



## Table of Contents

Section	Page
<b>Introduction.....</b>	<b>1</b>
Regulatory Requirement .....	1
Collection System Description.....	1
Wastewater Collections Division .....	1
Source Control and Fats, Oil and Grease (FOG).....	2
SSMP Development Plan and Schedule .....	2
Electronic reporting of Sewer System Overflows (SSO) .....	2
Collection System Assessment.....	3
Plan and Schedule.....	3
The Eleven Elements of the SSMP: .....	3
SSMP Element Progress.....	5
Glossary and Acronyms.....	6
<b>Element I: Goals.....</b>	<b>10</b>
SWRCB Requirement.....	10
Mission Statement and Goals.....	10
<b>Element II: Organization.....</b>	<b>11</b>
SWRCB Requirement.....	11
<b>Element III: Legal Authority.....</b>	<b>14</b>
SWRCB Requirement.....	14
Legal Authority Discussion .....	15
3a. Prevention of Illicit Discharges .....	16
3b. Proper Design and Installation of Sewers and Connections .....	18
3c. Lateral Maintenance Access.....	19
3d. Limited Discharge of FOG and Other Debris .....	20
3e. Enforcement Measures.....	21
Satellite Collection Systems .....	22
<b>Element IV: Operation and Maintenance.....</b>	<b>23</b>
SWRCB Requirement.....	23
4a. Collection System Maps .....	25
4b. Preventive Operation and Maintenance.....	27
Daily .....	27
Monthly Tasks.....	30
Annual Tasks.....	31
4c. Rehabilitation and Replacement Plan .....	33
Mainline Repairs .....	33
Manhole Repairs.....	34
Lift Station Repairs.....	35
4d. Staff Training .....	36
4e. Contingency Equipment and Replacement Inventories .....	38
<b>Element V: Design and Performance Provisions.....</b>	<b>39</b>
SWRCB Requirement.....	39
Element 5. Design and Performance Provisions .....	39

5a. Standards for Installation, Rehabilitation and Repair .....	40
5b. Standards for Inspection and Testing of New, Rehabilitated, and Repaired Facilities .....	41
<b>Element VI: Overflow Emergency Response Plan .....</b>	<b>42</b>
SWRCB Requirement.....	42
Overflow Emergency Response Plan Discussion .....	43
Laterals.....	43
Current Information .....	43
Categories of Sewer System Overflows (SSO's).....	44
Reporting of SSO's.....	45
Overflow Policies and guidelines.....	46
Spills on private property.....	47
Private Property spills to city streets .....	47
Traffic and crowd control .....	47
Lift Station Policies .....	47
Station By-pass.....	47
Telemetry and Electrical Problems.....	48
<b>Element VII: FOG Control Program .....</b>	<b>49</b>
Traps and Interceptors .....	49
SWRCB Requirement.....	51
FOG Control Discussion.....	52
Identification and Sewer Cleaning .....	53
Legal Authority to Control Sources of FOG.....	54
Legal authority to prohibit discharges .....	54
Authority to install grease, oil and sand interceptors .....	55
Grease, oil and sand interceptors-Maintenance.....	55
Manhole installation .....	55
Inspection of premises .....	56
Enforcement measures where appropriate .....	56
Facility Inspection .....	57
Public Outreach.....	58
<b>Element VIII: System Evaluation and Capacity Assurance Plan.....</b>	<b>59</b>
SWRCB Requirement.....	59
Element 8. Evaluation and Capacity Assurance Plan.....	59
8b. Design Criteria:.....	59
8c. Capacity Enhancement Measures: .....	59
8d. Schedule: .....	60
8a. System Evaluation .....	60
Hydraulic Model.....	60
Flow Estimates .....	60
8b. Design Criteria .....	61
8c. Capacity Enhancement Measures .....	61
8d. Capital Improvement Schedule .....	62
<b>Element IX: Monitoring, Measurement, and Program Modification .....</b>	<b>63</b>
SWRCB Requirement.....	63

Element 9. Monitoring, Measurement, and Program Modification .....	63
9a. Maintain Relevant Information .....	64
9b. Monitor and Measure the Effectiveness .....	65
Element I: Goals .....	65
Element II: Organization.....	65
Element III: Legal Authority.....	65
Element IV: Operation and Maintenance Program .....	65
Element V: Design and Performance Provisions .....	65
Element VI: Overflow Emergency Response Plan .....	66
Element VII: F.O.G. Control Program .....	66
Element VIII: System Evaluation and Capacity Assurance Plan.....	66
Element XI: Communication Program .....	66
9c. Success of Preventative Maintenance .....	67
9d. Update Program Elements .....	67
9e. Identify and Illustrate SSO Trends .....	67
<b>Element X: SSMP Program Audits .....</b>	<b>68</b>
SWRCB Requirement.....	68
Element 10. SSMP Program Audits .....	68
SSMP Program Audits.....	68
<b>Element XI: Communication Program .....</b>	<b>69</b>
SWRCB Requirement.....	69
Communication Program for Development of SSMP.....	70
Communication Program for Implementation of SSMP .....	70
Communication Program with Satellite Systems.....	71
<b>Appendix A.....</b>	<b>A</b>
Attachment A: City of Morro Bay Municipal Code Chapter 13.12 SEWERS.....	A
Attachment B: City of Morro Bay Standard Specifications: 8. SEWERAGE .....	A
Attachment C: City of Morro Bay Standard Drawings: Sewer Section.....	A
<b>Appendix B .....</b>	<b>B</b>
Attachment A: State Waste Discharge Requirements.....	B
Attachment B: Emergency Notification Numbers .....	B
Attachment C: Notification Checklist .....	B
Attachment D: Sewage Spill Report.....	B
Attachment E: Chain of Custody .....	B
Attachment F: Job Cost Record .....	B
Attachment G: Notice Concerning Private Property Back-ups .....	B
Attachment H: Claim Form and Instructions.....	B
<b>Appendix C.....</b>	<b>C</b>
Attachment A: June 2008 Newsletter .....	C
Attachment B: Sample “No Grease/No Grasa” Sticker.....	C
Attachment C: Sample Maintenance Log.....	C
Attachment D: Sample Disposal Tips .....	C
Attachment E: Fats, Oils, and Grease Brochure / Best Management Practices.....	C
Attachment F: Sample Site Visit/Trap Inspection Page .....	C

# Introduction

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## **Regulatory Requirement**

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 (WDR). The WDR 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, comply with the requirements of the WDR.

The City of Morro Bay (City) owns and operates a wastewater collection system more than one mile in length that conveys untreated wastewater to a publicly owned treatment works (POTW) and therefore is required to comply with the WDR. The City submitted a Notice of Intent (NOI) to the SWRCB on October 4, 2006 for coverage under the WDR and has developed this Sewer System Management Plan (SSMP) according to the Development Plan and Schedule.

## **Collection System Description**

The City of Morro Bay's collection system serves residential and commercial users. The collection system 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 mainlines are made of a variety of materials, depending on the age; terra cotta salt glazed pipe, vitrified clay pipe (VCP), polyvinyl chloride (PVC), asbestos concrete (AC) and cast iron. The lift stations include 2 Flooded Suction Stations with wet pit/dry pit configuration and 1 with submersible pumps and an above ground control panel.

Satellite agencies include the San Luis Coastal Unified School District, the State Parks (2) at the north end of town and south end of town, and the Bayshore Village Home Owners Association.

## **Wastewater Collections Division**

The City has a separate Wastewater Collections Division, to oversee the operations and maintenance of the collection system. The Department operates under the general supervision of the Public Services Director and 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), 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 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, to prioritize maintenance activities. The programs meet many of the requirements of the WDR. The WDR requires that these activities be assessed and codified by specified deadlines.

### **Source Control and Fats, Oil and Grease (FOG)**

In 1999 businesses in Morro Bay were surveyed for possible industrial-waste discharges. The survey included business names, addresses, names of contacts, telephone numbers, inventories of chemicals, discharge volumes, and other pertinent information. Based on this information and a master list of businesses developed from business license applications, certain businesses were found to have no potential for industrial discharge, such as offices, and retail stores. Others were excluded from further consideration as industrial dischargers because they discharged only domestic wastewater. For the remaining industries, waste discharge volumes were estimated in proportion to water usage determined from billing records provided by the City Water Department. Follow-up activities for these businesses include scheduled return visits, surprise on-site inspections and formal tours of the facilities. These include a commercial laundry, car washes, a dry cleaner, print shops and the oil-water separator maintained by the Harbor Department.

In 2002, restaurants were surveyed for grease removal devices. Based on this survey a grease trap and interceptor program was begun. A Site Visit Book (SVB) was developed and inspections were begun. At this point there is a ‘hard-copy’ record and a digital record on the computer in the collection area.

### **SSMP Development Plan and Schedule**

The development Plan and Schedule outlines the plan actions to be taken, and compliance dates that the city will have in the development of the SSMP. This document is required to be approved by the City Council during a public meeting. Therefore the City Council asked that most elements be submitted 2 months or more earlier than the WDRs require. While numerous development action items are already in place, some of the items will need to be documented in writing. The City will complete each of the eleven SSMP elements by the City Council’s scheduled submission date and complete the document by the SWRCB compliance date. This task will be completed by the Collection Division and Public Services Department.

### **Electronic reporting of Sewer System Overflows (SSO)**

All Enrollees were required to obtain SSO Database accounts and receive a “Username” and “Password” by registering through the California Integrated Water Quality System (CIWQS) web-site. Additionally, within 30 days of receiving an account and prior to recording SSOs into the database, all enrollees were required to complete the “Collection System Questionnaire”, which collects pertinent information regarding an Enrollee’s

collection system. This questionnaire must be updated at least annually. The questionnaire was completed on April 17, 2007 and has been updated as changes have been made. The Morro Bay Collection System has been assigned a Waste Dischargers Identification Number (WDID) of 3 SSO 11429.

Electronic reporting of SSOs was begun on May 2, 2007. This reporting of Category 1 and Category 2 SSOs and other spills will be ongoing. The Collection Department maintains a spread-sheet regarding SSOs on the City's computer network shared drive, it is kept up-to-date listing all spills including private laterals. Written spill reports will be maintained at the Collection Department Office, and will be reported on the Monthly Operation Summary.

### **Collection System Assessment**

The City is conducting a sewer system management assessment to identify activities that the City needs to meet the requirements of the WDR. This assessment will show which of the Collection Department's activities meet the requirements of the WDR, and which need to be created, modified, or expanded. This program will be on-going, and the document being created will be expandable and editable.

### **Plan and Schedule**

The first steps in the WDR were to file the Notice of Intent, fill out the questionnaire and begin electronic reporting of SSO's. The step that followed was to present the Plan and Schedule to the governing body for approval. At the regular meeting of the City Council on October 8, 2007, Item A-7 Preparation and Adoption of the Sewer System Management Plan was presented, along with Task #1-Goals, and Task #2- Agency Organizational Structure and SSO Reporting Chain of Communication. The City Council Amended the submission dates and asked to be included in the notification chain of communication. Submission dates were April 6, 2009 and May 2, 2009, giving a two month lead to the council for approval before the required SWRCB due dates. The motion as amended was carried unanimously.

### **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. Mapping
  - b. Preventative Maintenance Program
  - c. Rehabilitation and replacement program
  - d. Inspection Program
  - e. Staff training
  - f. 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 SSOs
  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

## SSMP Element Progress

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Required Elements	Our Status	State Deadline
Goals	October 2007 Council	Nov. 1, 2007
Organization	October 2007 Council	Nov. 1, 2007
Legal Authority	January 2009 PWAB March 2009 Council	May 1, 2009
Operations and Maintenance Program	February 2009 PWAB March 2009 Council	May 1, 2009
Design and Performance Provisions	April 2008 PWAB June 2009 Council	August 1, 2009
Overflow Emergency Response Plan	February 2008 PWAB March 2009 Council	May 1, 2009
F.O.G Control Program	September 2008 PWAB March 2009 Council	May 1, 2009
System Evaluation and Capacity Assurance Plan	May 2008 PWAB June 2009 Council	August 1, 2009
Plan Audits/ Monitoring	May 2008 PWAB June 2009 Council	August 1, 2009
SSMP Program Audits	May 2008 PWAB June 2009 Council	August 1, 2009
Communications Program	April 2008 PWAB June 2009 Council	August 1, 2009

# Glossary and Acronyms

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Terms and acronyms used in this document and/or the Statewide GWDR, along with their definitions, are as follows:

**AR or (Authorized Representatives)**- The person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or a duly authorized representative of that person.

**BAT**- Best Available Technology

**Blockage or stoppage**- something that fully or partially blocks the wastewater from flowing through a sewer pipeline.

**BMP**- Best Management Practice

**CWEA (California Water Environment Association)**- CWEA is an association of professionals in the wastewater field. CWEA trains and certifies wastewater professionals, disseminates technical information, and promotes sound policies to protect and enhance the water environment. CWEA provides technical references for sewer system operation and maintenance.

**CCTV**- Closed Circuit Television

**CFR**- Code of Federal Regulations

**CIP**- Capital Improvement Program

**CIWQS (California Integrated Water Quality System)**- All SSO reporting is done on the CIWQS website.

**CMMS**- Computerized Maintenance Management System

**Clean-out or CO**- Access hole on a sewer line, normally at the end of the line and normally smaller than a manhole.

**Dynamic Model**- Computer hydraulic model simulation that solves dynamic flow equations for accurate simulation of backwater, looped connections, surcharging, and pressure flow in a collection system.

**FOG (Fats, Oils and Grease)**- Fats, Oils and Grease that are discharged into the sanitary sewer system by food service establishments (FSE), homes, apartments, retirement homes, and other sources. FOG is a major cause of blockages leading to increased maintenance and sometimes SSOs.

**FOG Control Program-** Establishes criteria for FOG discharge at various businesses.

**GIS (Geographical Information System)-** A database linked with mapping, which includes various layers of information, such as sewer maps, storm drain maps, parcels and other features. The City uses ARCGIS.

**Governing Board-** In the City of Morro Bay this is the City Council.

**GPS-** Global Positioning System

**GWDR or WDR (General Waste Discharge Requirements)-** An authorization to discharge waste with certain conditions. Differs from an NPDES permit in that WDRs do not sunset. The Statewide General WDR for Sewer systems was adopted by the SWRCB and will be implemented by RWQCB and SWRCB.

**I/I-** Infiltration and Inflow

**Infiltration-** The seepage of groundwater into a sewer system, including service connections. Seepage can be through cracked pipes, pipe joints, connections, or manhole walls and joints.

**Inflow-** Water discharged into a sewer system and service connections from roof leaders, cellars, yard and area drains, foundation drains, springs, swampy areas, around manhole covers, surface runoff, drainage etc. Inflow differs from infiltration in that it is a direct discharge into the sewer rather than a leak.

**Lamphole-** In the past this was used to lower a lamp into the line for inspection. They are currently used the same as an end of the line clean-out.

**Lateral-** The portion of a sewer that connects the customer with the City's main line.

**Upper lateral:** Portion from the building to the property line.

**Lower Lateral:** Portion from the property line to the sewer main either in an easement or street. Upper and lower lateral are privately owned and maintained.

**Lift Station (LS) or Pump Station-** A station with redundant pumps, that raises sewage to a level from which it can flow by gravity.

**LRO (Legally Responsible Official)-** The person representing the enrollee, that certifies SSO reports to the CIWQS website.

**Manhole or MH-** Access hole on a sewer line with cones and barrels. Installed every 300-400 feet to facilitate cleaning, or change in direction.

**MRP (Monitoring and Reporting Program)-** Established in the WDR for monitoring, reporting, recording and public notification requirements of the WDR.

**O&M-** Operation and Maintenance

**OES-** Office of Emergency Services

**Order-** SWRCB Order No. 2006-0003-DWQ adopted May 2, 2006

**OERP (Overflow Emergency Response Plan)-** Identifies a plan for notification procedure, appropriate response, procedures to address emergency operations and insure that all reasonable steps are taken to contain and prevent discharges.

**PM (Preventive Maintenance)-** Regularly scheduled servicing of machines, infrastructure and other equipment.

**R&R-** Rehabilitation and Replacement, can also be CIP.

**RWQCB (Regional Water Quality Control Board)-** The City is in Region 3.

**POTW-** Publicly Owned Treatment Works (WWTP)

**SCADA (Supervisory Control and Data Acquisition)-** A computerized control and data recording system that operates a wastewater, treatment or water system remotely, recording operational data.

**SOP-** Standard Operating Procedure

**SSO (Sanitary Sewer Overflow)-** Any overflow, spill, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system.

Category 1: All discharges that are equal to or greater than 1000 gallons; result in a discharge to a drainage channel, surface water, or drainpipe that was not fully captured and returned to the system.

Category 2: All other releases from the enrollees sewer system.

Private Lateral Sewage Discharges: Spills caused by blockages or other problems from private property.

**SSMP (Sewer System Management Plan)-** This plan is different from the Sewer System Master Plan. The management plan preparation was required by the SWRCB Order No. 2006-0003, State General Waste Discharge Requirements for Sanitary Sewer Systems (WDR or GWDR).

**SCSMP (Sewer Collection System Master Plan)-** This refers to the Master Plan submitted by the Wallace Group in 2006 also referred to as the Wallace report 2006.

**Sanitary Sewer System-** A system of pipes, pump stations, sewer lines or other conveyances upstream of the Wastewater Treatment Plant, used to collect and transport wastewater to the publicly owned treatment works.

**Satellite Collection System or Agency-** The portion of the system owned and operated by an agency other than the agency that owns the wastewater treatment plant, to which the sewer system is tributary.

**SWRCB or State Board (State Water Resources Control Board)-** The State agency that developed and passed the GWDR (WDR) for collection systems.

**WWC-** Wastewater Collections

**WWTP-** Wastewater Treatment Plant

# Element I: Goals

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The collection system agency must develop goals to manage, operate, and maintain all parts of its collection system. The goals should address the provision of adequate capacity to convey peak wastewater flows, as well as a reduction in the frequency of sanitary sewer overflows (SSOs) and the mitigation of their impacts.

## SWRCB Requirement

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The collection system agency must develop goals to properly manage, operate, and maintain all parts of its wastewater collection system in order to reduce and prevent SSOs, as well as to mitigate any SSOs that occur.

## Mission Statement and Goals

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The mission of the Collections Division is to preserve and enhance the quality of life in the City of Morro Bay and to protect the public health and the environment by collecting and conveying wastewater in a safe, environmentally conscientious, and efficient manner.

This can most readily be accomplished by:

- Maintaining and improving the sewer lines and lift stations within the City in a manner consistent with the adopted Sewer System Master Plan now and into the future.
- Aggressively minimizing the number and impact of sanitary sewer overflows (SSOs) that may occur throughout the City of Morro Bay.
- Cost-effectively minimizing inflow/infiltration (I/I) and provide adequate sewer capacity to accommodate design storm flows.
- Controlling source discharges to the Wastewater Treatment Plant in accord with State and Federal regulations.
- Developing and implementing programs necessary to comply with State and Federal mandates, rules, and regulations.

# Element II: Organization

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The collection system agency's SSMP must identify staff responsible for implementing measures outlined in the SSMP, including management, administration, and maintenance positions. Identify the chain of communication for reporting and responding to SSOs.

