



City of Morro Bay
Sewer System Management Plan

**AUDIT REPORT
2011**

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Summary

The California State Water Resources Control Board's (SWRCB) Wastewater Discharge Requirements (WDRs) adopted on May 2, 2006, requires that the owners of a wastewater collection systems with more than a mile of pipeline have in place a Sewer System Management Program (SSMP) to reduce the number and severity of Sanitary Sewer Overflows (SSO). The SSMP program requires the agency to perform an internal audit every two years. This is the first audit after the adopted SSMP by the City of Morro Bay in 2009, and meets the biennial audit requirements.

This biennial audit of the City of Morro Bay's SSMP consisted of applying sufficiency rankings to all 11 sections of the SSMP requirements. The sufficiency rankings are based on the WDRs requirements. All 11 sections of the SSMP were reviewed for sufficiency based on a five point scale rating from compliance to non compliance and were found to be in *compliance* as their the sufficiency ranking. Multiple sections contain recommendations to for changes to the document that further define the responsibilities of the manager, supervisor, and the collection crewmembers. The findings of this audit will lead the performance of the Waste Water Collections Division until the next biennial SSMP scheduled in the spring of 2013.

Introduction

On May 2, 2006, the State Water Resources Control Board (SWRCB) enacted Order No. 2006-0003, State General Waste Discharge Requirements for Sanitary Sewer Systems, to create a centralized statewide mechanism to manage all publicly owned wastewater collection agencies. The WDRs requires any public agency that owns or operates a sanitary sewer system more than one mile in length that conveys untreated or partially treated wastewater to a publicly owned treatment works (POTW), in the State of California to comply with the requirements of the WDRs.

A principal element of the State Order is the requirement that the collection agencies adopt and maintain a management plan for the system, referred to as a Sewer System Management Plan (SSMP).

The City of Morro Bay Waste Water Collections Division, after conducting a public hearing, adopted the City of Morro Bay SSMP on June 8, 2009, in accordance with the State Order.

The State Order establishes the following goals:

- The SSMP must document the organization's legal authority to achieve the goals of the SSMP as demonstrated through the City of Morro Bay's ordinances, agreements and other legally binding instruments.
- The SSMP must identify the City of Morro Bay's organization and staff responsible for implementing and maintaining the SSMP.
- The SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the City of Morro Bay's wastewater conveyance system.

Additionally, the State Order requires the City of Morro Bay staff to perform periodic internal audits of the SSMP focusing on evaluating the effectiveness of the SSMP and staffs compliance with its requirements, as shown in Section D-13 of the State Order. The internal audits must be performed at least every two (2) years, with the audit report kept on file at City of Morro Bay. Due date for this audit is 2011. Unlike traditional audits, which occur after the audit period has been fulfilled, SWRCB staff have indicated that future audits will need to be completed prior to the anniversary of the plan adoption (i.e. June 2013, 15,17...) or the City will be deemed out of compliance.

The SSMP must be updated every five (5) years, capture any significant program changes, and be re-certified by the City Council of the City of Morro Bay. To complete the re-certification process, City of Morro Bay staff must enter the information on the Online SSO Database and mail a hard copy to the State Water Resources Control Board. The due date for re-certification of the SSMP is June 8, 2014.

In general, the State's audit requirements of the SSMP are extremely complex with many overlapping topics. As described below, there are 11 major categories in the SSMP and a dozen subcategories. Additionally, a comprehensive audit program includes evaluation elements such as document control, training, objectives, data management, audit procedures, and results approach outcomes.

The City has a separate Wastewater Collections Division, to oversee the operations and maintenance of the collection system. The Division operates under the general supervision of the Utilities/Capitol Projects Manager. The division includes a Wastewater Collection Supervisor and three Wastewater Collection System Operator levels. The Division responds to sewage spills and other calls 7 days a week, 24 hours per day. To expedite cleaning and emergency response, the City also owns and operates a combination cleaner (Hydro-Vac), trailer-mounted jetter, three emergency generators, a diesel powered hydraulic pump, maintains an inventory of spare pumps and motors, confined space entry and safety equipment, and other tools and apparatuses. The Division has a scheduled preventive maintenance and enhanced maintenance program to maintain the system. In addition, the City has completed its first complete Closed Circuit Television (CCTV) inspection and has recorded historical data about the system to better prioritize maintenance activities. The WDRs requires the assessment these activities and these programs meet the requirements of the WDRs.

