightning storms, at night, in heavy vegetation or poison oak, near aggressive wildlife or domestic animals, traversing steep or rugged terrain, unstable slopes, or creek banks, near swift moving water or potential flash flood conditions, or during snowy weather is not considered "normal risk". If any member of the field crew is uncomfortable with a reasonable self-determined hazardous field condition, it is that person's responsibility to bring this to the attention of the on-site field supervisor or their supervisor. A "reasonable self-determined hazardous field condition" is defined as other than normal risk. Supervisors shall not dismiss any person's spoken concerns that field conditions are too hazardous to complete the work assignment.

The person taking the samples must have adequate protection, including protective clothing. They must wear gloves, as protection against chemical and/or bacteriological hazards, while they are sampling or handling samples that are known or suspected to be hazardous (e.g., visible solids or sheens, downstream from sewage spills, etc.), or if hands have open wounds. The type of gloves worn shall be determined by the sampling circumstance and type of pollutants expected – for instance longer gloves are needed when samples must be taken well below the surface.

When in a boat or wading in a stream, a personal floatation device shall be worn at all times. Other protective measures shall be taken in accordance with West Valley Sanitation District safety procedures.

Upon arrival at a sampling site, safety equipment such as signs, cones, lights, etc. shall be set out as appropriate. Vehicles shall be parked in locations and directions to minimize traffic disruption and avoid sample contamination. Photos should be ultimately taken of the placement of all safety equipment and signage

The following guidelines apply to all fieldwork by District staff.

- No sample or measurement is worth the risk of injury.
- All staff shall use proper personnel protective gear as appropriate for the incident (e.g., life preservers, gloves, goggles, etc.)
- Field sampling crews should consist of at least two members unless otherwise approved by a supervisor.
- Be conscious of the whereabouts of rattlesnakes, mountain lions, and other dangerous animals.
- Open body wounds are entry sites for infection; take the necessary precautions for self-protection using appropriate PPE.
- If there is storm activity in the work area, wait for safer conditions to develop or postpone the sampling.
- Do not sample at night without approval from your supervisor.
- Do not trespass on private property, or posted restricted public lands without prior permission and or written approval from property owner or administrator.
- If strange or suspicious looking people are in the work area, either wait for them to leave or postpone the work to a later time. Do not force confrontations with strangers and

back away from any confrontations with the public. Be courteous and understanding of public concerns of the situation.

- Take the necessary precautions against exposure to harmful weather conditions such as heat, wind, snow, cold, rain, etc.
- Carefully evaluate a given on-site situation to determine if the task can be performed safely.
- Wear protective footwear when entering streams.
- Do not enter the stream if the water is flowing too fast.
- When sampling in the Pacific Ocean, one person should always face the Ocean (never turn their back) to watch for rip currents, hazardous surf and waves. Never enter the surf to sample if it is hazardous to do so &/or if beach is posted as unsafe due to hazardous surf or other conditions - sample only when safe to do so.

F. Stream Velocity Measurements

If sampling is performed after the SSO has stopped, the velocity of the impacted surface water must be determined in order to estimate SSO travel time and select an accurate Source sample location. One way to measure the SSO travel time is to use a velocity probe (such as a Global Water FP111-S Flow Probe or similar in-stream flow measurement device) to determine the rate of flow in the water body. In cases where a water velocity probe is used, the manufacturer's instructions will be followed. In cases where a probe is not available, velocity may be estimated by observation of the movement of materials (e.g., leaves, small sticks, etc.) in the affected watercourse.

G. Sampling Equipment

The District maintains sampling equipment located in the Engineering Trailer and at the Corporation Yard. The kit is inspected quarterly by the Maintenance & Utilities Supervisor and the Senior Engineer or their designees. Additionally, any District staff utilizing the kit is responsible for informing their supervisor of the need for decontaminating sampling equipment and field monitoring devices and or if the supplies need to be replenished.

