CITY OF BUELLTON

Sewer System Management Plan Revision 4

Public Version

2020

PREPARED BY

WALLACE GROUP®

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SSMP UPDATE AND ADOPTION RECORD

The City of Buellton's SSMP has undergone the following formal updates, which were approved and adopted by the City Council on the dates identified below:

Revision No.	Adoption Date	Description of Updates	Update Completed By
0	04/22/10	A SSMP was developed to comply with the State Water Resources Control Board's General Waste Discharge Requirements for Sanitary Sewer Systems.	Wallace Group and City Staff
1	12/12/13	Update the information in the SSMP so that it is current and bring the SSMP into compliance with the State Water Resources Control Board's Amended Monitoring and Reporting Program for the General Waste Discharge Requirements for Sanitary Sewer Systems.	Wallace Group and City Staff
2	05/28/15	SSMP 5 Year Update: Updates and revisions based on findings in 2014 SSMP Audit for compliance with the State Water Resources Control Board's General Waste Discharge Requirements for Sanitary Sewer Systems.	Wallace Group and City Staff
3	06/15/16	SSMP Revisions based on findings of 2016 SSMP Audit (*Informal revisions – no recertification by City Council required for these revisions*). Updates to Appendices and supporting program documents.	Wallace Group and City Staff
-	06/26/18	SSMP Revisions based on findings of 2018 SSMP Audit (*Informal revisions – no recertification by City Council required for these revisions*). Updates to Appendices and supporting program documents.	Wallace Group and City Staff
4	June 2020	SSMP 5 Year Update: Updates and revisions based on findings in 2020 SSMP Audit for compliance with the State Water Resources Control Board's General Waste Discharge Requirements for Sanitary Sewer Systems.	Wallace Group and City Staff

EXECUTIVE SUMMARY

The State Water Resources Control Board's (SWRCB's) Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems, Order No. 2006-0003-DWQ, and Amended Monitoring and Reporting Program (MRP), Order No. WQ 2013-0058-EXEC, require the City of Buellton (City) to have and maintain a Sewer System Management Plan (SSMP), which provides "a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system" in order to "help reduce and prevent sanitary sewer overflows (SSOs), as well as mitigate any SSOs that do occur" [Order No. 2006-0003-DWQ Section D.13(i)]. The SSMP must be updated every five (5) years and must include any significant program changes. Re-certification by the City Council is required in accordance with D.14 when significant updates to the SSMP are made. The City must enter the data in the Online SSO Database and mail the form to the State Water Board, as described above, to complete the re-certification process.

Revision 4 represents the required 5 Year Update for the City's SSMP, due for completion and re-certified by the City Council.

The SSMP includes the following eleven (11) Elements:

1. Goal

The City's goals, which are included in the SSMP, are:

1. Be available and responsive to the needs of the public, and work cooperatively with local, state, and federal agencies to reduce, mitigate, and properly report SSOs.

2. Maintain documentation and update each SSMP Element, which contains schedules and plans to complete operations and maintenance tasks, engineering studies, and SSO monitoring, reporting and record keeping requirements, on an annual basis.

3. Maintain the number of SSOs to less than three (3) in a calendar year.

4. Have zero (0) capacity related SSOs except those caused by storm events exceeding the design storm for that section of the collection system.

5. Have no more than one (1) SSO repeated within one (1) year from the same sewer line segment, manhole, or lift station.

2. Organization

The Organization Element of the SSMP identifies the City of Buellton Staff and Contract Staff, who are responsible for implementing the SSMP, responding to SSOs, and meeting the SSO reporting requirements, and identifies the lines of authority of SSO responsibilities and chains of communication for SSO response and reporting. The Legally Responsible Official (LRO) is also designated in this SSMP Element to meet the SWRCB requirements for completing and certifying SSO reports in the SWRCB's online regulatory information database and tracking system, California Integrated Water Quality System (CIWQS).

3. Legal Authority

This SSMP Element outlines the City Municipal Code Chapters that provide the City with the legal authority to:

a. Prevent illicit discharges;

b. Require that sewers and connections be properly designed and constructed;

c. Limit the discharge of fats, oils, and grease (FOG) and other debris that may cause blockages; and

d. Enforce any violation of its sewer ordinances.

4. Operation and Maintenance Program

The City's operation and maintenance (O&M) of its collection system ensures that the system is kept in good working condition, and this SSMP Element outlines the work that is conducted to accomplish the optimal O&M of the City's collection system. This SSMP Element details:

a. Sanitary sewer system maps, which are developed and maintained in GIS;

b. Preventative Maintenance (PM) Program, which consists of activities such as cleaning of sewer lines and other regular maintenance;

c. Rehabilitation and Replacement (R&R) Plan, which focuses on sewer pipes at risk of collapse or prone to more frequent blockages due to pipe defects and includes a time schedule for funding and completing the capital improvement plan (CIP);

d. Training program and records for City Staff and Contractor collection system O&M activities; and

e. Equipment and replacement part inventory with critical replacement parts and equipment identified.

This SSMP Element will be updated with the CIP and associated time schedule and funding information developed from the results of the City's Sewer Collection System Master Plan, which was completed by the end of fiscal year 2020.

5. Design and Performance Provisions

The Design and Performance Provisions Element describes the standards and specifications for new construction, repair of the existing sanitary sewer system, and the inspection and testing of these items.

The City utilizes the City of Buellton Department of Public Works Standard Details and utilizes the *Greenbook: Standard Specifications for Public Works Construction* for inspection and testing procedures and standards and through references to Sections

and Subsections of the *Greenbook* in the City of Buellton Department of Public Works Standard Details. The State of California Department of Health Services' *Guidance Memo No. 2003-02: Guidance for the Separation of Water Mains and Non-potable Pipelines* is also used by the City to regulate the separation of water and sewer lines.

6. Overflow Emergency Response Plan

The Overflow Emergency Response Plan (OERP) contains the following information in order to protect public health and the environment in the event of a SSO:

a. Notification procedures for primary responders and regulatory agencies;

b. Notification procedures for regulatory agencies and other potentially affected entities for SSOs that potentially affect public health or reach the waters of the State;

c. OERP training procedures for City Staff and Contractors responsible for responding to SSOs;

d. Emergency operations procedures for response activities, such as traffic and crowd control; and

e. A SSO mitigation and impact assessment program.

This SSMP Element was updated with formal OERP Emergency Operating Procedures (EOPs) and training program.

7. FOG Control Program

The goal of the FOG Control Program is to reduce the amount of FOG discharged to the sanitary sewer system. This SSMP Element includes the following information:

a. Public education outreach implementation plan and schedule;

b. FOG disposal plan and schedule;

c. The legal authority to prohibit FOG discharges and prevent associated SSOs;

d. Grease control device installation, maintenance, best management practices, and record keeping and reporting requirements and design standards;

e. High maintenance area identification and cleaning maintenance schedule; and

f. FOG source control measure development and implementation for City Food Service Establishments (FSEs), which has included annually permitting and semiannual compliance inspections of FSEs since 2008.

8. System Evaluation and Capacity Assurance Plan

The 2006 Citywide Sewer Study consists of a sanitary sewer system hydraulic evaluation, which was used to establish some short- and long-term CIP. However, the Citywide Sewer Study did not evaluate the City's collection system capacity for wet weather flows and did not establish the design criteria required to evaluate the collection system's hydraulic capacity.

The City updated the Citywide Sewer Study in 2020 to address dry and wet weather flows and the design criteria required to evaluate the collection system's hydraulic capacity. The City is developing a Capital Improvement Program (CIP) addressing any identified hydraulic deficiencies or other areas requiring rehabilitation and replacement and will provide information on CIP funding sources.

9. Monitoring, Measurement, and Program Modifications

The City monitors the implementation of the eleven (11) SSMP Elements in order to measure the effectiveness of the City's SSMP program in reducing SSOs. This SSMP Element outlines the manner in which each SSMP Element is monitored and evaluated and the schedule with which the City completes this monitoring and evaluation.

10. Sewer System Management Plan Program Audits

The SSMP Program Audits Element outlines the audit process and identifies the City Staff responsible for conducting or participating in SSMP Program Audits and generating the required SSMP Program Audit Report. SSMP Program Audits must occur at a minimum of every two (2) years and are required to evaluate the effectiveness of the City's SSMP Program, identify program deficiencies, and provide an improvement schedule based on the audit findings.

11. Communication Program

This SSMP Element describes the manner in which the City communicates the development, implementation, and performance of its SSMP with the public in order to provide them with the opportunity to provide input as the SSMP program is developed and implemented. The City has historically conducted outreach through City Council Meetings, the City website, print media, and social media.

INTRODUCTION

This Sewer System Management Plan (SSMP) was developed in compliance with the requirements of the State Water Resources Control Board (SWRCB) Statewide General Waste Discharge Requirements (WDR), Order No. 2006-0003-DWQ, and Amended Monitoring and Reporting Program (MRP) Order No. WQ 2013-0058-EXEC, which are both included in Appendix 0A.

The SSMP must be updated every five (5) years and must include any significant program changes. Re-certification by the City Council is required in accordance with D.14 when significant updates to the SSMP are made. The City must enter the data in the Online SSO Database and mail the form to the State Water Board, as described above, to complete the re-certification process.

0.1 Requirement Background

The WDRs require all public wastewater collection system agencies in California that own and operate sanitary sewer systems greater than one mile in length, which collect or convey untreated or partially treated wastewater to a publicly owned treatment facility, to develop, implement, and maintain a SSMP and report sanitary sewer overflows (SSOs) using the State's electronic reporting system, California Integrated Water Quality System (CIWQS).

The SSMP includes the following eleven (11) Elements:

1. Goal
2. Organization
3. Legal Authority
4. Operation and Maintenance Program
5. Design and Performance Provisions
6. Overflow Emergency Response Plan
7. FOG Control Program
8. System Evaluation and Capacity Assurance Plan
9. Monitoring, Measurement, and Program Modifications
10. Sewer System Management Plan Program Audits
11. Communication Program

Each SSMP Element is prefaced with the associated WDR section and narrated with the City of Buellton (City) policies and procedures, which address the respective SWRCB requirements.

0.2 City of Buellton System Overview

The City is located in the western Santa Ynez Valley of northern Santa Barbara County along Highway 101 halfway between Santa Barbara and Santa Maria. The City takes its name from the Buell family, who were instrumental in settling the area around the present-day City in the late 1800s.

The City was incorporated in 1992 and is steadily growing from a “crossroads” commercial center for automobile travelers to a place of interest. The total incorporated area of Buellton is approximately 1.6 square miles. Figure 0-1 provides an aerial overview of Buellton and identifies the City’s service area.

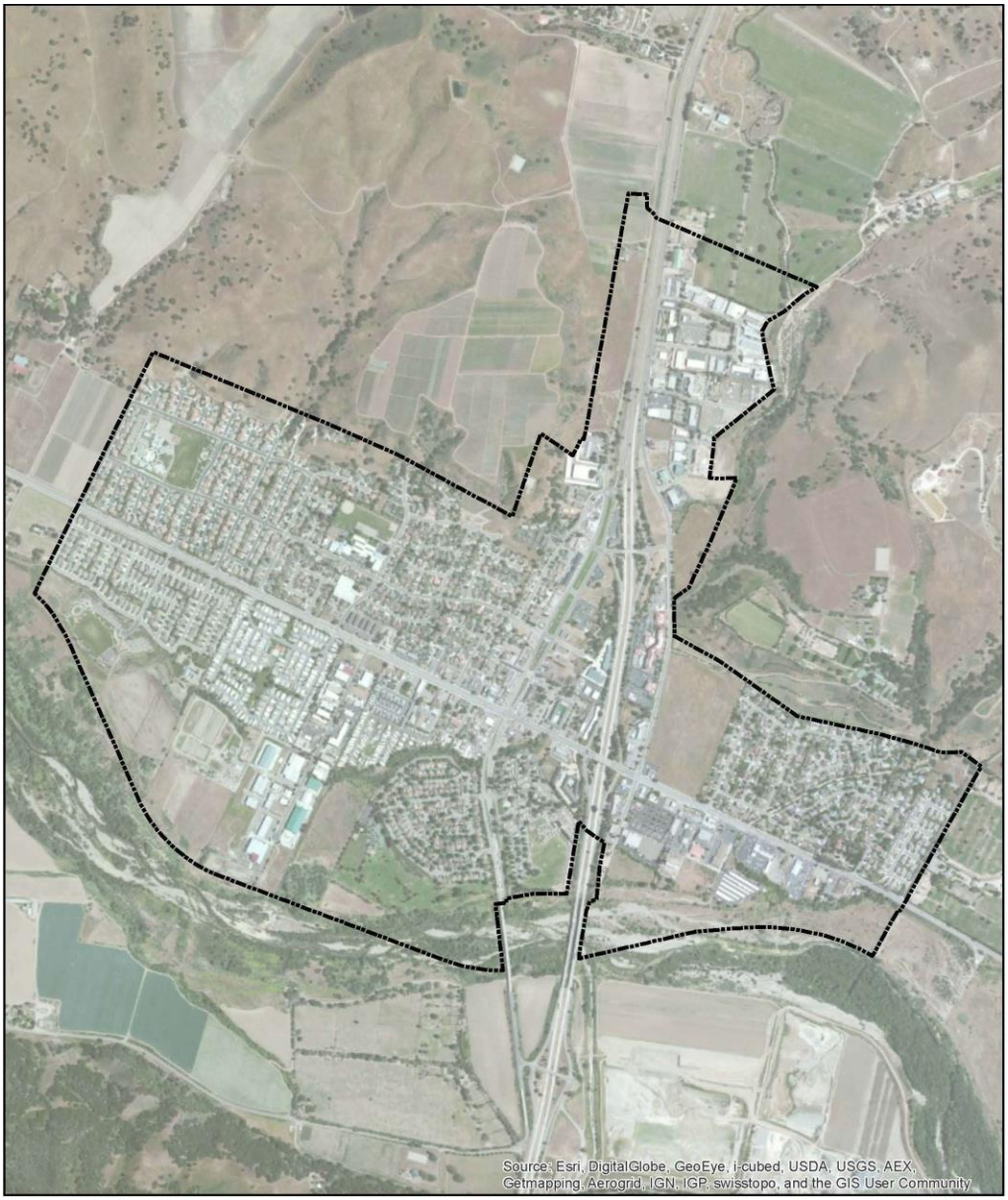


Figure 0-1: Buellton Service Area

The City of Buellton provides sewer services for residences, commercial, and industrial businesses, and serves a population of approximately 5,550[1] residents. The City's collection and conveyance system is mainly comprised of approximately twenty (20) miles of gravity pipelines, which vary in diameter from 6-inch to 15-inch, and eight hundred and fifty (850) feet of force mains.

Maintenance access to the sewers is provided by three hundred and seventy-nine (379) manholes and a number of structures, such as clean outs and inspection holes. There are two (2) public sewer lift stations located in the City's service area that pump the City's wastewater to a City owned, operated and maintained wastewater treatment plant. The sewer lift stations are operated by the City, and Fluid Resources Management (FRM) is contracted to provide on-going maintenance for these lift stations.

0.3 Governing Body

Buellton was incorporated as a City in 1992. The City Council is comprised of five (5) members. Members of the City Council are elected at a general election held every 2 years and hold terms for a period of 4 years. The Mayor is voted by consensus by the Council annually.

The City Council governs the City and makes policy decisions with advice from the City Manager and City Attorney. City Council meetings are held in the Council Chambers at two (2) regular meetings each month. The City Council's authority and responsibility includes the adoption and approval of the SSMP and any formal updates to the SSMP. The SSMP formal update and adoption record is included at the beginning of the SSMP.

[1] 2018 SBCAG Report

SSMP TASKS AND DUE DATES: 2020 SSMP REV 4

The following table provides tasks identified in Elements No. 1 to 11 in the 2020 SSMP. Anticipated dates for completion are provided in the column to the right of each task.

SSMP Element and Associated Tasks	Due Date
Element 1: Goals	
See Element 9: Monitoring, Measurement and Program Modifications	Annually - February
Element 2: Organization	
See Element 9: Monitoring, Measurement and Program Modifications	Annually - February
Element 3: Legal Authority	
See Element 9: Monitoring, Measurement and Program Modifications	Annually - February
Element 4: Operations and Maintenance Program	
Sewer & Storm Water Atlas Map Updates: review maps for new information associated with rehabilitation/replacement or identification of missing sewer & storm water assets, integrate into sewer/storm water atlas and GIS. Document any changes on revision log.	Annually - February
High Maintenance Area Inspection/Cleaning: inspect manholes and sewer lines identified on High Maintenance (Hot Spot) List. Clean lines as necessary and report appropriate observations on manholes and sewer lines on the *Sewer Line Cleaning and Routine Manhole Inspection Log*.	Weekly
Weekly Lift Station Inspections: inspect lift stations and perform necessary system checks. Document findings on *Weekly Lift Station Log.*	Weekly
Quarterly Lift Station Inspections: contact FRM for quarterly checks on City lift stations. Keep photocopies of Quarterly Reports with *Weekly Lift Station Log* sheets.	Quarterly: January, April, July, October
Review results of Contracted Sewer Line Cleaning/Manhole Inspections: review data, summarize and rank appropriate data for incorporation into Rehabilitation and Replacement Plans and CIP.	January
Review results of Contracted CCTV: review data, summarize and rank appropriate data for incorporation into Rehabilitation and Replacement Plans and CIP.	January

SSMP Element and Associated Tasks	Due Date
Annual Sewer System O&M SOP Training: review and train on O&M SOPS #1-9. Document training on a City training log and retain a copy in training binder.	Annually - June
Update Critical Parts and Equipment List: review components necessary for proper operation and maintenance of the sewer system and related equipment, develop list of inventoried equipment, parts for equipment and sewer system components.	Annually - August
Element 5: Design and Performance Provisions	
Review Design and Performance Standards identified in the SSMP and check for necessary updates. If updates have occurred or are warranted, incorporate into this element of the SSMP when completed.	Annually - August
Element 6: Overflow Emergency Response Plan (OERP)	
SSO Emergency Response Training: conduct annual training on SSO Emergency Operating Procedures # 1-10. Document training in City training log. Update procedures as necessary when required changes are identified.	Annually - August
CIWQS Reporting – No Spill Certification: file within 30 calendar days after the end of the calendar month in which no spills have occurred.	Monthly
Element 7: Fats, Oils and Grease (FOG) Control Program	
Hot Spot List: Update Hot Spot (High Maintenance Area) list based on CCTV data and field observations.	Annually - January
Element 8: System Evaluation and Capacity Assurance Plan (SECAP)	
Review CCTV, Line Cleaning and Manhole Inspection Results: incorporate findings for projects that require capacity related upgrades into rehabilitation and replacement and CIP plans and include this information in revision to SSMP.	Annually - January
Element 9: Monitoring, Measurement and Program Modifications	
Review SSMP Goals: review progress toward meeting SSMP Goals and report to City Council on Progress.	Annually - February
Review Organizational Structure: review and update Org Charts and SSO Chain of Communication as appropriate.	Annually - February
Legal Authority: review Section 9.3.3 on page 9-3 of SSMP and develop memo as appropriate.	Annually - February

SSMP Element and Associated Tasks	Due Date
Overflow Emergency Response Plan (OERP): review effectiveness of OERP annually and make adjustments to this plan and associated procedures as appropriate.	Annually - February
FOG Program: review monthly reports and assess effectiveness of FOG Control Program. Adjust program parameters as necessary.	Annually - February
System Evaluation and Capacity Assurance Plan: review the need for capacity enhancements in the system based on CCTV findings, field observations and SSO records. If capacity enhancements are needed, develop design criteria and schedule project(s). Update CIP/Rehabilitation & Replacement Plan in SSMP.	Annually - February
SSMP Audit: schedule SSMP Audit bi-annually in March to ensure completion prior to May 2nd bi-annually.	March 2022 (Next Audit due 5/2/22)
SSO Trends: update SSO trend information in Tables 9-2 thru 9-3 in SSMP.	Annually - January
Element 10: SSMP Audits	
SSMP Audit: schedule SSMP Audit bi-annually in March to ensure completion prior to May 2nd bi-annually.	March 2022 (Next Audit due 5/2/22)
Element 11: Communication Program	
Buellton Buzz: Include a FOG Article for residential sewer users to address Holiday grease discharges.	Annually – September or October
Buellton BBQ Bonanza: What not to flush flyer.	Annually - July
Satellite Sewer System Outreach: distribute outreach letter.	Annually - June
SSMP Annual report to City Council	Annually - February

ELEMENT 1 – REVISION RECORD

The City of Buellton's SSMP Element 1 – Goal has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
0	4/22/10	Formally Adopt SSMP.	Wallace Group/Rose Hess	City Council
1	12/12/13	No revisions	Wallace Group	Rose Hess
2	5/28/15	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council
3	6/15/16	No revisions	Wallace Group	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 1 - GOAL

The City of Buellton has the following goals for the management and maintenance of the sanitary sewer collection system. These goals provide focus for the City Staff to continue operate and maintain City facilities and to implement improvements for management of the collection system to prevent sanitary sewer overflows (SSOs). The role of the SSMP in supporting these goals is discussed below.

1.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(i) states:

> The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.

1.2 Sanitary Sewer System Goals [WDR D.13(i)]

The City seeks to provide high quality and reliable wastewater collection for its residents and businesses by meeting the following goals:

1. Be available and responsive to the needs of the public, and work cooperatively with local, state, and federal agencies to reduce, mitigate, and properly report SSOs.

2. Maintain documentation and update each SSMP Element, which contains schedules and plans to complete operations and maintenance tasks, engineering studies, and SSO monitoring, reporting and record keeping requirements, on an annual basis.

