



City of Morro Bay  
Sewer System Management Plan

**AUDIT REPORT**  
**2013**

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## **Summary**

The California State Water Resources Control Board's (SWRCB) Wastewater Discharge Requirements (WDRs) adopted on May 2, 2006, require owners of a wastewater collection system with more than a mile of pipeline have a Sewer System Management Program (SSMP) in order to reduce the number and severity of Sanitary Sewer Overflows (SSO). The SSMP program requires the agency to perform an internal audit of the SSMP every two years. This is the second audit since the City of Morro Bay adopted the SSMP in June 2009. The first audit occurred in June 2011. This audit meets the biennial WDR audit schedule.

This biennial audit of the City of Morro Bay's SSMP consisted of applying compliance rankings to all 11 sections of the SSMP requirements. The compliance rankings are based on the WDRs. Morro Bay City Staff reviewed all 11 sections of the SSMP based on ratings from compliance to non compliance, and all 11 sections were found to be in *compliance*. The findings of this audit will lead the performance of the Wastewater Collections Division until the scheduled 2014 re-write of the City's SSMP.

## **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 require 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 documents 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 identifies the City of Morro Bay's organization and staff responsible for implementing and maintaining the SSMP.
- The SSMP provides 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 staff compliance with its requirements, as shown in Section D-13 of the State Order. The internal audit must be performed at least every two (2) years, with the audit report kept on file at City of Morro Bay. 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 12 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 (Division), within the Public Services Department, to oversee the operations and maintenance of the collection system. The Division

operates under the general supervision of the Wastewater Division Manager. The Division includes a Collections System Supervisor and three levels of Wastewater Collection System Operators. Division Staff respond to sewage spills and other calls 24 hours a day, 7 days a week. To expedite cleaning and emergency response, the city owns and operates a combination cleaner (Hydro-Vac), a trailer-mounted jetter, four emergency generators, a diesel powered hydraulic pump, stocks an inventory of spare pumps and parts, confined space entry and safety equipment, and other tools and equipment. The Division does have a scheduled preventive maintenance and enhanced maintenance program to maintain the system, and contracts Closed Circuit Television (CCTV) inspection and records historical data about the system through the use of GIS sewer maps linked to the inspection videos, to prioritize maintenance activities. The programs satisfy the WDR. The WDR requires that these activities be assessed and codified by specified deadlines.

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 discharger's 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 and maintains their own SSMP, the City of Morro Bay does not consider them a satellite agency. The JPA agreement specifies the ownership and operational terms that define our legal standing and relationship.

This is the second internal audit of the SSMP. The first audit was completed in 2011. 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 Wastewater Collection 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:

**Goal 1:** Maintain and improve the sewer infrastructure within the City in a manner consistent with the adopted Sewer Collections System Master Plan updated in 2006 now and into the future.

**Compliance:** Ongoing. 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's per SSMP policies.

**Improvements:** completed to date to meet this goal include:

- Rehabilitated Lift Station 2 and 3 complete with new 20 ft depth wet wells and above ground chemical and electrical structure to minimize confined space entry.
- Installed 2,200 linear feet of 8 inch PVC force main.
- Installed 2,700 linear feet of 8 inch gravity main.
- Rehabilitated portions of Section 6:
  - Lined 2,100 feet of sewer main, on Balboa Ave. and Quintana Rd. and replaced eight manhole lids along the rehabilitated sewer main with Pamrex sealing manhole rings and covers.
- Rehabilitated portions of Section 1 & 3:
  - Replaced twenty-one manhole lids and rings with Pamrex sealing manhole rings and covers along North Main St.

**Future projects:** currently under development:

- Sewer line repair/replacement, manhole rehabilitation, and continued manhole ring and cover replacement with sealing manhole rings and covers.
- The Laurel Easement sewer line within Section 4
- Various rehabilitation projects for sections 3,4,5 and 12. Future plans include upgrades to Lift Station #1.

**Goal 2:** Reduce the number and impact of sanitary sewer overflows (SSO) that may occur throughout the City of Morro Bay.

**Compliance:** Ongoing. City staff's proactive maintenance effort, as outlined

in the SSMP, has decreased the frequency of SSOs. Collections staff maintains an SSO log as part of the SSMP and City of Morro Bay's reporting requirements.

- From June 2011 to June 2012, there were 2 SSOs reported to CIWQS. The maintenance program has been changed to mitigate root intrusion that lead to the first SSO. The second SSO has been corrected with the rehabilitation of Lift station 3.
- From June 2012 to June 2013, there was one SSO reported. This main line has been added to the chemical root treatment program.