Several agencies discharge to the City wastewater collection system that the City considers satellite agencies. They are:

- Morro Bay High School (San Luis Coastal Unified School District)
- Morro Bay State Park (2 sources California State Parks)
- Bayshore Village Home Owners Association

These systems are owned and operated by other agencies, and may have more than a mile of sewer lines. Under the Morro Bay Municipal Code, these agencies are like any other discharger. The City does not maintain those systems, but does have the right to regulate the dischargers flows into our sewer system.

The Cayucos Sanitary District (CSD) also discharges to the Wastewater Treatment Plant through both a separate main and a shared main facility. A Joint Powers Agreement (JPA) specifies that their discharge must be such that it does not cause harm to the treatment process, however, since the CSD has an ownership interest in the WWTP, the City of Morro Bay does not consider them a satellite agency.

The current Joint Powers Agreement with the CSD is under review and should be updated in conjunction with an upgrade to the WWTP. This agreement specifies the ownership and operational terms that define our legal standing and relationship.

This is the first internal audit of the SSMP. After reviewing the SSMP and working through the audit report, staff will create a list of proposed remedies if deficiencies are found to exist, file the report, and continue working to achieve or exceed the goals of the Wastewater Collections Division.

Audit of the SSMP

As specified in the State Order, the SSMP is comprised of eleven (11) sections or subsets of Section D. 13, as follows:

The Eleven Elements of the SSMP:

1. Goals- The stated goals for the SSMP
2. Agency Organizational Structure and SSO reporting chain of communications
3. Document Legal Authority
4. Operation and Maintenance
 - a. Collection System Mapping
 - b. Preventative Operations and Maintenance Program
 - c. Rehabilitation and Replacement Program
 - i. Inspection Program
 - d. Staff training
 - e. Contingency, Equipment, and Parts Inventory
5. Design and Performance
 - a. Design Standards
 - b. Inspection and Testing Standards
6. Overflow Emergency Response Plan
7. Fats, Oils and Grease (FOG) Control Program
 - a. Fog Ordinance
 - b. A program to reduce or eliminate FOG SSO
8. System Evaluation and Capacity Assurance Plan
9. Monitoring, Measurements and Program Modifications
10. SSMP Audits
11. Communication Program
 - a. Communications with the public
 - b. Communications with satellite agencies

This internal audit is focused on the above eleven categories as required by the State Order. The audit will consist of evaluation of each element in each category standardized with the same sufficiency criteria, based on evidence of operations and discussions with the City of Morro Bay's Waste Water Collections staff. Overall the SSMP has a compliance ranking based on State Order audit guidelines and a sufficiency review of each section. A recommendation for revision to the SSMP was provided when there was enough information to support it.

The format for audit reporting is as follows:

- State Order Section/Subsection
- Findings
- Reference Information
- Sufficiency Ranking
 - Complies
 - Substantial Compliance
 - Partial Compliance
 - Marginal Compliance
 - Not in Compliance
- Recommendation, when appropriate.

Section 1. Audit of Goals - State Order D.13.i

Review the SSMP to determine if it complies with the State Order by having a goal to provide a plan to manage, operate, and maintain all parts of the City of Morro Bay System.

Findings:

The City of Morro Bay has established a list of goals in its SSMP that complies with the goals established in the State Order.

The City of Morro Bay's Goals for the SSMP together with progress to date are as follows:

1. Goal, Maintaining and improving the sewer infrastructure within the City in a manner consistent with the adopted Sewer System Master Plan now and into the future.

Compliance - Ongoing. In adherence to the SSMP, the City of Morro Bay's staff reviews CCTV inspection reports and provides a summary of the findings for engineering to make a final assessment and create CIP programs to minimize SSO.

Improvements completed to date to meet this goal include the Section 1 repairs, Orcas Way Pipe-Bursting, and Man-Hole Lining Rehabilitation Project.