3. Maintain the number of SSOs to less than three (3) in a calendar year.

4. Have zero (0) capacity related SSOs except those caused by storm events exceeding the design storm for that section of the collection system.

5. Have no more than one (1) SSO repeated within one (1) year from the same sewer line segment, manhole, or lift station.

ELEMENT 2 – REVISION RECORD

The City of Buellton's SSMP Element 2 – Organization has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
0	4/22/10	Formally Adopt SSMP.	Wallace Group/Rose Hess	City Council
1	12/12/13	Revisions based on findings of biannual audit.	Wallace Group/Rose Hess	Rose Hess
2	5/28/15	SSMP 5-Year Update	Wallace Group/Rose Hess	City Council
3	5/15/16	Updates based on completion/implementation of Emergency Response Plans referenced in this section.	Wallace Group/Rose Hess	Rose Hess
-	6/1/18	Updates to City Council and City Organization Chart from 2018 SSMP Audit	Wallace Group/Rose Hess	Rose Hess
4	June 2020	SSMP 5-Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 2 - ORGANIZATION

The Organization Element identifies the City of Buellton Staff and Contract Staff responsible for implementing this SSMP, responding to SSO events, and meeting SSO reporting requirements. This SSMP Element also outlines the City organization, SSMP responsibilities of personnel, authorized representatives, and chains of communication for SSO response and reporting. The Legally Responsible Official (LRO) is designated below in order to meet SWRCB requirements for completing and certifying SSO reports in CIWQS. Names of the current City Council members are available in **Appendix 2A**.

2.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(ii) states:

> The SSMP must identify:
>
> (a) The name of the responsible and authorized representative as described in Section J of this Order.
>
> (b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through 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 persons responsible for reporting SSOs to the State or Regional Water Board and other agencies if applicable (such as County Health Officers, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

The aforementioned WDR Order No. 2006-0003-DWQ Section J states:

> All applications, reports, or information shall be signed and certified as follows:
>
> (i) All reports required by this Order and other information required by the State or Regional Water Board shall be signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or by a duly authorized representative of that person, as described in paragraph (ii) of this provision. (For purposes of electronic reporting, an electronic signature and accompanying certification, which is in compliance with the Online SSO database procedures, meet this certification requirement.)
>
> (ii) An individual is a duly authorized representative only if:
>
> (a) The authorization is made in writing by a person described in paragraph (i) of this provision; and
>
> (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.

2.2 Responsible and Authorized Representatives [WDR D.13(ii)(a)]

The name of the authorized representative described in WDR Section J above is listed in Table 2-1:

Table 2-1: City of Buellton Authorized Representative

Name	Title	CIWQS SSO Database
Rose Hess	Public Works Director/City Engineer	Legally Responsible Official
Scott Wolfe	City Manager	Legally Responsible Official

2.3 SSMP Program Implementation [WDR D.13(ii)(b)]

The names and contact information for management, administrative, and maintenance Staff who are responsible for implementing specific measures for the City's SSMP Program are presented in Table 2-2 below along with their specific responsibilities.

An organization chart showing the lines of authority for all City Staff, consultants contracted with the City, and contract Staff described below in Table 2-2 is included in **Appendix 2B**.

Table 2-2: Staff and Contract SSMP Responsibilities and Contact Information

Name and Title	SSMP Responsibilities	Contact Information
Scott Wolfe City Manager *City of Buellton*	▪ The City Manager directs the Public Works Director/City Engineer in the management of all eleven (11) SSMP Elements.	(805) 686-0137 Office E-mail: scott@cityofbuellton.com
Greg Murphy City Attorney *Burke, Williams, and Sorensen, LLP– Contract with City of Buellton*	▪ The City Attorney assists the Public Works Director/City Engineer to manage Element 3 – Legal Authority.	[redacted]

Name and Title	SSMP Responsibilities	Contact Information
Rose Hess Public Works Director/City Engineer *City of Buellton*	▪ The Public Works Director/City Engineer directs City and City Contract Staff in the management of all eleven (11) SSMP Elements.	(805) 688-5177 Office [redacted] E-mail: roseh@cityofbuellton.com
Ben Hernandez – Finance Technician and Code Enforcement Sarah Cote – Revenue Specialist Administrative Staff *City of Buellton*	▪ The City Code Enforcement Officer, Finance Technician, and Revenue Specialists receive and assure that the appropriate City Field Worker respond to in person communications, phone calls, e-mails, and faxes to assist with the implementation of: – Element 4 – Operation and Maintenance Program; – Element 6 – Overflow Emergency Response Plan; – Element 7 – FOG Control Program; – Element 11 – Communication Program. ▪ In a SSO response, could provide a carefully pre-scripted message for citizens who call with general questions.	(805) 688-5177 Office
Jeff Edwards Kent Yankee *Deputy and Assistant City Engineers* *MNS Engineers– Contract with City*	▪ MNS Engineers, Inc. is under contract to assist the City Engineer and is directed by the Public Works Director/City Engineer to manage the CIP and design and inspection services in the implementation of: – Element 4 – Operation and Maintenance Program, Rehabilitation and Replacement Plan; – Element 5 – Design and Performance Provisions; and – Element 8 – System Evaluation	(805) 688-5200 MNS Office [redacted] E-mail: jedwards@mnsengineers.com kyankee@mnsengineers.com

Name and Title	SSMP Responsibilities	Contact Information
	and Capacity Assurance Plan.	
Mike Ellison Steven Neff Operators *Fluid Resources Management (FRM) – Contract with City*	▪ FRM Operators perform routine operation, preventative maintenance, and repair and major maintenance services for the City owned lift stations as described in Element 4 – Operation and Maintenance Program. ▪ Communicates maintenance results for the City lift stations in quarterly inspection reports to the Public Works Director/City Engineer.	(805) 597-7100 Office E-mail: mikee@frm-ops.com
Bill Callahan Environmental Compliance Specialist *Wallace Group – Contract with City*	▪ The Environmental Compliance Specialists manage the City FOG Program permitting, inspections, enforcement, and outreach services as described in Element 7 – Fats, Oils, and Grease Control Program. ▪ Delivers a monthly FOG Program inspection summary report to the Public Works Director/City Engineer.	(805) 544-4011 Office E-mail: billc@wallacegroup.us
Kurt Greer Juan Gomez Joe Grauer Joe Velasquez *Maintenance and Utilities Field Workers - City of Buellton*	▪ City Field Workers perform management, operations and maintenance in the City Public Works (PW) Department. The PW Department is responsible for streets, curbs and gutters, sidewalks, sewer system, storm drain system, and water systems. ▪ City Field Workers are responsible under the direction of the Public Works Director/City Engineer for the following SSMP Elements: – Element 4 – Operation and Maintenance Program; – Element 6 – Overflow Emergency Response Plan;	[redacted]

Name and Title	SSMP Responsibilities	Contact Information
	– Element 7 – FOG Control Program. ▪ Field Workers respond to SSOs with cleanup tools, notify regulatory agencies, document response activities using City procedures, assist in determining cause of SSO, and assist in implementing corrective actions to prevent recurrence of future SSOs.	

2.4 Chain of Communication for Responding to SSOs [WDR D.13(ii)(c)]

SSO reports usually begin with a call from a resident to the City Public Works Department, 911 dispatchers, or the Santa Barbara County Sheriff and Fire Departments.

The City Public Works telephone contact number is (805) 688-5177.

After hours, the City contracts with an answering service (Echo Communications) which has the City of Buellton Phone List and contacts the appropriate City Staff person to respond.

The Santa Barbara (SB) County Sheriff and SB County Fire personnel also have the City of Buellton Phone List which is used if they are called.

The Public Works Call Out List is included in SS-EOP-02: SSO Notification Attachment 1, which will be provided in SSMP Element 6 – Overflow Emergency Response Plan Appendix A by June 2015, and has the names of the City Field Worker Staff and the order in which they are on-call to respond to public works issues outside of normal City business hours.

During the process of responding to a SSO, the following actions are taken to verify the report and ensure the safety of the public:

1. During Public Works business hours, the Public Works Director/City Engineer, Rose Hess receives the call from a citizen, SB County Sheriff, or SB County Fire Department and obtains the location of concern and a description of the problem. The name and phone number of the caller is requested and documented if not anonymous for follow-up information.

2. After hours, City Dispatch (Echo Communications), SB County Sheriff, or SB County Fire Department contact the on-call City Field Worker Staff and direct them to the described location. The Overflow Emergency Response Plan (OERP) contained in Element 6 is initiated.

3. City Field Worker Staff proceed to the location to verify the report.

4. If a SSO is verified, Field Worker Staff member contacts the Public Works Director/City Engineer and requests support.

5. The Public Works Director/City Engineer notifies the City Manager, Marc Bierdzinski both during and after business hours.

6. Cal OES must be contacted within two (2) hours of an SSO, when the SSO is greater than or equal to 1,000 gallons to a surface water.

SSMP Element 6 – Overflow Emergency Response Plan and SS-EOP-01: Overflow Emergency Response Program, is provided in SSMP Element 6 – Overflow Emergency Response Plan Appendix A, contains a chain of communication for reporting SSOs for use in the field by the City Field Worker Staff or the Public Works Director/City Engineer. This chain of communication is reproduced in Figure 2-1 for reference.

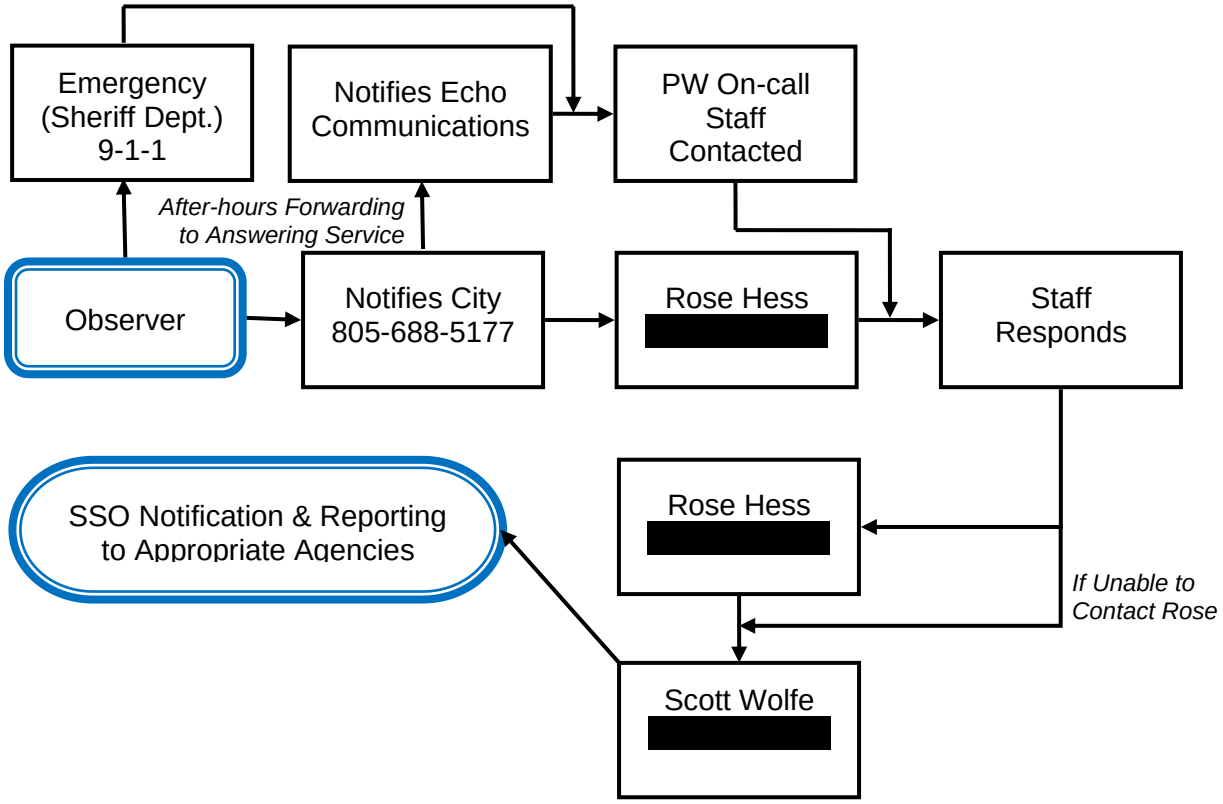


Figure 2-1: SSO Response Chain of Communication

SSO notification is outlined in SSMP Element 6 – Overflow Emergency Response Plan is outlined in SS-EOP-02: SSO Notification. The contact information and notification requirements associated with notifying RWQCB and other applicable agencies, such as Cal OES, are included in that SSMP Element and will be included in that EOP upon its completion.

Upon completion of containment and clean-up, the Public Works Director/City Engineer, Rose Hess or the designee will use SS-EOP-03: SSO Reporting Attachment 1: Reporting SSOs in CIWQS, provided in SSMP Element 6 – Overflow Emergency Response Plan Appendix A, to initiate the Draft SSO Report in CIWQS.

APPENDIX 2A

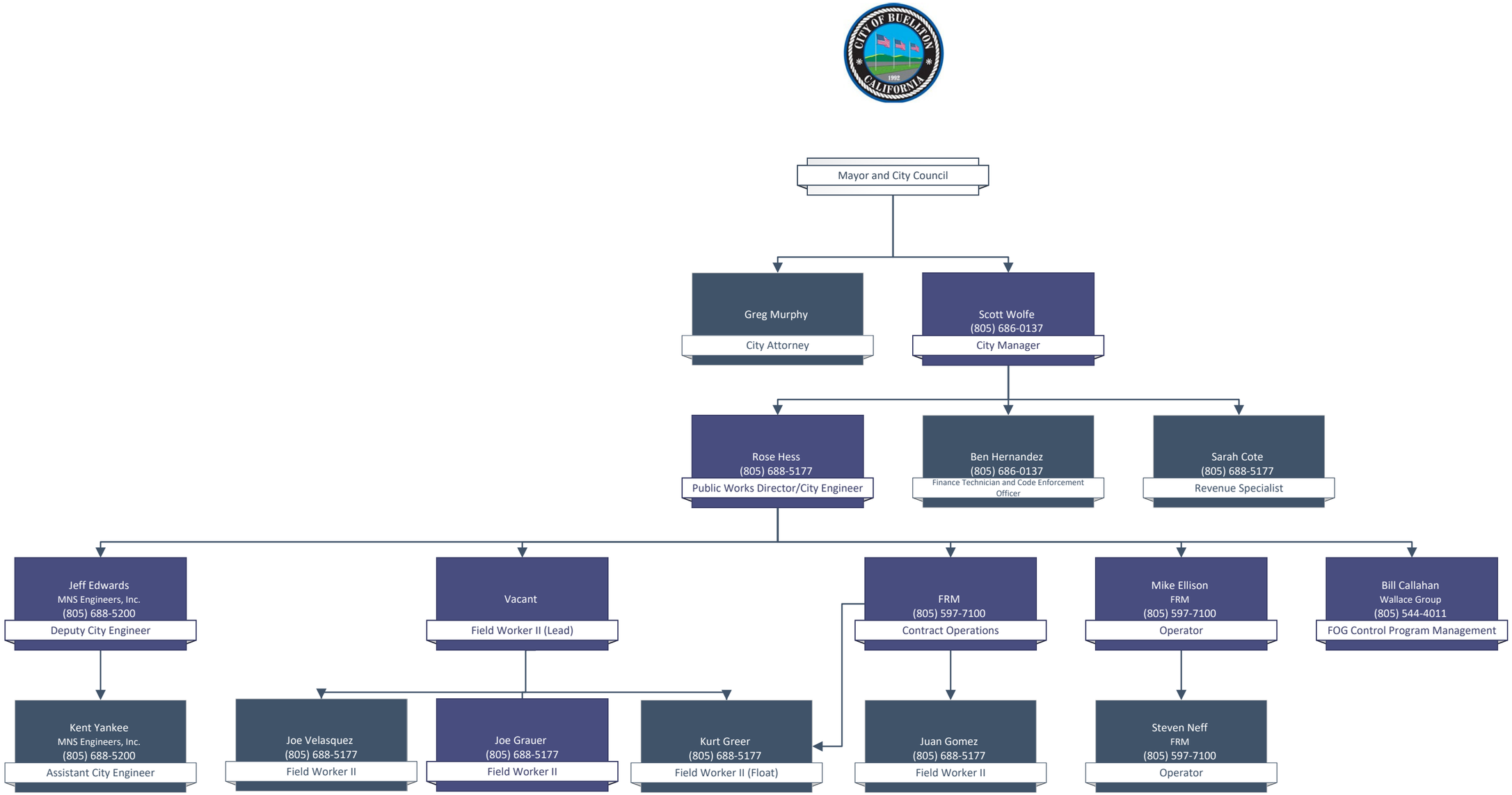
2020 City of Buellton Council Members

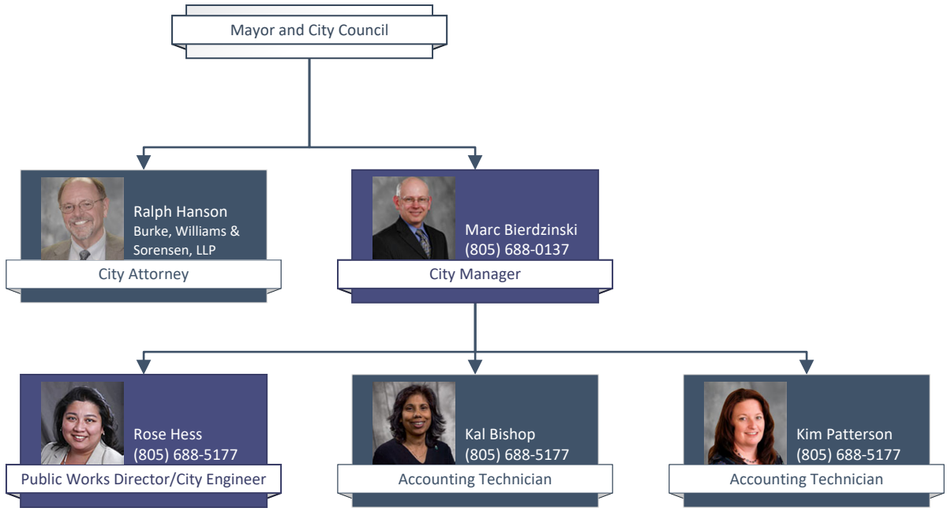
Table 2A-1: City of Buellton Governing Council Members

Name	Title	Term Expires
Holly Sierra	Mayor	2020
Art Mercado	Vice Mayor	2020
Ed Andrisek	Council Member	2022
David King	Council Member	2022
John Sanchez	Council Member	2020

APPENDIX 2B

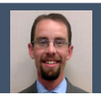
City of Buellton Organization Chart


Mayor and City Council
Greg Murphy
City Attorney
Scott Wolfe
(805) 686-0137
City Manager
Rose Hess
(805) 688-5177
Public Works Director/City Engineer
Ben Hernandez
(805) 686-0137
Finance Technician and Code Enforcement Officer
Sarah Cote
(805) 688-5177
Revenue Specialist
Jeff Edwards
MNS Engineers, Inc.
(805) 688-5200
Deputy City Engineer
Vacant
Field Worker II (Lead)
FRM
(805) 597-7100
Contract Operations
Mike Ellison
FRM
(805) 597-7100
Operator
Bill Callahan
Wallace Group
(805) 544-4011
FOG Control Program Management
Kent Yankee
MNS Engineers, Inc.
(805) 688-5200
Assistant City Engineer
Joe Velasquez
(805) 688-5177
Field Worker II
Joe Grauer
(805) 688-5177
Field Worker II
Kurt Greer
(805) 688-5177
Field Worker II (Float)
Juan Gomez
(805) 688-5177
Field Worker II
Steven Neff
FRM
(805) 597-7100
Operator


Mayor and City Council
Ralph Hanson
Burke, Williams &
Sorensen, LLP
City Attorney
Marc Bierdzinski
(805) 688-0137
City Manager
Rose Hess
(805) 688-5177
Public Works Director/City Engineer
Kal Bishop
(805) 688-5177
Accounting Technician
Kim Patterson
(805) 688-5177
Accounting Technician

Rose Hess
(805) 688-5177
Public Works Director/City Engineer

Jeff Edwards
MNS Engineers, Inc.
(805) 688-5200
Deputy City Engineer



Kent Yankee
MNS Engineers, Inc.
(805) 688-5200
Assistant City Engineer

Joe Meehan
(805) 688-5177
Lead Maintenance and Utilities Fieldworker (Water)

Joe Graner
(805) 688-5177
Water

Kurt Greer
(805) 688-5177
Journeyman Water/WWTP

John Sanchez
(805) 688-5177
Lead Maintenance and Utilities Fieldworker (Sewer)/ WWTP Chief Plant Operator

Ray Ochoa
(805) 688-5177
Journeyman WWTP

Mike Ellison
FRM
(805) 597-7100
Operator

Steven Neff
FRM
(805) 597-7100
Operator

Bill Callahan
Wallace Group
(805) 544-4011
FOG Control Program Management

ELEMENT 3 – REVISION RECORD

The City of Buellton's SSMP Element 3 – Legal Authority has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
0	4/22/10	Formally Adopt SSMP.	Wallace Group/Rose Hess	City Council
1	12/12/13	Revisions based on findings of biannual audit.	Wallace Group/Rose Hess	Rose Hess
2	5/28/15	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council
3	6/15/16	No Revisions	Wallace Group/Rose Hess	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 3 - LEGAL AUTHORITY

The City maintains the legal authority over the sanitary sewer system in the City Municipal Code Sections described in and included as the appendices to this Element. The City Municipal Code was adopted in 1995 and is available on the City's website: www.cityofbuellton.com.