**Future Projects:** Sewer line and manhole rehabilitations on an as needed basis. See Goals 1 and 3 for projects that help achieve this goal.

**Goal 3:** Cost-effectively minimizing inflow/infiltration (I/I) and provide adequate sewer capacity to accommodate design peak wet weather flow.

**Compliance:** Ongoing. There have been no wet weather related SSOs during this audit cycle, June 2011 to June 2013. We continue our efforts to install Pamrex sealing manhole rings, covers, and rain dishes.

**Improvements:** Because of sewer main and manhole rehabilitation in section 6, City Staff effectively reduced wet weather I/I in this section.

- Main Street Rehabilitation Project, minimizing stormwater from entering sewer manhole lids by replacing non-sealing with sealing manhole lids in the flow line of Main Street.
- CIPP rehabilitation to reduce I/I
- Manhole sealing

**Future Projects:** 1) Manhole rehabilitation projects. 2) Evaluate sewer mains using electro-scan technology. 3) Purchase flow monitoring equipment and analyze metered flow data.

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

**Compliance:** Ongoing. Annual communications and inspections at selected local business and commercial establishments regarding acceptable Best Management Practices (BMPs) for discharges to the sewer collection system.

**Future Actions:** to provide training to new employees and business owners on source control of discharges. Provide/continue public outreach to both residential and commercial Business owners on proper source control discharges. Various media are used to distribute education material; e.g. newsletters, city website, personal interactions and handouts.

**Goal 5:** Continue to monitor the State and Federal mandates, rules, and regulations as necessary.

**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. An annual calendar of reoccurring events has been created so that sampling or reporting are conducted in a timely manner.

**Future Actions:** Ongoing. Training with California Water Environment Association (CWEA), California Joint Powers Insurance Authority (CJPIA) safety training, local training, California Rural Water Association (CRWA), Sacramento water program and conversations with regulatory personnel.

Maintain a H<sub>2</sub>S monitoring program, this program uses an Odalog to measure and record H<sub>2</sub>S in the collection system. O&M Staff’s goal is to maintain an average H<sub>2</sub>S level at about 8ppm at a force main to gravity line interface. As the program expands, staff can monitor the H<sub>2</sub>S level in other areas of the system. Main lines with high H<sub>2</sub>S concentration may be added to the enhanced line cleaning schedule. Ultimately this program will protect the collection system and increase its life cycle.

**Goal 6:** Develop training programs for collections staff 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.

**Compliance:** Ongoing. Staff attended a workshop on SSO volume estimating, and crews participated in a “hands on SSO drill”. Training for new staff has also been provided. Certificate training for all field staff and maintaining at least 12 hours of contact hours required for re-certification of CWEA certification.

**Future Actions:** Expand on the “hands on SSO drill”, and field exercises with pipe replacements. Certificate training for all field staff and maintaining at least 12 hours of contact hours required for re-certification of CWEA certification.

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: Continue to implement programs designed to enhance of the management of operations and maintenance program for all parts of the system.

## **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 SSMP audits are available on the City's website. The SSO reporting Chain of Communication is also updated periodically and as needed.

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 be updated periodically and as needed. The chart is updated annually in the Agency's annual budget. Continued out-reach 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, prevention of illicit discharges and protecting public health and safety.

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 (i.e. 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 and operations program, (c) rehabilitation and replacement program, (d) operations and maintenance training program, and (e) part inventory program including identification of critical replacement parts.*

##### Findings:

- (a) *An up to date map of the sewer system that shows all pipe reaches, manholes, siphons, diversion structures, and pump stations, if any*
  - The City of Morro Bay maintains and updates GIS mapping and data tables for collection system assets. This information is accessed through the City of Morro Bay's server and asset maps are republished annually.
  
- (b) *A routine preventative maintenance and operations program*
  - Engineering and Collections system staff respond to field Underground Service Alerts (USA) and customer inquiries, staff actions are recorded.
  - The City of Morro Bay's Collection staff systematically performed and completed the CCTV inspection of the collection system ahead of the five year schedule outlined in the SSMP.
  - O&M staff completed routine sewer main cleaning and lift station maintenance, including enhanced line cleaning for problematic sewer mains. The main line cleaning is recorded in the Simms program.
  - The City continues a bi-annual chemical root control program. A contractor chemically treats mains with known root problems and newly discovered mains with roots.
  
- (c) *Rehabilitation and replacement program*
  - Collections system staff relays pipeline condition and other asset information to the engineering department. With this information Capital Improvement Projects (CIPs) are developed. The Engineering and Collections staff hold annual CIP meetings to develop and update the five-year schedule for near and long-term improvement projects to provide continuing support for the three lift stations and 14 sewer sections.
  - Replacement of two of the three sewer lift-stations and sewer line rehabilitation and projects throughout the 14 sewer sections..
  