Future projects, currently under development, include the rehabilitation of Section 6, sewer line rehabilitations, the Laurel Easement sewer line within Section 4, and the rehabilitation of Lift Station #2.

2. Goal, Aggressively minimizing the number and impact of sanitary sewer overflows (SSO) that may occur throughout the City of Morro Bay.

Compliance - Ongoing. The proactive maintenance effort outlined in the SSMP has decreased the frequency of SSOs from a city average of 4 SSOs per year to 1 SSO per eighteen-months. All SSOs are documented in the SSO log as part of the SSMP and City of Morro Bay's reporting requirements.

3. Goal, Cost-effectively minimizing inflow/infiltration (I/I) and provide adequate sewer capacity to accommodate design storm flows.

Compliance - Ongoing. Winter of 2010 was an extremely wet period receiving significantly more rain fall than average without any wet weather related SSOs occurring.

Improvements Minimizing inflow/infiltration (I/I) has occurred on the Main Street Rehabilitation Project, minimizing stormwater from entering sewer manhole lids by replacing non sealing with sealed manhole lids in the flow

line of Main Street.

Future Projects include the potential for quantitative electro-scanning; used to measure the relative leak potential of pipe segments and to prioritize rehabilitation and replacement projects.

4. Goal, Controlling source discharges to the Wastewater Treatment Plant in accordance with State and Federal regulations;

Compliance – Ongoing. Annual communications with selected local business receiving industrial discharge permits regarding acceptable collections as well as monitoring WWTP MRP for controlling source discharge.

Future Projects are to provide training to new employees and business owners on source control of discharges.

5. Goal, Developing and implementing programs necessary to comply with State and Federal mandates, rules, and regulations.

Compliance - Ongoing. The City of Morro Bay's Collection staff performs CCTV inspections, evaluations, and prepares reports necessary to ensure continued compliance with regulatory requirements.

Future Projects include creation of an annual calendar of reoccurring events to make sure that no sampling or reporting requirements are missed.

Reference: City of Morro Bay SSMP

Sufficiency: Complies. The City of Morro Bay's SSMP Element I complies with the *Goals* requirement of the State Order.

Recommendation: Staff recommends that an additional goal be created to further expand the effectiveness of this SSMP.

Added Goal:

6. Develop training programs necessary to teach up-to-date industrial systems required by State and Federal mandates, rules and regulations, describing the duties and responsibilities of all positions including supervisory implementation and advancement certification, and additional training on standards and codes to gain additional understanding of the California Building and Plumbing code, trenchless technology (preventative maintenance and repairs) and standard construction methods.

2. Audit of Organization - State Order D.13.ii

Review the SSMP to determine if it complies with the State Order by having the names of authorized representatives published and update in the SSMP.

Findings:

The City of Morro Bay has identified and kept updates of its authorized representatives, management, administration, and maintenance personnel and has shown the chain of communication for reporting SSO. The chart is updated annually in the Agency's annual budget.

The City of Morro Bay has posted on its website the Organization Chart.

Reference: City of Morro Bay Organizational Chart, City of Morro Bay SSMP, Page 12

City of Morro Bay Chain of Command, City of Morro Bay SSMP, Page 12

City of Morro Bay Chain of Communication for Reporting SSO, City of Morro Bay SSMP, Page 13

Concise Contact List: In Case of Emergency SSO, City of Morro Bay SSMP Appendix B, Attachments B, and C

Sufficiency: Complies. The City of Morro Bay's SSMP Element II complies with the *Organization* requirements of the State Order.

Recommendation: The City of Morro Bay's Organization and Chain of Command is a "living document" which needs to continue to be updated periodically. Continued outreach to surrounding agencies (upstream) by sharing our spill response forms which will help make sure that Morro Bay and select local businesses are added to their SSO Reporting Chain of Communications.

Make this document available on the City of Morro Bay Waste Water Collections Division website.

3. Audit of Legal Authority - State Order D.13.iii

Review the SSMP to determine if it complies with the State Order by having ordinances and agreements in place and updated to prevent illicit discharges, provide for proper design of upstream facilities, provide right of way and access to the Sewer Systems, and enforce the City of Morro Bay regulations.