3.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(iii) states:

> Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:
>
> (a). Prevent illicit discharges into its sanitary sewer system (examples may include Inflow & Infiltration (I/I), storm water, 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.

3.2 Illicit Discharge Prevention [WDR D.13(iii)(a)]

Illicit discharges, such as storm water, debris, chemicals, waste, roots, concrete, etc., are addressed in the City Municipal Code Sections, which are identified below.

Table 3-1: Illicit Discharge Prevention Legal Authority

Municipal Code Section
14.08.020 – Treatment of wastes required.
14.24.010 – Drainage into sanitary sewers — Prohibited.
14.24.030 – Specific discharge prohibitions.

3.3 Sewer and Connection Design and Construction [WDR D.13(iii)(b)]

The proper design and construction of sewers and connections is required by the following City Municipal Code Sections from City Municipal Code Chapters 14.16: Building Sewers, Lateral Sewers, and Connections and 14.20: Public Sewer Construction, as identified below:

Table 3-2: Sewer and Connection Requirements

Municipal Code Section
14.16.010 – Permit—Required.
14.16.020 – Construction requirements.
14.16.030 – Sewer materials.
14.16.040 – Minimum size and slope.
14.16.050 – Building drain.
14.16.060 – Joints and connections.
14.16.070 – Connection to public sewer.
14.16.080 – Separate sewers.
14.16.090 – Old building sewers.
14.16.100 – Sewer too low.
14.16.110 – Protection of excavation.
14.16.120 – Maintenance of side sewer.
14.16.130 – Backflow protection device.
14.20.010 – Permit—Required.
14.20.020 – Plans — Profiles and specifications — Required.
14.20.030 – Subdivisions.
14.20.040 – Easement or right-of-way.
14.20.050 – Persons authorized to perform work.
14.20.060 – Grade stakes
14.20.070 – Compliance with local regulations.
14.20.080 – Protection of excavation.
14.20.090 – Compliance with occupational safety and health acts.
14.20.100 – Design and construction standards.

3.4 Publicly Owned Lateral Access [WDR D.13(iii)(c)]

The City does not own or maintain laterals except to City-owned properties. Therefore, this section is not applicable.

3.5 FOG and Debris Discharge Limitations [WDR D.13(iii)(d)]

The City limits the discharge of fats, oils, and grease and other debris that may cause blockages through the City Municipal Code Sections identified below:

Table 3-3: FOG and Debris Limitations

Municipal Code Section
14.24.030 – Specific discharge prohibitions.
14.24.040 – Interceptors — Required.
14.24.050 – Grease interceptors and gravity separating devices.

3.6 Enforcement [WDR D.13(iii)(e)]

The City enforces violations of its sewer ordinances through the legal authorities provided in the City Municipal Code Sections identified below:

Table 3-4: Enforcement Legal Authority

Municipal Code Section
14.08.015 – Excessive sewer maintenance expense.
14.08.016 – Damage to city's municipal wastewater system — creation of other liability.
14.24.100 – Control of Wastewater Discharges
14.52.020 – Powers and authorities of inspectors.
14.72.010 – Consent orders.
14.72.020 – Order to show cause.
14.72.030 – Administrative compliance orders.
14.72.040 – Cease and desist orders.
14.72.050 – Administrative fines.
14.72.060 – Emergency suspensions.
14.72.070 – Termination of discharge.
14.72.080 – Appeals.
14.72.090 – Injunctive relief.
14.76.010 – Civil penalties.
14.76.020 – Criminal prosecution.
14.76.030 – Remedies nonexclusive.

City Municipal Code Chapter 14 can be found on the City's website in the following link: *http://qcode.us/codes/buellton/*.

APPENDIX 3A

City Municipal Code Chapter 14 can be found on the City's website in the following link:

http://qcode.us/codes/buellton/

ELEMENT 4 – REVISION RECORD

The City of Buellton's SSMP Element 4 – Operation and Maintenance Program has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
0	4/22/10	Formally Adopt SSMP.	Wallace Group/Rose Hess	City Council
1	12/12/13	Revisions based on findings of biannual audit.	Wallace Group/Rose Hess	Rose Hess
2	5/28/15	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council
3	6/15/16	Revisions based on findings of biannual audit.	Wallace Group/Rose Hess	Rose Hess
-	5/25/18	Revisions based on findings of biannual audit. Updates to appendix and SOPs.	Wallace Group/Rose Hess	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 4 - OPERATION AND MAINTENANCE PROGRAM

The City's operation and maintenance of its collection system ensures that the system is kept in good working condition. Sewer lift station maintenance work is contracted to and performed by Fluid Resource Management (FRM). Routine sewer lift station operations and sewer line operations and maintenance are primarily conducted by City of Buellton Staff. The City is currently under contract with Mainline Utility Company for Annual sewer line cleaning and CCTV services. Recent system wide cleaning and CCTV was completed in 2019. This SSMP Element outlines the work that is conducted to accomplish the optimal operation and maintenance of the City's collection system.

4.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(iv) states:

> The SSMP must include those elements listed below, which are appropriate and applicable to the Enrollee's system:
>
> (a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;
>
> (b) 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 Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;
>
> (c) 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 condition 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- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;
>
> (d) Provide training on a regular basis for Staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and
>
> (e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

4.2 Collection System Map [WDR D. 13(iv)(a)]

The sewer collection system consists of approximately twenty (20) miles of pipelines and is predominantly clay pipe. The majority of the sewer collection system consists of gravity pipelines, which vary in size from six (6) to fifteen (15) inches in diameter, and there is approximately 850 feet of force mains. **Table 4-1** illustrates the age of the sewer lines by identifying the years during which the associated percentages of the sewer system were constructed.

Table 4-1: Age of Sewer Lines

Year Sewer Constructed	Percent of Sewer System
2000 to Present	27%
1980 to 1999	23%
1960 to 1979	50%

There are two (2) public sewer lift stations located in the City's service area, which are operated by City Staff and maintained through contracted services provided by Fluid Resource Management (FRM). The City maintains current copies of this contract at the Public Works office. The two lift stations are identified as Riverview Park Lift Station and Zaca Creek Glof Course Lift Station. The force main immediately downstream of the Riverview Park lift station is owned and maintained by the City. The newly acquired lift station which services the Zaca Creek Golf Course discharges to a force main which is not owned or operated by the City. The force main associated with the Zaca Creek Golf Course Lift Station is owned and maintained by the Rancho de Maria Homeowners Association. Public lift station locations and associated force mains are referenced in **Figure 4-1** below.

Maintenance access to the gravity sewers is provided by 379 manholes and several structures, such as cleanouts and inspection holes. The collected wastewater is conveyed to the City's wastewater treatment plant for treatment and disposal. **Figure 4-1** depicts a general overview of the existing system.

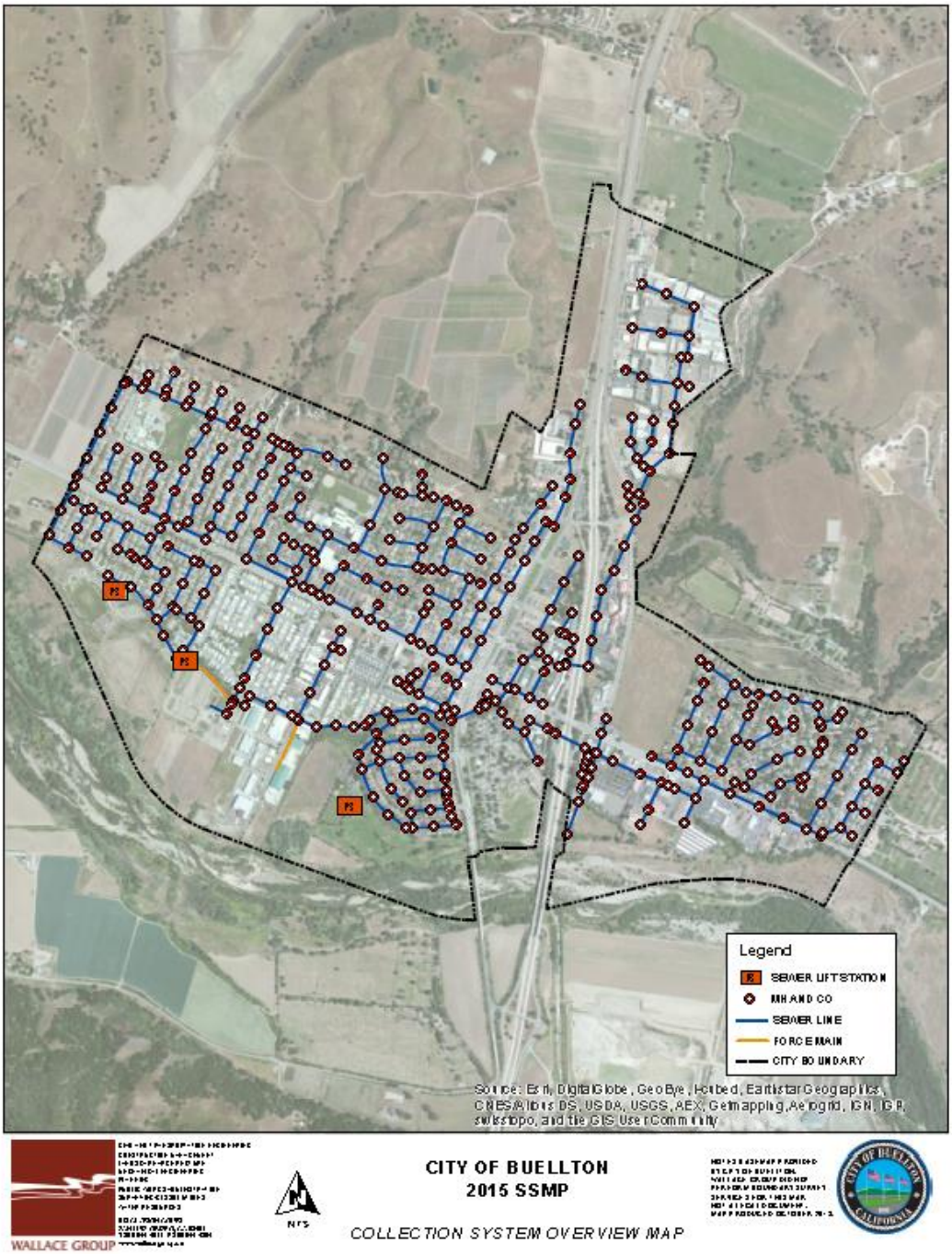


Figure 4-1: Sewer System Overview

The City of Buellton is in the process of completing up-to-date electronic collection system maps created and maintained by MNS Engineers, Inc. using geographic information system (GIS). These maps are overlain onto aerial imagery and provide detailed locations of the system's components with references to roads, homes, trees, etc. within the City boundary.

In addition to providing general location mapping, the electronic map is updated as changes are made to the City's collection system to include precise information relating to the general characteristics of the system components. This information includes material composition, pipe diameters, segment lengths, slopes, grade elevations, invert elevations, drain field system, and survey data. The contract for GIS services is included in the General Services Agreement with MNS Engineers and is on file at the City Public Works Department.

Collection system maps are printed to hard copy and provided to the City's Staff and contractors for use during routine maintenance and operations and during capital improvement projects. As-built plans and construction drawings are maintained as the system is improved through each capital improvement project. This data will also be routinely integrated back into the collection system GIS as this system is upgraded. The sewer system atlas map used for daily operations is in **Figure 4-2**.

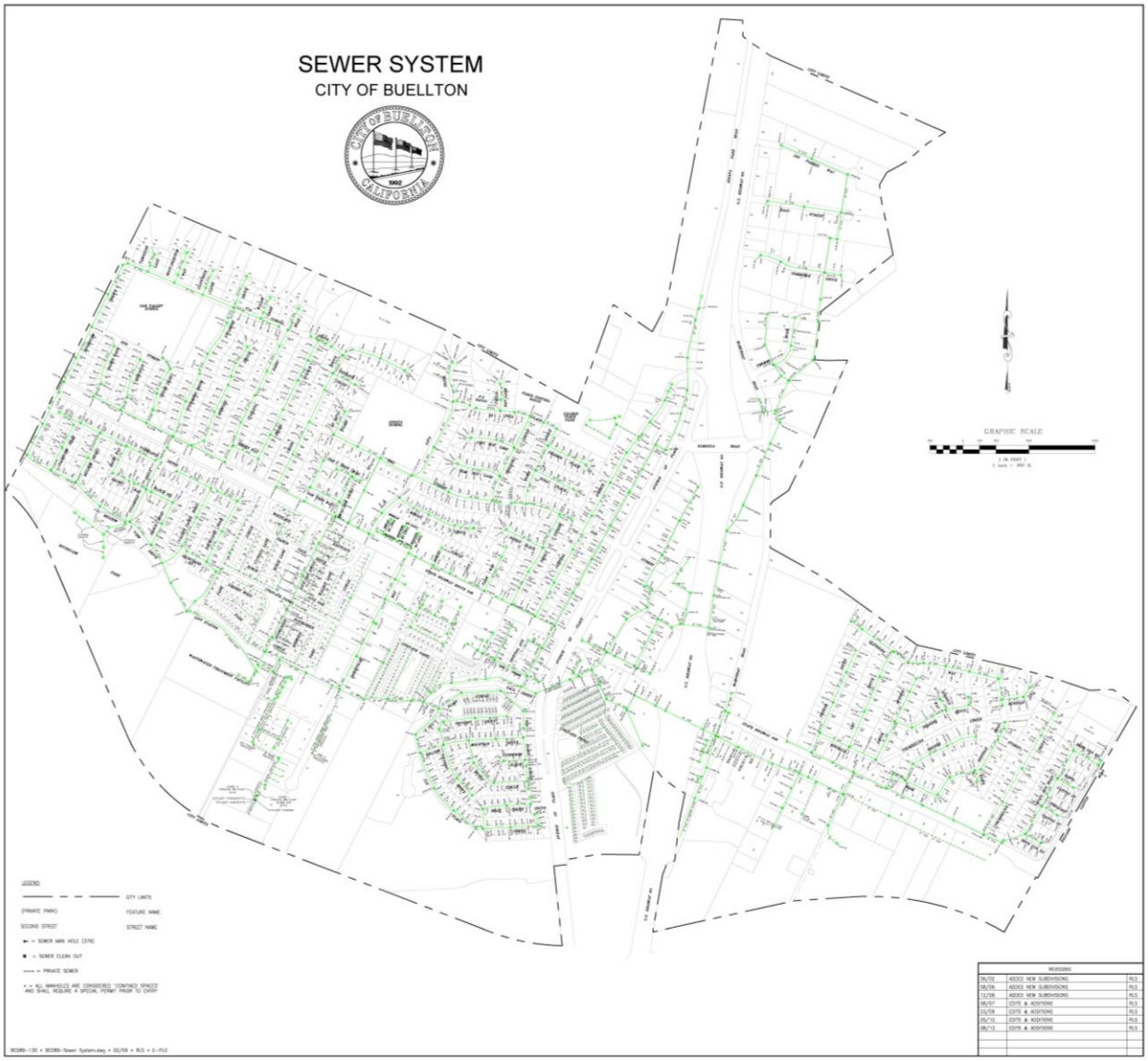


Figure 4-2: Sewer System Atlas

GIS and atlas system maps also include storm drain locations throughout the City. The system atlas map for storm water is depicted in **Figure 4-3** below.

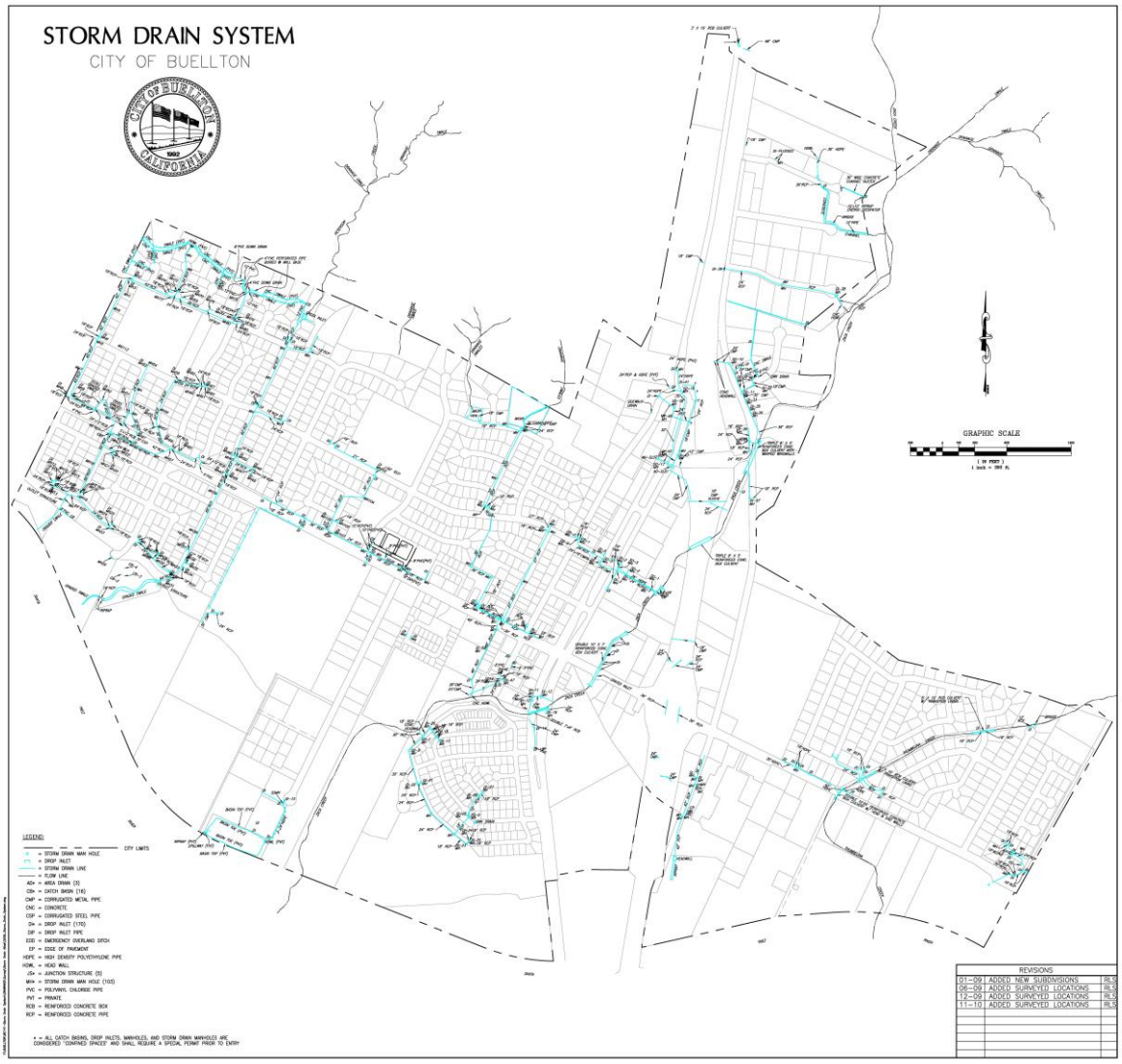


Figure 4-3: City Storm Drain System

4.3 Preventative Maintenance Program [WDR D.13(iv)(b)]

The City's manhole inspection, sewer line inspection, and cleaning program are all integral components of preventative maintenance. The City addresses non-routine work requests with the use of work order forms. These maintenance tasks are performed individually and tracked in the City's Work Order Log.

4.3.1 CCTV Inspection

City closed circuit television (CCTV) inspections utilized Mainline Utility Company between 2015 and 2019 to conduct CCTV investigations of the entire sewer collection system. This project was completed over a 4-year period in 2019. The contract for these services is managed by Public Works staff. Analysis of CCTV data is ongoing by Public Works Staff. This work is performed as part of the sewer line cleaning contract planned for this timeframe. Assessment of these inspections will enable the City to develop a capital improvement plan in which sewer lines are rehabilitated or replaced in future years. Approximately 6.5 miles of sewer lines received CCTV inspections in 2015/16 with the additional 13 miles completed between 2016/17, 2017/18 and 2018/19 Fiscal Years. The City is in the process of analyzing the original summary of CCTV inspection reports, completed in 2019. This analysis was completed in 2020 and has been used to identify projects for inclusion in the City's overall rehabilitation and replacement program, discussed later in this Element and included in the Sewer Collection System Master Plan (SCSMP). This analysis will also help to inform Operations and Maintenance staff on potential Hot Spot areas in the collection system that may need additional inspection and/or maintenance. A copy of the CCTV Analysis and the SCSMP will be maintained at the Public Works office. Some additional CCTV will be necessary in 2021 based on the findings of the 2019 analysis. These additional areas are provided in **Appendix G**.

4.3.2 Cleaning

The City's sewer cleaning plan for 2020 and subsequent years is to clean the entire gravity collection system every three years and to inspect problematic sewer lines, which also called high maintenance areas (HMAs) or "hot spots", on a weekly basis with physical cleaning occurring based on Staff's assessment of the internal condition of these lines. Sewer line assessments will be based on historic sewer cleaning logs, Staff's visual observations in the field, potential trouble areas reported by pretreatment inspectors, and future CCTV inspections. Sewer line cleaning will be segmented by sewer cleaning area. Sewer Cleaning Area Maps are provided in **Appendix 4G** and illustrate the three (3) cleaning areas the City identified in its sanitary sewer system.

The City maintains adequate staffing and funding to accomplish annual cleaning objectives with the assistance of contracted sewer line cleaning services, which is the primary mechanism to achieve system-wide cleaning objectives.