## SWRCB Requirement

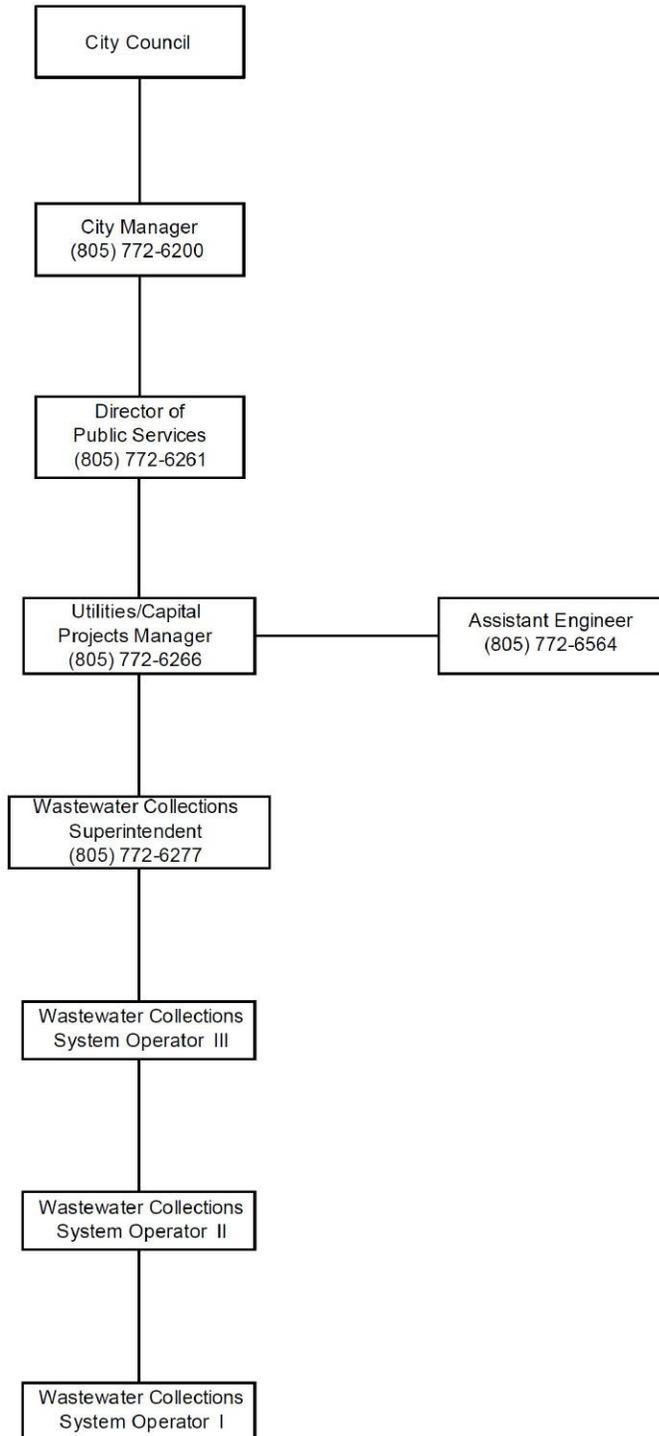
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The collection system agency's SSMP must identify:

- (a) The name of the responsible or authorized representative;
- (b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation; and
- (c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

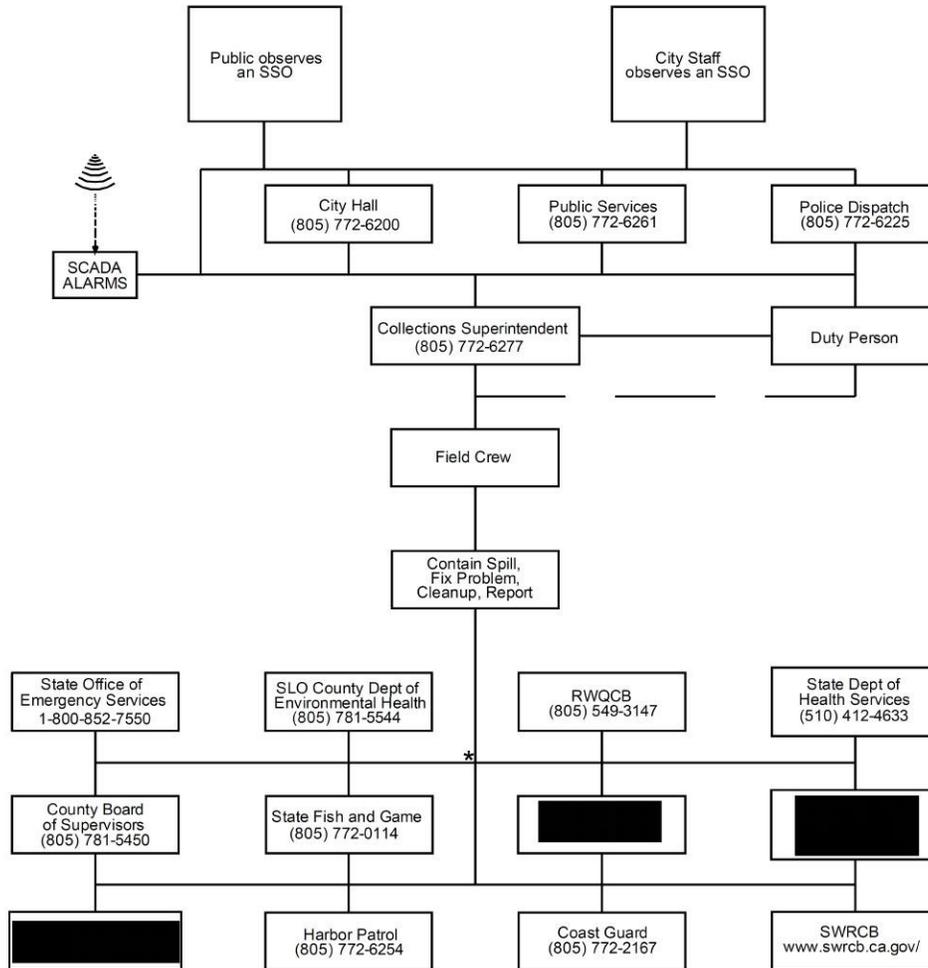
# City of Morro Bay - WDR Compliance

## Agency Organization



# City of Morro Bay - WDR Compliance

## SSO Reporting Chain of Communication



\*Notes: 1.) Additional contact information (once available) can be found on the following sheet, labelled "Revised Emergency Notification Numbers."  
 2.) Blacked out boxes contain private party information not intended for public use.

# Element III: Legal Authority

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This section of the SSMP discusses the City of Morro Bay's Legal Authority including Municipal Code and agreements with other agencies. This section is to fulfill the Legal Authority element of the SWRCB (Element 3) SSMP requirements.

## SWRCB Requirement

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The City must demonstrate, through collection system use ordinances, service agreements, or other legally binding procedures that it possesses the necessary legal authority to:

- (a) Prevent illicit discharges into its wastewater collection system (examples may include infiltration and inflow (I/I), stormwater, chemical dumping, unauthorized debris and cut roots, etc.);
- (b) Require that sewers and connections be properly designed and constructed;
- (c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
- (d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and;
- (e) Enforce any violation of its sewer ordinances.

# Legal Authority Discussion

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The City of Morro Bay's Municipal Code, Standard Specifications and Development Fee Schedule contain the legal authority the SSMP by the SWRCB requires.

- (a) Chapter 13.12 Sewers of the Municipal Code is dedicated to the city's sewer system. This chapter contains sections stating the city's requirements for the use of sanitary sewer within the city. This chapter includes provisions to protect public health and prevent pollution.
- (b) Title 8 of the Standard Specifications contains the city's requirements for the construction of sanitary sewer facilities installed, altered, or repaired within the city.
- (c) Development Fee Schedule contains policies pertaining to fees, including service charges, billing and collection, and calculation of fees.

Chapter 13.12 of the Municipal Code and Title 8 of the Standard Specifications are included in full in Appendix A. Segments of these documents are discussed in the following sub-sections as they pertain to the prevention of illicit discharges, proper design and construction of sewer mains and connections, maintenance access, and enforcement measures.

## 3a. Prevention of Illicit Discharges

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Chapter 13.12 outlines legal discharges to the City of Morro Bay's sewer system. The chapter also contains measures prohibiting illicit discharges to prevent damage to the collection system, treatment process, or cause harm to the public health or environment.

- (a) Stormwater and I/I Section 13.12.100 prohibits the discharge or cause of discharge of any stormwater, surface water, groundwater, roof runoff, subsurface drainage, unpolluted industrial cooling or unpolluted industrial process waters to any sanitary sewer. Section 13.12.110 requires that all unpolluted discharge shall be discharges to such sewers as are specifically designated as combined sewers or storm sewers, or to a natural outlet approved by the director of public works. Unpolluted industrial cooling or unpolluted process waters maybe discharged, upon approval of the director of public works, to a storm sewer, combined sewer or natural outlet.
- (b) Prohibited discharges Section 13.12.120 prohibits the discharge or cause of discharge of any of the following described waters or wastes to any public sewers.
- Any liquid or vapor having a treatment temperature higher than one hundred fifty degrees Fahrenheit;
  - Any water or waste which may contain more than one hundred parts per million, by weight, of fat, oil, or grease;
  - Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas;
  - Any garbage that has not been properly shredded;
  - Any ashes cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure, or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works;
  - Any water or wastes having a pH lower than 5.5 or higher than 9.0, or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works;
  - Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment process, constitute a hazard to humans, plants or animals, or create any hazard in the receiving waters of the sewage treatment plant;
  - Any waters or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant;
  - Any noxious or malodorous gas or substance capable of creating a public nuisance;
  - Any wastes which will exceed the limitations set forth in federal pretreatment standards;
  - Any wastes which will interfere with the disposal, reclamation or refuse of the wastewater treatment plant effluent or sludge;

- Any wastes which will cause the wastewater treatment plant to violate its NPDES permit;
- Any radioactive wastes or isotopes or half-life or concentration which exceed limits established by the water quality control superintendent;
- Any wastes which cause a hazard to human life or create a public nuisance.

## **3b. Proper Design and Installation of Sewers and Connections**

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Regulations pertaining to the design, construction and inspection of private sewer systems, building sewers, and connections are included in Chapter 10.12 of the Municipal Code and Title 8 of the Standard Specifications.

- (a) Permit Required
- (b) Design Requirements Section 8.02 of the Standard Specifications specifies the minimum size and slope of a building sewer. Design requirements are contained in the Standard Specifications and are assessed and revised on a 2 year basis or as needed.
- (c) Installation of Sewers Section 8.09 states the requirements of lines and grades, trench widths, excavation for sewers, bracing and shoring, laying of pipe, trench backfill, testing of sewer lines, and cleaning for the construction of all sewer lines and connections.

### **3c. Lateral Maintenance Access**

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Property owners are responsible for maintaining in satisfactory and effective operation the street and sewer laterals all the way to the main lateral. The city has a map of city maintained sanitary sewer system.

The director of public works has the authority to enter all properties or send an authorized representative of the city, without prior notice, for the purpose of inspecting, sampling and testing in accordance with the provisions of chapter 13.12 of the Municipal Code.

### **3d. Limited Discharge of FOG and Other Debris**

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The Fats, Oils, and Grease (FOG) Control Program contained in this SSMP goes into depth about the city's FOG control measures. Section 13.12.120 of the Municipal Code prohibits specific discharges including any waste containing more than one hundred parts per million, by weight, of fat oil, or grease.

Debris discharge into the City of Morro Bay's sanitary sewer is prohibited as a discharge in section 13.12.120 which prohibits the discharge of any ashes cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure, or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works.

## **3e. Enforcement Measures**

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The City of Morro Bay holds legal right to terminate water service through section 13.12.310 of the Municipal Code if any user fails to meet the requirements set forth in chapter 13.12. The director of public works shall have the authority to terminate water service or use alternate actions to protect the wastewater treatment facilities, employees, and surrounding environment from hazardous discharges.

Section 13.12.320 holds any person violating a provision of chapter 13.12 liable for all damages resulting from such violation, or which arise from actions taken in the correction of such violation, which are incurred by the city. These damages include but are not limited to attorney's fees, court costs, and fines levied on the city by regulatory agencies.

# Satellite Collection Systems

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There are several agencies that discharge to the City wastewater collection system that we consider to be satellite agencies. These are:

1. Morro Bay High School (San Luis Coastal Unified School District)
2. Morro Bay State Park (2 sources)
3. Bayshore Village Home Owners Association

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

The Cayucos Sanitary District (CSD) does discharge to the Wastewater Treatment Plant through both a separate main and a shared main. Our 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 both the sewer main and the WWTP. We do not consider them to be a satellite agency.

The current Joint Powers Agreement with the CSD, is being assessed and is currently under review for an update in conjunction with an upgrade to the WWTP. This agreement specifies ownership and operational contract that detail our legal standing.

# Element IV: Operation and Maintenance

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The Wastewater Collection Division is responsible for the inspection and maintenance of approximately 60 miles of sewer line; three lift stations; more than 1100 manholes/cleanouts; and the equipment and facilities related to collections. Staff is charged with public relations, implementation of a pretreatment program, implementation of a FOG program, and other programs as necessary to ensure compliance with Federal and State law. Staff also monitors, schedules, and performs repairs, video inspections, construction, and lateral work. In addition, staff records historical information concerning the system and/or repairs, changes or other information.

Staff maintains a systematic video inspection of the sewer lines, and a systematic root control program. Staff maintains all the lines in town and cleans them on a two-year schedule. Lines that have been identified as problem areas are cleaned on a more frequent basis.

Employees are on call twenty-four hours a day, 365 days a year to respond to calls and emergencies.

Staff operates and maintains a combination cleaner (Hydro-Vac), three emergency generators, a by-pass pump, a service truck and other equipment.

## SWRCB Requirement

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### **Element 4. Operations and Maintenance Program**

The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's (City of Morro Bay) system:

#### **4a. Collection System Map**

Each wastewater collection system agency shall maintain up-to-date maps of its wastewater collection system facilities, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater pumping and piping facilities.

#### **4b. Preventive Operation and Maintenance**

Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventive Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders.

#### **4c. Rehabilitation and Replacement Plan**

Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the conditions of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short-term and long-term plans plus a schedule for developing the funds needed for the capital improvement plan.

#### **4d. Training**

Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained.

#### **4e. Contingency Equipment and Replacement Inventories**

Provide equipment and replacement part inventories, including identification of critical replacement parts.

## 4a. Collection System Maps

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The Collection Division has and maintains a hand-drawn set of maps used in the field for maintenance and line cleaning. This set of maps divides the City into 14 numbered sections. All manholes are numbered and all sewer line distances are labeled. There are additional notations on these maps concerning street names, force mains, valves, manholes with weirs, lift station locations, and pipe diameters, to aid the collections team during routine cleaning and maintenance.

On these maps, the numbering system generally follows flow direction, in that the lower numbers indicate either the highest point in a section, the end of a line, or where one section ties into another. Additionally, clean-outs and lampholes are also numbered. This set of maps was updated in 2007, and is constantly being updated. When errors in distance or other issues are noticed they are updated on the maps. The information is then passed to the engineering department for inclusion in the digital Geographical Information System (GIS) sewer database described below.

The division has begun a program of recording lateral information as it is gathered, and recording this information on the master set of maps at the Public Services Office. The collected lateral information includes distance from the property line, depth at the property line, date of installation and contractor. This information is recorded on a form with an attached sketch that is kept at the division office with the sewer encroachment permit. The sketch and form are filled out by collections department staff with each lateral inspection.

There are as-built drawings of the three lift stations in the Collection Division office and at the Public Services office. These contain engineering information and drawings of each station. The most complete set of as-built drawings can be found in the Public Services office. There are areas of Morro Bay where sufficient as-built information does not exist. Some portions of the sewer were built prior to the incorporation of the City, and recorded information is scarce or nonexistent.

There is also a Geographical Information System (GIS) called ARCGIS available at the Public Services office. This program is being updated and assessed for accuracy. This program has more information and numerous layers that can be added to the mapping system. As this program is updated and becomes more complete the Division will incorporate its use into system operation and maintenance.

Currently engineering staff and collection operators are updating the ARCGIS system and numbering the manholes, cleanouts and sections to mirror the hand drawn maps used for routine cleaning and maintenance. As this work is completed these maps will replace the hand drawn map set and will serve as a constant repository for as-built information.

The Public Services Division also has and maintains a map of the stormdrain system. Maintenance of the stormdrain maps are the responsibility of the Streets and Stormdrain Department which is permitted under a separate NPDES permit issued by the RWQCB.

Work has begun on the updating and recording of GPS data concerning the stormdrains. The stormdrain system can also be laid over the ARCGIS system to enable rapid location of stormwater conveyance facilities in the event of a sewer spill.

In summary, the Public Services Department maintains as-built maps and databases, with the assistance of field staff. As time goes on, the continuous effort required to collect and record as-built documentation will lead to the creation of an even more complete and accurate sets of maps for use in both the office and field.

## **4b. Preventive Operation and Maintenance**

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Routine operations and maintenance activities are most readily categorized by dividing them into the normal frequency of occurrence. The time intervals we use are:

- Daily
- Monthly
- Semi-Annual
- Annual
- Others

### **Daily**

Vehicles are checked, the atmospheric monitor is either ‘bump’ tested or calibrated and logged, then morning rounds are performed. Morning rounds consist of Lift Station checks, USA marking, and inspections on known problem areas.

#### **Safety and Vehicle Inspection**

Safety equipment is checked for faults and preparedness daily to ensure it is able to be used in response to an emergency. Vehicles are inspected and maintenance is performed if any problems are found to ensure a reliable operating vehicle fleet.

#### **Underground Service Alerts**

Each day operations staff checks for Underground Service Alerts (USAs) that have been received by the Public Services Department. The Administration Utilities Tech forwards all requests to the Collection Division computer. The underground utilities are marked in the field, the operator initials the USA ticket, and dates the form. A record of this activity is then logged in the daily log and the completed USA ticket is passed on to the Water Department for their use.

#### **Lift Station checks**

Each lift station is checked daily. Entry into the underground lift stations requires use of confined space entry procedures. An atmospheric monitor is used to assess the atmosphere inside the lift station. After the atmosphere is checked staff may enter the lift station. Station entry can only be performed by a confined space certified entrant with the necessary stand-by personnel onsite. No entries are performed without both confined space certified and stand-by personnel. If any pumps, plumbing or electrical work is done two trained stand-by personnel are required in addition to the trained worker who is performing the work.

Station performance is checked by running each pump in the hand position, listening to the pump, checking for heat or vibration, and observing the check

valve operation. Pump seals are checked for leakage and the sump is checked. Hour meter readings and atmospheric monitor readings are recorded on the lift station record sheets. The general condition of each station is noted. Pumps are always returned to the auto position. Any abnormal operations are assessed and immediately necessary repairs are performed, charts are logged into the daily log, reported to supervisory staff, and additional work or maintenance is scheduled.

Morning rounds can also include inspection of areas that have had known problems and also may include 'blind' areas where a Sanitary Sewer Overflow (SSO) could potentially go unnoticed such as easements and creek crossings.

Electrical issues that cannot be solved or repaired will be contracted to a local electrician for assessment and repair.

Following the daily rounds noted above, the staff performs various other scheduled tasks. These tasks can include PM (Preventive Maintenance) of sewer lines, manhole inspections, lateral/tie-in inspections, pretreatment program implementation, logging and recording of tasks completed or planned, or any of the other maintenance tasks required.

### **Customer Complaints and Calls**

Wastewater Collections answers calls 24 hours per day 7 days a week. One operator is always on-call and carries a duty phone.

Customer complaints and calls are prioritized and responded to as soon as possible. All calls are recorded in the daily log or in the supervisor's diary for inclusion in the Monthly Operation Summary.

Calls may come from a number of different sources, including staff at the Public Services Department, Police Department, or from customers themselves. As far as possible, staff records the date, time, name of the caller, the nature of the complaint, and the resolution of the call. In some instances, Wastewater Collections staff may not be able to resolve an issue because it involves facilities on private property which the City neither owns nor maintains. In these cases WWC records the call and assists to the degree possible, but does not take responsibility for the issue. WWC operators will answer calls to spills from private laterals and assist as possible, but in general they do not perform work on private facilities. Staff may assist with cleanup of spills to City streets, and provide other assistance, where such assistance is immediately necessary to protect the public health and welfare. The City encourages citizens to hire licensed plumbers to do repairs, maintenance, and cleaning of facilities on private property.

Calls after hours will be attended to and assessed by the on-call duty personnel. The person on duty receiving the call will decide the course of action to be taken, and call for further assistance, or equipment as needed.

### **Line Cleaning**

Line cleaning with the Hydro-Vac is one of the primary tasks WWC performs. The City maintains approximately 345,897 linear feet of sewer line, 1116 manholes and cleanouts.

Line cleaning is broken into two maintenance activities:

1. Scheduled maintenance, and
2. Enhanced maintenance.

### **Scheduled Line Cleaning**

All lines are cleaned on a 2-year cycle. This line cleaning is recorded in the daily log and in the Simms program on the WWC computer. The Simms program is a work management system that has outlived its useful life and will need to be replaced. As the ARCGIS program becomes more complete it is intended to be supplemented or replaced with a new Computerized Maintenance Management System (CMMS) program.

### **Enhanced Line Cleaning**

The first week of each month an enhanced maintenance list is printed with each manhole-to-manhole reach listed. These lists are used for recording the date, and results of the cleaning. Enhanced maintenance includes lines suspected of having FOG, roots, or other build-up issues. Enhanced maintenance is performed on 60, 90, and 180 day rotations. WWC utilizes records, past practices and operator familiarity to schedule this enhanced maintenance, with all sewer lines being cleaned at least once every two years.

A list of known potential problem areas is maintained for use by collections system staff.

Lines on the 'enhanced maintenance list' that are serviced for other reasons: suspected FOG build-up, suspected roots, grit and debris will be treated for roots or flushed regularly as appropriate to the severity of the problem.

### **Closed Circuit Television (CCTV)**

The City currently has a systematic inspection program with a CCTV contractor. WWC inspects 3 sections per year. Other lines are videoed as problems occur or as requested for project planning purposes.

By inspecting 3 sections of the sewer per year the entire City's sanitary sewer system is inspected every five years.

CCTV inspections are used to look for cracks, potential for collapse, offsets, lateral inventory, and other pipe flaws. City staff prioritizes repairs based on these video inspections, operator familiarity with the system, and information gathered from other activities. Priorities are set in accordance to Table 1-1: Priority Determination in section 4c Rehabilitation and replacement. Repairs are prioritized according to condition, location, capacity and other criteria by engineering and WWC staff.

### **Roots**

The City has a systematic root treatment program to prevent blockages of the sewer mains and damage caused by roots. The root control consists of foaming approximately 4 miles of sewer mains. This program will expand to include all lines that are found by operators and CCTV to have roots. The program will be cyclic, with root foam application being applied yearly to different lines. The current root treatment product must be reapplied within two years after the first application, and within 3 years after the second application. This treatment schedule is used to plan root treatment for existing and future line treatment.

### **Work Orders**

Public Service Work Orders (WOs) are assessed, and attended to by WWC in a timely manner. After the WO is complete staff record the outcome, sign and date the WO, make a copy for WWC files, log the WO in the logbook, and return the original WO to the Public Services Department. Work orders are largely generated from calls to Public Services by citizen complaints or other City departments.