Findings:

The City of Morro Bay, Chapter 13.12 of the Municipal Code and Title 8 of the Standard Specifications, which provides the legal authority for the use of the City's sewer system, including illicit discharge, protecting the public health and prevent pollution.

Additionally, the City of Morro Bay maintains files that document the City of Morro Bay's right to access easements.

Reference: Chapter 13.12 of the Municipal Code, City of Morro Bay SSMP, Appendix A, Attachment A

Title 8 of the Standard Specifications, City of Morro Bay SSMP, Appendix A, Attachment B

City of Morro Bay Standard Drawings: Sewer Section, Appendix A, Attachment C

Sufficiency: Complies. The City of Morro Bay's legal structure complies with the *Legal Authority* requirements of the State Order.

Recommendation: Update and revise the City sewer standards/construction drawings to stay up to date with current construction trends,

Review City Municipal Code, recommend, if any, changes, and/or updates to stay current with the changing definitions in State law (ie definition of a private lateral and private lateral spill.)

4. Audit of Operation and Maintenance Program - State Order D.13.iv

Review the SSMP and activities of staff, consultants and contractors to determine compliance with the State Order by having (a) an up to date map of the sewer systems that shows all pipe reaches, manholes, siphons, diversion structures, and pump stations, if any, (b) a routine preventative maintenance program and operations program, rehabilitation and replacement program, (c) operations and maintenance training program, (d) Training, and (e) part inventory program including identification of critical replacement parts.

Findings:

Pipeline condition information is conveyed to engineering if repairs, rehabilitations, and/or replacements are needed, from which CIPs are generated. Currently, the City of Morro Bay's CIP program is based on the first systematic condition assessment completed in 2009.

The City of Morro Bay maintains and updates GIS mapping and data tables for sewer pipe reaches and manholes. These maps can be accessed through the City of Morro Bay's intranet and are republished about once per year.

Underground Service Alerts (USA) and customer relations are handled daily, logged within respective departments (Public Services and Waste Water Collections), and monitored for completeness.

The City of Morro Bay's Collection staff systematically performed and completed the CCTV inspection of sewerlines ahead of the five year schedule outlined in the SSMP.

Sewerlines, lift station checks, and preventative maintenance (clean) is routinely performed with added efforts given in known problem areas. Upcoming City festivals, holidays, and tourist influences have been monitored and incorporated into the regularly scheduled maintenance to minimize the probability of SSOs due to the significant increases in population and food distribution (FOG) that can occur.

A root treatment program has been in effect and is scheduled on a bi-annual basis; Every year treatment is performed in specific areas to systematically treat every pipeline where roots have been observed once every two years and treatment is performed in the known trouble areas annually.

Collection crews have maintained mandatory standard trainings and certifications, per the State certifications and licensure. Certifications and Licensures include, but are not limited to, Confined Space Entry, CPR/First Aide, Blood Borne Pathogens, and Hazardous Waste.

Staff operates and maintains a combination cleaner (Hydro-Vac), three emergency generators, a by-pass pump, a service truck, recently purchased trailer-mounted jetter, and other equipment. Equipment is inventoried.

Reference: City of Morro Bay SSMP, Element IV

Sufficiency: Complies The City of Morro Bay's Element IV complies with the *Operations and Maintenance* section of the State Order.

Recommendation: Capital Improvement Projects Division has scheduled improvements within the various sections of Morro Bay to include; replacement of two of the three sewer lift-stations and sewer line rehabilitation projects throughout the 14 sewer sections. Additional projects are in planning stages. This effort needs to continue.

Additional/Alternative methods of determining pipe condition, other than CCTV, have been discussed and are being reviewed for use in the future.

Implement training modules as discussed in the recommendations under Element I Goals.

5. Audit of Design and Performance Provisions - State Order D.13.v

Review the SSMP to determine if it complies with the State Order by having design and construction standards and specifications for installation of new facilities including coverage for testing of new facilities prior to acceptance.

Findings:

The SSMP contains reference to the City of Morro Bay's Standard and Specifications in addition to the City's Municipal Code. In addition, reference is made to other approved testing methods, such as ASTM (formerly known as American Society for Testing and Materials), to ensure that the infrastructure meets the design and performance provisions.