SSO Sample Collection Equipment Inventory:

- Cooler
- Surface Water Sampling SOP (Attachment B)
- Ice Pack (stored in freezer or from ice maker at Oldemeyer Center
- 5 Ammonia sample bottles, preserved (3 for samples, 1 for Field Blanks and 1 extra in the event of contamination, spillage of the preservative or other contingency)
- 9 Coliform sample bottles (6 for samples, 1 for Field Blanks and 2 extra in the event of contamination, or other contingency)
- Field monitoring device(s) for DO, pH, and temperature (calibrated on regular basis) and extra batteries for each device
- Digital camera, with extra batteries
- Latex gloves
- Safety glasses/goggles
- Surface Water Sampling Worksheet (Attachment D)
- Sampling Pole

- Field Lights
- Waterproof Pen
- Minimum of 20 blank sample bottle labels
- Chain of Custody form (Attachment C)
- Velocity probe
- Boat and personal floatation device (if applicable)
- Hip Waders, rubber boots, life jacket
- Decontamination items: Non-phosphate detergent, distilled/deionized water, 10% nitric acid, solvent rinse.

H. Surface Water Maps
Maps of surface waters in the Seaside County Sanitation District service area that may be impacted by an SSO are located in Attachment F.

I. Follow Up Sampling
1. Sampling will be repeated every 24 hours, or as directed by the RWQCB or Monterey County Environmental Health Services, until such time as one of the following criteria have been met:
   - The County Environmental Health Services or the RWQCB indicates follow up sampling is no longer required, or
   - Both the ammonia and bacteria levels downstream are approximately equal to or less than the upstream levels; or
   - The concentration of ammonia is at or below that of the upstream sample, or the un-ionized ammonia is below 0.025 mg/L as N; and
   the concentration of total coliform levels are below the applicable acute water quality objective for the appropriate beneficial use listed in the table below.

Beneficial Use	Fecal Coliform (MPN/100mL)	Enterococcus Bacteria (cfu/100mL)	
		Estuarine and Marine	Fresh Water
Water Contact Recreation	90th percentile < 400	no sample > 110	Max at 89
Shellfish Harvesting	90th percentile < 43	--	--
Non-contact Water Recreation	90th percentile < 4,000	--	--

J. Surface Water Sampling SOP
The Surface Water Sampling SOP, Attachment B, provides step-by-step procedures to collect samples and deliver them for analysis in accordance with Sections 6, 7 and 9.

10. NOTIFICATIONS OF SENSITIVE RECEPTORS AND REGULATORY AGENCIES

Table 10.1 describes regulatory and other notifications that must be made in accordance with the triggers indicated:

Table 10.1 Notifications of Sensitive Receptors and Regulatory Agencies

Contact	Trigger	Deadline	How	Person(s) Responsible
OES	If SSO is greater than or equal to 1,000 gallons and reaches or has potential to reach surface waters.	2 hours after awareness of SSO	Call Cal OES at (800) 852-7550.	LRO, or Maintenance & Utilities Superintendent
County Environmental Health	SSO reaches Surface Water or Storm Drains & not fully contained	2 hours after awareness of SSO	Call (831) 755-4505	Maintenance & Utility Worker
SWRCB	If 50,000 gal or more were not recovered.	45 days after SSO end time, Submit SSO Technical Report.	CIWQS*	LRO, or District Engineer

** In the event that the CIWQS online SSO database is not available, notify the State Water Resources Control Board (SWRCB) by phone or email and provide required information until the CIWQS online SSO database becomes available.*

Beach and Park Warnings and Closures

1. District staff is responsible for posting beach and park warning or closure signs when there is a beach or park advisory or closure due to a SSO.
2. The beach and park advisory or closure pertains to the area where the SSO discharged into the applicable water body, including the Monterey Bay, and 1000 yards in each direction along the beach, stream or pond from the SSO entry point.
3. The signs are posted at all beach, stream or pond public access points within this 2,000-yard window.
4. The Monterey County Health Environmental Health Services' beach advisory and closure signs will be utilized by the District, mounted upon traffic barricades or other suitable method.
5. When Monterey County informs the District staff that the beach is no longer under an advisory or closure, staff is responsible for removal of the signs and barricades.