### **Monthly Tasks**

WWC performs the following tasks on a monthly basis:

- a. Preparing the enhanced maintenance list and performing the maintenance.
- b. Preparing and submitting the Monthly Operations Summary. The Monthly Operation Summary documents accomplishments, difficulties, repairs, calls/complaints, routine and enhanced maintenance operations, and other WWC subjects that come up or are out of the ordinary, spill reports and related paperwork. These reports will be filed with the Utilities/Capital Projects Manager, the Wastewater Treatment Plant, the Public Services file and the WWC files. Monthly operations reports are kept on file for future reference. These can be subpoenaed, referenced operational information, and used for historical data. The information is taken from the Daily Log, Source Control Log, and the Supervisor's Diary.

- c. File Category II and ‘No Spill’ certifications on the CIWQS website. Category I spill reports are reported within three days of discovery, and have other reporting requirements (see: Overflow Emergency Response Plan). All reporting and certification rules and guidelines are contained in the Overflow Emergency Response Plan.
- d. Calibrate atmospheric monitors, and log in the Calibration Log. ‘Bump testing’ of the atmospheric monitors is performed daily and recorded in the calibration log (see daily tasks).

## **Annual Tasks**

The following tasks are completed on an annual basis:

- a. File an annual summary with Marine Research Specialists the WWTP monitoring and reporting program consultants, for inclusion in the WWTP Annual Report. At this time WWC is forwarding digital copies of all the Monthly Operations Summaries to Marine Research Specialists. Marine Research Specialists then calls with any specific questions they may have for clarification.
- b. Request a copy of the current business license list from staff at City Hall. This list is used for the FOG and Source Control Programs. The list should contain the business names, addresses and other phone and contact information. This yearly list is used to keep track of changes in ownership, and also helps locate any new businesses that may have opened in other locations. From this list an operational list for FOG and Source control inspections is generated, and referenced as part of the FOG program.
- c. Schedule Root Treatment for approximately 4 miles of sewer line. Keep the logs from previous years for scheduling subsequent years of treatment. Also keep all paperwork concerning guarantees, manhole-to-manhole stretches treated. This work is cyclic and these records will be used to schedule future treatment.
- d. Plan and schedule video inspection of 3 Sections of the collection system. The systematic inspection of all sections should take 5 years, and be on-going after the first assessment.
- e. Update emergency notification sheet as appropriate. Call all the phone numbers to insure the proper number and contact are recorded. Assess and update any programs that may have changes to them including, personnel or phone number changes.
- f. Inflow and infiltration (I&I) into the sanitary sewer system is monitored throughout the year with use of smoke testing, video inspection and visual inspection. The City places flow monitoring equipment to monitor flow throughout the sewer system to track and eliminate sources of I&I.

This list is not all-inclusive, as numerous tasks are assigned to WWC throughout each year. Numerous other tasks are also addressed such as: DOT testing; Personnel Evaluations; Driver’s physicals; Certification Testing; Driver’s License Testing;

Specialty Training (Confined Space Training, Trenching and shoring training, First Aid/CPR, Safety and other WWC related training); Daily logs, reports, emergency operations and assisting with satellite agencies; Tie-in inspections, public relations and outreach; Monitoring contract work; FOG issues and source control, and others.

## 4c. Rehabilitation and Replacement Plan

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Routine maintenance is essential to keeping a sewer system operating efficiently. In addition to solving emergency problems the prevention efforts of scheduled maintenance is important. This manual contains maintenance schedules for sewer cleaning, sewer inspection, and lift station inspection.

In order to manage a sewer system, priorities must be determined and assigned to tasks.

**Table 1-1: Priority Determination**

Priority	Description
1	Tasks threatening the public health or environment are the first priority.
2	Tasks threatening the effectiveness of sewer system or treatment process operation are second priority.
3	Tasks preventing a sewer system or treatment process failure are third priority.

Inspecting all elements of the sewer system is important to measure the effectiveness of the cleaning and repair efforts. The City of Morro Bay uses a variety of monitoring and inspection methods to determine the condition of the system and the effectiveness of the maintenance performed. Closed circuit television inspection is used to evaluate the condition of the sewer system. Ground inspection of collection system facilities, including lift stations and manholes are done by the sewer maintenance team on a regular basis as part of their scheduled tasks. These monitoring and inspecting efforts are recorded and ranked in accordance with the above priority ranking. This list is used to plan sewer replacement and repair projects.

Short term rehabilitation and replacement (R&R) projects are based on sewer inspections with ranked priority levels. Short-term R&R projects fit into the long-term R&R projects found in the Sewer Collection System Master Plan which is the City's adopted long term planning document. This document delineates Capital Improvement Projects (CIPs) necessary to provide an adequate and operable sewer system for both current and future customers.

Several important techniques are available for sewer rehabilitation. The types used are best determined by an economic analysis after sewer evaluation.

### **Mainline Repairs**

#### **Point Repairs and Replacement**

Point repairs consist of repairing cracked, corroded, or broken gravity sewers and force mains. This work typically includes excavation to the location of the break, removal of the broken pipe section(s) and replacement with new pipe.

### **Joint Testing and Grouting**

Joint testing and grouting are done on sewer line sections with leaking joints but no structural defects. This work can be done in conjunction with the routine televising of lines. Grouting has a limited life and must be repeated every 5-10 years.

### **Sewer Lining**

Sewer lining is a technique which returns pipe to new condition. Many of the current systems can be used where pipe is structurally deficient. Due to the limited excavation required for these techniques, they are good choices where surface construction would cause much disruption.

### **Pipe Bursting**

Pipe Bursting is a technique used to replace an existing pipe by splitting the existing pipe and putting the new pipe inside. This technique can be used to put in a larger pipe or replace broken sections of pipe. Due to the limited excavation required for this technique, it is a good choice where surface construction would cause much disruption.

## **Manhole Repairs**

Manhole repairs consist of repairing structural defects or leakage in individual manholes and castings. The structural repair work may include:

### **Replacement of casting (lid and frame)**

The castings of a manhole protect the integrity of the inside of the manhole and help prevent inflow of surface stormwater. Replacement of the casting is used when the lid and frame of a manhole have deteriorated. This technique involves replacing the old lid and frame with a new lid and frame.

### **Replacement of defective adjusting rings or top sections**

The concrete rings that make up a sewer manhole deteriorate over time causing weak spots in the manhole walls. Rings that show extensive wear can be replaced as an alternative to replacing the whole manhole. This technique is best used for manholes that have only a few worn rings near the top section of the manhole.

### **Replacement of Complete manhole**

Manhole replacement involves demolition and removal of the existing manhole and the construction of a new manhole. This technique is commonly used to replace damaged or caved manholes.

### **Relining the existing manhole**

Existing Manholes can be lined with an epoxy liner to seal the manhole to prevent infiltration. Wire mesh is placed before the liner in cases where additional structural support is needed. Due to the limited excavation required for this

technique, it is a good choice where surface construction would cause much disruption.

**Grouting to eliminate leakage**

Grouting to eliminate leakage is a technique used to seal joints between manhole rings or cracks in a manhole. By grouting joints and cracks in the sides of a manhole inflow and infiltration of stormwater and groundwater can be reduced.

**Lift Station Repairs**

Preventative Maintenance is performed on the lift station pumps including changing out aging seals, balancing impellers, cleaning out pumps of debris. Valves are maintained by operating the valves semi-annually and rebuilding non operable valves. Lift stations require periodic cleaning to remove built up grit and debris in the wells. Other repairs that are necessary for reliable operation of the lift stations are scheduled by the Collections Supervisor.

## 4d. Staff Training

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Training is important to keep sewer systems operating efficiently. The City of Morro Bay encourages and sends staff to training seminars to teach sewer maintenance and operation skills. In addition staff also brings ideas for new technology to the City for possible adoption into the sewer program. The OSHA recorded training schedule is included herein.

<b>Training Topic</b>	<b>Frequency</b>	<b>Description</b>
Bloodborne Pathogens	Initial Annual	Title 8 Section 5193(g)(2)
Carcinogens as Listed	Initial	Title 8 Section 5209(e)(5)
Confined Spaces	Initial	Title 8 Section 5157(g)
	Program Update Changes	Title 8 Section 5158(c)(2)
Emergency Action Plan	Initial Plan Update	Title 8 Section 3220(e)
Excavation/ Trenching/Shoring		Title 8 Section 1541
Fall Protection	Initial	Title 8 Section 1671.1
First Aid & CPR	Initial Changes Every 2 years (or as specified by cert. Organization)	Title 8 Section 3469(b) 6251(d)(2) 3400(b) 5157, 5158, 5193 3421, 6052
Flaggers (Traffic)	Initial	Title 8 Section 1599(f)&(g)
Hazardous Waste	Initial Annual Refresher	Title 8 Section 5192(e) 5192(q)(6)
Hearing (Noise) Protectors	Initial Retraining	Title 8 Section 5098(a)(4) 5097(d)(5)(A) 5097(d)(5)(B)
Injury & Illness Prevention Program	Initial Update	Title 8 Section 3203(a)(7) 1509(e)
Job Hazard(s)	Before Job Assignment New Hazards	Title 8 Section 3203(a)(7) 1510(a)&(c)
Lockout/Blockout	Initial When Updated	Title 8 Section 3314 3314(j)
Machinery and Equipment	Before Use	Title 8 Section 1510(b)
Noise Exposure	Initial Annual	Title 8 Section 5099(a)
Openings/Holes- Floors and Roofs		Title 8 Section 3212(b)
Calif. Posting Requirements	Initial	Title 8 Section 340
Traffic Control	Initial	Title 8 Section 1599(f)&(g)

This table represents minimum training level. In addition to these mandatory requirements there are a number of additional topics of interest to collections operations and maintenance where training is worthwhile.

- Conduct annual training of water utility personnel and service contractors (field screening, sampling, smoke/dye testing, and TV inspection).
- California Water Environment Association trainings
- Safety and other WWC related training

## 4e. Contingency Equipment and Replacement Inventories

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WWC keeps an inventory log of all operations equipment and replacement parts. The item description, quantity, and storage location are recorded. This inventory list is kept in the WWC office, to track and manage equipment held by WWC. The list is updated on a periodic basis as equipment and replacement inventory changes. Every year the list is reviewed to verify inventory. In the event something is missing from the inventory list WWC staff investigates and updates the inventory log.

Staff operate and maintain a combination cleaner (Hydro-Vac) used for scheduled and enhanced maintenance. This tool allows the city to clean main sewer lines on a routine basis and clean mains in response to an emergency. WWC also owns and operates three emergency generators to power lift station pumps during a power outage as well as a bypass pump used to move wastewater when a lift station pump is being worked on or when a pump stops.

Spare parts are kept on hand at the City yard in order to be used to make minor repairs at night or on weekends when supplies are hard to obtain. Spare parts on hand include:

- Fittings
- Wyes
- Pumps
- Seals
- Blind flanges for lift stations
- Check valve parts
- Valves
- Hydro-Vac parts
- Cleaner supplies
- Paint

In the event of a catastrophic event where major repairs are needed, WWC will provide a safe, temporary solution until a qualified repair crew is able to be brought in to make the repair.

# Element V: Design and Performance Provisions

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This section of the SSMP identifies the City of Morro Bay's design and performance provisions found in the City's Municipal Code, Standard Drawings, and Specifications. This section is to fulfill the Design and Performance Provisions element of the SWRCB (Element 5) SSMP requirements.

## SWRCB Requirement

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### **Element 5. Design and Performance Provisions**

The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:

#### **5a. Standards for Installation, Rehabilitation and Repair**

The SSMP must identify design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems.

#### **5b. Preventive Operation and Maintenance**

The SSMP must identify the procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

## **5a. Standards for Installation, Rehabilitation and Repair**

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The City currently has an adopted set of construction documents which include standard drawings and specifications. These construction documents are currently under review to incorporate new technologies in sanitary sewer installation, rehabilitation, and repair techniques.

The City is in the process of updating its standard plans and specifications. The update is currently in draft format and is expected to be completed by early 2012. The previous update was in 1987. The City Engineer has the authority of maintaining and modifying these documents as needed.

Section 8 of the City's standard specifications addresses Sanitary Sewer Installation. This section includes specifications on pipe, manhole, cleanout, and sewer lateral materials and construction methods, including acceptable methods for sewer taps, as well as sewer line testing, acceptance, final inspection by closed circuit television (CCTV), and abandonment of existing sewer mains. These requirements are used to ensure that sewers are constructed to the City's specifications and will perform adequately with minimal infiltration or maintenance problems and will maintain their structural integrity for the duration of their intended service lives.

Many of the specifications included in Section 8 of the City's standard specifications also apply to sewer pipeline rehabilitation and repair projects. Additional specifications related to specific sewer rehabilitation and repair projects will be added as the City selects the preferred method of such rehabilitations and repairs. Additional requirements will be included in project-specific specifications as needed to ensure a quality product.

The City owns and operates three lift stations and does not anticipate additional lift stations to be built because the City is near built out. Therefore, lift station plans and specifications are not included in the standards and will be reviewed on a project specific basis. Design standards and construction specifications for lift stations will be developed as needed on a project-specific basis should any new municipal lift stations or major lift station rehabilitation or repair projects be implemented.

All public sewer mains within the City are designed and constructed by the City or by consultants under contract to the City. The City's Municipal Code contains design requirements for building sewers, including minimum sizes and slopes (Section 8.02). Design flow and capacity criteria for sewer mains and trunk lines are described in the Sewer Collection System Master Plan.

**Appendix A includes the City's standard specifications and drawings.**

## **5b. Standards for Inspection and Testing of New, Rehabilitated, and Repaired Facilities**

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Installation of new or rehabilitation of a private sewer lateral are required to be videoed to allow inspection by the Wastewater Collections team and the City Engineering Department. Wastewater Collections is available to observe all construction projects involving the main sewer system, such as lateral connections, manhole and sewer line rehabilitations and repairs. This inspection is a requirement of the encroachment issued to contractors working on any connections to the main.

Inspection and testing is performed to ensure that overall construction of the project conforms to the contract documents; facilities are tested in accordance with the provisions of the contract. Inspection and testing of construction projects is conducted by the City Engineering Department and Utilities Department or private contractors.

Testing and startup occurs throughout the project as system components are placed and connected in the manner in which they are intended to operate. The system components are expected to be fully functional prior to testing. The contractor is required to test the operation of each component upon completion of its installation. During the testing and startup process, individual components are checked, tested and started individually prior to checking the system as a whole. The inspector is responsible for monitoring quality assurance to assure compliance with the contract documents and any authorized amendments.

A project is considered complete when the construction is sufficiently complete, when the facility is tested in accordance with the contract and can be used for its intended purpose. Before acceptance of a facility, Morro Bay receives O&M manuals, record 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.

# **Element VI: Overflow Emergency Response Plan**

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The collection system agency must develop an overflow emergency response plan (OERP) that provides procedures for SSO notification, response, reporting, and impact mitigation. The response plan should be developed as a stand-alone document and summarized in the SSMP.

## **SWRCB Requirement**

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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 MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDR or NPDES permit requirements. The SSMP 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.

# Overflow Emergency Response Plan

## Discussion

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The mission of the Collection Division is to provide wastewater collection and source control in a safe, environmentally conscientious and efficient manner: to implement preventive maintenance and improvements to accommodate the community's adopted goals and objectives; to develop and implement programs necessary to comply with State and Federal mandates, rules, and regulations; to protect the health and safety of the environment, the public, and the employees; to protect the City's investment in infrastructure and equipment; to perform preventive maintenance of the City's 60 miles of collection lines and three lift stations; to assure control of source discharges to the wastewater treatment plant in accord with State and Federal regulations; to reduce storm water sources flowing into the collection system by encouraging the use of BMP's; and to aggressively minimize the potential of discharge of untreated waters to the Bay and Ocean, and throughout the City of Morro Bay.

### Laterals

Sewer Laterals: The Collection Division responds to Sewer System Overflows (SSO's) and maintains manholes and lines up to, but **not** including laterals. Property owners are responsible for the repair and maintenance of private laterals. A "lateral is defined as any facility installed and intended to be used by one or more private properties, not the general public, including but not necessarily limited to, piping from City main to building and main connection. (See: Private lateral spills to city streets, Page 44)

### Current Information

Current Information: It is the responsibility of the Collection Division to ensure that all phone numbers and other references in this manual are kept up-to-date.

# Categories of Sewer System Overflows (SSO's)

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Categories of SSO's: The State Water Resources Control Board Monitoring and Reporting Program (MRP) No.2006-0003 Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR's) defines SSO's as follows:

Category 1: All discharges of sewage resulting from a failure in the Enrollee's (City of Morro Bay) sanitary sewer system that equals 1000 or more gallons; or results in a discharge to a drainage channel and/or surface water; or discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

Category 2: All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system.

Private Lateral Sewage Discharges: Sewage discharges that are caused by blockages or other problems within a privately-owned lateral.

# Reporting of SSO's

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Reporting of SSO's: All Category 1 and Category 2 sewer system overflows are required to be reported on the California Integrated Water Quality System (CIWQS) electronic database. This contains information that allows the SWRCB and regional water boards to effectively analyze the extent of SSO's statewide and their impacts on beneficial uses and public health.

Private lateral sewage discharge reporting is optional, however if they are reported the names of those responsible are required on the report.

- A Category 1 SSO must be reported as soon as possible but no later than 3 business days after the overflow. (Refer to Exhibit A)
- A Category 2 SSO must be reported within 30 days after the calendar month in which the SSO occurred. (Refer to Exhibit A)
- A report of NO Overflow during a calendar month must be certified within 30 days of the end of the calendar month on the state system. (Refer to Exhibit A)

Other notifications may also be required. These include Office of Emergency Services (OES), RWQCB, and others. Other numbers both State and local may be found on the Emergency Notification Numbers sheet (Refer to Exhibit B). This sheet is posted in the Collection Division office, at the Wastewater Treatment Plant, at the Public Services Office, in each vehicle and is attached with this manual.

A notification checklist is provided in this manual and will be kept with each vehicle to be used during the notification process to log notifications made. (Refer to Exhibit C) City Council has requested notification and this notification will be by telephone or E-mail and will be the responsibility of the Capital Projects Manager or Senior Civil Engineer.

Reporting to County Health: During normal work hours County Health will be notified of spills at 781-5544. Leave a message with the receptionist. She will contact the inspector for this area. For spills under 500 gallons a copy of the spill report will be faxed to 781-4211. For spills greater than 500 gallons all paperwork will be faxed to that number. After hours reporting will be to the Sheriff's Dispatcher. Dispatch will contact the proper on-call person from County Health. The County Sheriff Dispatch Number is 781-4550.

Order No. WQ 2008-0002-EXEC, amends the reporting time requirements for notification to OES, RWQCB, and County Environmental Health to two hours from becoming aware of a Category 1 SSO. Further, certification that those notifications have been made is required within twenty-four (24) Hours. The notification log will serve as that certification. (Amendment attached Exhibit K)

# Overflow Policies and guidelines

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Upon arrival at any plug or spill:

1. **Contain** to the greatest extent possible any spill and prevent it from entering any drainage area, the Bay, the Ocean or any waterway. If a spill has entered any storm drain, block the outlet and return any spilled material to the collection system after the plug is cleared.
2. **Clear** the plug. Spills caused by failure of a lift station will require other steps. These may include by-pass of a lift station or the use of a pump truck, or both.
3. **Control** the contained spill by vacuuming or sweeping as much liquid and/or solids as possible. Materials used for containment need to be disposed of in an appropriate manner.
4. **Limit** Exposure to the spill.
5. **Clean up** the spill.
6. **Disinfect** by spraying a light solution of sodium hypochlorite to disinfect the area; wait for the solution to dry. Ensure that no liquid leaves the containment area or enters State waters.
7. **Post**, if any body of water is affected, for 72 hours or until no threat can be demonstrated. (Signs are available in the Collection Division office, in the closet.)
8. **Make** all required and appropriate notifications. (Refer to Emergency Notification Numbers- sheet- Exhibit B and C).
9. **Sample**, (Creeks or Bay) up-stream and down-stream. Use proper sample bottles. Samples must be handled as required by **Standard Methods**. They must be iced and transported to a certified laboratory, in an ice chest at your earliest possible convenience. A Chain of Custody (Refer to Exhibit E) must be filled out and accompany the samples. At the certified laboratory the party accepting the samples will sign the Chain of Custody and the person delivering the samples will get a copy of the Chain of Custody and name the requested tests (total and fecal coliforms, normally).
10. **Gather** all possible appropriate information for required reports. (Refer to State Waste Discharge Requirements SSO-WDR Reporting Requirements Flow Chart- Exhibit A).
11. **Put** it in the log, fill out a spill report (Refer to Exhibit D), file on the CIWQS website.

## **Spills on private property**

Current City Policy is as follows:

1. Do not call or recommend any cleaning company. (Refer to Exhibit H)
2. Private property owners/renters must call a cleaning company and submit a claim to the City Risk Manager. The telephone number for the Risk Manager is 772-6200. (Refer to Exhibit I)
3. If clean up is needed on private property, instruct the owners/occupants to avoid contact with contaminated articles and engage professional clean-up companies. If the owner/occupant believes the City is responsible direct them to the City Risk Manager at City Hall, during regular work hours.