Before acceptance of a facility, Morro Bay receives O&M manuals, records and as-built drawings, permanent keys, final cleanup, final repairs, etc. The testing and startup is completed when test results are approved and the reliability test has demonstrated that the system functions as designed.

Legal requirements for construction and major repair projects are documented in the sections of the specifications and are made a part of all construction contracts, however, the legal section of the specifications have not been made a part of the SSMP due to their project specific nature.

Reference: Standard for manholes, City of Morro Bay SSMP, Appendix A, Attachment C

Standard for connections, City of Morro Bay SSMP, Appendix A, Attachment C

Standard for bedding and backfill, City of Morro Bay SSMP, Appendix A, Attachment C

Sufficiency: Complies The City of Morro Bay's Element V complies with the *Design and Performance Provisions* of the State Order.

Recommendation: Update/Revise City sewer standards/construction drawings as discussed under Element III Legal Authority.

Implement training modules as discussed in the recommendations under Element I Goals.

6. Audit of Overflow Emergency Response Plan - State Order D.13.vi

Review the SSMP to determine if it complies with the State Order by having an overflow emergency response plan that includes (a) proper notification procedures, (b) a program that assures proper response to all overflows, (c) procedures that ensure prompt notification of regulatory agencies and other affected entities, (d) proper training for staff and contractors named in the response plan, (e) procedures to address traffic control and crowd control, and, (f) implementation of steps to prevent SSO from reaching waters of the United States.

Findings:

SSO's have been classified, logged, reported, and treated per the requirements outlined in the Overflow Emergency Response Plan contained in the SSMP.

From January 2009 to July 2011, there was ten (10) SSO within the City of Morro Bay service area:

Private Laterals: 5 SSO

Locations: 1170 Main St. Sundancer Village, June 8, 2009
330 Morro Bay Blvd., October 28, 2009
238-240 Pacific St. (Apartments), October 28, 2009
395 Morro Bay Blvd. Market & Spirits Liquor, October 28, 2009
414 Estero St., November 16, 2009

Food Service Lateral: 2 SSO

Locations: 1700 Main St. Taco Bell, October 26, 2009
781 Quintana Rd., Burger King, July 19, 2011

Industrial Service Lateral: 1 SSO

Location: 839 Quintana Rd., Hinson Tire, March 22, 2010

Main Sewer Line: 2 SSO

Location: 380 Main St., January 30, 2009
Alder Ave. /San Joaquin St. intersection, April 15, 2010

The positive impact of the proactive maintenance plan in the SSMP has yielded measurable results regarding SSOs. The frequency of SSOs from the City's system has dropped from an average of 4 SSOs per year to 1 SSO per eighteen-months. The two SSO events from the City mains were caused by a root blockage and an accumulation of debris and grease. Enhanced maintenance efforts may further reduce the frequency of these events.

The Collections Department Supervisor maintains a series of forms to outline all proper procedures to be followed at the onset of an SSO. The notification checklist is updated periodically, shared with other local agencies, and

verified for completeness. Calls are made within the 2-hour time limit for all SSO's per the SSMP.

Reference: *Sanitary Sewer Overflow Unified Response Guidance Plan*, City of Morro Bay SSMP, Appendix B

SSO Response Flow Chart, City of Morro Bay SSMP, Appendix B, Attachment A

Collections Crew Chain of Command, City of Morro Bay SSMP, Appendix B, Attachment C

SSO Event Reporting Line, City of Morro Bay SSMP, Appendix B, Attachment D

Collection Systems Stoppages log in Microsoft Excel format

Sufficiency: Complies. The City of Morro Bay's Element VI complies with the *Overflow Emergency Response Plan* requirements of the State Order.

Recommendation: Maintain regularly scheduled and enhanced sewer main cleaning.

Plan and implement SSO "drills" intended for off-duty personnel (on-call basis) for all collection crewmembers since the frequency of actual events has been greatly reduced. Emphasizing protocol to ensure requirements are met per the SSMP.

Educating the public on the benefit and need for private/residential sewer backflow preventers requiring them where appropriate.

In addition, continue to educate local plumbers to notify the Waste Water Collection Division when "unclogging" drains/private sewer lateral. Uncaptured deposits of debris into the sewer mains by plumbers when clearing laterals has the potential of causing SSOs.