11. TECHNICAL REPORT

This MRP requires that in the event of a 50,000 gal or greater overflow spilled to surface waters, the District must prepare and submit an SSO Technical Report that includes a description of all water quality sampling activities conducted, a location map of all water quality sampling points, and the analytical results and evaluation of the results, pursuant to Section B.5 of the MRP. In addition, this report must be submitted to the CIWQS Online SSO Database within 45 days of the end of the SSO and must be certified by the District's Legally Responsible Officer (LRO).

12. RECORDKEEPING

All sampling related records associated with this WQMP should be contained in the appropriate SSO Incident file designated with a specific locator record number. These records shall include at least the following documents related to the WQMP:

- A narrative description of water quality sampling activities associated with the event.
- Timeline of the sampling activities until sampling is terminated.
- All surface water sampling worksheets.
- Computations of spill travel time in surface waters, if appropriate.
- Chain of Custody for all samples.
- Sampling Map of all sample locations.
- All photos or video showing sampling activities.
- Final analytical results from the certified laboratory conducting the sample analysis along with an Agency evaluation of the results to determine the nature and impact of the release.
- Failure analysis reviews of the WQMP including recommendations for changes and modifications.
- Calibration records for specific equipment used in the sampling processes.
- Notification documentation for all public and private agencies involved with or requiring monitoring related to final sample results.

The District shall maintain all records including records from service contractors associated with this WQMP as part of the file records for an SSO as required by the WDR and MRP. These records shall be maintained for a minimum period of five-years from the end date of the SSO unless required by regulatory enforcement action, request of the State or Regional Board or as support for claims litigation resulting from the SSO. All records associated with the SSO shall be destroyed upon reaching the end of the file retention period or as otherwise required by the Regional or State Board.

Samples of all District forms and records used in this WQMP are included as attachments.

13. TRAINING

Training will be provided in accordance with Table 13.1.

Table 13.1 Seaside County Sanitation District surface water sampling training program	
Who Is Trained To Collect Surface Water Samples?	ALL MAINTENANCE & UTILITIES PERSONNEL, ENGINEERING PERSONNEL
Trainer Qualifications	The trainer shall, by virtue of training, experience, education or a combination thereof demonstrate expertise in surface water sampling science, techniques and documentation.
Training Curriculum	at a minimum, training shall include: • The District's Water Quality Monitoring Plan • Sampling technique, including hands on practice • Sampling equipment calibration, use and decontamination procedures, including hands on practice • Sampling safety • Completion of the Sampling Equipment Calibration/Maintenance Log, Surface Water Sampling Report and Chain of Custody
Training Documentation	Attendees shall be required to sign-in to all training on the appropriate forms used by the District.
Refresher Training Frequency	Bi-Annual
Who is Responsible for Ensuring Training Occurs?	MAINTENANCE & UTILITIES SUPERINTENDENT, SENIOR ENGINEER
Required Training Records	Employee training sign in log
Who is Responsible for Maintaining Records?	MAINTENANCE & UTILITIES SUPERINTENDENT, SENIOR ENGINEER

14. INTERNAL REVIEW AND UPDATE OF THE WQMP

The WQMP is a requirement of the WDR and MRP regulations and therefore the WQMP must be adopted by the District governing board when completed and thereafter at the same time as the new adoption of the SSMP every five years or when major changes to the SSMP are required. Internal reviews of the WQMP should be conducted at a minimum with District SSMP audits or with a failure analysis following a SSO event requiring the use of this WQMP. This latter evaluation should be used to determine if any procedures or program changes would improve the WQMP.