City Staff currently inspects sewer HMAs on a weekly basis and cleans these areas based on weekly observed conditions. Sewer cleaning work history is tracked in the City's Sewer Line Cleaning and Routine Manhole Inspection Log. The City's Sewer Line Cleaning and Routine Manhole Inspection Log is also populated by Staff during cleaning activities. Staff notes the physical attributes of the line being maintained, logs the results of observed cleaning results, and makes recommendations for future maintenance activities for the section of line being cleaned based on inspection findings. The City's Sewer Line Cleaning and Routine Manhole Inspection Log is then used as a work history record and to create future cleaning schedules. The following line cleaning documents are provided in **Appendix 4A**:

- Sewer System Hot Spot Cleaning List
- Sewer Line Cleaning and Routine Manhole Inspection Log

4.3.3 Visual Inspection

Approximately forty percent of the City's manholes are less than fifteen years old. Visual manhole inspections are currently conducted during sewer line cleaning activities. Manhole inspections are incorporated into the sewer line cleaning and CCTV inspection contract. Manhole inspections will be divided into two categories:

- Annual Inspections:
  - Monitor flow and any items of concern that may be routinely observed during line cleaning and CCTV inspections.
  - Observations are logged in the sewer line cleaning log as warranted.
- Detailed Inspections:
  - Detailed inspections conducted when conditional warrant an additional level of inspection for potential rehabilitation and/or replacement.
  - Monitor physical location and characteristics, structural condition, and hydraulic conditions.
  - Results documented on a Manhole Observation and Inspection Report, which is used by engineering staff to rank the condition of City manholes and develop manhole rehabilitation and replacement plans. The Manhole Observation and Inspection Report is provided in **Appendix 4B**.

The City maintains adequate staffing and budget to accomplish manhole inspections during each inspection cycle.

4.3.4 High Maintenance Areas

The City has historically maintained twelve HMAs throughout the system, which are cleaned at varying intervals based on Staff's weekly inspections of these areas. These HMAs are generally the result of two contributing factors in the City's sewer system: fats, oils, and grease (FOG) and root intrusion. An overview of these twelve HMAs is found in **Figure 4-4**.

The HMA map included as Figure 4-4 is updated when Staff observes sewer line conditions that require an increased cleaning frequency. Future sewer line rehabilitation and replacement projects may allow Staff to modify and reclassify cleaning schedules based on the internal condition of these lines. This map and the associated Hot Spot list are planned for update in late 2020 when CCTV reports are analyzed. New Hot Spots will be added to the list based on the recommendations in the CCTV analysis.

Figure 4-4: HMAs

4.3.5 Lift Station Operation and Maintenance

There are two public lift stations located in the City's service area: River View Park Lift Station and Zaca Creek Golf Course Lift Station. These lift stations are provided with duplex pumping systems for redundancy and reliability. These duplex systems allow for continued operation of a lift station in the event of pump failure.

Routine, weekly lift station operation and maintenance activities are performed by City Staff. FRM is contracted by the City for quarterly and emergency lift station maintenance. Lift stations are inspected by City Staff on a weekly basis. Inspections consist of logging weekly pump run

times and performing a general inspection of major critical components of the station, such as pump operation, station controls, alarms, and one emergency backup generator, which is located at the wastewater treatment plant.

The Riverview Park lift station is equipped to operate under emergency conditions, such as a power outage utilizing an emergency backup generator. The Zaca Creek Golf Course lift station is not equipped with a power cord to connect to an emergency power supply. The City has access to a rented trailer-mounted generator in the event emergency power is necessary. Due to the limited flow these lift stations receive from River View Park and the Golf Course, the City has the ability to close these park restrooms during an extended power failure eliminating flow to these lift stations during a lengthy power outage.

When routine or minor maintenance is required, it is documented on Weekly Lift Station Logs. An example Weekly Lift Station Log is included in **Appendix 4C**. Major maintenance tasks, such as emergency maintenance, significant system adjustments, repairs, and replacements, are completed by outside contractors. A record of these maintenance activities and repairs is maintained in the City's Work Order Log.

The City's contractor for lift station maintenance, FRM, provides a quarterly preventative maintenance schedule to help ensure pump station components are running and maintained based on industry and manufacturers recommendations. Work Orders for quarterly inspections and maintenance are maintained by the City in their database. Examples of FRM Quarterly Reports are provided in **Appendix 4D**.

4.4 Rehabilitation and Replacement Plan [WDR D.13(iv)(c)]

As sewer collection systems age, the risk for deterioration, blockages, and collapse increases considerably. To mitigate those risks, the City is planning to conduct several investigative efforts and analyses to ensure sewer system assets are assessed and replaced when necessary.

The City plans to complete engineering reviews and assessments on the information obtained from an update to their 2006 Citywide Sewer Study, which is planned to be completed by the end of June 2020 and will also include the results of CCTV and manhole inspections. This information will give the City the necessary information to identify and prioritize system deficiencies. Short- and long-term rehabilitation actions will be implemented after review of this data to address each deficiency.

Short- and long-term rehabilitation actions are funded through the City's sewer enterprise fund and capital budget. Capital projects and annual operating budgets are funded by wastewater user fees. Long-term rehabilitation actions will be incorporated into upcoming fiscal year budgets as capital improvement projects. Work for short- and long-term projects, such as manhole rehabilitation or replacement and sewer spot repairs are performed by area contractors through publicly bid service contracts awarded by the City.

Sewer improvement projects are included in the fiscal year 2019/2020 Operating and Capital Budget. The "Budget at a Glance" – Operating/CIP Budgets for fiscal year 2019/2020 are found on the City website at *https://www.cityofbuellton.com/departments/finance.php*. Future funding and identification of long-term capital projects beyond this fiscal year will be provided through an Operations Cost and Rate Analysis, which will be described and included or referenced in this SSMP Element upon its completion.

The Rehabilitation and Replacement Projects in **Table 4-2** have been identified for completion in Fiscal Year 2020/2021 as a result of a CCTV analysis of the City's collection system:

Table 4-2 Capital Improvement Projects

Bid Projects	Cost: Engineers Estimate
Sewer Line Point Repair - Calor Drive: MH 102 - 105	$14,300
Sewer Line Point Repair - Calor Drive: MH 105 - 108	$11,900
Sewer Line Replacement - Calor Drive: MH 108 - 107	$10,100
Sewer Line Point Repair - Calor Drive: MH 83 - 82	$5,500
Sewer Line Point Repair - Calor Drive: MH 82 - 81	$12,750
Sewer Line Point Repair - Via Corona: CO394 – MH 105	$6,600
Sewer Line Point Repair - Valley Dairy Rd: MH 197- MH 196	$6,000
Sewer Line Point Repair – Riverview Drive: MH 963 - MH 230	$5,500
Sewer Line Point Repair – Farmland Drive: MH 180 – MH 181	$5,500
Sewer Line Point Repair – Tamarind Lane: MH 960 – MH 961	$6,000
Total Cost	**$84,150**
Alternative Bid Projects	**Cost: Engineers Estimate**
Sewer Line Replacement – Oak Tree Way: MH 86 – MH 84	$8,400
Sewer Line Replacement – Meadow View: MH 235 – MH 236	$8,400
Sewer Line Replacement – 2nd Street: MH 66 – MH 78	$8,700
Sewer Line Replacement – 2nd Street: MH79 – MH 164	$6,575
Total Cost	**$32,075**
Total Combined Project Cost Estimates Including 10% Contingency	**$127,848**

4.5 Training [WDR D.13(iv)(d)]

Training programs include formal classroom training and on-the-job training. Training is facilitated by both City Staff and outside training workshops. On-the-job cross training is pursued to ensure Staff has a proficient working knowledge of the sanitary sewer system and that critical tasks can be performed without interruption. Task proficiency is a requirement for all job positions and promotions. Staff job descriptions are in **Appendix 4E**. Training records are maintained by the Public Works Director/City Engineer in a Staff Training Logs.

Operations and Maintenance Staff are initially trained in the proper operation and maintenance of all new major mobile equipment and facilities by the respective contractor or manufacturer. Written operation and maintenance manuals are used as resource material for start-up training and new Staff training.

The City developed Standard Operating Procedures for the operation and maintenance of the sewer collection and conveyance system in 2015. These procedures which require annual training in June each year are identified below. A record of annual training will be kept on file at the Public Works Office.

Operation and Maintenance Procedures

- Preventative Maintenance Program
- Lift Station Operation and Maintenance
- Annual Sewer Collection System Cleaning and High Maintenance Area Cleaning and Reporting
- Annual Map & GIS Updates
- Underground Service Alert (USA) Marking
- Fats, Oils, and Grease (FOG) Control Program
- Routine Traffic and Crowd Control
- Sewer Connection Requests
- Collection System Training Requirements

Copies of these procedures are on file at the City Public Works Department.

Safety training is an integral aspect of the City's program. Every Staff member receives formal safety training. This training consists of confined space training, traffic control, safety equipment, distracted driving, CPR/First Aid, etc. Safety training records are also included in the Staff Training Log on file at the City Public Works Department. Annual training on operation and maintenance activities and SSMP Element 4 – Operation and Maintenance Program will be conducted with City Staff. Training will be documented and tracked in the City's Staff Training Log.

Contractors implementing portions of this Operation and Maintenance Program are required to be appropriately trained on the activities they are completing through their contracts with the City and their licensing.

4.5.1 Staffing

The City currently staffs its Wastewater Department with three full-time employees and one floating position. These employees are also assisted by two additional Staff members from the Water Department, who are also trained in the operation and maintenance of the sewer collection and conveyance system. As previously mentioned, a portion of wastewater operation and maintenance activities are covered by contract staff. Currently contractors are used for lift station maintenance, sewer line cleaning, manhole inspections, and CCTV inspections.

4.6 Equipment and Replacement Parts Inventory [WDR D.13(iv)(e)]

Equipment and replacement parts inventories are divided into two categories: sewer lift stations and sewer lines and appurtenances.

4.6.1 Sewer Lift Stations

The City does not perform significant maintenance activities for the two public lift stations in the collection system. Contract services are used for quarterly and emergency lift station maintenance and are currently relied upon for an inventory of critical parts.

4.6.2 Sewer Lines and Appurtenances

Critical parts and equipment, such as tools, pipe, hydro vac parts, and portable pumps, are tracked through the City's Critical Parts and Equipment List, which is included in **Appendix 4F**. The City will update this list to account for new parts and equipment as they are purchased and to account for parts and materials used in the sewer collection and conveyance on an ongoing basis.

In the event of an emergency, local retailers are available to supply additional needed equipment and parts on short notice. Valley Tool is recognized in the Santa Ynez Valley as the largest distributor of rental equipment and tools, and Todd Pipe and Supply is the largest distributor of plumbing and building products. Both vendors are located within the City limits. Contact information for the retailer's location is provided below:

- Valley Tool Rentals
  870 McMurray Road
  (805) 688-7213

- Todd Pipe and Supply
  820 McMurray Road
  (805) 688-3960

Additional equipment and emergency support can also be provided by Fluid Resource Management. Stewarts De-Rooting & Plumbing, Autosys Inc., Mainline Utility Co. and the City of Solvang Public Works Department who are available for emergency call-out services. Contact information for the above-mentioned emergency support is provided below:

- Fluid Resource Management
  2385 Precision Drive
  Arroyo Grande, CA 93420
  (805) 597-7100

- Mainline Utility Co.
  1305 North H Street
  Lompoc, CA 93436
  (805) 434-5015

- Autosys Inc.
  PO Box 3092
  Atascadero, CA 93423
  (805) 464-7170

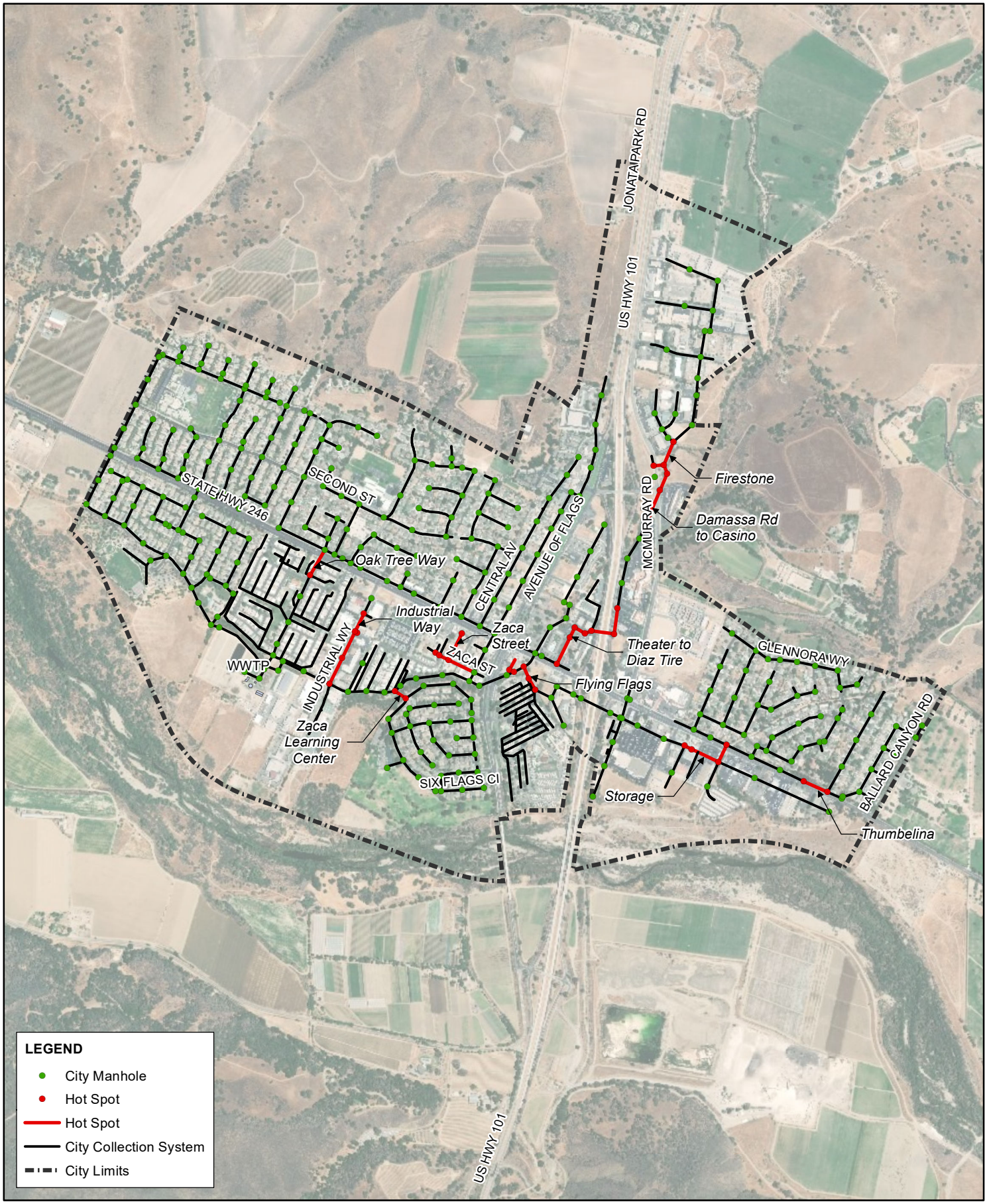
- Stewarts De-Rooting
  410 East Montecito Street
  Santa Barbara, CA 93103
  (805) 965-8813

- City of Solvang Public Works Department
  411 Second Street
  Solvang, CA 93463
  (805) 688-5575

APPENDIX 4A

Sewer Hot Spot Cleaning Records

Sewer System Hot Spot Cleaning List
Sewer Line Cleaning and Routine Manhole Inspection Log



WALLACE GROUP
CIVIL ENGINEERING
CONSTRUCTION MANAGEMENT
LANDSCAPE ARCHITECTURE
MECHANICAL ENGINEERING
PLANNING
PUBLIC WORKS ADMINISTRATION
SURVEYING/GIS SOLUTIONS
WATER RESOURCES
612 CLARION COURT
SAN LUIS OBISPO, CA 93401
T 805 544-4011 F 805 544-4294
www.wallacegroup.us

1 inch = 1,500 feet

CITY OF BUELLTON
SANITARY SEWER COLLECTION SYSTEM MASTER PLAN

FIGURE 3-3: HIGH MAINTENANCE AREAS

NOTES:
ESRI BASEMAP.
WALLACE GROUP DID NOT PERFORM BOUNDARY SURVEY SERVICES FOR THIS MAP. NOT A LEGAL DOCUMENT.

MAP PRODUCED MAY 2020.

APPENDIX 4B

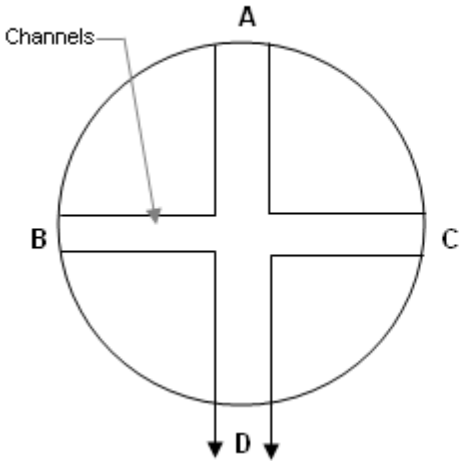
City Trunk Line and Manhole Observation and Inspection Report

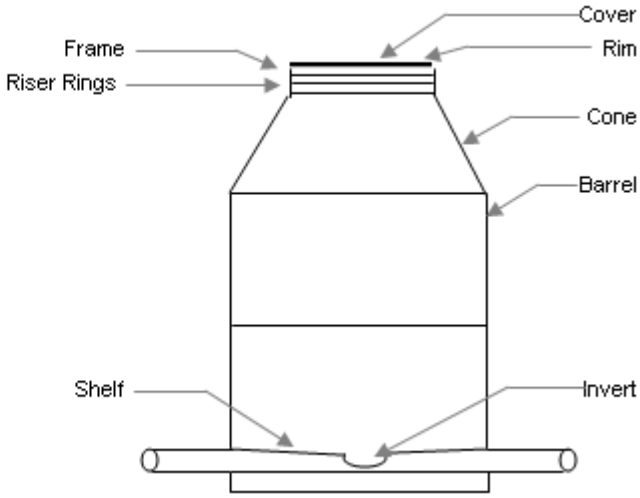
City Trunk Line Manhole Observation and Inspection Report

MH No. _____ **Date:** _____ **Time:** _____ **Inspector:** _____

Elevation: _____ **Depth To Invert:** _____ **Cleanliness:** _____

Type of Construction: _____ **Street Reference:** _____





Defects Observed: (cover, frame, grout, riser rings, steps, shelf, pipes, channels, etc.)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

(Use Reverse Side For Additional Defects To Be Noted)

	Pipe Size	Length	From MH# to MH#	Est. Flow	Type of Flow	Depth of of Flow	Velocity of Flow
A.	_____	_____	_____	_____	_____	_____	_____
B.	_____	_____	_____	_____	_____	_____	_____
C.	_____	_____	_____	_____	_____	_____	_____
D.	_____	_____	_____	_____	_____	_____	_____

City Trunk Line Manhole Observation and Inspection Report

I. Manhole Initial Inspection

A. Location
- 1. Roadway ☐
- 2. Gutter ☐
- 3. Paved Alley ☐
- 4. Unpaved Alley ☐
- 5. Easement ☐
- 6. Other_____ ☐

B. Cover
- 1. Serviceable ☐
- 2. Damaged ☐
- 3. Displaced ☐
- 4. Missing ☐
- 5. Loose ☐
- 6. Sealed ☐

C. Ring/Frame
- 1. Serviceable ☐
- 2. Loose ☐
- 3. Displaced ☐
- 4. Missing Grout ☐
- 5. Needs Raising ☐
- 6. Needs Lowering ☐

D. Manhole Material
- 1. Cast-in-Place ☐
- 2. Pre-Cast ☐

E. Size of MH Cover
- 1. 24-inch ☐

II. Structural Inspection

A. Rungs
- 1. Serviceable ☐
- 2. Unsafe ☐
- 3. Missing ☐
- 4. Corroded ☐

B. Cone
- 1. Serviceable ☐
- 2. Broken ☐
- 3. Corroded ☐
- 4. Misaligned ☐
- 5. Leaking/Bad Joints ☐

C. Riser
- 1. Serviceable ☐
- 2. Broken ☐
- 3. Corroded ☐
- 4. Misaligned ☐
- 5. Leaking/Bad Joints ☐

D. Shelf
- 1. Serviceable ☐
- 2. Broken ☐
- 3. Dirty ☐
- 4. Misaligned ☐
- 5. Bad Base Joints ☐

E. Channel
- 1. Serviceable ☐
- 2. Obstructed ☐

III. Hydraulic Inspection

A. Inflow Indications
- 1. Stains on Rungs ☐
- 2. Stains on Bench ☐

B. Surcharge Indications
- 1. Debris on Shelf ☐
- 2. Debris on Rungs ☐

C. Clarity of Flow
- 1. Turbid Appearance ☐
- 2. Clear Appearance ☐

D. Flow Type
- 1. Steady ☐
- 2. Pulsing ☐
- 3. Turbulent ☐
- 4. Surcharging ☐
- 5. Sluggish ☐

E. Flow Depth Compared to Adjacent Manholes
- 1. Same ☐
- 2. Lower ☐
- 3. Higher ☐

I. Manhole Initial Inspection
II. Structural Inspection
III. Hydraulic Inspection

E. Size of MH Cover
2. 30-inch ☐

F. Manhole Size
1. 4-foot ☐
2. 5-foot ☐

E. Channel
3. Corroded ☐
4. Bad Pipe Joint ☐
5. Silt ☐
6. Poor Condition ☐

F. Approximate Flow Depth
1. Uniform Depth ☐
2. Time _____ AM / PM ☐

Observation Summary (Inspector):