Continue public education efforts regarding FOG and other household items which have the potential to be disposed via sewer laterals to minimize the potential of any SSO.

7. Audit of FOG (Fats, Oils and Grease) Control Plan- State Order D.13.vii

Review the SSMP to determine if it complies with the State Order by having a FOG Control plan with (a) a public education element, (b) FOG disposal facilities identified, (c) ordinances, rules and regulations to prevent FOG, (d) requirements to install FOG traps together with standard drawings for traps, owner maintenance requirements, owner record keeping requirements and owner reporting requirements, (e) inspection authority and staffing, (f) FOG mapping for pipe reaches impacted by FOG, and (g) a source control plan for reaches currently impacted by FOG.

Findings:

The City of Morro Bay has determined that a FOG Control Program is necessary. The City of Morro Bay has an Ordinance in place prohibiting excessive FOG discharges and has a cleaning and maintenance schedule for areas prone to FOG build-up such as siphons and pipeline sections with minimal slope.

A Site Visit Book (SVB) was developed for source and FOG control inspections which records the date, name of the business, owner/contact information, inspector, and condition of trap and purpose of visit. A master list was then made and a record book was instituted with updates and review on an annual basis.

The SVB has an owner/contact signature line, which is signed at the time of the inspection. The first sheet is then torn off and given to the owner/contact and the second page stays in the book with the inspector. The inspector then uses the SVB to record data in the record book.

Reference: City of Morro Bay SSMP, Appendix C, FOG Control Program

Chapter 13.12 of the Municipal Code, City of Morro Bay SSMP, Appendix A, Attachment A.

Title 8 of the Standard Specifications, City of Morro Bay SSMP, Appendix A, Attachment B.

Sufficiency: Complies. The City of Morro Bay's Element VII complies with the *FOG control plan* of the State Order.

Recommendation: Continue a partnering/educational relationship with the businesses/restaurants within the City. Maintain inspections and recommendations for grease interceptor and traps.

Insert as Attachment E to the SSMP, "Guide to Grease Interceptors- Elimination the Mystery," The Plumbing & Drainage Institute, Revised 2010, in Appendix C

8. Audit of the System Evaluation and Capacity Assurance Plan- State Order D.13.viii

Review the SSMP to determine if it complies with the State Order by having a Capital Improvement Plan (CIP) that considers (a) Evaluation of those portions of the sewer systems that are experiencing SSO discharges due to hydraulic deficiency, (b) Design Criteria commensurate with the sewer systems, (c) Capacity Enhancement Measures and steps to address short term and long term CIP goals and an implementation schedule, and (d) Schedule for completion of the necessary things-to-do that were developed in items D.13.viii (a) - (c) above.

Findings:

The City of Morro Bay's staff complies with the requirements of the State Order by operating a computer models for its System Evaluation and Capacity Assurance Plan. The primary component of the plan, as directed in the State Order is its Capital Improvement Program (CIP). The other major element of the plan is the Design Criteria addressed in Section 5 above (State Order D.13.v).

The City of Morro Bay's engineering department operates Arcview GIS. The model contains the collection system which includes approximately 60 miles of gravity sewer line, approximately 2.5 miles of force main, approximately 1116 manholes, lampholes and clean-outs, and three lift stations which are monitored daily. The model has been data organized to the variety of pipe materials, lengths between manholes/clean-out, and direction of flow. Arcview GIS is up to date, has ongoing mapping capability and color-coded results presentation.

Engineering also operates with MS Excel for tracking its projects, financial costs, and the distribution of those costs across the duration of the project. Financial expenditures are categorized with priority (high, medium, and low) and area of improvements.

Reference: City of Morro Bay, Arcview GIS.

Sufficiency: Complies. The City of Morro Bay's Element VIII complies with the *System Evaluation and Capacity Assurance Plan* requirements of the State Order.

Recommendation: Maintain open communications with the collection department's assessment of the sewer main, regularly scheduled maintenance, and any incidents involving potential SSO.

Develop a system wide GIS based model to enable running various flow scenarios.