## **Private Property spills to city streets**

If a spill originates on private property, then flows to a city street, refer to 'Overflow Policies and Guidelines' (Pg. 6). The same steps may be required, with the exception that Collection Division personnel do not clear plugs from private laterals. The property owner must contact a plumber to clear the lateral.

## **Traffic and crowd control**

In the case that traffic or crowd control is needed, employees from other divisions may be called (Refer to Exhibit G). If none are available or more traffic and crowd control is needed personnel may call the Morro Bay Police Department, to dispatch officers or volunteers on an as needed basis. The Police Dispatch phone number is 772-6225.

## **Lift Station Policies**

For problems encountered with Lift Stations, refer to the Collection Division Confined Space Entry Program (Exhibit J).

Additional Personnel that may be necessary should be confined space certified. Wastewater Treatment personnel are confined space certified. Only persons who have been Confined Space Certified may enter City of Morro Bay confined spaces. Other City staff may be able to provide assistance in traffic control, crowd control or with issues not related to confined space entry.

## **Station By-pass**

If a station must be by-passed, it may be necessary to contract a pump truck, set up the by-pass pump, or both. If a pump truck is required one of several local firms should be available.

There are manifolds at LS/1 and LS/2 for by-pass pumping. If the by-pass pump is required along with Lift Station work it may be necessary to ask for additional personnel from the Treatment Plant to operate and monitor the pump. By-pass is not available at LS/3. LS/3 requires a vacuum truck to by-pass. Emergency short-term by-pass may be accomplished by use of the Hydro-Vac, however, long term by-pass requires a pump truck, because the Hydro-Vac may be called to a plug at any time.

### **Telemetry and Electrical Problems**

For electrical and telemetry problems which cannot be determined or solved call one of several local electrical contracting firms who have a knowledge of our system.

# Element VII: FOG Control Program

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Fats, oils and grease (FOG) can have negative impacts on wastewater collection and treatment systems. Most wastewater collection system blockages can be traced to FOG and roots. Blockages in the collection system are serious, causing sewage spills, manhole overflows and can cause back-ups into homes and businesses.

Problems caused by wastes from restaurants and other grease producing establishments have served as the basis for ordinances and regulations governing the discharge of grease materials to the sanitary sewer system. This type of waste has forced the requirement of the installation of preliminary treatment facilities, commonly known as grease traps or interceptors.

There are two kinds of FOG pollutants common to wastewater systems:

1. Petroleum-based oil and grease (non-polar concentrations) occur at businesses (automotive related normally) using oil and grease. These disperse on the surface of water causing sheen. These concentrations are regulated by other agencies (local, state and federal), and are not a part of this program.
2. Animal and vegetable based fats, oils and grease (polar concentrations) are more difficult to regulate due to the large number of restaurants in Morro Bay. These do not disperse in water, but instead congeal and regroup into large masses. These concentrations are the basis for this program.

Grease is singled out for special attention because of its poor solubility in water and its tendency to separate from the liquid solution. Grease in a warm liquid may not appear harmful. As the liquid cools, the grease or fat congeals and causes “nauseous mats” on the surface of settling tanks and digesters. It coats the interior of pipes, wet-wells and other surfaces. It can cause the shut-down of wastewater treatment units. It is the cause for targeted, scheduled maintenance of specific areas of town.

## **Traps and Interceptors**

A trap is a small reservoir built into the wastewater piping a short distance from the grease producing area. Baffles in the reservoir retain the wastewater long enough for the grease to congeal and rise to the surface. The grease can then be removed and disposed of properly.

An interceptor is a vault with a minimum capacity of 500 gallons. It is normally located on the exterior of the building. The vault includes a minimum of two compartments. Flow between each compartment is through a 90-degree fitting designed for grease retention. The capacity of the interceptor provides adequate residence time for

wastewater to cool down and allow the grease to congeal and rise to the surface where it accumulates until the interceptor is cleaned.

Maintenance staff, or another employee of the establishment, usually performs grease trap maintenance. Permitted haulers, licensed septic services, or recyclers usually perform interceptor maintenance. The entire volume of the interceptor (liquids and solids) is removed from the interceptor and properly disposed of. When performed properly and at the appropriate frequency, grease interceptor and trap maintenance can greatly reduce the discharge of FOG into the collection system.

The required maintenance frequency for grease interceptors and traps depends greatly on the amount of FOG a facility generates, as well as any best management practices (BMPs) that the establishment implements to reduce the FOG discharged into its sanitary sewer system.

Any establishment that introduces fats, oils or grease into the sewer system in quantities large enough to cause line blockages, hinder treatment, or in quantities greater than 100 parts per million (CMB Municipal Code 13.12.120 B.) should install a grease trap or interceptor. Interceptors are the best choice for larger, high volume restaurants, hotels, retirement homes and other larger commercial establishments. Smaller restaurants and take-out restaurants with limited menus, minimum dishwashing and/or minimal seating may find a trap suitable. Medium volume establishments may find that a trap will be too small and opt to install an interceptor.

Any establishment that doesn't install a trap or interceptor and generates or uses FOG in food preparation will eventually encounter a maintenance problem that will be grease related. If the blockage is in the building the establishment has direct responsibility for paying for maintenance. If a blockage or restriction is in the public sewer, the establishment may have to pay to have the city main maintained. If the blockage affects other establishments or homes there may be civil issues and penalties involved.

This section of the SSMP discusses the City of Morro Bay's FOG control measures, including identification of problem areas, focused cleaning and source control. This section is to fulfill the FOG control element of the SWRCB (Element 7) SSMP requirements.

# SWRCB Requirement

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The City shall evaluate its service area to determine whether a FOG control program is needed. If the City determines that a FOG control program is not needed, the City must provide justification for why it is not needed. If FOG is found to be a problem, the City must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. The FOG source control program shall include the following as appropriate:

- (a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- (b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer service area;
- (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- (d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the grease removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- (e) Authority to inspect grease producing facilities, enforcement authorities, and whether the City has sufficient staff to inspect and enforce the FOG ordinance;
- (f) An identification of sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section; and
- (g) Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified in (f) above.

# FOG Control Discussion

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The City has determined that a FOG control program is necessary per the SSMP requirements. There is an average of between 45 and 55 food service facilities located within the city limits that discharge to the City sewers. Operations staff has also noted the tendency for grease to build-up in specific sewer lines and in certain sections of the City.

The City's FOG control program consists of focused cleaning and maintenance as well as source control. The collection division also maintains a spread-sheet of all spills and blockages to localize areas requiring further attention. The following subsections discuss identification and cleaning of grease prone areas or sewer lines that are prone to grease build-up, legal authority to prohibit grease discharge or require a grease removal device, facility inspection, public outreach, and Best Management Practices (BMPs) that can be instituted at each agency.

# Identification and Sewer Cleaning

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The City Collection Staff utilizes records, past practices and operator familiarity to identify and prioritize enhanced maintenance procedures. A list of known areas that are prone to grease build-up and root problems has been established and schedules maintenance on 60, 90, and 180 day rotations. The reason that root lines are included in this list is that grease is prone to accumulate on roots. The City is establishing a cyclic root control program using chemical root control measures to kill and retard the growth of roots in the sewer system. This program will expand to include all areas where roots are noted by operators and CCTV inspections.

- (a) Identification of Grease Problem Areas. The City identifies potential problem areas by tracking locations and causes of blockages and SSOs. A review of the City sewer overflow spread-sheet for instance shows that most SSOs are caused by roots and grease. Additionally, debris type and severity are noted by operations staff during routine and focused cleaning. Areas with several restaurants or grease producing facilities are also considered potential grease problem areas.
- (b) Focused Cleaning. Included in the focused cleaning program are lines specifically for FOG control, root control and other lines that have been prone to other problems in the past. Cleaning frequency depends on the history of stoppages, as well as areas expected to be prone to grease build-up.

The Wastewater Collection Division maintains tables of each manhole to manhole reach scheduled for enhanced maintenance. These tables are also used for cleaning logs, on which operators note the date and time of flushing, as well as the debris type and severity. These tables include additional lines that are cleaned for reasons other than FOG. Sewer lines not included in the focused cleaning program are cleaned on a two-year cycle.

Two satellite agencies within the service area have restaurants. They are the San Luis Coastal Unified School District and the State Park on the south end of town. They are responsible for FOG generated in their areas.

# **Legal Authority to Control Sources of FOG**

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Legal measures available to the City to control sources of FOG include the following:

1. Authority to prohibit specific discharges
2. Authority to require grease removal devices
3. Preliminary treatment facility maintenance
4. Manhole installation
5. Inspection of premises
6. Enforcement measures, as appropriate

## **Legal authority to prohibit discharges**

Chapter 13.12.120 of the City's municipal code prohibits specific discharges, as follows:

Except as provided in this chapter, no person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewers.

- A. Any liquid or vapor having a temperature higher than one hundred fifty degrees Fahrenheit;
- B. Any water or waste which may contain more than one hundred parts per million (PPM), by weight, of fat, oil, or grease;
- C. Any gasoline, benzene, naptha, fuel oil, or other flammable or explosive liquid, solid, or gas;
- D. Any garbage that has not been properly shredded;
- E. Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, woods, paunch manure, or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works;
- F. Any water or waste having a pH lower than 5.5 or higher than 9.0, or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works
- G. Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment process, constitute a hazard to humans, plants or animals, or create any hazard in the receiving waters of the treatment plant;
- H. Any waters or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant;
- I. Any noxious or malodorous gas or substance capable of causing a public nuisance;
- J. Any wastes which will exceed the limitations set forth in federal pretreatment standards;
- K. Any wastes which will interfere with the disposal, reclamation or refuse of the wastewater treatment plant effluent or sludge;
- L. Any wastes which will cause the wastewater treatment plant to violate its NPDES permit;

- M. Any radioactive wastes or isotopes or half-life or concentration which exceed limits established by the water quality control superintendent;
- N. Any wastes which cause a hazard to human life or create a public nuisance.

### **Authority to install grease, oil and sand interceptors**

Chapter 13.12.130 authorizes the installation of grease removal equipment as follows:

Grease, oil, and sand interceptors shall be provided when, in the opinion of the director of public works (Public Services), they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, and other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the director of public works (Public Services), and shall be located as to be readily and easily accessible for cleaning and inspection.

Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight, and equipped with easily removable covers which, when bolted in place, shall be gastight and watertight.

### **Grease, oil and sand interceptors-Maintenance**

Chapter 13.12.140 provides the following:

Where installed, all grease, oil, and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times.

Chapter 13.12.160 Preliminary treatment facility maintenance states the following:

Where preliminary treatment facilities are provided for any water or wastes, they shall be maintained continuously in satisfactory and effective operation, by the owner at his expense.

### **Manhole installation**

Chapter 13.12.170 provides for the following:

When required by the director of public works (Public Services), the owner of any property served by a building sewer carrying industrial wastes shall install a suitable control manhole in the building sewer to facilitate observation, sampling and measurements of the wastes. Such manhole, when required, shall be accessible and safely located, and shall be constructed in accordance with plans approved by the director of public works (Public Services). The manhole shall be installed by the owner at his expense, and shall be maintained by him so as to be safe and accessible at all times.

## **Inspection of premises**

Chapter 13.12.185 provides for inspection as follows:

The director of public works (Public Services), or authorized representative of the city, shall be permitted to enter all properties, without prior notice, for the purpose of inspection, sampling and testing in accordance with the provisions of this chapter.

## **Enforcement measures where appropriate**

Chapter 13.12.310 provides the right to terminate water service as follows:

If any user of the city sewer system fails to meet the requirements set forth in this chapter, the director of public works (Public Services) shall have the authority to terminate water service or use alternate actions to protect the wastewater treatment facilities, employees and surrounding environment from hazardous discharges.

Chapter 13.12.320 provides liability for damages from violation as follows:

Any person violating a provision of this chapter shall be liable for all damages resulting from such violation, or which arise from actions taken in the correction of such violation, which are incurred by the city, including but not limited to attorney's fees, court costs, and fines levied on the city by regulatory agencies.

# Facility Inspection

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In 2002 the City conducted a survey of grease producing facilities. This included restaurants, retirement homes, markets and liquor stores with delicatessens, hotels and schools, sandwich shops, fast food agencies, and others. Inspections were based on a list of business licenses provided by the City of Morro Bay. A Site Visit Book (SVB) was developed which records the date, name of the business, owner/contact information, inspector, condition of trap and purpose of visit. There is a 'remark' section on which field notes, conditions noted and warnings can be noted. A master list was then made and a record book was instituted.

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.

Inspections are conducted using the guidelines outlined in EPA publication 831-B-94-001, entitled Industrial User Inspection and Sampling Manual for POTW's. This manual provides guidelines for the conduct of inspections and recording of field notes. Other guidelines and information is gained from a publication entitled Fats, Oil and Grease, Best Management Practices Manual, Information, Pollution Prevention, and Compliance Information for Publicly-Owned Treatment Plants. This manual was produced by Brown and Caldwell, with the notation "*Reproduction with credits encouraged*".

## Inspection Guidelines

1. Inspectors will maintain a professional, courteous demeanor at all times.
2. Inspections should be performed at times other than a facility rush hour.
3. The facility owner/contact or representative will open the trap or interceptor.
4. All records and field notes will be kept in ink.

The criteria used for the SVB will be as follows;

Percent of trap filled	Trap Condition
25%	Good
25%-50%	Fair
>50%	Poor

If the trap is in FAIR condition the establishment should be advised to keep an eye on the maintenance schedule. The cleaning frequency may need to be increased.

If the Trap is in POOR condition it should be noted in the 'Remarks' section of the SVB page and the owner/contact should be advised to clean it immediately. The establishment should then be reinspected in about 30 days. Traps should not be allowed to be habitually kept in POOR condition.

In the field, grease trap inspection is best accomplished by using a manila folder cut into 2” wide strips to test the traps. This is done by using the manila strip as a dipstick. The manila strip should pierce the layer of grease in the trap, giving a good measurement of the depth of the grease and liquid. If it will not pass through the top layer the trap needs to be cleaned immediately. With interceptors a length of ½”- ¾” PVC pipe with tape on the handle works the same way with the same results. Establishments with interceptors shall also keep receipts from the agency contracted for service. These should be checked for frequency of cleaning.

The City has “No Grease-No Grasa” stickers available for sinks in establishments. These should be placed near all sinks as a reminder that it’s best to remove the grease prior to washing and introducing FOG into the system. Removing as much FOG as possible and sending it to landfill will also help keep FOG from filling a trap prematurely, causing more maintenance.

For cleaning frequency, it is best for each establishment to keep a cleaning log. This will be the best way to find and maintain each facility’s cleaning frequency. The Collection division has produced a log sheet that is being made available for businesses to log cleaning frequency. Note: A BMP for establishments with interceptors is for the manager to monitor the agency cleaning the interceptor.

### **Public Outreach**

The City produces a newsletter that discusses each division’s accomplishments and difficulties along with educational information twice per year. The City also produces a flyer entitled, Morro Bay & Cayucos Wastewater Disposal Tips. The Wastewater Collection Division has produced a “No Grease/No Grasa”, sticker that has been made available to restaurants, as well as a cleaning log for grease traps. Work has begun on a brochure to be entitled, Help Stop The Grease. This brochure discusses the importance of keeping Fats, Oils, and Grease (FOG) out of the system, and storm drains.

The division is available to meet with businesses and others to discuss Best Management Practices (BMPs), concerning FOG, and other collection system related issues. Appointments can be made by calling the Public Services office, the Collection Department, the Wastewater Treatment Plant, or the Stormwater Program Manager.

Public Services:	772-6261
Wastewater Collections Department: Collection System Supervisor	772-6277
Wastewater Treatment Plant: WWTP Superintendent	772-6272
Stormwater Program Manager: City Engineer	772-6569
Engineering Technician	772-6265

# Element VIII: System Evaluation and Capacity Assurance Plan

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This section of the SSMP identifies the City of Morro Bay's plan for system evaluation and capacity assurance. The City completed a comprehensive Sewer Collection System Master Plan Update in May 2006. This Master Plan includes a capacity evaluation and identifies necessary capacity-related future improvement projects. The Master Plan is a separate document from this SSMP; this section of the SSMP summarizes key capacity-related portions of the Master Plan and adopts it by reference. This master planning process is used to fulfill the Evaluation and Capacity Assurance Plan element of the SWRCB (Element 8) SSMP requirements.

## SWRCB Requirement

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### **Element 8. Evaluation and Capacity Assurance Plan**

The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:

#### **8a. Evaluation:**

Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events.

#### **8b. Design Criteria:**

Where design criteria do not exist or are deficient, undertake the evaluation identified in 8a above to establish appropriate design criteria; and

#### **8c. Capacity Enhancement Measures:**

The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I&I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

**8d. Schedule:**

The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in 8a - 8c above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.

## **8a. System Evaluation**

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Capacity assessments are completed as part of the City's Sewer Collection System Master Plan Process. The Master Plan capacity analysis is based on hydraulic modeling of the City's collection system under both current and future design flows. The following sub-sections provide a brief summary of the modeled system, flow estimates, and evaluation criteria used for the City's sewer system capacity evaluation.

Note that the City does not have a history of sanitary sewer overflows caused by hydraulic deficiencies in the sewer system. Likewise, modeling of the City's sewer system conducted during the preparation of the 2006 Sewer Collection System Master Plan also shows no likely dry weather overflows due to current hydraulic deficiencies. The Master Plan shows that there are some areas of the collection system that will need to be upsized to handle wet weather flow conditions at build out. The sections of upsizing are identified in the master plan and are prioritized in the capital improvement project schedule.

As part of the effort to reduce I&I, the City will be purchasing and installing flow monitoring equipment. These devices allow the City to determine baseline flow conditions and that data will be used to calibrate and check future models.

**Hydraulic Model**

As a part of the City's Sewer Master Plan, a hydraulic model was developed using a spreadsheet model, based on Manning's Equation, to evaluate existing and ultimate need system capacity. Nearly all of the City's collectors, ranging in size from 6 to 27 inches in diameter, were included in the model. As discussed in previous sections of this SSMP, the City also receives flow from the Cayucos Sanitary District (CSD). No pipes from outside agencies were included in the model, but the model did include flow inputs from the locations where flow discharges into to the City's system from the CSD.

**Flow Estimates**

As noted above, flows were considered from within the City, as well as from the CSD.

Existing and ultimate flow demands were estimated based on the Planning Department's estimates of the City build-out population. Flows estimates were based on the number, type, and location of connections. Flow monitoring stations were installed at eleven temporary monitoring sites within the City to confirm the projected estimates and to calibrate the model.

Further discussion of the collection system analysis can be found in Chapter 5 of the SCSMP. Current and future average daily base wastewater flows are summarized in Table 8-1. As discussed under Capacity Evaluation Criteria below, peak wet weather flows were projected to be about three times greater than average daily flows. This coordinates with the FMP prepared for the wastewater Treatment Plant Project which used a peaking factor of 4.5.

<b>Existing (2006) Flow</b>	0.833 mgd
<b>Ultimate Flow</b>	0.99 mgd

\*Source: City of Morro Bay Sewer Collection System Master Plan Update

## **8b. Design Criteria**

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The City of Morro Bay has not experienced any dry weather sanitary sewer overflows due to hydraulic deficiencies in the sewer system. The current design criteria for sanitary sewer design are adequate to prevent hydraulic deficiencies from occurring in the construction of new facilities of the sewer system. The City’s design criteria accommodate wet weather flows by reserving additional capacity for those events.

The City of Morro Bay has experienced localized flooding in the past in the vicinity of three creeks Alva Paul, No Name, and Morro. During these types of flooding events it can be nearly impossible to determine if an SSO is occurring.

## **8c. Capacity Enhancement Measures**

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As stated previously, the City does not have a history of SSO discharges caused by hydraulic deficiencies. The City relies on several documents, which plan for future growth, secure needed funding, and prioritize projects based on the service area needs and to design and construct improvements. In general, the Master Plan and Capital Improvement Project Prioritization process consider the needs of the service area as well as capacity or other operational needs.

A Capital Improvement Project Prioritization process consists of ranking a list of projects from the latest Master Plan, operational issues, and modeling results. A project prioritization list is developed and ranked by City staff to identify and prioritize projects to be conducted. Projects are evaluated on an annual basis as part of the City’s budgeting process. This process considers the needs, risks, and funding priorities for the various projects.

The City uses the master plan to determine what projects are needed to prevent hydraulic deficiencies from occurring. Projects that are identified and prioritized in the Capital

Improvement Project Prioritization process are scheduled and constructed under the direction of the manager of the utility. The Master Plan will be revised and updated when one of two conditions occurs; first when the projects identified are largely completed; or secondly when a significant change is made to the system (such as the addition of a large new development).

## **8d. Capital Improvement Schedule**

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The City of Morro Bay maintains a list of capital improvement projects (CIPs) for the Wastewater Collection System. This list is generated through the Capital Improvement Program Priority process and review of the current Master Plan. A complete list of Capital Improvement Projects can be found in Table 7-3 of the Sewer Collection System Master Plan.

The Morro Bay Public Services Department has an up-to-date list of current CIPs including description, priority, and progress. The City reviews the capital projects, available funding, anticipated staff resources available, and priorities on an annual basis as part of the City's budgeting process.

# Element IX: Monitoring, Measurement, and Program Modification

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This section of the SSMP discusses parameters the City tracks to monitor the success of the SSMP and how the City plans to keep the SSMP current. This section fulfills the Monitoring, Measurement, and Program Modifications requirement for the SWRCB (Element 9) SSMP requirements.