_____
_____
_____
_____
_____

Recommendations (Inspector):

_____
_____
_____
_____
_____

Inspector's Signature: _____ **Date:** _____

Recommendations (Chief Plant Operator):

_____
_____
_____
_____
_____

Chief Plant Operator Signature: _____ **Date:** _____

APPENDIX 4C

Weekly Lift Station Log

City of Buellton

Weekly Lift Station Log

Lift Station:_____

Date	Run Time Pump #1	Run Time Pump #2	Test Pumps in Hand and Auto	Test Controls (Floats)	Seal Failure Light On?	Test Alarms : Auto Dialer/ Alarm Light	Test Emergency Power Supply	Other Observed Conditions	Maintenance Performed

APPENDIX 4D

FRM Quarterly Report Examples

FLUID RESOURCE MANAGEMENT
OPERATIONS • MAINTENANCE • MECHANICAL

CITY OF BUELLTON MAINTENANCE CHECKSHEET 2019

RIVERVIEW PARK

SERVICE DATE	11/14/2019
WORK ORDER	043FWW09001
SERVICE TECHNICIAN	MARK SNYDER

UPON ARRIVAL ON SITE	
SEND UPDATE EMAIL (WORKING ON SITE, IGNORE ALARMS)	☑
CONTACT CLIENT TO NOTIFY OF WORK AND COORDINATE ANY ITEMS NEEDING ATTENTION	☑

LIFT STATION	
CONTROLS TESTED (MANUALLY OR AUTO)	☑
INCOMING VOLTAGE 230 V SINGLE PHASE	☑
CIRCUIT BREAKER / DISCONNECT	☑
POWER FAIL ALARM	☑
TEST OPERATION OF FLOATS, VERIFY PUMPS ALTERNATE	☑
HIGH LEVEL ALARM	☑
INSPECT GUIDE RAIL ASSEMBLY AND DISCHARGE PIPING	☑
INSPECT ISOLATION AND CHECK VALVES	☑
INSPECT STRUCTURE FOR CORROSION	☑
PUMP DOWN TEST	☑
PUMPING NEEDED ? NO	☑
PUMP #1 HOURS = 591	☑
PUMP #2 HOURS = 1178	☑
GREASE MAT LEVEL 5 %	☑
PUMPS IN AUTO?	☑
SITE CLEAN UP	☑

CONTROL PANEL	☑
TIGHTEN CONNECTIONS	☑
CLEAN INTERIOR	☑
CHECK VENTS FOR OBSTRUCTION	☑
FLA/MEG OHM READINGS FOR ALL MOTORS (ENTER READINGS ON CLIENT REPORT)	☑
ENSURE ALL HOA SWITCHES ARE IN INITIAL ARRIVAL OR CORRECT POSITION	☑

TECHNICIAN COMMENTS FOR MANAGER	☑
1) Pulled floats and tested, checked good. 2) Slide rail header bracket missing on Pump #1. 3) Lift station in good working order.	

re	
SEND UPDATE EMAIL INFORMING EVERYONE YOU ARE FINISHED	☑
INFORM CLIENT THAT WORK IS COMPLETE AND GO OVER ANY CONCERNS LOGGED	☑

FLUID RESOURCE MANAGEMENT

OPERATIONS • MAINTENANCE • MECHANICAL

CITY OF BUELLTON SERVICE REPORT

RIVERVIEW PARK

SERVICE DATE	11/14/2019
SERVICE TECHNICIAN	MARK SNYDER

PUMP/MOTOR READINGS

LIFT STATION PUMP 1 FULL LOAD AMPS	11.9
LIFT STATION PUMP 1 MEGOHMS	INFINITE
LIFT STATION PUMP 2 FULL LOAD AMPS	12.1
LIFT STATION PUMP 2 MEGOHMS	INFINITE

COMMENTS FOR CLIENT

FLUID RESOURCE MANAGEMENT
OPERATIONS • MAINTENANCE • MECHANICAL

CITY OF BUELLTON MAINTENANCE CHECKSHEET 2019

ZACA CREEK GOLF COURSE

SERVICE DATE	11/14/2019
WORK ORDER	043FWW09001
SERVICE TECHNICIAN	MARK SNYDER

UPON ARRIVAL ON SITE	
SEND UPDATE EMAIL (WORKING ON SITE, IGNORE ALARMS)	☑
CONTACT CLIENT TO NOTIFY OF WORK AND COORDINATE ANY ITEMS NEEDING ATTENTION	☑

LIFT STATION	
CONTROLS TESTED (MANUALLY OR AUTO)	☑
INCOMING VOLTAGE 230 V SINGLE PHASE	☑
CIRCUIT BREAKER / DISCONNECT	☑
POWER FAIL ALARM	☑
TEST OPERATION OF FLOATS, VERIFY PUMPS ALTERNATE	☑
HIGH LEVEL ALARM	☑
INSPECT GUIDE RAIL ASSEMBLY AND DISCHARGE PIPING	☑
INSPECT ISOLATION AND CHECK VALVES	☑
INSPECT STRUCTURE FOR CORROSION	☑
PUMP DOWN TEST	☑
PUMPING NEEDED ? NO	☑
PUMP #1 HOURS = 58	☑
PUMP #2 HOURS = 44	☑
GREASE MAT LEVEL 1 %	☑
PUMPS IN AUTO?	☑
SITE CLEAN UP	☑

CONTROL PANEL	☑
TIGHTEN CONNECTIONS	☑
CLEAN INTERIOR	☑
CHECK VENTS FOR OBSTRUCTION	☑
FLA/MEG OHM READINGS FOR ALL MOTORS (ENTER READINGS ON CLIENT REPORT)	☑
ENSURE ALL HOA SWITCHES ARE IN INITIAL ARRIVAL OR CORRECT POSITION	☑

TECHNICIAN COMMENTS FOR MANAGER ☑

1) Pulled floats and tested, checked good. 2) Removed broken lock stem for lift station lid security and brought back to shop for replacement. 3) Lift station in good working order.

BEFORE LEAVING FACILITY	
SEND UPDATE EMAIL INFORMING EVERYONE YOU ARE FINISHED	☑
INFORM CLIENT THAT WORK IS COMPLETE AND GO OVER ANY CONCERNS LOGGED	☑

FLUID RESOURCE MANAGEMENT

OPERATIONS • MAINTENANCE • MECHANICAL

CITY OF BUELLTON SERVICE REPORT

ZACA CREEK GOLF COURSE

SERVICE DATE	11/14/2019
SERVICE TECHNICIAN	MARK SNYDER

PUMP/MOTOR READINGS

LIFT STATION PUMP 1 FULL LOAD AMPS	9.6
LIFT STATION PUMP 1 MEGOHMS	002 @ 1000 VDC
LIFT STATION PUMP 2 FULL LOAD AMPS	9.2
LIFT STATION PUMP 2 MEGOHMS	INFINITE

COMMENTS FOR CLIENT

APPENDIX 4E

Operations and Maintenance Job Descriptions

Maintenance and Utility Field Worker I
Maintenance and Utility Field Worker II
Maintenance and Utility Field Worker III

CITY OF BUELLTON

MAINTENANCE & UTILITY FIELDWORKER I

Job Description

GENERAL STATEMENT OF DUTIES:

Performs duties in general maintenance, repair and construction work assignments in support of public works projects; performs work on City streets, storm drainage systems, sewer systems, water systems, and other City properties and facilities.

DISTINGUISHING CHARACTERISTICS:

This is the entry-level class within the Maintenance and Utility Worker series. This class is distinguished from the higher classes by the performance of the more routine tasks and duties assigned to the position within the series. This class is typically used as a training class, and employees may have only limited or no directly-related work experience but must gain basic skills during the probationary period and persistently and diligently strive to acquire knowledge and experience necessary to gain certification and skills commensurate with journey-level performance.

SUPERVISION RECEIVED:

This employee works under the supervision of the Director of Public Works, and upon assignment, the Leadworker.

EXAMPLE OF DUTIES:

1. Assists in the installation, repairs and maintenance of streets, sidewalks, storm drains, traffic signs and landscaping.
2. In learning capacity, operates and maintains a variety of light and heavy equipment including backhoe, loader, dump truck, boom truck, jack hammer, and sewer rodding machines; drives other City vehicles and operates other power equipment as necessary.
3. Assists in the performance of major and minor repairs to equipment used in the course of duties.
4. Trims and maintains trees in public right-of-way, trims lawns, shrubs, maintains parks and other landscaped areas, performs other maintenance work as assigned.
5. Performs building maintenance tasks such as painting, minor construction and general repairs.
6. Lifts, moves and carries heavy objects.
7. Performs pick and shovel work in digging, widening and back filling trenches and assisting in the maintenance and repair of water and sewer lines.
8. Applies pesticides and herbicides as directed.

9. In a learning capacity, maintains, repairs and installs water mains, water service, water pumping equipment, purification equipment, fire hydrants and related equipment.
10. In a learning capacity, maintains and operates water reservoirs, valves and related piping, including Sewer Plant and Water Filtration Plant.
11. Maintains daily activity log, monitors storage tank levels, sounds wells and records depths for report purposes.
12. Learns to perform basic analysis in water and wastewater treatment.
13. Reads meters and keeps accurate records.
14. In a learning capacity, installs, repairs and maintains wastewater facilities consisting of sewage and wastewater treatment plant.
15. Operates and maintains pumps.
16. Operates and maintains aerators, clarified digesters, grinders, filters, chemical dispensers and related equipment.
17. Maintains treatment ponds.
18. Checks meters, gauges and flow meter readings for plant operators, assists in reviewing results of laboratory tests to determine effectiveness of plant operations.
19. Repairs and maintains the wastewater collection system, operates sewer rodder equipment.
20. Under supervision, responds to customer requests for service, complaints and problems.
21. Answers emergency calls, takes appropriate action such as placing barricades, calls out additional assistance/responsible agencies, removes fallen trees and limbs, clears clogged drainage channels, repairs/replaces street signs, performs emergency patching of streets, performs emergency repairs on water and sewer systems.
22. Maintains a safe working environment.
23. Performs other duties as assigned.

RECRUITING REQUIREMENTS: KNOWLEDGE, SKILL AND ABILITY

Basic knowledge of use of hand and power tools; basic construction maintenance and procedures, methods and terminology; learns the operation of trucks, dump trucks, loaders and backhoes and has the ability to gain basic operational skills within probationary period; learns to perform maintenance and repair of job-related equipment; acquires a working knowledge of water and sewer systems within probationary period; ability to understand and follow verbal and written instructions; ability to perform basic mathematical calculations and communicate effectively both verbally and in writing; ability to work with employees and public in a harmonious and productive manner; possession of a valid California driver's license and a satisfactory driving record.

PHYSICAL DEMANDS AND WORKING CONDITIONS:

Strenuous physical work with continuous exposure to such unpleasant elements as dust, fumes and odors, dampness, raw sewage, noise levels, or outside weather conditions. Physical demands include frequent lifting and carrying of objects over 75 pounds, often combined with stooping, bending, twisting, crawling, reaching, working above ground at heights of 40 feet or more or on irregular surfaces, and working in confined spaces. Employee will be required to maintain Hepatitis B immunization.

EXPERIENCE AND TRAINING:

High School diploma or General Education Development certificate required. Certification will be required within one year of employment at Grade I – Waste Water Treatment or Grade I – Water Treatment, as well as any combination of education and/or experience necessary for satisfactory job performance. Certification in the appropriate Grade shall be continuously maintained.

- Wastewater & Water 1 Certification – Required within first year of employment
- Obtain Water Distribution I - Extra $100.00/month
- Obtain Water or Wastewater II - Move to Fieldworker II
- Obtain other II Certificate - Extra $100.00/month
- Obtain Water Distribution II - Extra $100.00/month
- Obtain Water or Wastewater III - Move to Fieldworker III
- Obtain other III Certificate - Extra $100.00/month
- Obtain Water Distribution III - Extra $100.00/month

This job description is not intended to be all-inclusive. An employee may also perform other reasonable related business duties as assigned by his/her immediate supervisor. This position is considered non-exempt.

MAINTENANCE & UTILITY FIELDWORKER I

ADOPTED SALARY LEVELS
(Effective July 1, 2011)

STEP	1	2	3	4	5
Monthly Salary	$2,749	$2,899	$3,047	$3,191	$3,343

CITY OF BUELLTON

MAINTENANCE & UTILITY FIELDWORKER II

Job Description

GENERAL STATEMENT OF DUTIES:

Performs semi-skilled duties in general maintenance, repair and construction work assignments in support of public works projects; performs work on City streets, storm drainage systems, sewer systems, water systems, and other City properties and facilities.

DISTINGUISHING CHARACTERISTICS:

This is the medium journey class within the Maintenance and Utility Worker series. This class is distinguished from the Maintenance and Utility Worker III class by the performance of semi-skilled to skilled duties assigned to positions within the series. This class performs the full range of duties assigned to the series and must have the experience and basic skills to perform them. It is expected that employees in this classification will persistently and diligently strive to acquire knowledge and experience necessary to gain certification and skills commensurate with full journey level performance.

SUPERVISION RECEIVED:

This employee works under the supervision of the Director of Public Works, and upon assignment, the Leadworker.

EXAMPLE OF DUTIES:

1. Installs, repairs and maintains streets, sidewalks, storm drains, traffic signs and landscaping.
2. Operates and maintains a variety of light and heavy equipment including backhoe, loader, dump truck, boom truck, jack hammer, and sewer rodding machines; drives other City vehicles and operates other power equipment as necessary.
3. Performs major and minor repairs to equipment used in the course of duties.
4. Trims and maintains trees in public right-of-way, trims lawns, shrubs, maintains parks and other landscaped areas, performs other maintenance work as assigned.
5. Performs building maintenance tasks such as painting, minor construction and general repairs.
6. Lifts, moves and carries heavy objects.
7. Performs pick and shovel work in digging, widening and back filling trenches and assists in the maintenance and repair of water and sewer lines.
8. Applies pesticides and herbicides as directed.
9. Maintains, repairs and installs water mains, water service, water pumping equipment, purification equipment, fire hydrants and related equipment.

10. Maintains and operates water reservoirs, valves and related piping, including Sewer Plant and Water Filtration Plant.
11. Maintains daily activity log, monitors storage tank levels, sounds wells and records depths for report purposes.
12. Perform basic analysis in water and wastewater treatment.
13. Reads meters and keeps accurate records.
14. Installs, repairs and maintains wastewater facilities consisting of sewage and wastewater treatment plant.
15. Operates and maintains pumps.
16. Operates and maintains aerators, clarified digesters, grinders, filters, chemical dispensers and related equipment.
17. Maintains treatment ponds.
18. Checks meters, gauges and flow meter readings for plant operators, assists in reviewing results of laboratory tests to determine effectiveness of plant operations.
19. Adjusts plant controls and process to ensure effective treatment.
20. Repairs and maintains the wastewater collection system, operates sewer rodder equipment.
21. Responds to customer requests for service, complaints and problems.
22. Answers emergency calls, takes appropriate action such as placing barricades, calls out additional assistance/responsible agencies, removes fallen trees and limbs, clears clogged drainage channels, repairs/replaces street signs, performs emergency patching of streets, performs emergency repairs on water and sewer systems.
23. Maintains a safe working environment.
24. Performs other duties as assigned.

RECRUITING REQUIREMENTS: KNOWLEDGE, SKILL AND ABILITY

Use of hand and power tools; basic construction maintenance and procedures, methods and terminology; learns the operation of trucks, dump trucks, loaders and backhoes and has the ability to gain basic operational skills within probationary period; ability to perform maintenance and repair of job-related equipment; knowledge of water and sewer systems or ability to gain working knowledge and skills within probationary period; ability to understand calculations and communicate effectively both verbally and in writing; ability to work with other employees and public in a harmonious and productive manner; possession of a valid California driver's license and a satisfactory driving record.

PHYSICAL DEMANDS AND WORKING CONDITIONS:

Strenuous physical work with continuous exposure to such unpleasant elements as dust, fumes and odors, dampness, raw sewage, noise levels, or outside weather conditions. Physical demands include frequent lifting and carrying of objects over 75 pounds, often combined with stooping, bending, twisting, crawling, reaching, working above ground at heights of 40 feet or more or on irregular surfaces, and working in confined spaces. Employee will be required to maintain Hepatitis B immunization.

EXPERIENCE AND TRAINING:

High School diploma or General Education Development certificate required. Certification will be required at Grade II – Wastewater Treatment or Grade II – Water Treatment, as well as any combination of education and/or experience necessary for satisfactory job performance. Certification in the appropriate Grade shall be continuously maintained.

- Must Obtain Water or Wastewater II to move to Fieldworker II level
- Obtain other II Certificate - Extra $100.00/month
- Obtain Water Distribution II - Extra $100.00/month
- Obtain Water or Wastewater III - Move to Fieldworker III
- Obtain other III Certificate - Extra $100.00/month
- Obtain Water Distribution III - Extra $100.00/month

This job description is not intended to be all-inclusive. An employee may also perform other reasonable related business duties as assigned by his/her immediate supervisor. This position is considered non-exempt.

MAINTENANCE & UTILITY FIELDWORKER II

ADOPTED SALARY LEVELS
(Effective July 1, 2011)

STEP	1	2	3	4	5
Monthly Salary	$3,343	$3,506	$3,670	$3,837	$4,001

CITY OF BUELLTON

MAINTENANCE & UTILITY FIELDWORKER III

Job Description

GENERAL STATEMENT OF DUTIES:

Performs skilled duties in general maintenance, repair and construction work assignments in support of public works projects; performs work on City streets, storm drainage systems, sewer systems, water systems, and other City properties and facilities.

DISTINGUISHING CHARACTERISTICS:

This is the full journey class within the Maintenance and Utility Worker series. This class may train workers in the lower classes in the accomplishment of assigned projects. This job classification performs the full range of duties assigned to the Maintenance & Utility Worker series at a skilled level of performance.

SUPERVISION RECEIVED:

This employee works under the supervision of the Director of Public Works, and upon assignment, the Leadworker.

EXAMPLE OF DUTIES:

1. Installs, repairs and maintains streets, sidewalks, storm drains, traffic signs and landscaping.
2. Operates and maintains a variety of light and heavy equipment including backhoe, loader, dump truck, boom truck, jack hammer, and sewer rodding machines; drives other City vehicles and operates other power equipment as necessary.
3. Performs major and minor repairs to equipment used in the course of duties.
4. Trims and maintains trees in public right-of-way, trims lawns, shrubs, maintains parks and other landscaped areas, performs other maintenance work as assigned.
5. Performs building maintenance tasks such as painting, minor construction and general repairs.
6. Lifts, moves and carries heavy objects.
7. Performs pick and shovel work in digging, widening and back filling trenches and assists in the maintenance and repair of water and sewer lines.
8. Applies pesticides and herbicides as directed.
9. Maintains, repairs and installs water mains, water service, water pumping equipment, purification equipment, fire hydrants and related equipment.
10. Maintains and operates water reservoirs, valves and related piping, including Sewer Plant and Water Filtration Plant.
11. Maintains daily activity log, monitors storage tank levels, sounds wells and records depths for report purposes.

12. Perform basic analysis in water and wastewater treatment.
13. Reads meters and keeps accurate records.
14. Installs, repairs and maintains wastewater facilities consisting of sewage and wastewater treatment plant.
15. Operates and maintains pumps.
16. Operates and maintains aerators, clarified digesters, grinders, filters, chemical dispensers and related equipment.
17. Maintains treatment ponds.
18. Checks meters, gauges and flow meter readings for plant operators, assists in reviewing results of laboratory tests to determine effectiveness of plant operations.
19. Adjusts plant controls and process to ensure effective treatment.
20. Repairs and maintains the wastewater collection system, operates sewer rodder equipment.
21. Responds to customer requests for service, complaints and problems.
22. Answers emergency calls, takes appropriate action such as placing barricades, calls out additional assistance/responsible agencies, removes fallen trees and limbs, clears clogged drainage channels, repairs/replaces street signs, performs emergency patching of streets, performs emergency repairs on water and sewer systems.
23. Maintains a safe working environment.
24. Performs other duties as assigned.

RECRUITING REQUIREMENTS: KNOWLEDGE, SKILL AND ABILITY

Use of hand and power tools; basic construction maintenance and procedures, methods and terminology; learns the operation of trucks, dump trucks, loaders and backhoes and has the ability to gain basic operational skills within probationary period; ability to perform maintenance and repair of job-related equipment; knowledge of water and sewer systems or ability to gain working knowledge and skills within probationary period; ability to understand calculations and communicate effectively both verbally and in writing; ability to work with other employees and public in a harmonious and productive manner; possession of a valid California driver's license and a satisfactory driving record.

PHYSICAL DEMANDS AND WORKING CONDITIONS:

Strenuous physical work with continuous exposure to such unpleasant elements as dust, fumes and odors, dampness, raw sewage, noise levels, or outside weather conditions. Physical demands include frequent lifting and carrying of objects over 75 pounds, often combined with stooping, bending, twisting, crawling, reaching, working above ground at heights of 40 feet or more or on irregular surfaces, and working in confined spaces. Employee will be required to maintain Hepatitis B immunization.

EXPERIENCE AND TRAINING:

High School diploma or General Education Development certificate required. Certification will be required at Grade III – Wastewater Treatment and Grade III – Water Treatment, as well as any combination of education and/or experience necessary for satisfactory job performance. Certification in the appropriate Grade shall be continuously maintained.