The internal review of the WQMP must include a thorough review of the then existing WQMP against actual performance by the agency staff and testing laboratory during and after the event. All documents associated with the water quality sampling should be reviewed and included in the SSO file and compared to the requirements in this Plan. Particular attention should be given to all dates and times associated with the monitoring, proper tests in support of the Regional Board Basin Plan, proper completion of the Chain of Custody, equipment calibration documentation of all equipment used for sampling and available photographs or video of the sampling processes, review and sign-offs by all responsible parties, review of the sampling locations map, final lab results and the certification report that the Technical Report was submitted within 45 calendar days of the end of the SSO to the CIWQS system.

In addition, the District should also conduct regular reviews of the WQMP at least bi-annually along with the bi-annual SSMP Audit required by the WDR. The review should be undertaken to determine that all information in the Program is current, that all classification responsibilities have not changed, that all forms are still appropriate and that all contract relationships with testing laboratories, if not associated with the agency, are still current and available 24 hours per day and 7 days per week. The review should also include a review of the Central Coast Regional Board Basin Plan to assure continuing conformance with the Basin Plan.

This internal review should be conducted by senior management of the collection systems personnel, laboratory management and any outside contract laboratory services subsequent to any event or once per year if the WQMP has not had to be invoked during the preceding year.

Finally, a schedule and assignment of responsibility for completion of the recommended changes should be prepared along with additions to the SSMP Change Log for these changes and modifications of the WQMP.

CHANGE LOG

The current MRP, Section E.3 requires that all changes to the Sanitary Sewer Management Plan (SSMP) be recorded and documented using an SSMP Change Log indicating what section is being change, a description of the changes, and the person or persons authorizing the changes. Because the WQMP is required by the WDR and MRP, it is also necessary that changes to the WQMP be included in the documentation of changes to the SSMP. Any changes resulting from Section 14 above should be added to the Change Log (see Attachment A) of the SSMP upon implementation and adoption of the changes as required by the WDR.