## SWRCB Requirement

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### **Element 9. Monitoring, Measurement, and Program Modification**

The Enrollee shall:

- a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
- b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- c) Assess the success of the preventative maintenance program;
- d) Update program elements, as appropriate, based on monitoring or performance evaluations; and
- e) Identify and illustrate SSO trends, including: frequency, location, and volume.

## 9a. Maintain Relevant Information

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The City tracks several performance measures through tracking logs and annual reports. The City plans to continue tracking all performance measures that are currently tracked. Tracking tools include:

- Monthly and Annual Reports
  - Asset Management Software
  - SSO Reporting and Tracking
  - Staff Training Records
  - Flow Monitoring Reports
  - System Modeling and Capacity
  - SSMP Audits Program
  - Video Inspection Results
  - Fog Inspection Log
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## **9b. Monitor and Measure the Effectiveness**

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In order to monitor the effectiveness of each element of the SSMP, the City has selected specific parameters that can be documented and compared on an annual basis in a simple format. These parameters were selected because they are straightforward, quantitative, and focused on results. Although the parameters may not track everything associated with SSMP implementation, changes in these parameters over time will indicate the overall success of the SSMP or, conversely, underlying problems that can then be investigated further.

There are eleven required elements to the SSMP. Our Monitoring, Measurement, and Program Modification efforts for each element are:

### **Element I: Goals**

The goal of the collection system is unlikely to change significantly. As part of the SSMP audit process (Element 10) we will review the goal and make necessary modifications

### **Element II: Organization**

The dynamics of organizations can change dramatically with time. The effectiveness and staffing levels of the current organization will be reviewed and compared to required SSMP efforts to determine when adjustments will need to be made to either organizational or staffing levels.

### **Element III: Legal Authority**

The legal authority by which the City operates and maintains its sewer system does not need to change very frequently. This authority lies nested in the Municipal Code which can be changed as necessary through a formed City Council process. Changes to the City's legal authority will most frequently be made to stay in alignment with changes to both State and Federal requirements. Changes to our legal authority will occur on an as needed basis.

### **Element IV: Operation and Maintenance Program**

Collections Operations and Maintenance (O&M) practices have evolved rapidly in the last several years and will continue to evolve as new technologies are developed. Modifications to the collections O&M Program are an ongoing effort. The process of auditing the SSMP every two years as required by element 10 will be used as a systematic evaluation of the effectiveness of our O&M Program. Significant changes made to the O&M practices in place will be documented in the audit process and included in the updated SSMP.

### **Element V: Design and Performance Provisions**

Design and performance provisions do not require frequent adjustment. On occasion new products, techniques, or practices are developed that warrant changes or revisions to design and performance standards. More frequently, rules, regulations, and code changes are made that need to be reflected in the City's standards. The authority to make these changes lies with the City Engineer and can be made as frequently as necessary. These changes will be documented in the SSMP which will be posted on the City's website and available at the Public Services Office.

## **Element VI: Overflow Emergency Response Plan**

Each spill from a sanitary sewer system is a unique event with its own set of circumstances. It is likely that as crews respond to events there may be refinements necessary to the adopted Overflow Emergency Response Plan (OERP). The general approach for dealing with SSOs defined in the OERP is not likely to change. Adjustments will be made as necessary and will be included in the updates of the SSMP. The number and type of SSOs within the City are tracked, and this log will be used to determine trends in SSO events with the intent of reducing or eliminating future SSOs.

## **Element VII: F.O.G. Control Program**

The F.O.G. control program in Morro Bay is viewed as the primary element of the Source Control Program. The effectiveness of site visits and other outreach efforts can be directly measured by the impact of F.O.G. on the system. The City has had a fairly mature F.O.G. Control/Source Control program in place for a number of years so major changes are not anticipated. Refinements made to the program will be documented, reviewed and adopted in the SSMP audit process.

## **Element VIII: System Evaluation and Capacity Assurance Plan**

The City of Morro Bay uses the Master Plan process as the Capacity Assurance Plan (CAP). Master Plans do not have a fixed timeline to be updated, as updates become necessary when either the Master Plan is largely completed or major revisions are made to the system. The most current Master Plan will be adopted and included in the SSMP to meet the CAP requirements.

## **Element XI: Communication Program**

The Utilities and/or Public Services Department sends out a biannual newsletter and posts the information on the City's website. Through these media as well as through the televised Public Works Advisory Board and City Council Meetings the department reaches out to the Public. The effectiveness of this effort will be audited within the SSMP framework and any necessary changes will be made during the SSMP audit process.

## **9c. Success of Preventative Maintenance**

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The City's preventative maintenance program is designed to minimize corrective and emergency maintenance as well as equipment failures. The City will assess the success of the preventative maintenance program by monitoring Operation and Maintenance records, asset inventories, equipment failures, and SSOs. If it is determined that the cause of any SSOs may have been prevented through preventative maintenance, job plans and schedules will be adjusted accordingly to help protect against the reoccurrence of future SSOs.

## **9d. Update Program Elements**

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Program elements will be updated or modified based on the review of the monitoring and reporting data through the self audit process as described in Element 10: SSMP Program Audit of this SSMP.

## **9e. Identify and Illustrate SSO Trends**

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The City reports all SSO events to the California Integrated Water Quality System (CIWQS). The frequency, causes, volumes, locations, and other SSO details and trends are tracked and analyzed by the City. The Wastewater Collections Division keeps a historical listing of all SSO. All SSO events are investigated and a report is generated, providing event details and causes of the SSO. SSO causes and actions taken to prevent similar SSO events from occurring will be included in the Element 10: SSMP Program Audit of this SSMP.

# Element X: SSMP Program Audits

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This section of the SSMP discusses the City's SSMP auditing program. This section fulfills the SWRCB (Element 10) SSMP Audit requirements.

## SWRCB Requirement

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### **Element 10. SSMP Program Audits**

As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.

## SSMP Program Audits

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The City of Morro Bay will produce internal audits every two years to determine the effectiveness of the SSMP elements and programs. The program audit will include a review of relevant data and trends maintained as part of the SSMP Monitoring and Measurements Program to determine opportunities to improve compliance with the SSMP requirements and system performance. A prioritized list of improvements will be updated as part of the audit program. An overview of SSMP related progress between audits will be included in the program audit.

As part of the audit process, the Wastewater Collections Division will review the SSOs from the previous years and will provide details in the Audit on the causes of the SSOs and what actions were taken to prevent similar SSOs from occurring in the future. As part of the audit the City will compare its performance with similar collection systems. If any deficiencies are determined, the appropriate elements of the SSMP will be updated as well as corresponding reference material.

The program audit will include a final report reviewing the City's performance and identifying findings. The report will be posted on the City's website and will be kept on file as an update to the City's SSMP, and will be included in State of the Sewer Reports to the City Council. When major changes are made to the SSMP the modified elements may be presented to City Council to be readopted.

# **Element XI: Communication Program**

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This section of the SSMP discusses the City of Morro Bay's Communication during the development, implementation, and performance of the SSMP. This section also discusses the communication between the City of Morro Bay and systems that are satellite to the City's sanitary sewer system. This section is to fulfill the Communication Program element of the SWRCB (Element 11) SSMP requirements.

## **SWRCB Requirement**

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The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

# **Communication Program for Development of SSMP**

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During the development of this SSMP the City Council decided that each element of the SSMP be presented to the Public Services Advisory Board (PWAB). The PWAB presentations are televised on local television channel 20 and allow for public review and comment. PWAB votes to recommend each element to be approved by the City Council.

After PWAB's recommendation, completed elements of the SSMP are presented to the Morro Bay City Council to be approved and adopted. The City Council has requested that the SSMP elements be presented at least two months prior to the State Water Quality Control Board's due date. This time buffer allows for incorporation of any comments and re-submission to the City Council, if necessary, prior to the State's due date. The City Council meetings are available on both the internet and local television channel 20.

Once the elements of the SSMP have been prepared for adoption, a draft copy is available at the City Library for review. The completed SSMP will be posted on the City's website. This ensures public access to the adopted SSMP.

# **Communication Program for Implementation of SSMP**

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The implementation of the SSMP brings changes to the operation of the City of Morro Bay's Wastewater Collections Division. Information regarding the commercial and residential customer role of implementing the SSMP has been presented in utility newsletters, and individual source control site visits as appropriate to the mandate. Communication of the new implemented processes will be at the City Council Meetings as part of the State of the Sewer presentation, presented approximately once per year. Performance of the elements of the SSMP will be continually monitored and presented in a summary during the State of the Sewer presentation.

Feedback on implementation and performance of the adopted SSMP elements will be recorded and taken into consideration for areas of review for the next revision of the SSMP. The document is required to be revised on a biannual basis. Our review will meet this requirement and will be adopted via a public process, ensuring continued outreach opportunities.

# **Communication Program with Satellite Systems**

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There are several agencies that discharge to the City Wastewater Collection System that we consider to be satellite agencies. These are:

1. Morro Bay High School (San Luis Coastal Unified School District)
2. Morro Bay State Park (2 sources)
3. Bayshore Village Home Owners Association

Regular communication with these satellite agencies will continue, and concerns regarding these satellite agencies will be discussed with the agency as needed.

The City of Morro Bay and the Cayucos Sanitary District operate under a Joint Powers Agreement (JPA) which outlines the joint ownership and operation of the wastewater treatment plant and sewer line. The Cayucos Sanitary District is not considered a satellite agency because they own, operate, and maintain a collection system that is tributary to the wastewater treatment plant they jointly own and operate. Communication with the Cayucos Sanitary District is necessary to operate the jointly owned sewer line that runs along North Main Street into the wastewater treatment plant. JPA meetings are routinely scheduled to discuss issues and make decisions regarding elements of the JPA.

# Appendix A

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Legal Authority Element Reference Documents

Attachment A: City of Morro Bay Municipal Code Chapter 13.12 SEWERS

Attachment B: City of Morro Bay Standard Specifications: 8. SEWERAGE

Attachment C: City of Morro Bay Standard Drawings: Sewer Section

**Attachment A**  
**City of Morro Bay Municipal Code**  
**Chapter 13.12 SEWERS**

## Chapter 13.12

## SEWERS\*

## Sections:

- 13.12.010 Connection permit for annexed territory.
- 13.12.020 Annexed territory connection—Computation of cost.
- 13.12.030 Annexed territory connection—Existing bonds excepted.
- 13.12.040 Main extensions to new customers other than subdivisions.
- 13.12.050 Calculation of sewer main extension charges.
- 13.12.060 Refunds.
- 13.12.070 Main extensions to subdivisions.
- 13.12.080 Refunds to subdividers.
- 13.12.090 Use of existing sewer.
- 13.12.100 Quality of sewer discharge.
- 13.12.110 Discharge of storm water, unpolluted drainage and industrial cooling waters.
- 13.12.120 Prohibited discharge.
- 13.12.125 Federal and state requirements.
- 13.12.130 Grease, oil and sand interceptors—Installation.
- 13.12.140 Grease, oil and sand interceptors—Maintenance.
- 13.12.150 Review and preliminary treatment of waters and wastes.
- 13.12.160 Preliminary treatment facility maintenance.
- 13.12.170 Manhole installation.
- 13.12.180 Analysis of waters and wastes.
- 13.12.185 Inspection of premises.
- 13.12.190 Agreement between city and industry.
- 13.12.200 Sewer charges.
- 13.12.205 Sewer use charges.
- 13.12.210 Collections.
- 13.12.220 Discharging sewage onto city lands.
- 13.12.230 Discharging sewage from septic tanks.
- 13.12.240 Designated sewage dumping places.
- 13.12.250 Discharge fees.
- 13.12.260 Commercial facilities.
- 13.12.270 Private facility—Construction.
- 13.12.280 Private facility—Operation.
- 13.12.290 Private facility—Permit revocation.
- 13.12.300 Private facility—Appeals.
- 13.12.310 Right to terminate water service.
- 13.12.320 Liability for damages for violation.

\*For statutory provisions regarding municipal sewer districts, see Health & Saf. Code § 4600 et seq.; for provisions authorizing cities to construct and maintain drains and sewers, see Gov. Code § 38900.

**13.12.010 Connection permit for annexed territory.**

Before a permit shall be issued for a sewer connection in any area now outside the city limits which shall hereafter be annexed to the city, the owner or applicant shall pay to the city for such privilege a sum in accordance with the Master Fee Schedule. (Ord. 225 § 66, 1982; Ord. 13 § 1 (part), 1965; prior code § 9200)

**13.12.020 Annexed territory connection—Computation of cost.**

The sum shall be the equivalent of the cost to similar properties then within the city which have paid for the facilities so to be used. (Ord. 13 § 1 (part), 1965; prior code § 9201)

**13.12.030 Annexed territory connection—Existing bonds excepted.**

The sum shall not include any amounts for which bonds of the city are then outstanding and to which the property shall become subject upon annexation. (Ord. 13 § 1 (part) 1965: prior code § 9202)

**13.12.040 Main extensions to new customers other than subdivisions.**

Mains will be extended to serve new customers under the following terms and conditions:

A. No main extension will be made by the city except on an approved dedicated street, alley or recorded easement;

B. Prior to construction of the main, every applicant for sewer service shall enter into a written form agreement for such extension and shall deposit with the department of public works an amount equal to ten percent of the estimated cost of the extension, including engineering and administration. The estimated cost shall be based on the actual size of facilities required to meet the service demands from that extension, except that six inch pipe shall be the minimum size considered for general use. Should the sewer department desire to install facilities greater than are needed to meet said service demands, the cost of the excess size of facilities shall be borne by the city. The engineering department shall then proceed with plans and specifications and shall solicit and open bids for the proposed work. On the basis of the approved bid, plus engineering and administration costs, the department of public works shall inform the applicant as to the cost of the proposed extension. Upon receipt by the city of an amount which, with the original deposit, is equal to the cost of the work, the engineering department shall proceed with the construction of the extension;

C. In the event that the applicant or applicants fail to deposit the required funds within sixty days after determination of the cost, the extension will not be made and no refund on the ten percent deposit will be made, except that where actual costs are less than the amount of such deposit, the city may refund the unused amount. (Ord. 13 § 1 (part), 1965: prior code § 9203)

**13.12.050 Calculation of sewer main extension charges.**

Immediately upon completion of the sewer extension, the city engineer shall prorate the entire cost thereof against all lots or property that may ultimately be benefited by direct connection to said sewer extension in proportion to the frontage thereof, or if the lots be irregular in shape, then in such manner as may, in the opinion of the city engineer, provide an equitable distribution of costs. In no case shall any applicant pay an amount less than the prorated cost of the extension for the length of his frontage as determined in this section. The sewer main extension charges shall be in addition to the specified service connection charges. (Ord. 13 § 1 (part), 1965: prior code § 9204)

**13.12.060 Refunds.**

A. The original applicant or applicants shall, up to ten years from the date of signing the form agreement, be entitled to a refund for each connection made to the extension, based on the prorated cost as determined in Section 13.16.060 for each lot or parcel. The engineering department may make extensions to the facilities constructed under this subsection without obligation to applicant and refunds will not be made for services connected to said additional extensions.

B. No interest shall be paid on or accrue on such deposits for sewer main extensions. Refunds of the deposit shall be made only if, as and when sewer main extension charges are collected from other consumers requiring service from this sewer main extension. (Ord. 13 § 1 (part), 1965: prior code § 9205)

**13.12.070 Main extensions to subdivisions.**

Where sewer main extensions are required for subdivisions, it will be the responsibility of the owner or subdivider to pay the cost for complete installation of all sewer facilities required within the subdivision and for extension of sewer transmission mains from the subdivision to the nearest existing main of adequate capacity for the area to be served. Such transmission main shall be subject to all the requirements as set forth in standard improvement specifications and drawings of the city,

13.12.070

and to any and all modifications and supplements thereto. Upon official acceptance by the city, the city shall assume full ownership, maintenance and control of such mains. (Ord. 13 § 1 (part), 1965; prior code § 9206)

**13.12.080 Refunds to subdividers.**

A. Upon completion of any sewer transmission main to a subdivision as outlined in Section 13.12.070, the subdivider may submit to the city engineer a certified statement showing the actual cost of such extension. If said extension is larger than six inches in diameter, the city engineer shall adjust the actual cost to the equivalent of a six-inch-diameter main. He shall then prorate the cost for a six-inch main against all lots or parcels which in the future may be served by direct connection to said main. Any and all connections to said main shall be subject to the charges specified in Section 13.12.050. The city may make extensions to facilities constructed under this regulation without obligation, and refunds will not be made for services connected to said additional extension.

B. The subdivider or owner shall, for a period of ten years from the date of official acceptance of the subdivision, be eligible for a refund on each connection made to the main extension, as provided herein.

C. No interest shall be paid on or accrue on any funds subject to such refund. Refunds shall be made only if, as, and when sewer connection charges are collected by the city. (Ord. 13 § 1 (part), 1965; prior code § 9207)

**13.12.090 Use of existing sewer.**

Before a permit is issued for a sewer connection in any areas within the city, which property shall use any then-existing sewerage facilities of the city for which such property shall not have made full payment of its share of the cost thereof, the owner or applicant shall pay a sewer availability charge in accordance with the Master Fee Schedule.

A sewer availability charge is a sum of money required to be paid by any person to buy into the municipal sewer system. (Ord. 225 § 67, 1982; Ord. 155 § 3, 1977; Ord. 13 § 1 (part), 1965; prior code § 9208)

**13.12.100 Quality of sewer discharge.**

No person shall discharge or cause to be discharged any stormwater, surface water, groundwater, roof runoff, subsurface drainage, unpolluted industrial cooling or unpolluted industrial process waters to any sanitary sewer. (Ord. 279 Exh. A (part), 1986; Ord. 13 § 1 (part), 1965; prior code § 9209 (part))

**13.12.110 Discharge of storm water, unpolluted drainage and industrial cooling waters.**

Stormwater and all unpolluted drainage shall be discharged to such sewers as are specifically designated as combined sewers or storm sewers, or to a natural outlet approved by the director of public works. Unpolluted industrial cooling or unpolluted process waters may be discharged, upon approval of the director of public works, to a storm sewer, combined sewer or natural outlet. (Ord. 279 Exh. A (part), 1986; Ord. 13 § 1 (part), 1965; prior code § 9209A)

**13.12.120 Prohibited discharge.**

Except as provided in this chapter, no person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewers.

A. Any liquid or vapor having a temperature higher than one hundred fifty degrees Fahrenheit;

B. Any water or waste which may contain more than one hundred parts per million, by weight, of fat, oil, or grease;

C. Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas;

D. Any garbage that has not been properly shredded;

E. Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, woods, paunch manure, or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works;

F. Any water or wastes having a pH lower than 5.5 or higher than 9.0, or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works;

G. Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment process, constitute a hazard to humans, plants or animals, or create any hazard in the receiving waters of the sewage treatment plant;

H. Any waters or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant;

I. Any noxious or malodorous gas or substance capable of creating a public nuisance;

J. Any wastes which will exceed the limitations set forth in federal pretreatment standards;

K. Any wastes which will interfere with the disposal, reclamation or refuse of the wastewater treatment plant effluent or sludge;

L. Any wastes which will cause the wastewater treatment plant to violate its NPDES permit;

M. Any radioactive wastes or isotopes or half-life or concentration which exceed limits established by the water quality control superintendent;

N. Any wastes which cause a hazard to human life or create a public nuisance. (Ord. 279 Exh. A (part), 1986; Ord. 13 § 1 (part), 1965; prior code § 9209B)

#### 13.12.125 Federal and state requirements.

Federal and/or state discharge requirements will apply in any case where they are more stringent than those in this chapter. (Ord. 279 Exh. A (part), 1986)

#### 13.12.130 Grease, oil and sand interceptors—Installation.

Grease, oil and sand interceptors shall be provided when, in the opinion of the director of public works, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, and other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the director of public works, and shall be located as to be readily and easily accessible for cleaning and inspection.

Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight, and equipped with easily removable covers which, when bolted in place, shall be gastight and watertight. (Ord. 13 § 1 (part), 1965; prior code § 9209C)

#### 13.12.140 Grease, oil and sand interceptors—Maintenance.

Where installed, all grease, oil and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times. (Ord. 13 § 1 (part), 1965; prior code § 9209D)

#### 13.12.150 Review and preliminary treatment of waters and wastes.

A. The admission into the public sewers of any waters or wastes having:

1. A five day biochemical oxygen demand greater than three hundred parts per million by weight; or

2. Containing more than three hundred fifty parts per million by weight of suspended solids; or

3. Containing any quantity of substances having the characteristics described in Section 13.12.120; or

4. Having an average daily flow greater than two percent of the average daily sewage flow of the city, shall be subject to the review and approval of the director of public works.