- Must Obtain Water or Wastewater III to move to Fieldworker III level
- Obtain other III Certificate - Extra $100.00/month
- Obtain Water Distribution III - Extra $100.00/month

This job description is not intended to be all-inclusive. An employee may also perform other reasonable related business duties as assigned by his/her immediate supervisor. This position is considered non-exempt.

MAINTENANCE & UTILITY FIELDWORKER III

ADOPTED SALARY LEVELS
(Effective July 1, 2011)

STEP	1	2	3	4	5
Monthly Salary	$4,070	$4,274	$4,488	$4,712	$4,948

APPENDIX 4F

Critical Parts and Equipment Inventory & Critical Vendors and Contractor List

CITY OF BUELLTON – CRITICAL PARTS AND EQUIPMENT LIST & EMERGENCY CONTRACTORS & VENDORS

Parts/Equipment	Manufacturer/Model#	Location	Quantity
Parts and Pumps: Lift Stations (All parts and equipment are purchased through Fluid Resource Management and Autosys Inc.)			
Gravity System			
Miscellaneous	Manhole Covers	Corp Yard	5
	Concrete Risers	Corp Yard	5
	Manhole Frames/Risers	Corp Yard	5
	Cleanouts	Corp Yard	7
Maintenance Equipment			
Trailer Mounted Jetter	Shamrock Pipe and Tool Motor Serial # 09252 C 16 RC Model LRG 4231 6007 B	Corp Yard	1
Trailer Mounted Jetter Equipment	½" Hose and Misc nozzles: 400 PSI	Corp Yard	1 each
Grit Catcher	N/A	Corp Yard	2

CITY OF BUELLTON – CRITICAL PARTS AND EQUIPMENT LIST & EMERGENCY CONTRACTORS & VENDORS

Parts/Equipment	Manufacturer/Model#	Location	Quantity
Spill Response	Absorbs It: Spill absorption media	Corp Yard	3 bags
	Ultra-Dram Storm Drain Seal Kits	Corp Yard	15 Kits various sizes
	Spill Response Pigs	Corp Yard	3
Misc. Equipment			
Cones	N/A	Corp Yard	12
Traffic Signs	N/A	Corp Yard	8

Rental Equipment and Tools	
Valley Tool Rentals 870 McMurray Road (805) 688-7213	Todd Pipe and Supply 820 McMurray Road (805) 688-3960

CITY OF BUELLTON – CRITICAL PARTS AND EQUIPMENT LIST
& EMERGENCY CONTRACTORS & VENDORS

Equipment and Emergency Support		
Fluid Resource Management 2385 Precision Drive Arroyo Grande, CA 93420 (805) 597-7100	Mainline Utility Co. 1305 North H Street Lompoc, CA 93436 (805) 434-5015	Autosys Inc. PO Box 3092 Atascadero, CA 93423 (805) 464-7170
Stewarts De-Rooting 410 East Montecito Street Santa Barbara, CA 93103 (805) 965-8813	City of Solvang Public Works Department 411 Second Street Solvang, CA 93463 (805) 688-5575 Mutual Aid Agreement with City for support during Emergency	

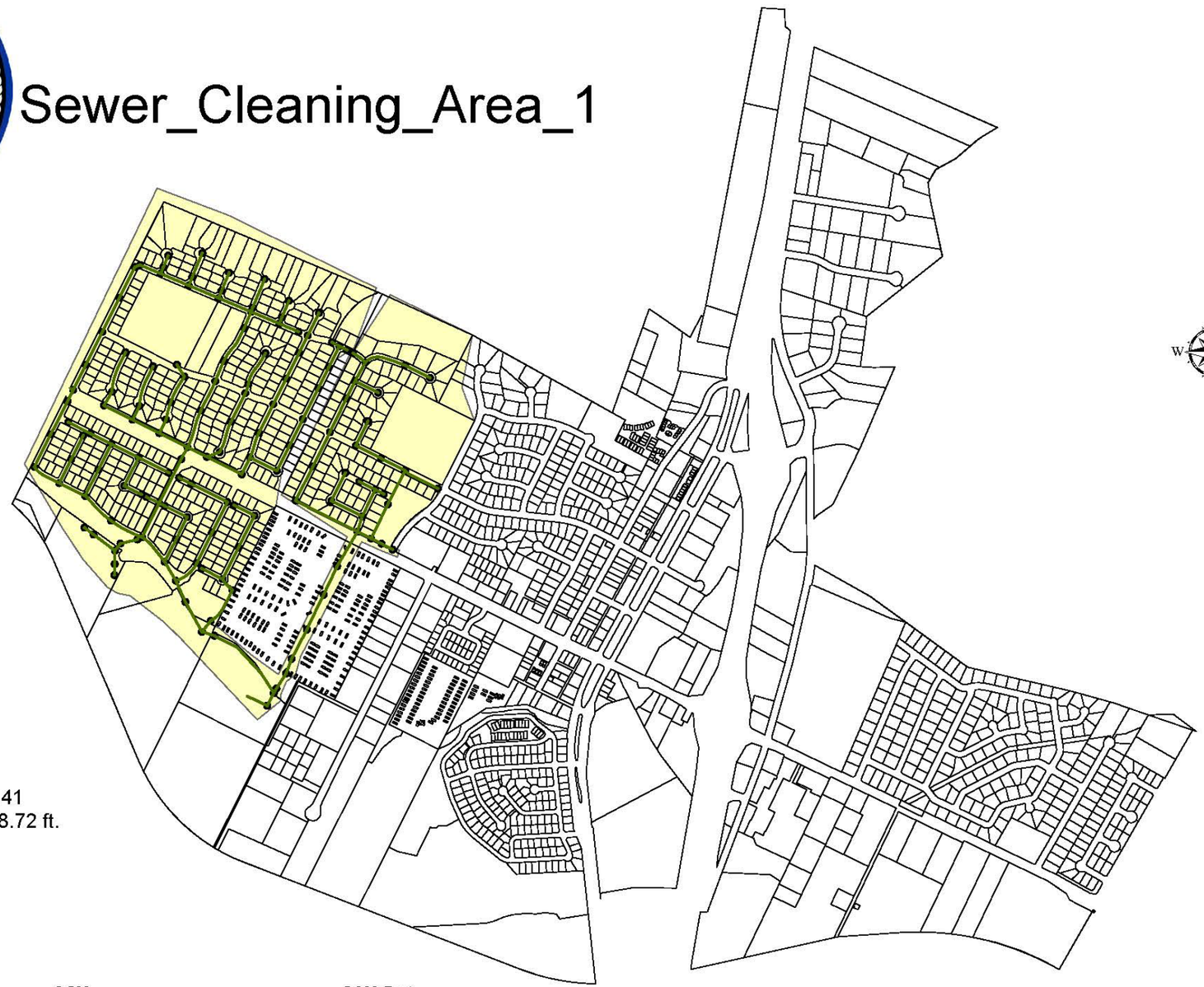
APPENDIX 4G

Sewer Cleaning Area Maps

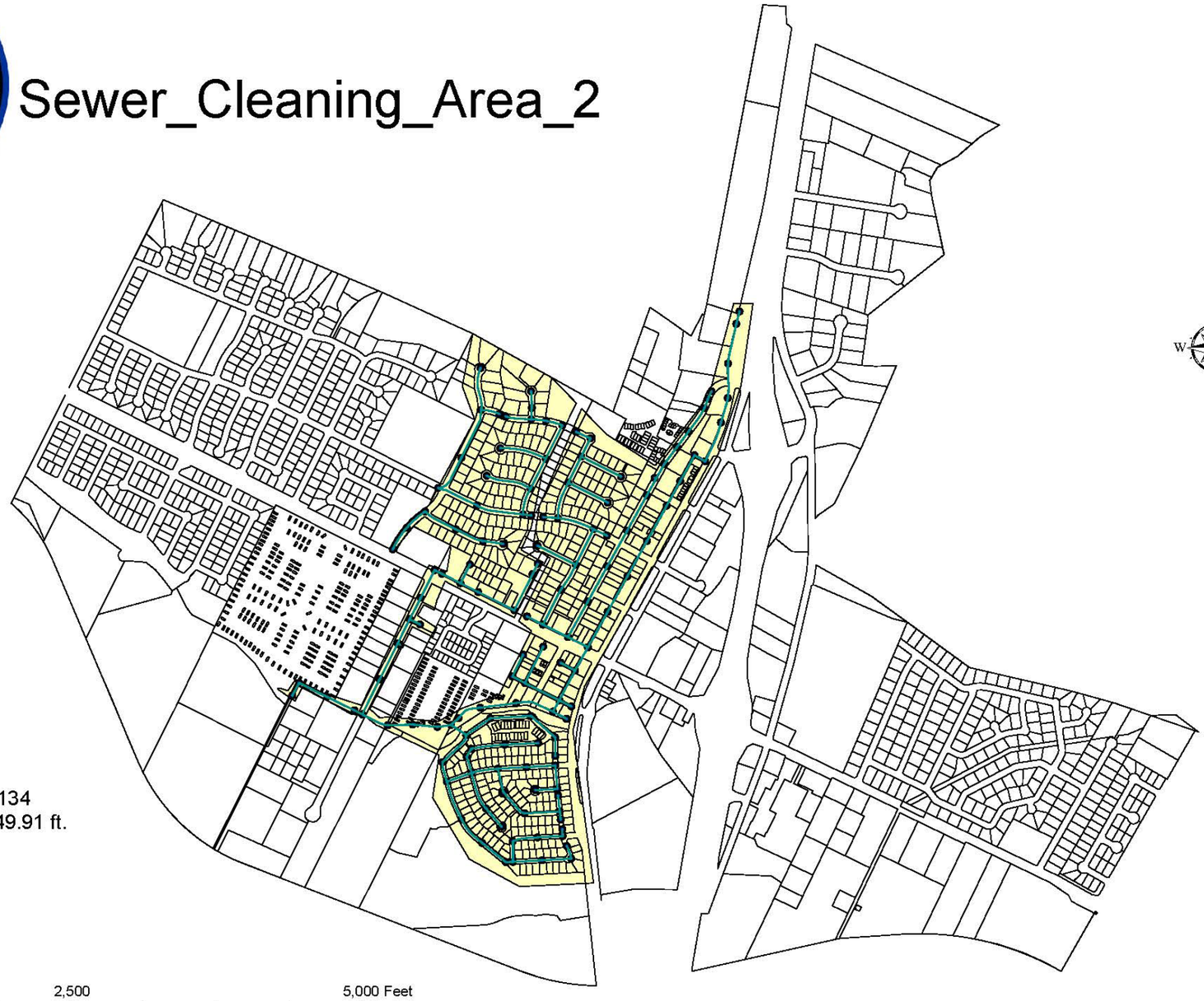
Sewer Cleaning Area 1
Sewer Cleaning Area 2
Sewer Cleaning Area 3

2021 Additional CCTV Areas requiring investigation

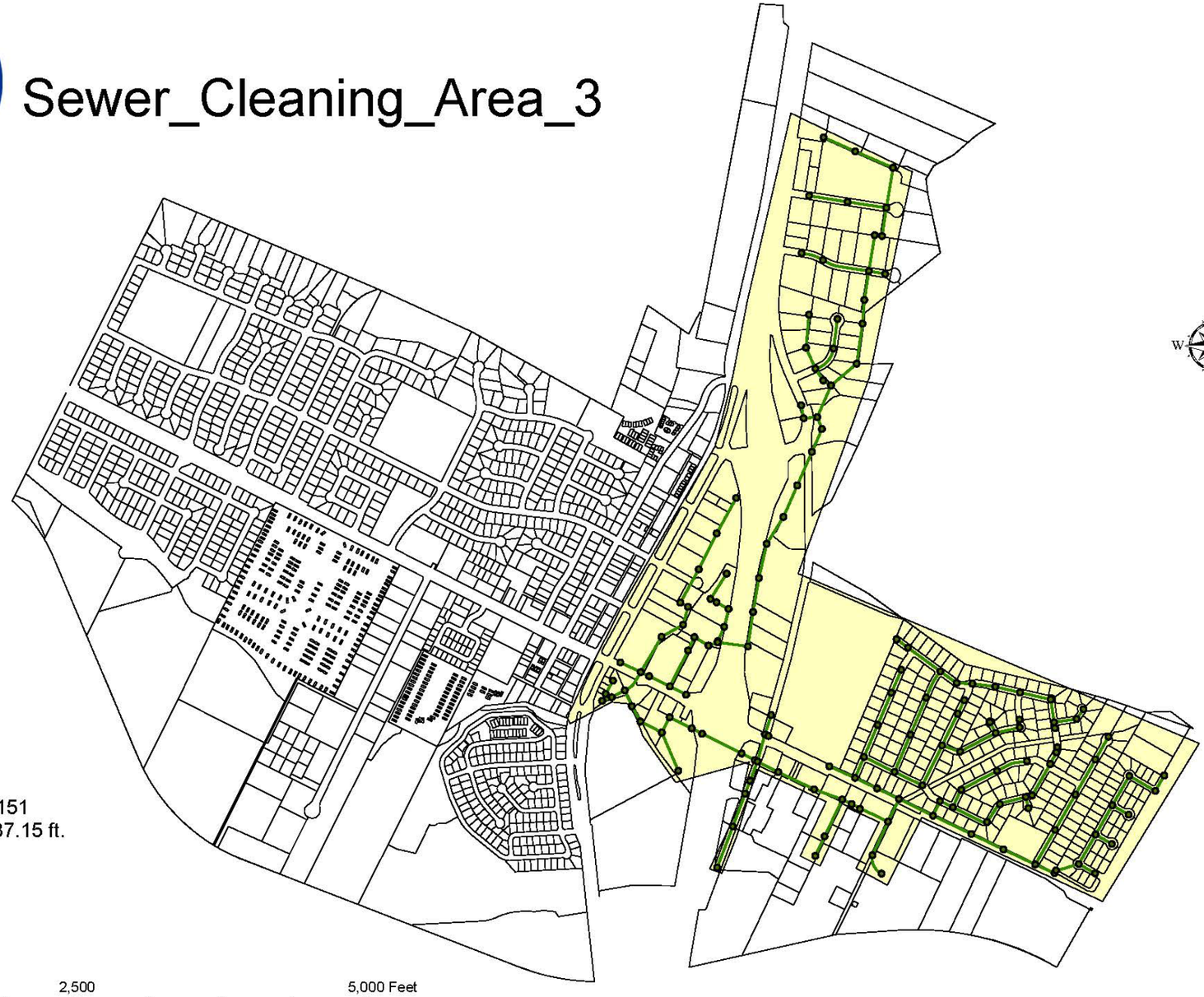
Sewer_Cleaning_Area_1



Sewer_Cleaning_Area_2



Sewer_Cleaning_Area_3



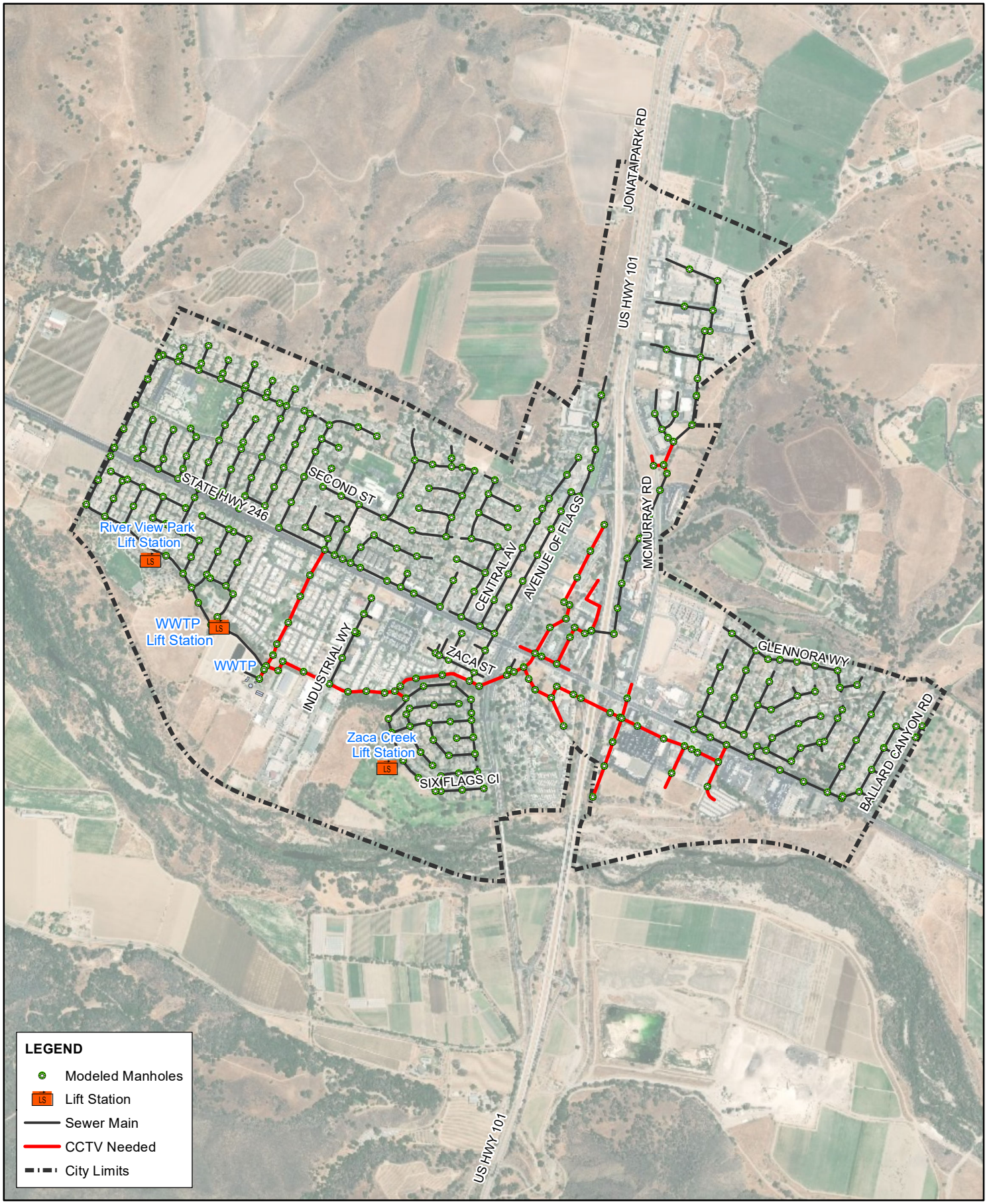
Legend

- SewerNodes_Area_3
- SewerLines_Area_3
- Parcels
- Area_3

SewerLines:
Total Number of Pipes: 151
Total Pipe Length: 32,837.15 ft.

SewerNodes:
Cleanouts: 31
Sewer Manholes: 120

0 1,250 2,500 5,000 Feet



WALLACE GROUP
CIVIL ENGINEERING
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PUBLIC WORKS ADMINISTRATION
SURVEYING/GIS SOLUTIONS
WATER RESOURCES

612 CLARION COURT
SAN LUIS OBISPO, CA 93401
T 805 544-4011 F 805 544-4294
www.wallacegroup.us

1 inch = 1,500 feet

CITY OF BUELLTON
SANITARY SEWER COLLECTION SYSTEM MASTER PLAN

FIGURE 3-4: ADDITIONAL CCTV NEEDED

NOTES:
ESRI BASEMAP.
WALLACE GROUP DID NOT PERFORM BOUNDARY SURVEY SERVICES FOR THIS MAP. NOT A LEGAL DOCUMENT.

MAP PRODUCED MAY 2020.

ELEMENT 5 – REVISION RECORD

The City of Buellton's SSMP Element 5 – Design and Performance Provisions has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
0	4/22/10	Formally Adopt SSMP.	Wallace Group/Rose Hess	City Council
1	12/12/13	Revisions based on findings of biannual audit.	Wallace Group/Rose Hess	Rose Hess
2	5/28/15	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council
3	6/15/16	Update appendices for this Element with current supporting documentation.	Wallace Group/Rose Hess	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 5 - DESIGN AND PERFORMANCE PROVISIONS

The standards and specifications for new construction and repair of the existing sanitary sewer system described in this SSMP Element are utilized to ensure a high quality, well designed, and functioning sanitary sewer system.

5.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(v) states that the SSMP must identify:

(a) 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; and

(b) Procedures and standards for inspection and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

5.2 Design and Construction Standards and Specifications [WDR D.13(v)(a)]

The City of Buellton contracts design services to MNS Engineers, Inc. The following details from the City of Buellton Department of Public Works Standard Details are utilized for work completed on the sanitary sewer system and are included in **Appendix 5A**:

- 519: Modification of Sewer Lateral Over Water Main
- 601: Sanitary Sewer Standards and Symbols
- 602: Sanitary Sewer Manhole
- 603: Sanitary Sewer Drop Manhole
- 604: Shallow Sanitary Sewer Manhole
- 605: Sanitary Sewer Cleanout
- 606: Sanitary Sewer Service Lateral
- 607: Sanitary Sewer Trench
- 608: Stainless Steel Manhole Step

The *Greenbook: Standard Specifications for Public Works Construction* is also utilized by the City through references to Sections and Subsections of the *Greenbook* in the City of Buellton Department of Public Works Standard Details.

The State of California Department of Health Services' *Guidance Memo No. 2003-02: Guidance for the Separation of Water Mains and Non-potable Pipelines* is utilized to regulate the separation of water and sewer lines and is included in **Appendix 5B**.