ATTACHMENT A
SSMP Change Log

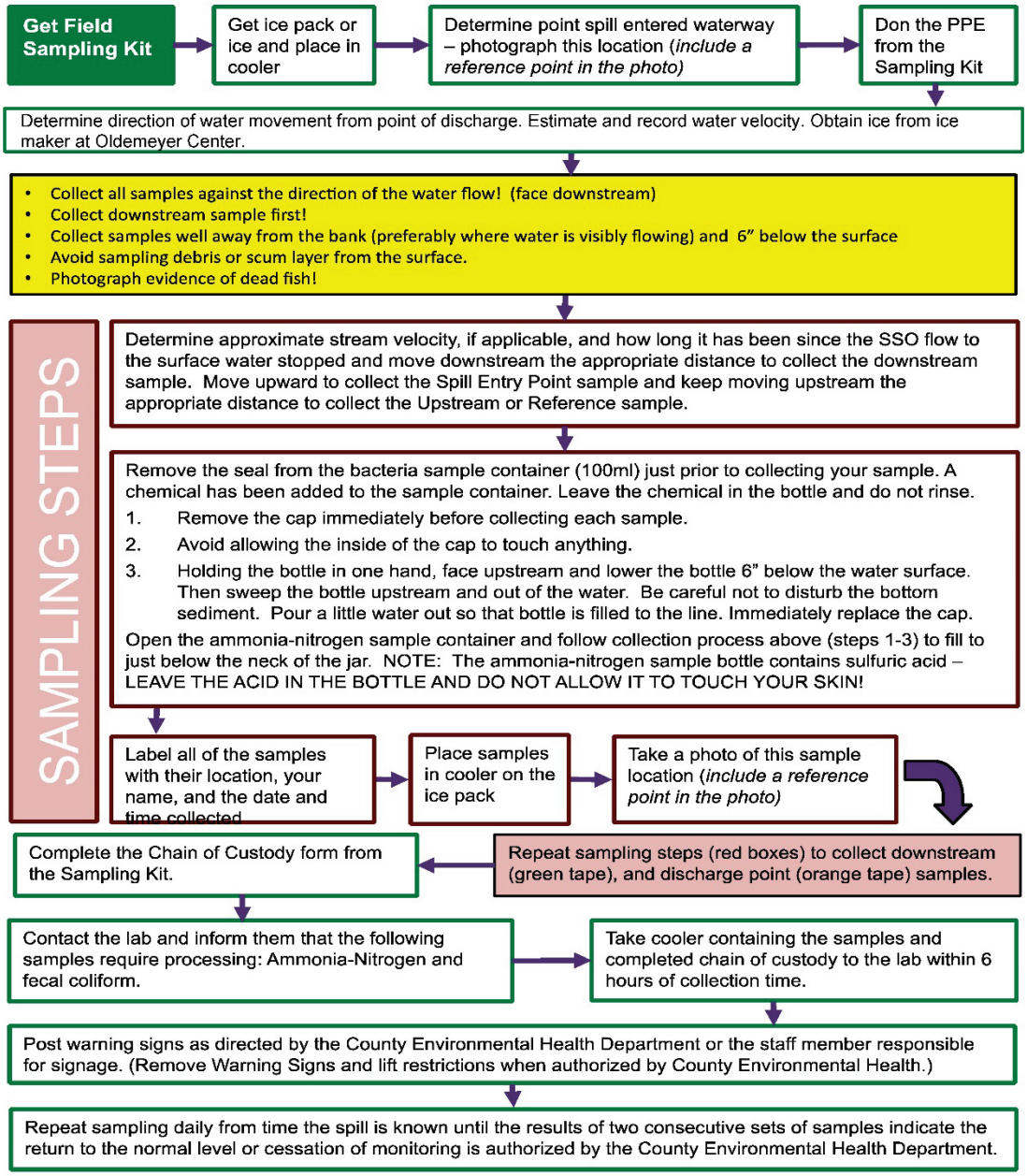
Seaside County Sanitation District
Water Quality Monitoring Plan

SSMP Change Log

Date	Section(s) Changed	Summary of Change	Approved (signature)

ATTACHMENT B
Surface Water Sampling SOP

Surface Water Sampling Standard Operating Procedure



ATTACHMENT C

Surface Water Sample Collection Chain of Custody Record

Customer Name	Seaside County Sanitation District			☐	**Hazardous Waste**	**PO#**	
Customer Address	440 Harcourt Avenue, Seaside, CA 93955			☐	**Unknown Material**	**WO#**	
Customer Telephone	(831) 899-6885	**Mail Code**		**CONTRACT LAB INFORMATION**		**Turnaround Requirement**	
Program Name				Ship to:		☐ Normal (21 days)	
Lab Program Coordinator		**Phone #**		Ship Date:		☒ Rush: 3 days ☐ Other:	
Sampled By				Courier:			

	SAMPLE COLLECTION INFORMATION								Analysis Requested					QA/QC Requirements	
			Type											☒ Lab Standard ☐ Special (see attached)	
LIMS# (Issued by Lab)	**Date**	**Time**	Composite	Grab	**Sample Location**	**Field pH**	**Field Temp**	**# Containers**	**Matrix***	Ammonia	Total Coliform / E. coli	Enterococcus			**Remarks/Notes**
			☐	☒	Upstream			3	A	☒	☒	☒	☐	☐	
			☐	☒	Entry Point			3	A	☒	☒	☒	☐	☐	
			☐	☒	Downstream			3	A	☒	☒	☒	☐	☐	
			☐	☒	Field Blanks**			2	O	☒	☒	☐	☐	☐	Distilled Water
			☐	☐						☐	☐	☐	☐	☐	
			☐	☐	** Only used for					☐	☐	☐	☐	☐	
			☐	☐	≥50,000 gal SSO					☐	☐	☐	☐	☐	