B. Where necessary in the opinion of the director of public works, the owner shall provide, at his expense, such preliminary treatment as may be necessary to:

1. Reduce the biochemical oxygen demand to three hundred parts per million and the suspended solids to three hundred fifty parts per million by weight; or

2. Reduce objectionable characteristics or constituents to within the maximum limits provided for in Section 13.12.120; or

3. Control the quantities and rates of discharge of such waters or wastes. Plans, specifications, and any other pertinent information relating to proposed preliminary treatment facilities shall be submitted for the approval of the director of public works and of the Water Pollution Control Board of the state, and no construction of such facilities shall be commenced until said approvals are obtained in writing. (Ord. 13 § 1 (part), 1965: prior code § 9209E)

**13.12.160 Preliminary treatment facility maintenance.**

Where preliminary treatment facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation, by the owner at his expense. (Ord. 13 § 1 (part), 1965: prior code § 9209F)

**13.12.170 Manhole installation.**

When required by the director of public works, the owner of any property served by a building sewer carrying industrial wastes shall install a suitable control manhole in the building sewer to facilitate observation, sampling and measurements of the wastes. Such manhole, when required, shall be accessible and safely located, and shall be constructed in accordance with plans approved by the director of public works. The manhole shall be installed by the owner at his expense, and shall be maintained by him so as to be safe and accessible at all times. (Ord. 13 § 1 (part), 1965: prior code § 9209G)

**13.12.180 Analysis of waters and wastes.**

All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in Sections 13.12.120 and 13.12.150 shall be determined in accordance with "Standard Methods for the Examination of Water and Sewage," and shall be determined at the control manhole provided for in Section 13.12.170, or upon suitable samples taken at said control manhole. In the event that no special manhole has been required, the control manhole shall be considered to be the nearest downstream manhole in the public sewer to the point at which the building sewer is connected. (Ord. 13 § 1 (part), 1965: prior code § 9209H)

**13.12.185 Inspection of premises.**

The director of public works, or authorized representative of the city, shall be permitted to enter all properties, without prior notice, for the purposes of inspection, sampling and testing in accordance with the provisions of this chapter. (Ord. 279 Exh. A (part), 1986)

**13.12.190 Agreement between city and industry.**

No statement contained in this chapter shall be construed as preventing any special agreement or arrangement between the city and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the city for treatment, subject to payment therefor by the industrial concern. (Ord. 13 § 1 (part), 1965: prior code § 9209I)

**13.12.200 Sewer charges.**

All users other than single and multiple family residences, trailer parks, motels, business establishments, schools, churches, fraternal and nonprofit organizations using more than one thousand five hundred cubic feet per month of sewage, shall be charged on the basis of cubic feet of sewage treated for the installation. Such quantities of sewage shall be determined by the city engineer, based upon the flow of sewage through a measuring device. Any occupant so charged who

may disagree with the city engineer's determination may, at the occupant's own expense, install private measuring devices in accordance with the specifications approved by the city engineer. (Ord. 13 § 1 (part), 1965; prior code § 9210)

**13.12.205 Sewer use charges.**

All sewer users including but not limited to single-family and multiple-family residences; trailer parks; motels; business establishments; schools; churches; public utility and industrial facilities; district, county, state and federal facilities; fraternal and nonprofit organizations shall pay a sewer use charge in order to provide funds to supplement the general taxes in financing construction, maintenance and operation of sewage collection, transport and treatment facilities in and for the city. (Ord. 155 § 4, 1977)

**13.12.210 Collections.**

Sewer use charges shall be in addition to the water charges and shall be included in the customer's bimonthly utility bill. Such charges shall be based upon rates in accordance with the Master Fee Schedule. (Ord. 225 § 68, 1982; Ord. 155 § 5, 1977; Ord. 13 § 1 (part), 1965; prior code § 9211)

**13.12.220 Discharging sewage onto city lands.**

It is unlawful for any person to dump or discharge raw or chemically treated sewage from any source onto the surface of any lands within the city. (Ord. 43 § 1 (part), 1966; prior code § 9212.1)

**13.12.230 Discharging sewage from septic tanks.**

It is unlawful for any person to dump or discharge within the city, septic tank cleanings or any raw or chemically treated sewage from septic tanks. (Ord. 43 § 1 (part), 1966; prior code § 9212.2)

**13.12.240 Designated sewage dumping places.**

Raw or chemically treated sewage from chemical toilets and sources other than septic tanks may be discharged or dumped within the city only at the places owned and/or operated by the city and designated by the director of public works or at such privately owned facilities for which a current operating permit has been issued as provided in this chapter. (Ord. 43 § 1 (part), 1966; prior code § 9212.3)

**13.12.250 Discharge fees.**

Each person dumping or discharging raw or chemically treated sewage from sources other than septic tanks into the facilities of the city shall pay the following fees:

A. House trailers or campers — See Master Fee Schedule;

B. Tank trucks or other commercial carriers — For each vehicle, see Master Fee Schedule for charge for each one thousand gallon capacity or fraction thereof, regardless of the actual amount discharged. (Ord. 225 §§ 69 and 70, 1982; Ord. 43 § 1 (part), 1966; prior code § 9212.4)

**13.12.260 Commercial facilities.**

It is unlawful for any person to discharge or dump raw or chemically treated sewage from commercial tank trucks or from other commercial sources into privately owned and/or privately operated facility. Such commercial source shall discharge or dump such sewage only into the facilities owned and/or operated by the city. (Ord. 43 § 1 (part), 1966; prior code § 9212.5)

**13.12.270 Private facility—Construction.**

No person shall install or construct any facility for receiving raw or chemically treated sewage from sources other than septic tanks without having first secured a building permit for said

installation from the building official in accordance with Sections 14.04.030 through 14.04.050 of this code. All such private facilities shall be installed in strict conformance with the approved plans and specifications of the city. (Ord. 43 § 1 (part), 1966; prior code § 9212.6)

**13.12.280 Private facility—Operation.**

No owner or operator of any facility for the reception of raw or chemically treated sewage shall permit any raw or chemically treated sewage to be dumped into such facility until an operating permit for such facility has been obtained from the director of public works as provided for in this chapter and conspicuously posted near such facility. Upon application to the director of public works, the director of public works shall issue, in accordance with the Master Fee Schedule, an operating permit to the owner of any such privately owned facility upon certification to the director of public works by the building official that such facilities have been constructed in conformance with the approved plans and specifications of the city. Such operating permit shall be conditional upon continued operation of such facilities in compliance with the rules, regulations and directives of the director of public works relating to such operation, including maintenance and cleaning of such facilities. The owner or operator of such facilities shall keep a log of discharger's name, driver's license number, vehicle type and license number, date and time of discharge. The owner or operator of the facility shall not permit commercial use of the discharge facility. Any officials of the city shall have the right of entry into buildings or premises regulated by this chapter in accordance with the provisions of Section 1.08.010 of this code. (Ord. 279 Exh. A (part), 1986; Ord. 225 § 71, 1982; Ord. 115 § 2, 1973; Ord. 114 § 7, 1973; Ord. 43 § 1 (part), 1966; prior code § 9212.7)

**13.12.290 Private facility—Permit revocation.**

In the event any privately owned facility for the collection of raw or chemically treated sewage from sources other than septic tanks is operated in violation of or contrary to or inconsistent with the rules, regulations and directives of the director of public works or this code, the director of public works, may in his discretion, suspend or revoke the operating permit theretofore issued for such private facility, with or without notice, provided, however, that in the event such suspension or revocation is immediate, notice of such action and the causes therefore shall be promptly sent to the owner of such facility by certified mail, postage prepaid, at the address indicated on the operating permit. (Ord. 43 § 1 (part), 1966; prior code § 9212.8)

**13.12.300 Private facility—Appeals.**

The owner or operator of any privately owned facility for the collection of raw or chemically treated sewage from sources other than septic tanks may appeal the decision of the director of public works suspending or revoking the operating permit for such facility, in accordance with Section 14.12.050 of this code; provided, however, that the order of the director of public works which is appealed from shall remain in full force and effect pending the determination of such appeal. (Ord. 43 § 1 (part), 1966; prior code § 9212.9)

**13.12.310 Right to terminate water service.**

If any user of the city sewer system fails to meet the requirements set forth in this chapter, the director of public works shall have the authority to terminate water service or use alternate actions to protect the wastewater treatment facilities, employees and surrounding environment from hazardous discharges. (Ord. 279 Exh. A (part), 1986)

**13.12.320 Liability for damages for violation.**

Any person violating a provision of this chapter shall be liable for all damages resulting from such violation, or which arise from actions taken in the correction of such violation, which are incurred by the city, including but not limited to attorney's fees, court costs, and fines levied on the city by regulatory agencies. (Ord. 279 Exh. A (part), 1986)

## MORRO BAY MUNICIPAL CODE

12.24.060 Section 710.1 of the California Plumbing Code is amended to read as follows:

Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole, lamphole, or pump station receiving manhole cover of the public sewer serving such drainage piping shall be protected from backflow of sewage by installing an approved type backwater valve. Fixtures above such elevation shall not discharge through the backwater.

14.24.070 Required sewer backwater valve.

A. Any existing lateral sewer piping upon any premises which services fixtures whose elevation is lower than the elevation of the first upstream sewer manhole rim, lamphole, or pump station receiving manhole, and for which the city has record of a previous sewage backflow incident involving a clogged sewer main shall be protected from backflow of sewage by installing backwater valves of a type approved by the director of public works or chief building inspector. The property owner shall be required to provide and install such device.

B. If the property owner fails to install and maintain a backwater valve in good working condition when required under this section, the director of public works or chief building inspector may declare said sewer connection to be a nuisance and abate such nuisance pursuant to Section 8.12.010 et seq. of this code by installing an approved type backwater valve at the owner's expense. Said property owner may, in addition, be subject to fines as outlined in subsection E. of this section.

C. All house connection sewers, industrial sewers, private sewage disposal systems and appurtenances thereto, now existing or hereafter constructed, shall be maintained by the owner of the property in a safe and sanitary condition and all devices or safeguards which are required by this section for the operation thereof shall also be maintained in good working order by the owner.

D. The director of public works, the health officer, and other duly authorized employees of the city and the health department bearing proper credentials and identification shall be permitted to enter all properties for the purposes of inspection, observation, measurement, sampling, and testing in accordance with the provisions of this section. The director of public works, the health officer, or their representatives shall have no authority to inquire into any processes including metallurgical, chemical, oil, refining, ceramic, paper or other industries beyond that point having a direct bearing on the kind and source of discharge to the sewers or waterways of facilities for waste treatment.

E. Violation and penalties. Any person who is convicted of violation of any provisions of Section 14.24.130 or 14.24.140 is guilty of an infraction punishable as provide in Chapter 1.16 of this code.

**Attachment B**  
**City of Morro Bay Standard**  
**Specifications: 8. SEWERAGE**

## 8. SEWERAGE

### 8.01 GENERAL

Sanitary sewer lines and appurtenances within City jurisdiction shall be constructed in accordance with the details shown on plans and specifications approved by the Engineer, these Standards and Specifications, and State Specifications where applicable.

### 8.02 DESIGN FLOW AND GRADIENT

An average flow of 100 gallons per person per day shall be used for hydraulic design purposes, with the peak flow double the average flow. Pipes shall be sized to handle peak flows with pipes flowing three-quarters (3/4) full.

Sanitary sewer grades shall be designed to provide a minimum velocity of 2 feet per second when flowing full. The following table indicates the slopes which will provide that velocity, and these shall be used as the minimum standard for design.

Diameter	Slope in Feet/Foot Min. Acceptable
6"	.0050
8"	.0035
10"	.0025
12"	.0020
15"	.0015
18"	.0012
House Lateral	.02

Whenever a change in the size of the pipe, or an angle of 20 degrees or greater in alignment occurs, the flowline of the pipe flowing into the manhole shall be a minimum of 0.17 foot above the flowline of the pipe flowing from the manhole, or an amount necessary to match the inside crowns of the pipes, whichever is greater.

Design velocities for sanitary sewers shall not exceed 10 feet per second, unless approved by the Engineer. The maximum design discharge shall not exceed the flow at critical slope and velocity. Sanitary sewers should not be designed for flow conditions at critical slope and velocity.

### 8.03 LOCATION AND ALIGNMENT

All sanitary sewers shall be constructed and installed within City right-of-way. Location of sewer lines in easements shall be kept to a minimum. Width and location of easements are subject to the approval of the Engineer. (See also Section 6.03)

Sewerage systems shall be designed so as to have a minimum curvature both horizontal and vertical. Whenever possible sewer

lines shall be laid out in a straight line between structures.

#### 8.04 DEPTH AND SIZE

The normal design depth of a sanitary sewer system shall be such as to obtain a minimum cover of 36 inches for the house lateral at the property line. Sewer mains and laterals shall be designed so as to be usable by each lot without the need for an ejector pump. Exceptions may be granted by the Engineer on a case-by-case basis.

The minimum sewer main size shall be 6 inches.

#### 8.05 MANHOLES

Manholes shall be installed in accordance with Standard Drawings S-3 and S-4, and these Specifications.

Manholes shall be watertight structures constructed by placing precast concrete sections on a poured concrete base. Eccentric cones shall be used with openings over the upstream side of the manhole. Steps shall not be permitted in manholes.

Whenever the inverts of sewer lines enter a manhole at different elevations, a standard drop manhole shall be constructed.

Normal maximum spacing for manholes shall be 400 feet. The maximum spacing of manholes on trunk sewer lines shall be as follows:

- 12" to 24" diameter - 400 feet
- 24" to 36" diameter - 500 feet.

Cleanouts at the end of a line shall not be further than 400 feet from the nearest manhole. Cleanouts shall be installed in accordance with Standard Drawing S-2.

Brick or block manholes shall not be allowed except under special circumstances where it is not feasible to construct pre-cast manholes.

#### 8.06 HOUSE SERVICE LINES

When a new sewer line is constructed, house service lines from the sewer to the property line or existing house service lines shall be installed at the same time. Whenever house service laterals are installed as a part of the construction of the sewer line, the use of wye or tee saddles shall not be permitted. Laterals shall not enter the main at an angle greater than 45 degrees.

Each house service line shall be referenced to the plan stationing. Location of the service lines shall be marked at the curb with an "S". Where curbs are not present laterals shall be marked with a brass tag stamped "S" on an iron pipe or 2" x 2" hub. The minimum size of any sanitary lateral shall be 4 inches.

FOR SEWER laterals installed after construction of the main line, the main shall be cut and a precast wye installed in accordance with Standard Drawing S-1.

Laterals shall have approved backflow preventers installed wherever the top of the lowest fixture is lower than the rim elevation of the upstream manhole.

Cast iron shall be used for laterals under driveways when there is less than 3'-0" of cover.

Excavation for laterals shall be in accordance with Section B.09C of these Specifications.

#### 8.07 PIPE

All sanitary sewer lines shall be clay pipe, PVC pipe, or cast iron pipe, or approved by the Engineer. All pipe and pipe fittings shall be marked or stamped with the trade brand name of the manufacturer, and strength or class of pipe. All pipe, fittings, and joints shall conform to ASTM Standards.

Abestos-cement pipe shall not be used for sewers.

Bituminous fiber pipe shall not be permitted for mains or laterals.

PVC pipe may only be used for gravity sewers. However, the Engineer may approve PVC for installation under low head pressure where surge forces are minimal.

#### 8.08 CASTINGS

All castings for manhole rings and covers, flushing branch frames and covers, or other purposes, shall be cast iron meeting the requirements of ASTM Designation A48, Class 25.

#### B.09 INSTALLATION OF SEWERS

A. Lines and Grade - All lines and grades shall be given by the Consultant and established in the field by the Consultant or Contractor. All stakes and marks shall be protected and preserved. Flow-line elevations shall be established at all changes in grade and at 50 foot intervals.

B. Trench Widths - The maximum width of trench measured at the top of pipe shall be governed by the size of the pipe to be installed in accordance with these Standards and Specifications.

C. Excavation for Sewers - Unless otherwise specified, the excavation for sewer pipe shall be an open trench in accordance with Standard Drawing W-6, excavated to three inches below the outside diameter of the bell. This undercutting shall be refilled with suitable bedding material as specified in the section on backfill, and thoroughly compacted into place.

When the trench is in an existing paved area, the pavement shall be sawcut and broken ahead of the trenching operations. The pavement shall be cut accurately in neat and parallel lines at

the width required for the trench, except when in the opinion of the Engineer the remaining pavement has been damaged.

Trenches shall not be left open farther than 100 feet in advance of pipe laying operations or 50 feet to the rear thereof, unless approved by the Engineer. No trenches shall be left open overnight.

When water is encountered, the trench shall be kept dewatered until the laying and jointing of the pipe, and placing of the bedding material has been completed, inspected, and approved. The Contractor shall place not less than 6 inches of 2-1/2 inch maximum size rock below the required bedding material, or otherwise de-water the trench in a manner which has been approved by the Engineer.

All safety orders, rules, or recommendations of the Occupational Safety and Health Administration (OSHA) and the Division of Industrial Safety of the Department of Industrial Relations of the State of California applicable to this work shall be obeyed and enforced.

D. Bracing and Shoring - As required by the "Trench Construction Safety Orders" of the California State Industrial Accident Commission, sufficient bracing and shoring shall be installed in trenches to insure the safety of workmen, and to protect and facilitate the work. Where practicable all such bracing and shoring shall be removed from the trench as the backfilling proceeds.

E. Tunneling shall not be permitted unless approved by the Engineer. If approved, tunneling shall be in accordance with Section 71-1.03 of the State Specifications.

F. Laying Sewer Pipe - The pipe shall be laid in conformity to the prescribed line and grade, and each pipe length checked to the grade line. Three consecutive points shown on the same rate of slope shall be used in common, in order to detect any variation from a straight grade. In case any such discrepancy exists, the work shall be stopped and the discrepancy directly reported to the Engineer. In addition, a string line or laser shall be used in the bottom of the trench to insure proper alignment and grade.

Pipe shall be laid continuously upgrade, with the bell of the pipe forward. Each length of pipe shall be laid on a firm bed and shall have a true bearing for the entire length. No wedging or blocking up of the pipe shall be permitted.

Connections to existing manholes shall be made by carefully breaking an opening in the wall of the manhole, inserting the end of the pipe through the opening flush with the inside wall, and packing the opening around the pipe with a stiff mix of cement mortar, thoroughly compacted to form a watertight connection. The mortar shall be trowelled smooth and flush with the inside wall of the manhole. Channeling of the flow through the manhole shall conform to the details shown on the Standard Drawings for new manholes. The contractor shall notify the Engineer 24 hours in advance before his connection is made to existing structures. The work shall be scheduled so that the interruption of flow is kept

to a minimum.

When the pipe is to be laid through a new manhole the top half of the pipe shall be sawcut and removed after the base is poured. Pipe elbows or bends shall be used when there is a change in direction.

Both bell and spigot shall be clean before the joint is made, and care shall be taken that nothing but the joint-making material enters joints. Cement joints, hot pour joints, and rubber rings shall not be permitted. Rubber coupler joints such as "Band Seal" may be used.

When for any reason pipe laying is discontinued for an hour or more the open end of each line shall be closed with a close-fitting stop.

G. Trench Backfill shall be per Section 8.06 of these specifications.

H. Testing of Sewer Lines - Prior to final approval, all sewer lines shall be tested for leakage by standard hydrostatic or low pressure air test as specified by the Engineer. Manholes shall be tested for watertight integrity either jointly with testing of sewer line or as separate units. All laterals shall be considered as part of the sewer for testing purposes.

PVC lines shall also be mandrel tested for roundness after completion of backfill.

I. CLEANING - Prior to the acceptance of any sewer line the Contractor shall clean all lines with a sewer cleaning ball under hydrostatic pressure. Any stoppage, dirt, or foreign matter shall be removed from the lines. All cleaning and testing of sewer lines shall take place after all construction is completed, up to but not including the final paving. The system will be inspected after final paving is completed and any damage to the system during final paving and cleanup will be corrected before approval.

#### 8.10 SPECIAL CONSTRUCTION

Special construction in areas of conflict between water and sewer lines shall be in accordance with the State of California Department of Health Services, Sanitary Engineering Branch, "Criteria for the Separation of Water Mains and Sanitary Sewers" dated April 5, 1983.

#### 8.11 REPLACEMENT OF ROAD SURFACES

Permanent paving replacement, in accordance with Standard Drawing W-6, shall not take place until other requirements have been met, but no less than 10 days after backfill has taken place. The replacement of all pavement and shoulder surfaces shall be in accordance with the Standard Drawings. Maintenance of permanent paving which may be required during a one-year period

after completion shall be provided by the Contractor at no expense to the City, including the complete restoration of all damaged property.

#### 8.12 TEMPORARY PAVEMENT

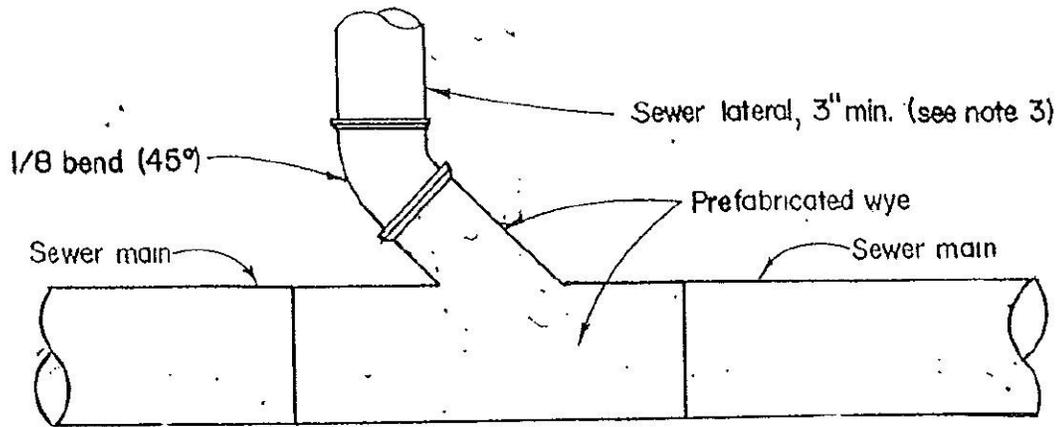
In any case a trench is cut across a thoroughfare a temporary coldpatch shall be placed immediately after backfill has been completed, and removed just prior to placing the permanent base and surfacing material. The temporary pavement shall be maintained smooth under traffic at all times.