- (d) *Operations and maintenance training program*

- Collection systems staff maintained standard trainings and certifications, per California Water Environment Association, Cal OSHA and City job requirements.
- (e) *Part inventory program including identification of critical replacement parts*
- Staff operates and maintains a combination cleaner (Hydro-Vac), four emergency generators, a by-pass pump, four trucks, a trailer-mounted jetter, and other equipment. Equipment and critical parts are 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 annually updates the 5-year Capital Improvement Projects (CIPs) to include the appropriate rehabilitation or upgrade projects for the three lift stations and 14 sections of sewer collections. Future projects include upgrades to lift station 1, mainline and other rehabilitation projects, chemical root control application in problem lines, and staff safety training.

## **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 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 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 June 2011 to June 2013, there were ten (10) SSO's within the City of Morro Bay service area:

Category 2 Private Laterals Sewage Discharges (PLSD) are usually not reported to CWIQS.

Private Laterals Sewage Discharges: 6 SSO's

Locations:

Surf Alley, September 14, 2012  
620 Monterey, October 28, 2012  
620 Monterey, October 29, 2012  
2198 Nutmeg, November 1, 2012  
620 Monterey, November 2, 2012  
465 Monterey, December 11, 2012 (reported to CIWQS as a category 2 PLSD)

Food Service Lateral: 1 SSO

Locations:

781 Quintana Rd, Burger King, July 19, 2011

Industrial Service Lateral: 0 SSO

Location:

Main Sewer Line: 3 SSO's

Location: 2680 Maple, May 1, 2012  
1495 Quintana, Lift Station 3, May 25, 2012  
245 Capri, March 25, 2013

City staff's proactive maintenance effort, as outlined in the SSMP, has decreased the frequency of SSOs. Collections staff maintains a SSO log as part of the SSMP and City of Morro Bay's reporting requirements.

- From June 2011 to June 2012, there were 2 Reported SSOs. The maintenance program has been changed to mitigate this potential

problem for the first SSO. The second SSO has been corrected with the rehabilitation of Lift station 3.

- From June 2012 to June 2013, there was one SSO reported.

The Collections Department maintains a series of forms to outline all proper procedures to be followed during an SSO. The notification checklist is updated periodically, verified for completeness and shared with other local agencies. Notification will be made to the required agency within the established time limit contained within the WDR.

Reference: *Overflow Emergency Response Plan*, City of Morro Bay SSMP, Appendix B

State Waste Discharge Requirements, City of Morro Bay SSMP, Appendix B, Attachment A

Notification Checklist, City of Morro Bay SSMP, Appendix B, Attachment C

Sewage Spill Report, 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: Conduct SSO response training and Public Outreach.

- One SSO "drill" training was completed this audit cycle and staff plans to implement more "SSO drills" next audit cycle. These drills are intended for off-duty personnel (on-call basis) for all collection crewmembers since the frequency of actual events has been greatly reduced. Training will emphasize protocols 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.
- Create a spreadsheet for FOG inspections similar to SSO reports.

- Continue dialog between Collection Division and Engineering Division to ensure FOG deficiencies are addressed through the Development Review process and City Standard Drawings are regularly updated.

## **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 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). During this audit cycle, 2011-2013, there were no SSO's reported or observed related to hydraulic deficiencies.

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 regularly. 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 Division tracks projects, their financial costs, and the distribution of those costs throughout the duration of projects. Maintenance and repair projects are prioritized based on structural conditions and frequency of operating problems.

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 and Engineering departments regarding assessment of the sewer main, regularly scheduled maintenance, any incidents involving potential SSO, and the development review process.
- Continue to investigate and 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 Wastewater Collection Division. The Collection Division staff are the first responders and collect the field information, and notify the appropriate departments. 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 of SSO (structural failure, FOG, roots, debris, etc.)

From June 2011 to June 2012, there were 2 reported SSOs. The maintenance program has been changed to mitigate this potential problem for the first SSO. The second SSO has been corrected with the rehabilitation of Lift station 3.

From June 2012 to June 2013, there was one SSO reported.

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 June 2013. The next audit will be due in June of 2016 per direction from RWRCB 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 second audit of the City of Morro Bay SSMP. This audit will become a reference for the 2014 SSMP and 2016 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. To re-certify the SSMP, by June 2014, will require comments and input from many stakeholder groups. The process of updating and adopting the revised SSMP will be a publicly televised process. After the city council adopts the completed SSMP, it will be available for public review on the City of Morro Bay's website.

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 on the SSMP during the certification process 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 public access.