*Matrix: P = Potable Water, W = Wastewater, A = Ambient Water, G = Groundwater, S = Soil, B = Biosolids, I = Industrial, O = Other (specify in remarks)

Relinquished	Date	Time

Relinquished to	Date	Time

Transport/Shipping Information		
☐ USPS	☐ UPS	☐ FedEx
Tracing #:		
☐ Other:		

Sample Receiving Documentation

Container intact? ☐ Yes ☐ No	Correct container? ☐ Yes ☐ No	Field preserved? ☐ Yes ☐ No	Custody tape intact? ☐ Yes ☐ No
Cooled? ☐ Yes ☐ No	Temp. Blank? ☐ Yes ☐ No (°C)	Comments:	
Sample distribution: ☐ Lab bench ☐ Ice chest ☐ Walk-in cooler shelf #		Disposal Date:	Disposed by: (inits.)

ATTACHMENT C
Surface Water Sample Collection Chain of Custody Record

C-O-C Distribution	Date:	By:	☐ Lab Admin File	☐ Prog/proj Mgr.	☐ Lab Prog. Coord.	☐ Delivery courier	☐ Pick-up
courier							

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Surface Water Sampling Worksheet **ATTACHMENT D**

Seaside County Sanitation District
Water Quality Monitoring Plan

Sample Date:	Sample Time: ☐AM ☐PM		Sample Location:
Sampler(s)' Name(s):			
Sampler(s)' Signature(s):			

What is being sampled?
☐Stream ☐Pond ☐Lake ☐Lagoon
☐Bay/Estuary ☐Ocean ☐River ☐Other:

Weather at time of sampling: ☐Sunny ☐Overcast
☐Sprinkling ☐Raining ☐Snowing

Was the SSO actively entering the surface water during Sampling? ☐YES ☐NO
If no, complete A-D in the gray box to the right ➔

If the SSO was not actively entering the surface water during sampling:

A. Stream Velocity: _____CFS

B. How Long Has the SSO ***NOT*** Been Entering the Surface Water?
_____ minutes X 60sec/min = _____ seconds

C. How Far Downstream Did You Travel To Collect The SOURCE Sample?
(A X C = Feet): _____ feet

D. Explain why you travelled a different distance, if you did, to collect the source sample:

NOTE: Calibrate equipment prior to use and record in the Equipment Calibration/Maintenance Log

Sample Location	# of Samples*	pH	Temp. (°C)	DO (mg/l)	Photo ID# of Sample Location	Visual Observations and/or Interferences
Upstream						
Source						
Downstream						
Field Blank						

* Minimum of 2 per location

FINISH CHECKLIST	NOTES / OBSERVATIONS
☐ **All Samples Labeled with:** ☐ Date: a six-digit number indicating the year, month, day of collection ☐ Time: a four-digit number indicating military time of collection. e.g. 0954 ☐ Sample Location: Upstream, Source, or Downstream ☐ Samplers: each sampler is identified ☐ Parameter/preservative: analysis to be conducted for sample/sample preservation ☐ **Chain of Custody Completed** ☐ **Samples on Ice in Cooler** ☐ **Pictures Taken of Each Sample Location and the Photo ID/# Noted Above**	

Surface Water Sampling Worksheet **ATTACHMENT D**

☐ **All Sampling Equipment Collected**	

ATTACHMENT E
Technical Report

Seaside County Sanitation District
Water Quality Monitoring Plan

Technical Report
Outline

1. Introduction
   Agency/system description

2. SSO Technical Report - Contents and Responses
   a. Causes and Circumstances of the SSO
      i. Detailed explanation of how and when SSO was discovered
      ii. Diagram indicating SSO "Cause point", appearance point, and final destination (use attachments, maps and diagrams as needed)
      iii. Detailed description of methodology employed and available data used to calculate the SSO volume and any volume recovered
      iv. Detailed description of the cause(s) of the SSO
      v. Copies of the original field crew records used to document the SSO (attachment)
      vi. Historical maintenance records for the lines involved in the cause of the SSO (attachment)

   b. Agency's Response to the SSO
      i. Chronological narrative description of actions taken by agency to terminate the SSO
      ii. Description of how the OERP was implemented to respond to and mitigate any impacts of the SSO
      iii. Final corrective action(s) completed and/or planned, including a schedule for actions not yet completed