9. Audit of the Monitoring, Measurement, and Program Modification - State Order D.13.ix.

Review the SSMP to determine if it complies with the State Order by (a) maintaining relevant information that can be used to establish and prioritize appropriate SSMP activities, (b) monitoring the implementation and, where appropriate, measure the effectiveness of each element of the SSMP, (c) assessing the success of the preventative maintenance program, (d) updating program elements, as appropriate, based on monitoring or performance evaluations, and (e) identifying and illustrating SSO trends, including frequency, location and volume.

Findings:

Compliance with this component of the SSMP falls under the responsibility of the Waste Water Collections Division. The Collections Division staff are the first responders and collect the field report, notifies the appropriate departments for action. In addition, the Collection Division performs follow-up debriefings to assess the success or failure of the response and mitigation efforts to implement improvements.

The City of Morro Bay also maintains a spreadsheet that generates statistical data to determine the effectiveness of its SSMP such as:

- number of SSO
- response time
- volume of SSO
- Cause (pipe size, material, and age)
- cause of SSO

As stated, impact of the SSMP regarding SSO has dropped from a city average of 4 SSO per year to 1 SSO per eighteen-months.

Reference: City of Morro Bay SSMP

City of Morro Bay, Collection System Stoppages spreadsheet

SIMMS and CUPSS software tools.

Sufficiency: Complies. The City of Morro Bay's Element IX complies with the *Monitoring, Measurement, and Program Modification* requirements of the State Order.

Recommendation: Continue the process of implementing and using electronic asset management and monthly task tracking software. These tools will help to ensure that past activities are captured in a format that enables easy review. Reviewing activities will enable the Division to determine trends and optimize efforts accordingly.

Maintain regularly scheduled sewer main cleaning and rehabilitation improvements program generated from the CIP.

Continue with semiannual planning sessions to discuss implementation of the SSMP and overall Division maintenance efforts.

10. Audit of the SSMP Program Audits - State Order D.13.x.

As a part of the SSMP, City of Morro Bay shall conduct periodic audits. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. These audits shall focus on the effectiveness of the SSMP, compliance with State Order requirements, identification of any deficiencies and steps to correct them.

Findings:

The City of Morro Bay has embarked on this audit of its SSMP with timeliness to allow the auditor adequate time to investigate, gather evidence, analyze and then report sufficiency and findings, and finally, to make recommendations when appropriate. The audit is due in 2011. The next audit will be due in June of 2013 per recent direction from SWRCB staff . The SSMP must be re-certified by 2014 after updating the SSMP with elements recommended by the 2011 and 2013 audits together and with any program changes implemented by City of Morro Bay.

Reference: This is the first audit of the City of Morro Bay SSMP. This audit will become a reference for the 2013 audit.

Sufficiency: Complies. This document will be inserted in Element X of the SSMP and will comply with the *SSMP Program Audits* requirements of the State Order.

Recommendation: Continue the open communication within the City Departments and Division. Develop an implementation plan to address any deficiencies identified during the audit. Progress can then be acknowledged with the next audit or certification.

11. Audit of the Communication Program - State Order D.13.xi.

Review the activities of staff to determine if they have complied with the State Order by (a) communicating the performance of the SSMP with the public and with City of Morro Bay member agencies, and (b) providing the public and the member agencies the opportunity to provide input.

Findings:

The State Order requirements are complex and developing the first SSMP required comments and input from many stakeholder groups. The process of creating and adopting the SSMP was a publicly televised process. After the plans' adoption, the completed SSMP was uploaded to the City of Morro Bay website for general public review.

With the completion of each audit, the City of Morro Bay staff will share the audit findings with the member agencies and make the report available to the public by posting it on the City of Morro Bay website. As noted in the State Order the SSMP Audit is the mechanism to be used to measure SSMP performance and the best document for communicating performance.

The general public will have an opportunity to provide input with the certification every five years as required by the Brown Act (public notice requirements). The City televises these meetings and streams them online to provide multiple channels of communication.

Reference: SSMP, City of Morro Bay Web Page

Sufficiency: Complies. The City of Morro Bay's Element XI complies with the Communications Program requirements of the State Order.

Recommendation: It is recommended after each audit that the City of Morro Bay staff post this document online for easy public access.