Design and construction provisions are also given in the following City Municipal Code Sections from City Municipal Code Chapters 14.16: Building Sewers, Lateral Sewers and Connections and 14.20: Public Sewer Construction, which are found on the City's website; http://qcode.us/codes/buellton/ and identified below:

Table 5-1: Design and Performance Provisions

Municipal Code Sections
14.16.010 – Permit—Required.
14.16.020 – Construction requirements.
14.16.030 – Sewer materials.
14.16.040 – Minimum size and slope.
14.16.050 – Building drain.
14.16.060 – Joints and connections.
14.16.070 – Connection to public sewer.
14.16.080 – Separate sewers.
14.16.090 – Old building sewers.
14.16.100 – Sewer too low.
14.16.110 – Protection of excavation.
14.16.120 – Maintenance of side sewer.
14.16.130 – Backflow protection device.
14.20.010 – Permit—Required.
14.20.020 – Plans—Profiles and specifications—Required.
14.20.030 – Subdivisions.
14.20.040 – Easement or right-of-way.
14.20.050 – Persons authorized to perform work.
14.20.060 – Grade stakes
14.20.070 – Compliance with local regulations.
14.20.080 – Protection of excavation.
14.20.090 – Compliance with occupational safety and health acts.
14.20.100 – Design and construction standards.

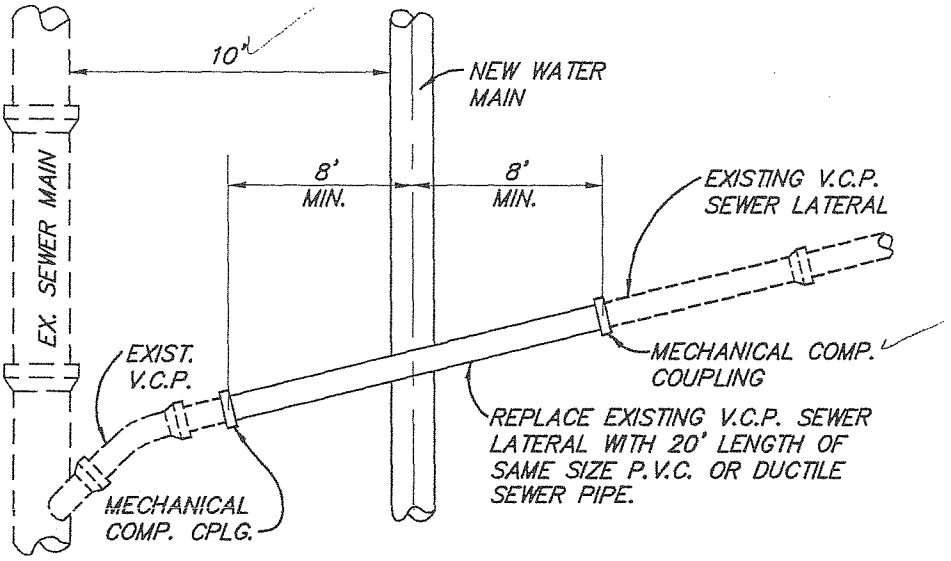
5.3 Inspection and Testing Procedures and Standards [WDR D.13(v)(b)]

The City's contract with MNS Engineers, Inc., which is referenced in Section 5.2 Design and Construction Standards and Specifications [WDR D.13(v)(a)], includes inspection services.

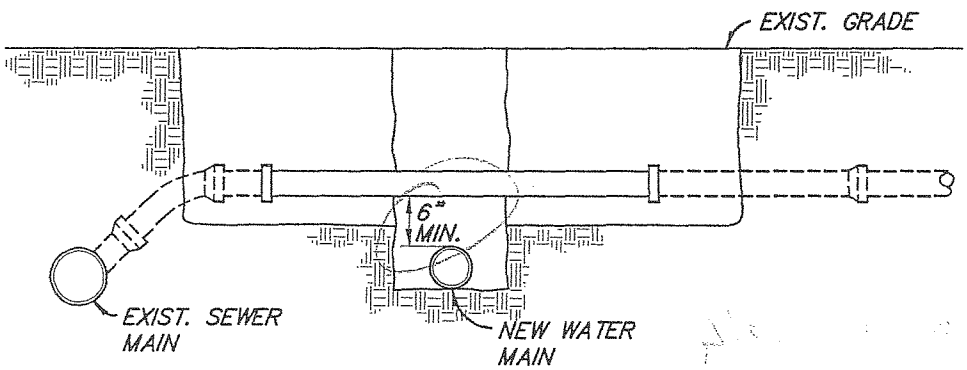
Inspection and testing requirements for sanitary sewer system components are followed as described by the current version of the *Greenbook: Standard Specifications for Public Works Construction* and include activities, such as closed-circuit television inspection and air-pressure and mandrel testing of gravity sewer mains. Inspection and testing procedures and standards are also typically included in project specifications.

APPENDIX 5A

City of Buellton Department of Public Works Standard Details



PLAN



PROFILE

NOTES

1. Any variation from that shown must be approved by the Engineer.
2. Sewer laterals shall maintain original slope.
3. P.V.C. pipe shall be Class 150 (SDR 17.0) meeting requirements of ASTM D 2241, Product Standard PS 22–70 Long Sustained Hydro Safety Factor of 4 to 1.
4. Backfill shall be Class I or II material as defined in ASTM D 2321 and shall be placed in accordance with ASTM D 2321.
5. Mechanical compression coupling shall be Caulder Coupling, or approved equal.

CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	MODIFICATION OF SEWER LATERAL OVER WATER MAIN	STANDARD DETAIL 519
	William Albrecht 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	

SECTION 600

SANITARY SEWER DETAILS

CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	SECTION 600 - TABLE OF CONTENTS	STANDARD DETAIL 600
	William Albrecht 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	

1. Unless noted otherwise, references to Sections and Subsections refer to the Standard Specifications for Public Works Construction.

2. Pipe and fittings for sewer main lines may be ABS Solid Wall Pipe as set forth in Subsection 207–15 or PVC Plastic Pipe as set forth in Subsection 207–17.

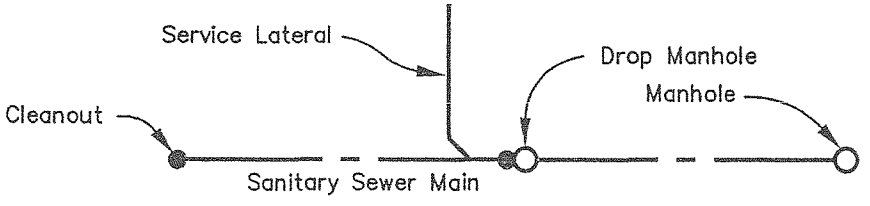
3. Pipe and fittings for sanitary sewer service laterals may be ABS Solid Wall Pipe as set forth in Subsection 207–15, PVC Plastic Pipe as set forth in Subsection 207–17 or Polyethylene (PE) Solid Wall Pipe as setforth in Subsection 207–19.

4. Pipe shall be bedded in conformance with Standard Detail 607.

5. Manholes shall be constructed in conformance with Standard Detail 602, 603 or 604 as appropriate.

6. Cleanouts shall be constructed in conformance with Standard Detail 605.

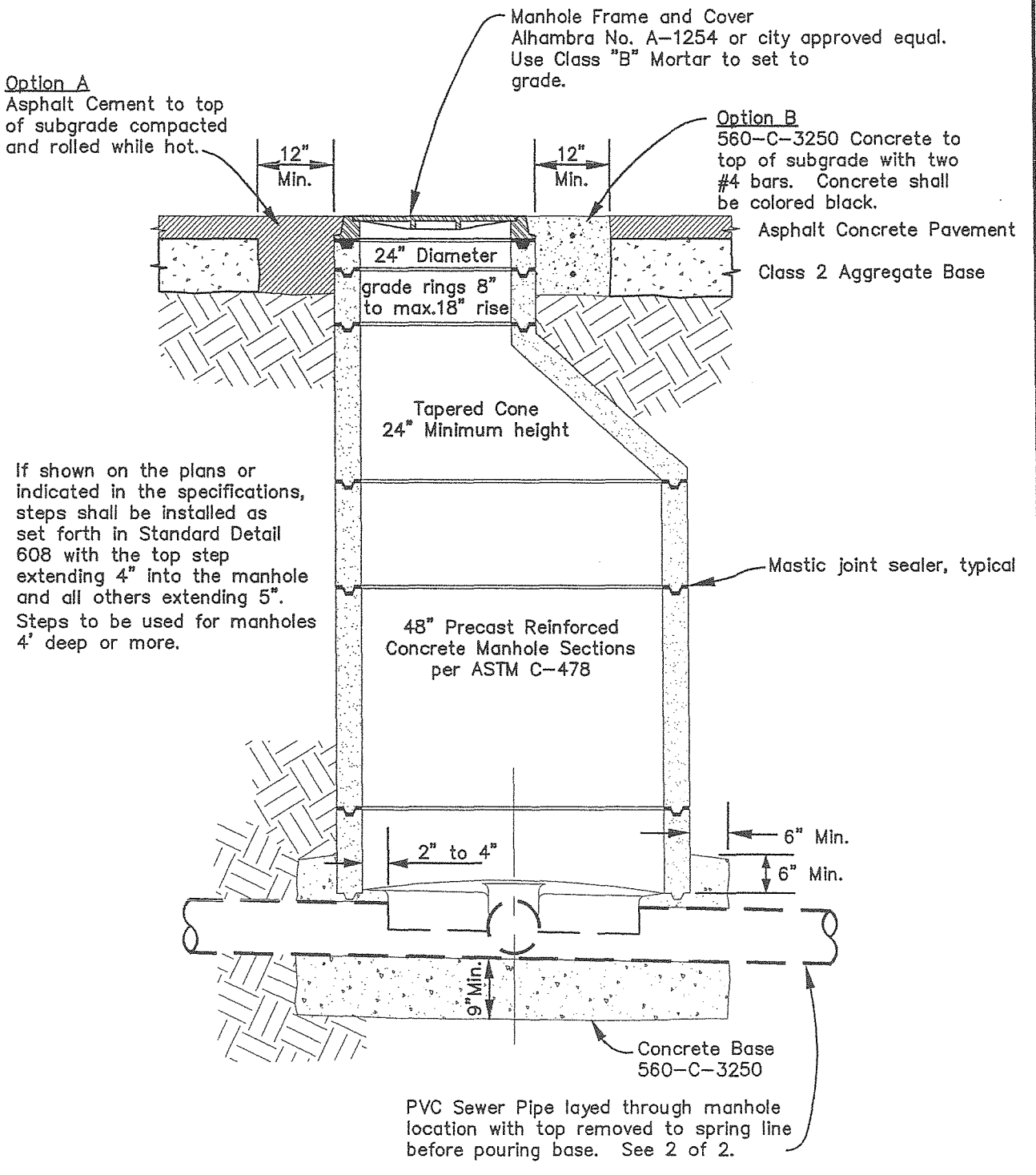
7. Sanitary sewer service laterals shall be constructed in conformance with Standard Detail 606. Profile Type "A" shall be used unless indicated otherwise in the plans or special provisions. All laterals shall be referenced by the premanent marking of an "S" on the top of curb. Where no curb exists, a 4"x4"x24" redwood post exposed 6" shall be placed next to the cleanout at property line. The post shall be scribed with the letter "S" and painted or stained to reduce weathering.



MAPPING SYMBOLS

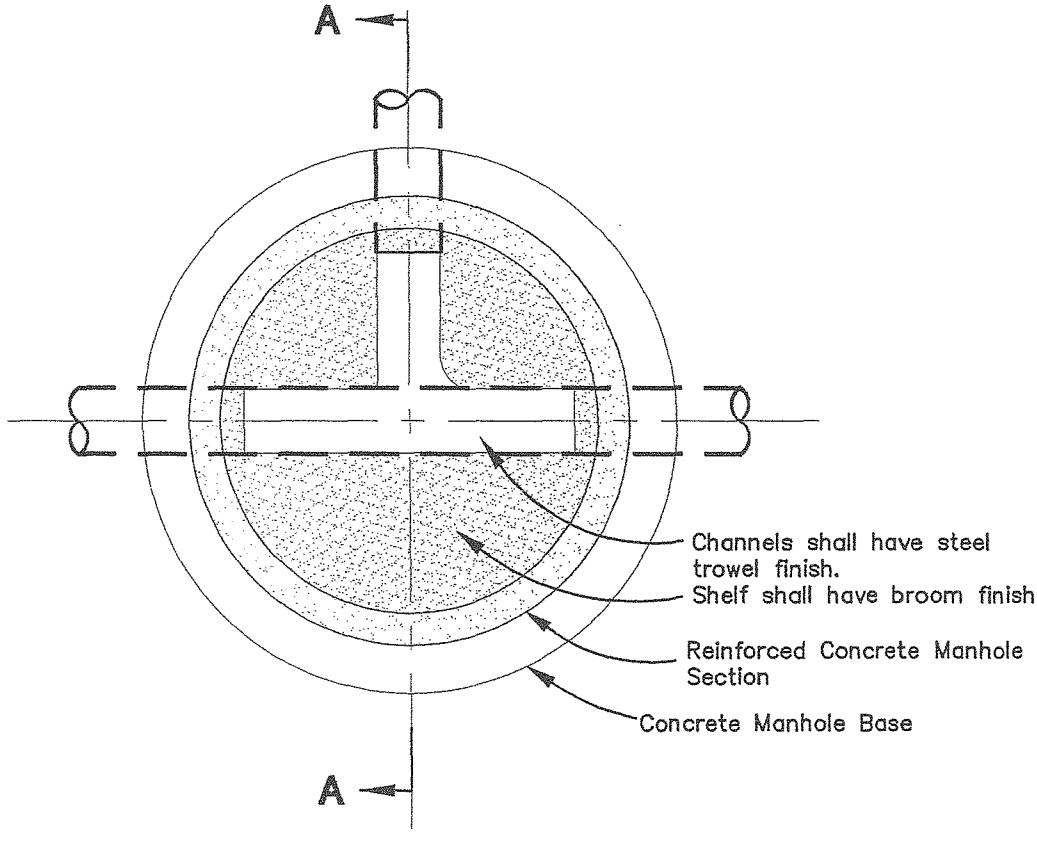
CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	SANITARY SEWER STANDARDS & SYMBOLS	STANDARD DETAIL 601
	William Albrecht 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	

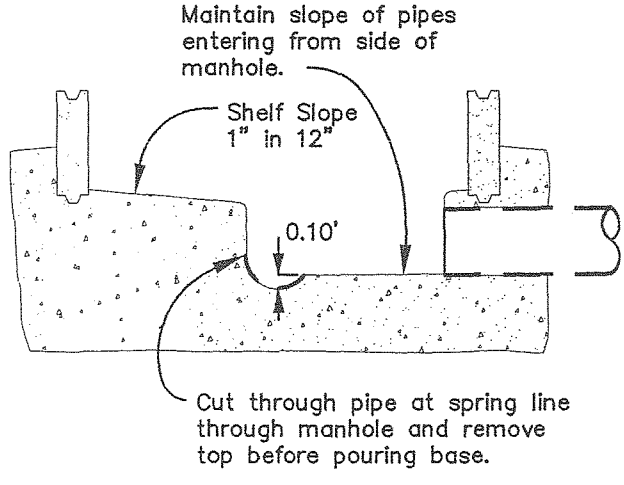


CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	SANITARY SEWER MANHOLE	STANDARD DETAIL 602 1 OF 2
	William Albrecht 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	



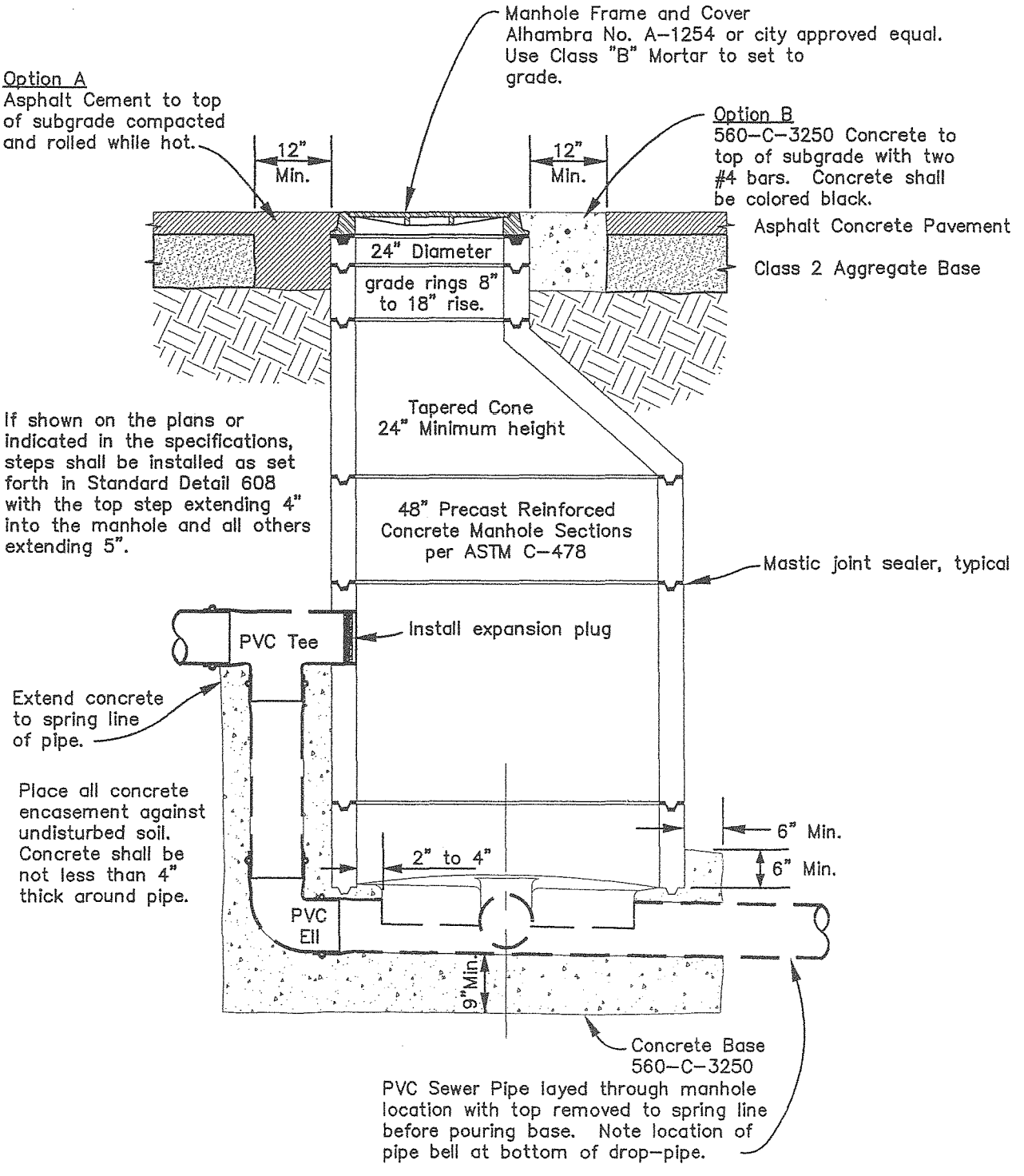
PLAN OF BASE



SECTION A-A

CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

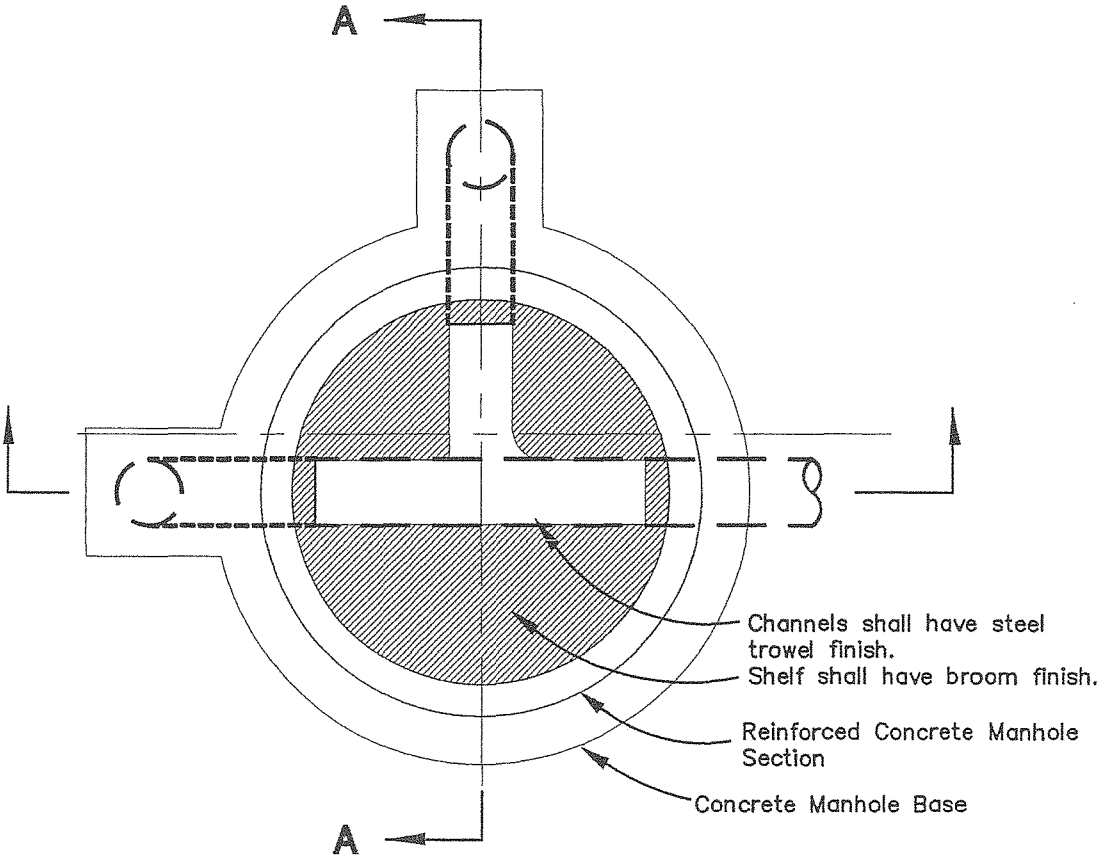
REVISIONS	SANITARY SEWER MANHOLE	STANDARD DETAIL 602 2 OF 2
	William Allbrecht 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	