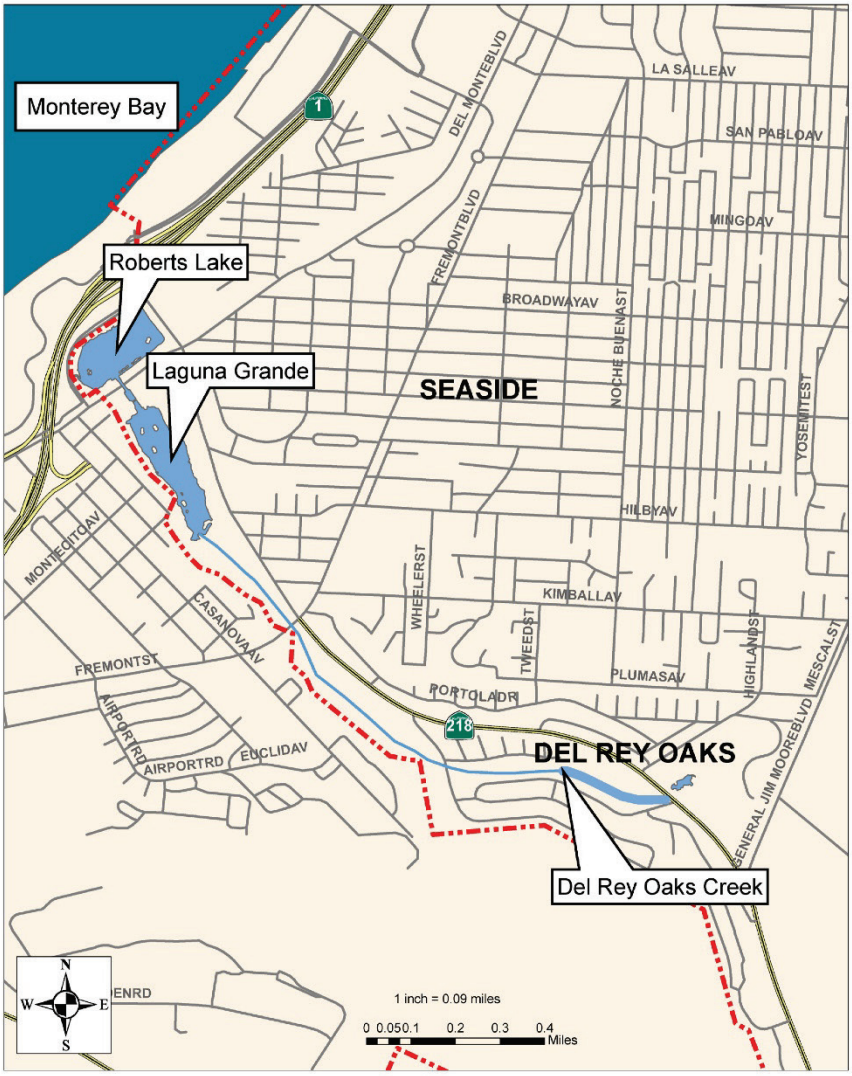
   c. Water Quality Monitoring
      i. Description of all water quality sampling activities conducted, including analytical results and evaluation of the results
      ii. Detailed location map illustrating all water quality sampling points

3. Conclusions

4. LRO Certification and Placement into CIWQS

ATTACHMENT F
SURFACE WATER MAPS

Seaside County Sanitation District
Water Quality Monitoring Program Plan



Seaside County Sanitation District
Water Quality Monitoring Program Plan
Surface Waters of Concern

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