#### 8.13 CLEAN UP

During the progress of the work, the Contractor shall keep the entire job site in a clean and orderly condition. Excess or unsuitable backfill material, broken pipe, or other waste material shall be removed from the job site. All gutters and roadside ditches shall be kept clean and free from obstructions.

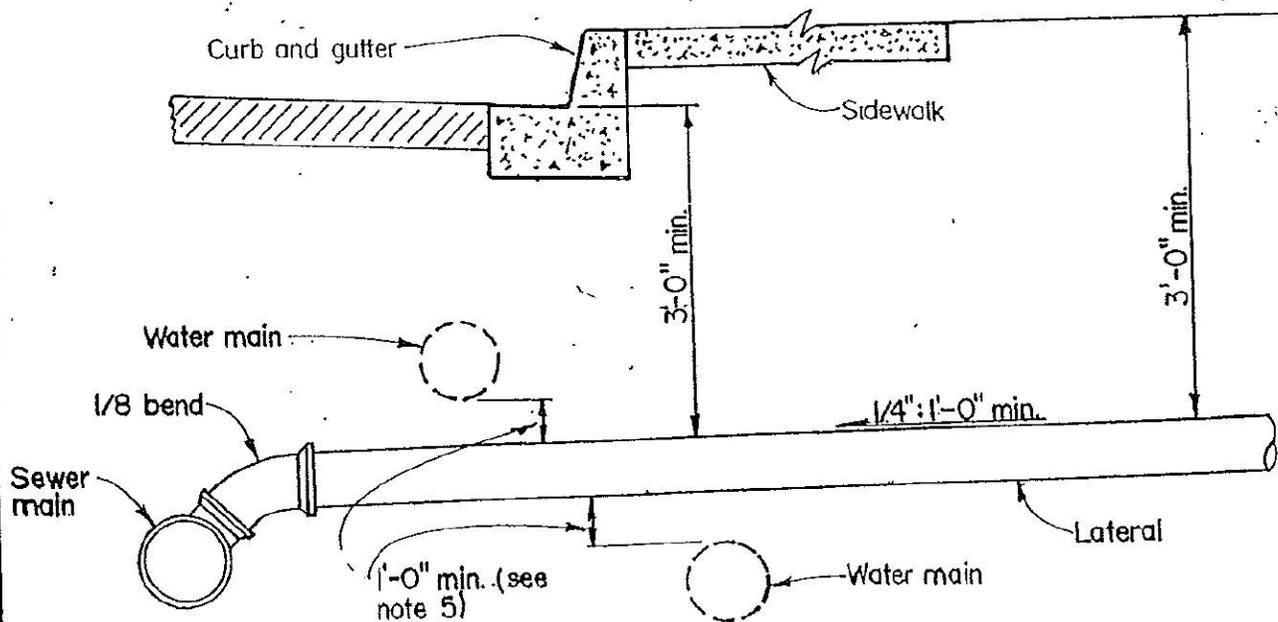
Before final acceptance of the work, the Contractor shall carefully clean up the work and premises, remove all temporary structures built by or for him, remove all surplus construction materials and rubbish of all kinds from the grounds which he has occupied and leave them in a neat condition.

**Attachment C**  
**City of Morro Bay Standard**  
**Drawings: Sewer Section**

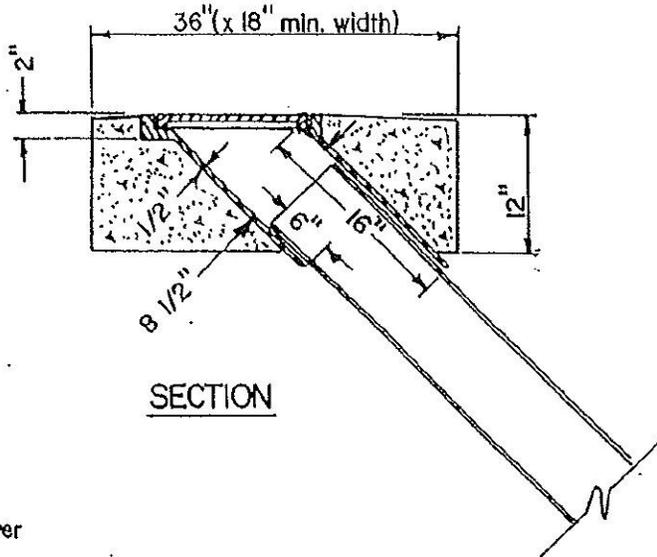


**NOTES:**

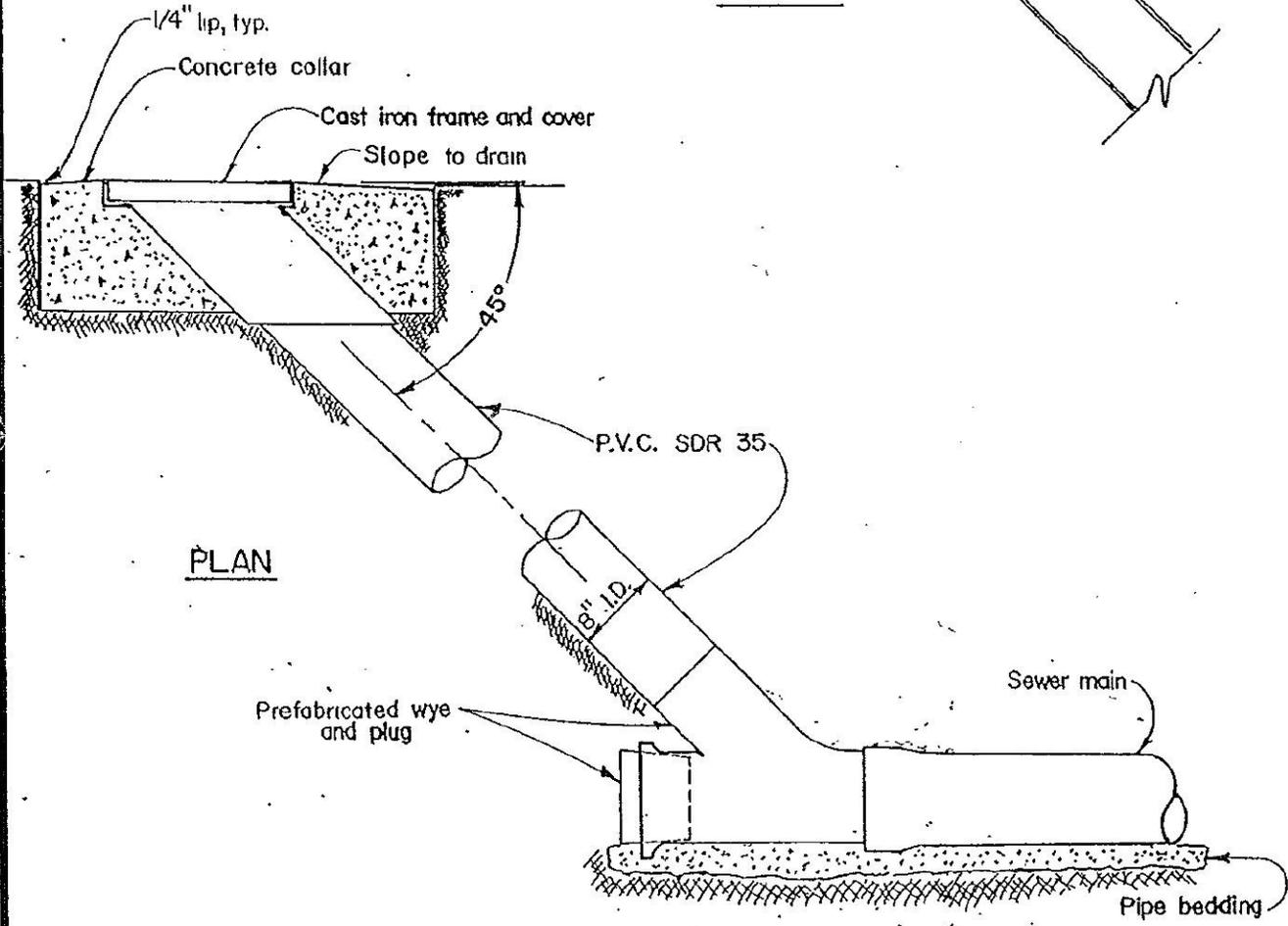
1. Sewer main shall be cut, and prefabricated wye installed; no saddle taps.
2. Lateral may be cast iron, ductile iron, V.C., PVC, or ABS sched. 40 pipe. Cast iron shall be used when cover over lateral is less than 36".
3. Lateral sizes to be determined by Community Development Department.
4. Sewer lateral and water service connection shall not be in same trench unless provisions of Section 1108 of the Uniform Plumbing Code are adhered to.
5. If minimum clearance of 1'-0" from water main cannot be obtained, Public Works Dept. shall determine joint spacing and lateral material. In the event a sewer lateral passes over a water main said main shall be exposed to determine clearance.
6. Trench backfill shall be select sand or sandy loam as approved by City Engineer.



APPROVED - CITY ENGINEER		DATE		<b>CITY OF MORRO BAY</b>		<b>SEWER MAIN CONNECTION</b>	
<i>[Signature]</i>		10-5-87					
REVISIONS	BY	APP	DATE	SCALE: NONE		<b>S-1</b>	



**SECTION**



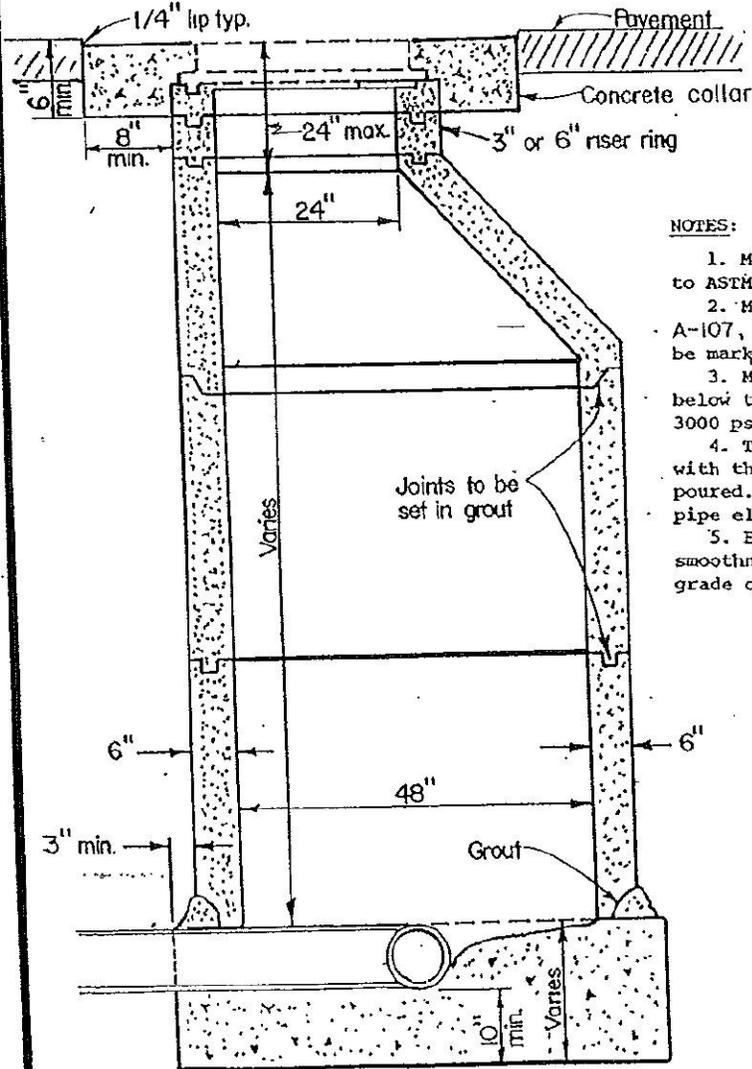
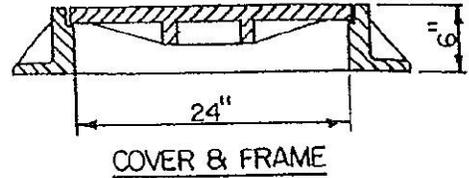
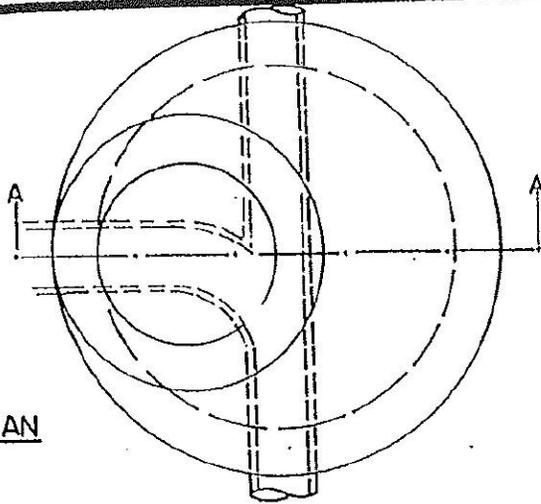
**PLAN**

**NOTES:**

1. Flushing branch (cleanout) shall be K.P. Foundrys model No. 2615 cast iron frame and model No. 3615 cast iron cover, or approved equals. Cover to be marked "SEWER".
2. Prefob. wye shall be same material as sewer main. If sewer main and wye are clay, bell on wye shall be snapped off and appropriate couplings shall be used to connect wye and PVC riser.
3. Concrete for collar shall have a minimum 2500 psi compressive strength in 28 days.

APPROVED-CITY ENGINEER		DATE		<b>CITY OF MORRO BAY</b>	<b>SEWER FLUSHING BRANCH (CLEANOUT)</b>
<i>[Signature]</i>		10-5-87			
REVISIONS	BY	APP	DATE	DEPARTMENT OF PUBLIC WORKS	SCALE: NONE
					S-2

PLAN

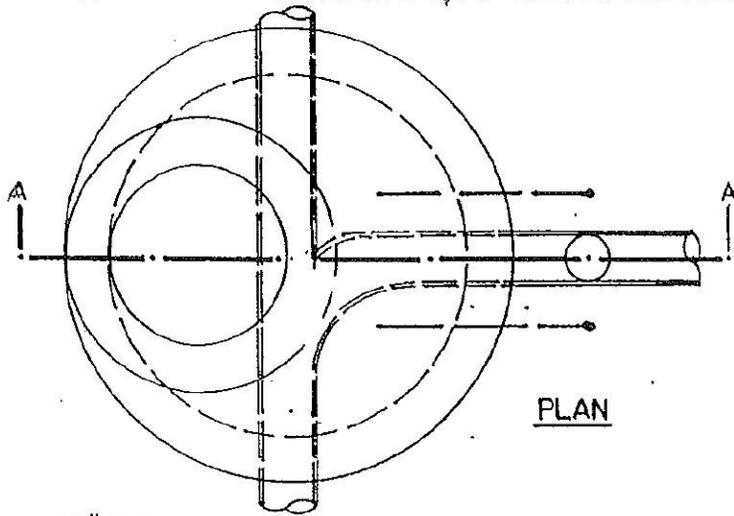


SECTION A-A

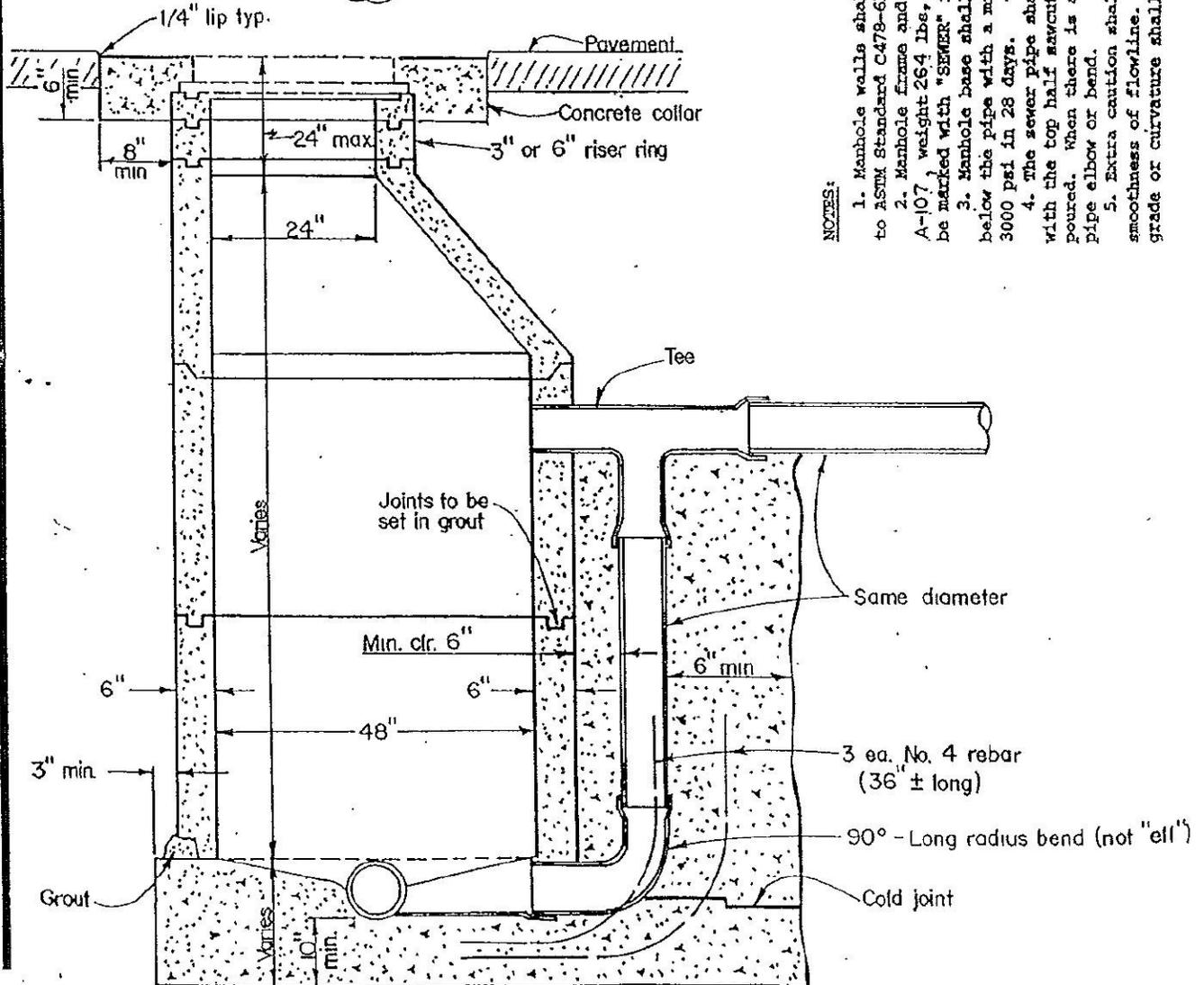
NOTES:

1. Manhole walls shall be precast type conforming to ASTM Standard C478-61T for Class 2 reinforced pipe.
2. Manhole frame and cover shall be Pinkerton No. A-107, weight 264 lbs, or approved equal. Cover shall be marked with "SEWER" in the center.
3. Manhole base shall be a minimum of 10" thick below the pipe with a minimum compressive strength of 3000 psi in 28 days.
4. The sewer pipe shall be laid through the manhole with the top half sawcut and removed after the base is poured. When there is a change in direction, use a pipe elbow or bend.
5. Extra caution shall be taken to insure smoothness of flowline. Roughness or abrupt changes in grade or curvature shall not be permitted.

APPROVED - CITY ENGINEER		DATE		CITY OF MORRO BAY	ECCENTRIC-CENTRIC PRECAST CONCRETE MANHOLE (TYPICAL)
<i>[Signature]</i>		10-5-87			
REVISIONS	BY	APP	DATE	DEPARTMENT OF PUBLIC WORKS	SCALE: NONE
					S-3



PLAN



SECTION A-A

NOTES:

1. Manhole walls shall be precast type conforming to ASTM Standard C478-61T for Class 2 reinforced pipe.
2. Manhole frame and cover shall be Pinkerton No. A-107, weight 264 lbs, or approved equal. Cover shall be marked with "SEWER" in the center.
3. Manhole base shall be a minimum of 10" thick below the pipe with a minimum compressive strength of 3000 psi in 28 days.
4. The sewer pipe shall be laid through the manhole with the top half sawcut and removed after the base is poured. When there is a change in direction, use a pipe elbow or bend.
5. Extra caution shall be taken to insure smoothness of flowline. Roughness or abrupt changes in grade or curvature shall not be permitted.

APPROVED-CITY ENGINEER

DATE

*[Signature]*

10-5-87

**CITY OF MORRO BAY**  
DEPARTMENT OF PUBLIC WORKS

**PRECAST CONCRETE DROP MANHOLE**

REVISIONS

BY APP DATE

SCALE: NONE

**S-4**

# Appendix B

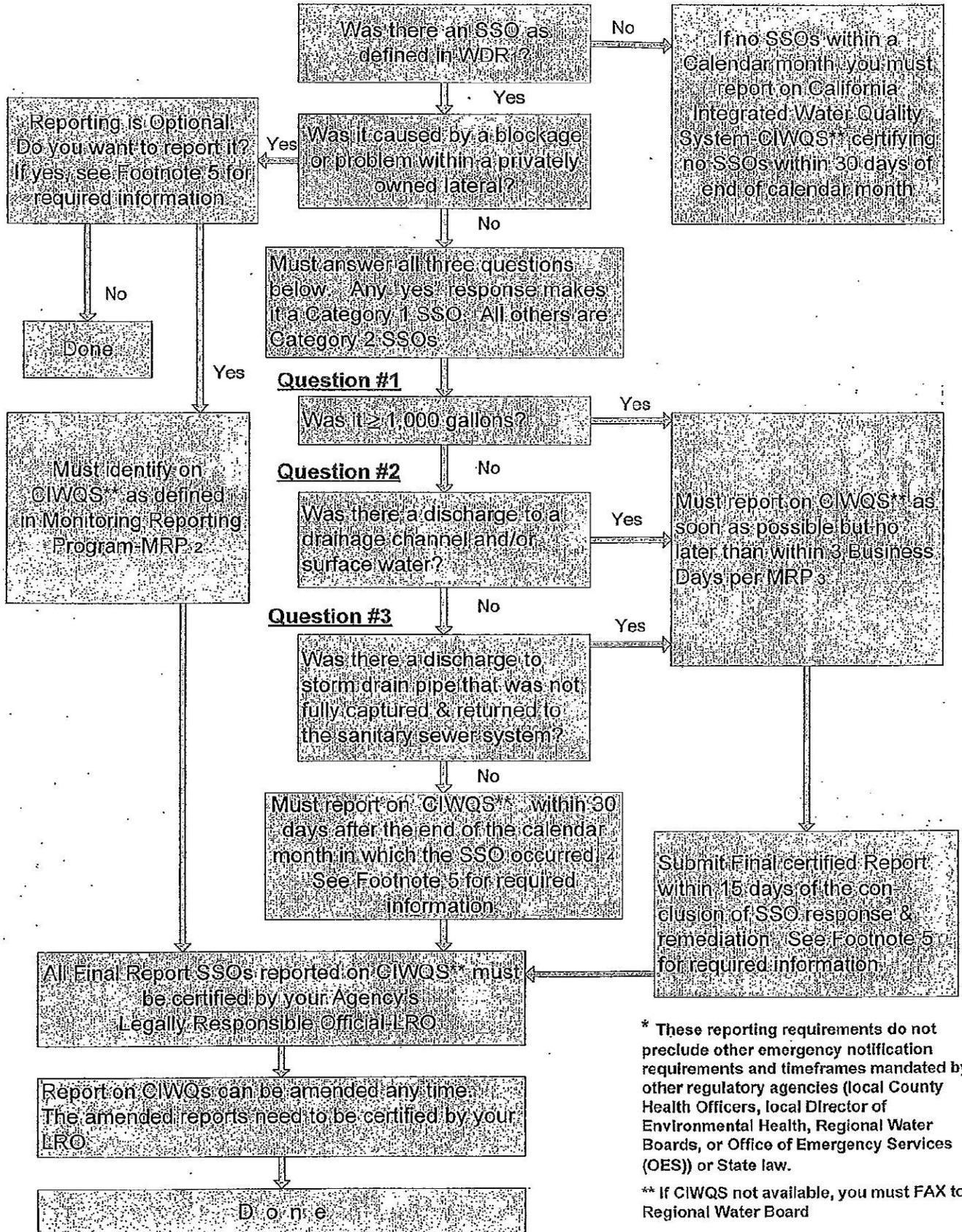
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## Overflow Emergency Response Plan Element Reference Documents

- Attachment A: State Waste Discharge Requirements
- Attachment B: Emergency Notification Numbers
- Attachment C: Notification Checklist
- Attachment D: Sewage Spill Report
- Attachment E: Chain of Custody
- Attachment F: Job Cost Record
- Attachment G: Notice Concerning Private Property Back-ups
- Attachment F: Claim Form and Instructions

**Attachment A**  
**State Waste Discharge Requirements**

## State Waste Discharge Requirements-WDR SSO Reporting Requirements \*



\* These reporting requirements do not preclude other emergency notification requirements and timeframes mandated by other regulatory agencies (local County Health Officers, local Director of Environmental Health, Regional Water Boards, or Office of Emergency Services (OES)) or State law.

\*\* If CIWQS not available, you must FAX to Regional Water Board

## Footnotes

1. WDR – 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.

2. MRP – The Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Enrollee) should be identified, if known. (See Footnote 5.)

3. MRP – Category 1 SSOs – Must be reported as soon as (1) the Enrollee has knowledge of the discharge; (2) reporting is possible; and (3) reporting can be provided without substantially impeding cleanup or other emergency measures. Initial reporting of Category 1 SSOs must be reported to the Online SSO System as soon as possible but no later than 3 business days after the Enrollee is made aware of the SSO. Minimum information that must be contained in the 3-day report must include all information identified in section 9 below, except for items 9.K – 9.M. (See Footnote 5.)

4. MRP – Category 2 SSOs – Must be reported to the Online SSO Database within 30 days after the end of the calendar month in which the SSO occurs (e.g., all SSOs occurring in the month of January must be entered into the database by March 1<sup>st</sup>). See Footnote 5.

See Next Page For Footnote 5.

5. MRP - At a minimum, the following mandatory information must be included prior to finalizing and certifying an SSO report for each category of SSO:

9. Category 2 SSOs:

- A. Location of SSO by entering GPS coordinates
- B. Applicable Regional Water Board (i.e. identify the region in which the SSO occurred)
- C. County where SSO occurred
- D. Whether or not the SSO entered a drainage channel and/or surface water
- E. Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system
- F. Estimated SSO volume in gallons
- G. SSO source (manhole, cleanout, etc.)
- H. SSO cause (mainline blockage, roots, etc.)
- I. Time of SSO notification or discovery
- J. Estimated operator arrival time
- K. SSO destination
- L. Estimated SSO end time, and
- M. SSO Certification: Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number

10. Private Lateral Sewage Discharges:

- A. All information listed above (if applicable and known) as well as:
- B. Identification of sewage discharge as a private lateral sewage discharge; and
- C. Responsible party contact information (if known)

11. Category 1 SSOs:

- A. All information listed for Category 2 SSOs, as well as:
- B. Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain
- C. Estimated SSO amount recovered
- D. Response and corrective action taken
- E. If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA must be selected
- F. Parameters that samples were analyzed for (if applicable)
- G. Identification of whether or not health warnings were posted
- H. Beaches impacted (if applicable). If no beach was impacted, NA must be selected
- I. Whether or not there is an ongoing investigation
- J. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps
- K. OES control number (if applicable)
- L. Date OES was called (if applicable)
- M. Time OES was called (if applicable)
- N. Identification of whether or not County Health Officers were called
- O. Date County Health Officer was called (if applicable); and
- P. Time County Health Officer was called (if applicable)

**Reporting to Other Regulatory Agencies**

These reporting requirements do not preclude an Enrollee from reporting SSOs to other regulatory agencies pursuant to California state law. These reporting requirements do not replace other Regional Water Board telephone reporting requirements for SSOs.

1. The Enrollee shall report SSOs to OES, in accordance with California Water Code Section 13271 Office of Emergency Services  
Phone (800) 952-7550

2. The Enrollee shall report SSOs to County Health officials in accordance with California Health and Safety Code Section 5410, et seq.

3. The SSO database will automatically generate an e-mail notification with customized information about the SSO upon initial reporting of the SSO and final certification for all Category 1 SSOs. E-mails will be sent to the appropriate County Health Officer and/or Environmental Health Department, if the county desires this information, and the appropriate Regional Water Board.

**Attachment B**  
**Emergency Notification Numbers**



**Attachment C**  
**Notification Checklist**



**Attachment D**  
**Sewage Spill Report**

**California Regional Water Quality Control Board, Central Coast Region  
SEWAGE SPILL REPORT**

Reporting Party		Phone	
Address		City	
Discharger		Phone	

Date Of Overflow		Time Overflow Began		Time Overflow Stopped	
Overflow Location (street address or lat. & long.)					
Volume Of Overflow (Gallons)		Path Of Overflow			
Waterbody/Bodies Affected					
Cause Of Overflow (grease, roots, vandalism, pump station failure, etc.)					

Action Taken To Stop Overflow					
Time Cleanup Began		Time Cleanup Complete			
Discussion Of Cleanup					
Were Public Health Warnings Posted, And If So, Where?		Number Of Overflows In Same Location In Last Three Years			
Discussion Of Measures Taken To Prevent Overflows At This Location					

Agencies Notified (Please Check)		County Health		Office of Emergency Services		Fish and Game		County Board Of Supervisors		Other (List)
----------------------------------	--	---------------	--	------------------------------	--	---------------	--	-----------------------------	--	--------------

SIGNATURE		DATE	
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**Attachment E**  
**Chain of Custody**



**Attachment F**  
**Job Cost Record**

CITY OF MORRO BAY  
DEPARTMENT OF PUBLIC WORKS

JOB COST RECORD

No. \_\_\_\_\_ Job Location \_\_\_\_\_  
 Date \_\_\_\_\_ Job Description \_\_\_\_\_  
 Customer or Party to be Billed \_\_\_\_\_  
 Address \_\_\_\_\_

LABOR

Employee	Hours	Rate	Amount

Total Labor \_\_\_\_\_

EQUIPMENT

Number	Description	Hours	Rate	Amount

Total Equipment \_\_\_\_\_

MATERIALS

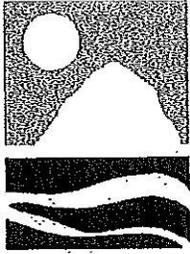
Quantity	Description	Price	Amount

Total Material \_\_\_\_\_

- 1. Labor \_\_\_\_\_
- 2. Equipment \_\_\_\_\_
- 3. Material \_\_\_\_\_
- 4. Misc. Expense \_\_\_\_\_
- Sub-Total \_\_\_\_\_
- 5. Overhead - 10% of items 2-4 \_\_\_\_\_

TOTAL \_\_\_\_\_

**Attachment G**  
**Notice Concerning Private Property**  
**Back-ups**



# CITY OF MORRO BAY

## NOTICE CONCERNING PRIVATE PROPERTY SEWER BACK-UPS

We are sorry you have had a sewer back up into your home or business. Please immediately take whatever measures are necessary to protect your property. Emergency cleanup services can be located in your telephone directory yellow pages under "Fire and Water Damage". The City of Morro Bay does not automatically take responsibility for damage to private property caused by sewer backups, and City employees have been instructed not to comment on the cause of problems in your home or business. Please do not ask them to make an assessment of damage or its cause. This is not one of their job responsibilities. Determining the cause of sewer backups can be a difficult task. The nature and cause of the problem is not always obvious at first glance. In many cases, sewer backups occur between the discharge point and the city-maintained facility and are out of the City's jurisdiction.

Since 1987, the Morro Bay Municipal Code, Section 14.24.070C has required:

"All house connection sewers, industrial sewers, private sewage disposal systems and appurtenances thereto, now existing or hereinafter constructed, shall be maintained by the owner of the property in a safe and sanitary condition and all devices or safeguards which are required by this section for the operation thereof shall also be maintained in good working order by the owner."

The City routinely flushes City sewer mains to keep them clear and the Municipal Code states the lateral from the City's sewer line to the property are the property owner's responsibility. To prevent possible future property damage resulting from backflows, the Municipal Code requires property owners on premises which have conditions susceptible to such damage install a "backwater valve". This valve, if kept in good working order, will prevent backflow of sewage from the main into your property. A copy of the Municipal Code section is on the back of this sheet.

If you believe the City of Morro Bay has been negligent in some manner, you may fill out the attached claim form and return to City Hall, 595 Harbor St., Morro Bay, CA 93442. The claim will be forwarded to the City's claims adjuster for an investigation into the circumstances and a recommendation regarding the City's liability. By law, the claim must be filed within six (6) months of the incident.

Andrea Lueker  
Risk Manager  
(805) 772-6207

**Attachment F**  
**Claim Form and Instructions**

# City of Morro Bay - CLAIM FORM

◆◆◆ PLEASE READ INSTRUCTIONS ON OTHER SIDE FIRST ◆◆◆

For Official Use Only

Name of Claimant \_\_\_\_\_  
(First Name) (Middle Initial) (Last Name)  
Home Address \_\_\_\_\_ Date of Birth \_\_\_\_\_  
City, State, Zip \_\_\_\_\_ Soc. Security # \_\_\_\_\_  
Daytime ( ) Evening ( ) Cell/pager ( ) CA Driver's Lic# \_\_\_\_\_

Type of Loss:  Personal Injury Other \_\_\_\_\_ Police Report # \_\_\_\_\_  
 Property Damage  Indemnity-Date complaint served \_\_\_\_\_

When did injury or damage occur? \_\_\_\_\_ AM/PM  
(Month/Day/Year) (Day of Week) (Time)

Where did injury or damage occur? (Street address, intersecting streets, or other location) \_\_\_\_\_

How did injury or damage occur? (Describe accident or occurrence) \_\_\_\_\_

What action or inaction of City employee(s) caused your injury or damage? \_\_\_\_\_

What injury or damage did you suffer? \_\_\_\_\_

Name of any witnesses \_\_\_\_\_

(Name) (Address) (Phone Number)

(Name) (Address) (Phone Number)

Name of City employee(s) involved? \_\_\_\_\_

Is total amount of claim greater than \$10,000? Yes \_\_\_ No \_\_\_ If YES, is this a limited civil case? Yes \_\_\_ No \_\_\_

If NO, state the amount claimed: Personal Injury \$ \_\_\_\_\_ Property Damage \$ \_\_\_\_\_ Other \$ \_\_\_\_\_

NOTE: Please attach copies of supporting documentation for the amounts claimed.

If claim relates to an automobile accident, please answer the following and ATTACH PROOF OF INSURANCE:

Please check here if there was no insurance coverage in effect at time of incident

Insurance policy # \_\_\_\_\_ Insurance Company \_\_\_\_\_

Insurance Broker/Agent \_\_\_\_\_

Address \_\_\_\_\_ Phone ( ) \_\_\_\_\_

ALL NOTICES AND/OR COMMUNICATIONS SHOULD BE SENT TO:

Name (Mr./ Mrs./ Ms.) \_\_\_\_\_ Daytime Phone ( ) \_\_\_\_\_

Address (Street, City, State, Zip) \_\_\_\_\_

**Warning:** California State Law generally requires that most claims against a public entity, such as the City of Morro Bay, be pre-sent within SIX (6) MONTHS from the date of the action or incident giving rise to the claim. Certain other claims must be filed within ONE (1) YEAR from the action or incident. You should check the Government Code to determine what presentation period applies in your case.

Signature

Relationship (self, attorney, guardian, etc.)

Date

# Appendix C

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## FOG Control Program Element Reference Documents

Attachment A: June 2008 Newsletter

Attachment B: Sample "No Grease/No Grasa" Sticker

Attachment C: Sample Maintenance Log

Attachment D: Sample Disposal Tips

Attachment E: Fats, Oils, and Grease Brochure / Best Management Practices

Attachment F: Sample Site Visit/Trap Inspection Page

**Attachment A**  
**June 2008 Newsletter**



# Water and Wastewater News

June 2008



## Fast Facts

- The City has about 60 miles of water main lines.
- The City has five drinking system operators.
- The City has four collections system operators.
- The City has about 60 miles of sewer main lines
- The City shares its Wastewater treatment plant with Cayucos.
- The City has nearly 100 capital projects in various stages of development.
- There are 2 staff members currently working part time on capital projects, among their other duties.

## Who to Call

Ever wondered who to ask for at Public Services to get your Water and Wastewater questions answered? Here's your guide to Public Services Department Utility Management Staff:

### Director

Bruce Ambo

### Utilities/Capital Projects

Dylan Wade

Kimberly Peoples

Kay Miller

### Water System

Alex Kuchenmeister

### Wastewater Collections

Jim Hayes

### Wastewater Treatment

Bruce Keogh

Phone: 772-6261

Fax: 772-6268

### Water Billing

Bonnie Johnson

Phone: 772-6222

## Nitrate Water Quality Update

### What has the City done to determine the source of the nitrate contamination?

The City hired Cleath and Associates to complete an analysis to determine the source of the nitrate pollution in the Morro Groundwater wells. The study determined that local farmers over-fertilizing their fields are causing the nitrate pollution. The study can be found on the web at <http://www.morro-bay.ca.us/water/cmbnitrate07.pdf>

### Why should I be concerned about nitrates?

High levels of nitrates in drinking water poses a significant health risk to consumers, especially infants and pregnant women, by reducing the blood's ability to carry oxygen.

The maximum level of nitrate allowable in drinking water is 45 milligrams per liter (mg/l). In November 2006 we experienced levels as high as 49 mg/l for several days.

### Is the water safe to drink?

The drinking water supply is monitored and treated to ensure that the water in our city is safe to drink. The water quality we provide to our customers meets all applicable State and Federal health and safety standards. Our most recent water quality report (2007) can be found at <http://www.morro-bay.ca.us/publicworks/2007ccr.pdf>.

### What if the water supply has a problem like in 2006?

In case of an emergency we have developed a Nitrate Notification Plan to provide both written and telephone notification, along with press releases to promptly inform the community in the event of a nitrate contamination event.

### What can I do to reduce nitrate levels in my home or business?

Nitrate can be removed from water by reverse osmosis. Many under-the-counter kitchen drinking water units and water vending machines use this method and have been proven to be very effective. **Important! Boiling water does not work and can actually make the problem worse!**

### What is the City doing to solve the nitrate contamination?

We have contacted the local farmers and regulatory agencies to enlist their help in solving the problem. We believe that through some modification of the current farming practices, great strides can be made in reducing nitrate contamination levels at our local wells.

The City will continue to treat all of the water delivered to our customers to ensure that the water is clean and safe to drink.

## Challenges with Our Local Water Supply

The City of Morro Bay relies on three separate sources for our water supply; State Water, Groundwater, and Desalination plant water.

About 85% of our current drinking water supply comes from the State Water Project, a statewide system that treats and delivers water from the Sacramento River Delta.

Every year in November the State Water treatment and delivery systems shut down for a two week period for maintenance.

Current climatic and legal issues could reduce our State water deliveries to about one-half of normal.

City staff has started the process to upgrade our Desalination Plant to increase its

energy efficiency and to improve its ability to treat contaminated groundwater. Less than 5% of our water supply is currently produced at the desalination plant.

Groundwater supplies the remainder of our water. We have had pollution events (nitrates and MTBE) that threaten the health of our local groundwater basins.

**Attachment C**  
**Sample Maintenance Log**



**Attachment D**  
**Sample Disposal Tips**

CITY OF MORRO BAY &  
CAYUCOS SANITARY DISTRICT  
595 HARBOR  
MORRO BAY, CA 93442

THIRD CLASS MAIL  
U.S. POSTAGE PAID  
MORRO BAY  
PERMIT #22



# Morro Bay & Cayucos

## Wastewater Disposal Tips

When you hear the word SEWAGE what do you think of? Pollution perhaps! Untreated sewage can be an enormous source of health hazards and pollution. However, normal household wastewater, sewage, can be effectively treated so that little or no harmful effects to human health or the environment result from its disposal.

Wastewater from Morro Bay and Cayucos is collected and transported through a network of pipes and pumps to the treatment plant on Atascadero Road. After solids removal and biological treatment, the treated wastewater is discharged to the ocean.

Wastewater collection and treatment are necessities to every community and we have a modern treatment facility, completed in 1985. In order to ensure effective treatment of wastewater and protection of our new treatment plant, take care to follow these simple disposal guidelines.

**1**

*Protect the biological processes of wastewater treatment by keeping toxics, paint, automotive wastes, solvents and pesticides out of the sewer system.*

**2**

*Many service stations will take waste oil and solvents for recycling.*



**3**

*Prevent blockages by keeping hair, bandages, grease and tampon applicators, etc., out of the sewer system.*

**4**

*Pour cooking grease into a can and throw it out with the garbage instead of washing it down the drain.*

**5**

*Don't expose treatment plant personnel to the unnecessary health hazards of solvents, poisons, caustic chemicals or razor blades.*



*If you need specific disposal information, or would like a tour of the treatment facility, call the Department of Public Works, 772-1214.*

**Attachment F**  
**Sample Site Visit/Trap Inspection**  
**Page**



# City of Morro Bay

595 Harbor Street  
Morro Bay, CA 93442

Ph: (805) 772-6277  
Fax: (805) 771-1804  
E-mail: jhayes@morro-bay.ca.us

No 2076

DATE

## SITE VISIT / TRAP INSPECTION

NAME OF BUSINESS	PURPOSE OF VISIT SITE VISIT <input type="checkbox"/> SAMPLE <input type="checkbox"/> GREASE TRAP <input type="checkbox"/>
OWNER/CONTACT	
STREET	CONDITION OF TRAP GOOD <input type="checkbox"/> FAIR <input type="checkbox"/> POOR <input type="checkbox"/>
TELEPHONE	
FAX	INSPECTOR

## REMARKS

OWNER / CONTACT