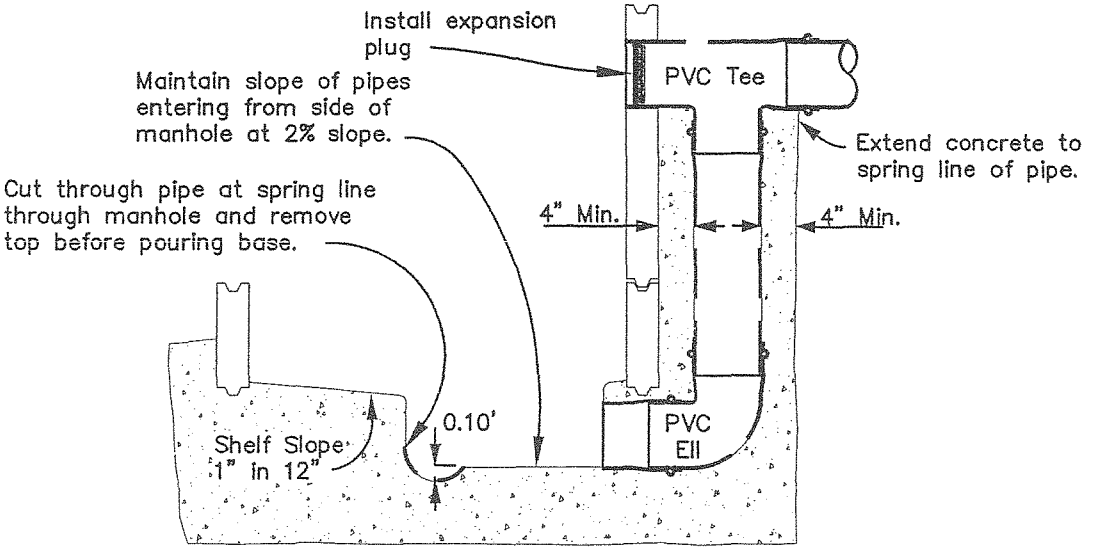
SECTION THROUGH DROP MANHOLE

CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	SANITARY SEWER DROP MANHOLE	STANDARD DETAIL 603
	William Ollbrecht 6-14-95	1 OF 2
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	



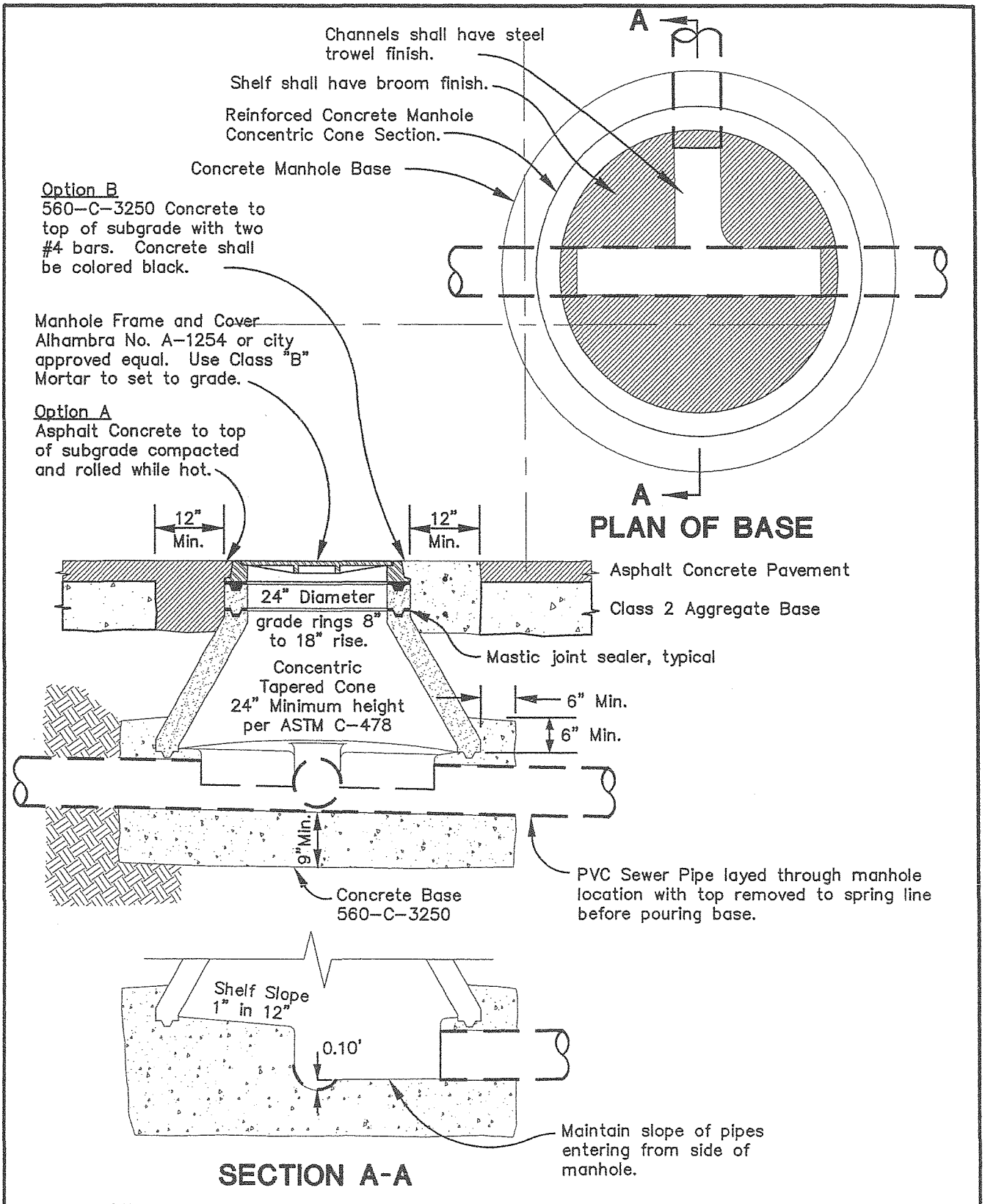
PLAN OF DROP MANHOLE BASE



SECTION A-A

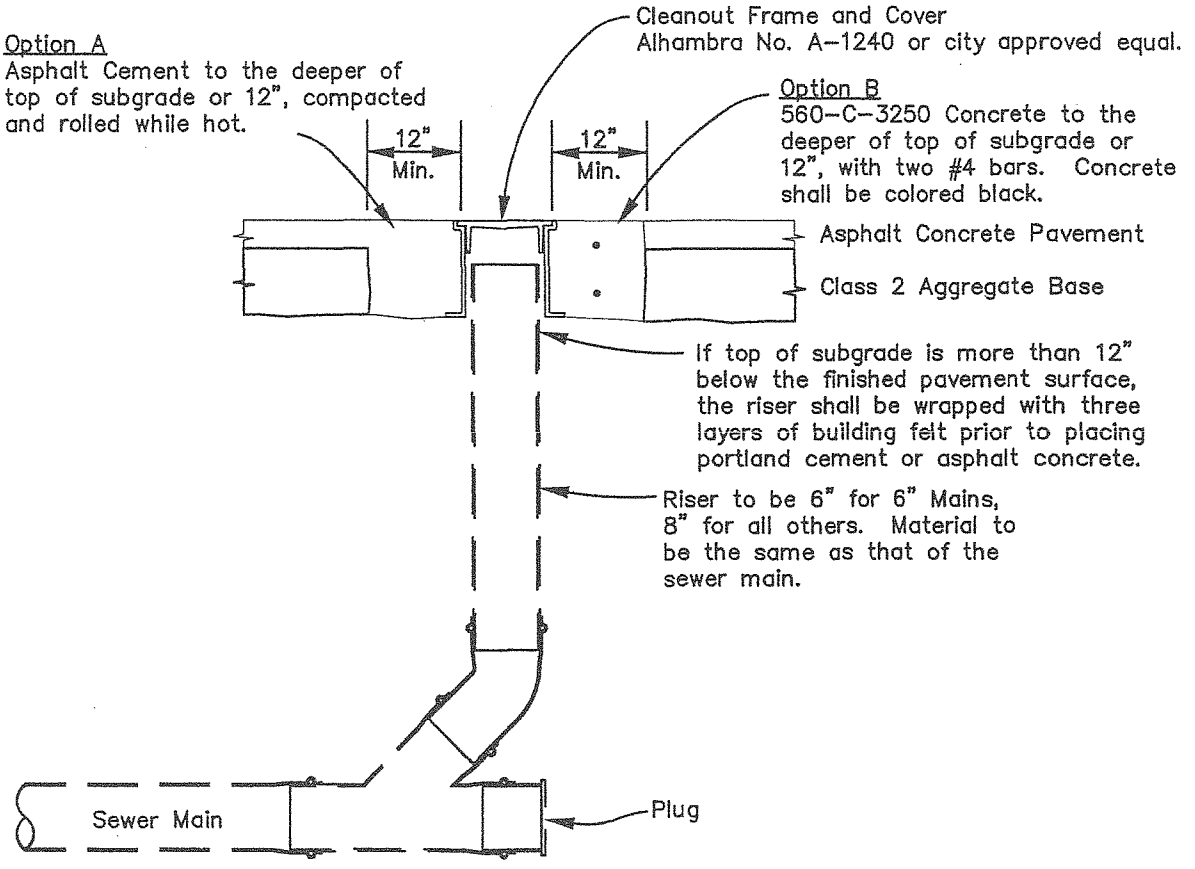
CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	SANITARY SEWER DROP MANHOLE	STANDARD DETAIL 603 2 OF 2
	William Albrecht 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	



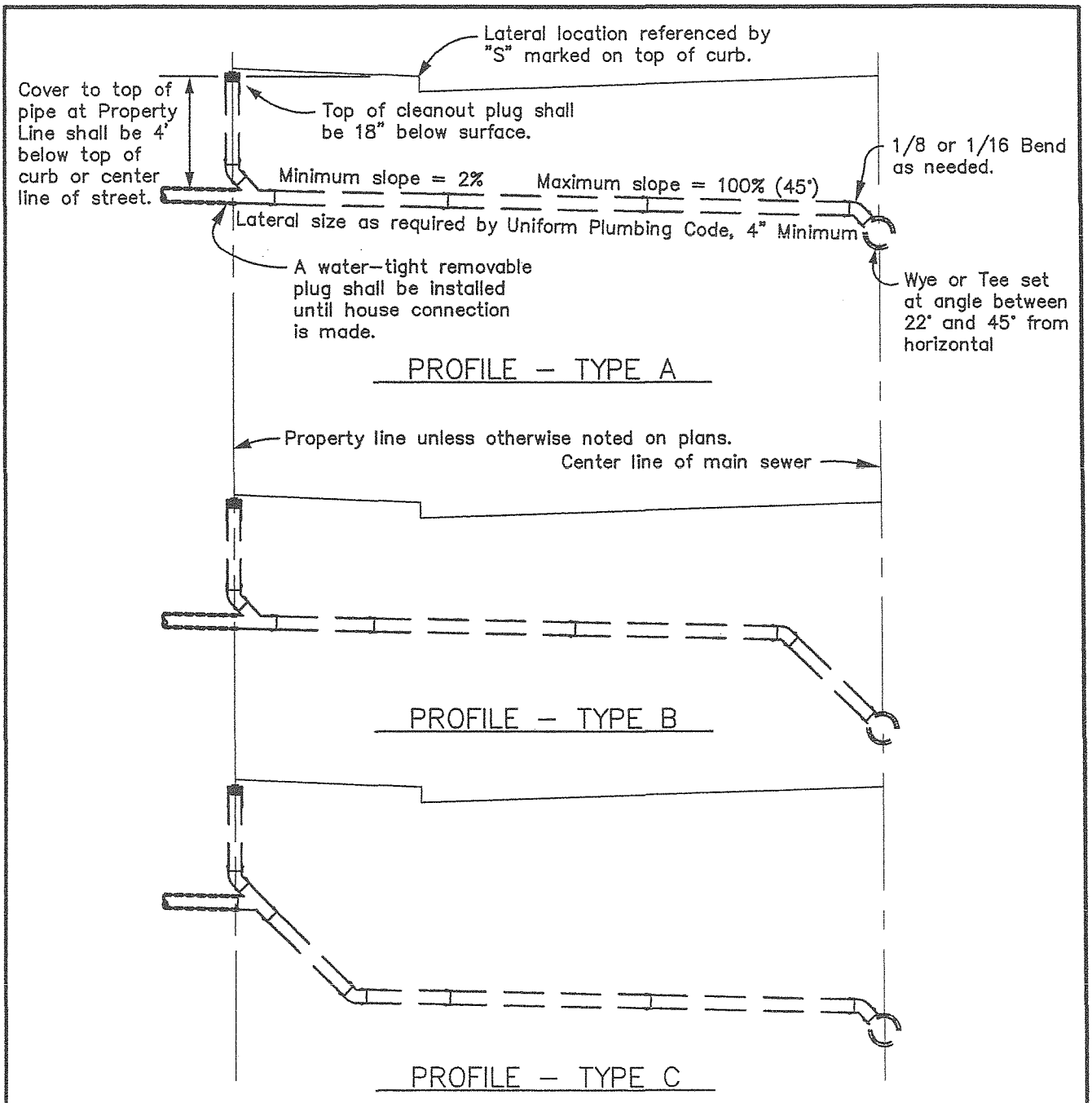
CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	SHALLOW SANITARY SEWER MANHOLE	STANDARD DETAIL 604
	William Albrecht 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	



CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	SANITARY SEWER CLEANOUT	STANDARD DETAIL 605
	William Allredt 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	

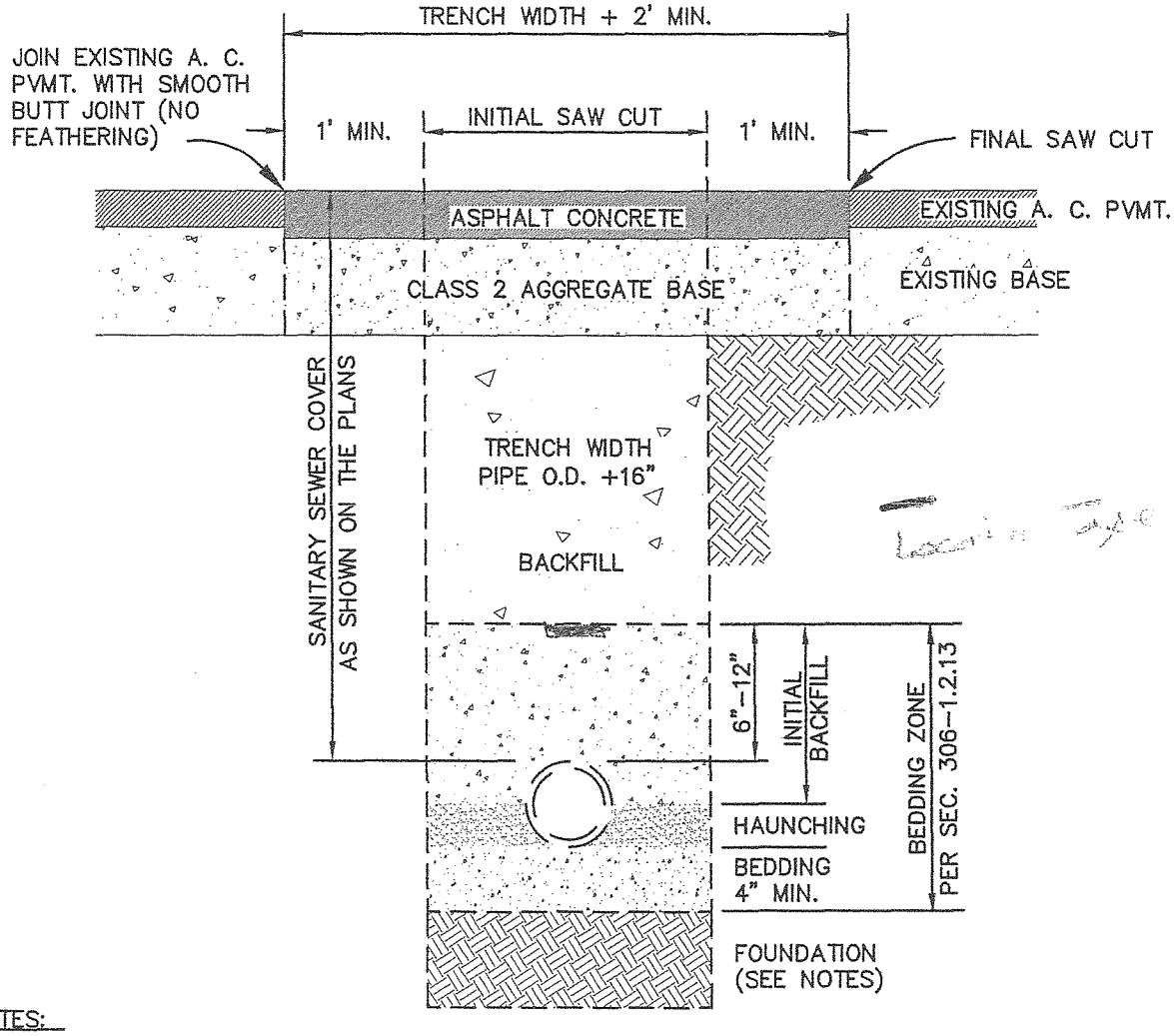


NOTES:

1. Except as otherwise indicated on the plans or in the specifications, all laterals shall be Type "A" and shall be constructed on straight lines and grades between control points and elevations.
2. Material may be Polyethylene Pipe, ABS Solid Wall Pipe, PVC Pipe or clay with fittings of the same material. Pipe and fittings shall be installed in conformance with manufacturer's recommendations.

CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	SANITARY SEWER SERVICE LATERAL	STANDARD DETAIL 606
	William Albrecht 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	



NOTES:

1. REPLACEMENT SECTION FOR ASPHALT CONCRETE PAVING SHALL BE NOT LESS THAN 4" OF ASPHALT CONCRETE ON NOT LESS THAN 6" OF CLASS 2 AGGREGATE BASE (CALTRANS SPEC.). IF THE EXISTING SECTION EXCEEDS THESE VALUES, MATCH EXISTING THICKNESSES. IF EITHER SAW CUT LINE IS WITHIN 4' OF THE EDGE OF GUTTER, ALL PAVEMENT BETWEEN THE EDGE OF GUTTER AND THE FARTHER SAW CUT LINE SHALL BE REMOVED AND REPLACED.

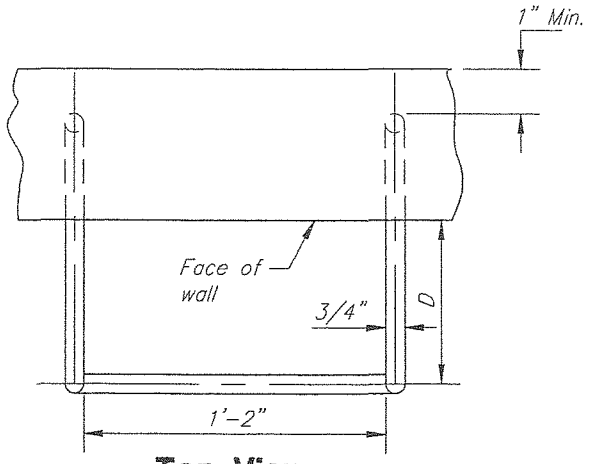
2. BACKFILL UNDER EXISTING OR PROPOSED PAVING, INCLUDING SIDEWALKS, SHALL BE CEMENT SLURRY CLASS 100-E-100 (1 SACK/CUBIC YARD). IN OTHER LOCATIONS, BACKFILL SHALL BE PER SECTION 306-1.3.1 WITH MAXIMUM SIZE OF ROCKS BEING 2-1/2" IN ANY DIMENSION.

3. BEDDING MATERIAL SHALL BE COMPOSED OF CRUSHED ROCK CONFORMING TO SUBSECTION 200-1.2 WITH 1/2" MAXIMUM GRADATION. BEDDING SHALL BE COMPACTED TO NOT LESS THAN 90% RELATIVE DENSITY. IF NATIVE MATERIAL IS SAND, GRAVEL OR SANDY-GRAVEL, AND IF APPROVED BY THE ENGINEER, BEDDING NEED NOT EXTEND BELOW THE PIPE.

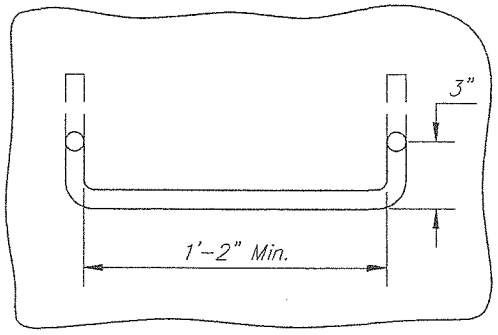
4. IF THE FOUNDATION IS FOUND TO BE EXPANSIVE OR ORGANIC MATERIAL, SAID MATERIAL SHALL BE REMOVED UNTIL SUITABLE MATERIAL IS FOUND. THE REMOVED MATERIAL SHALL BE REPLACED WITH MATERIAL MEETING THE REQUIREMENTS FOR BACKFILL.

CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

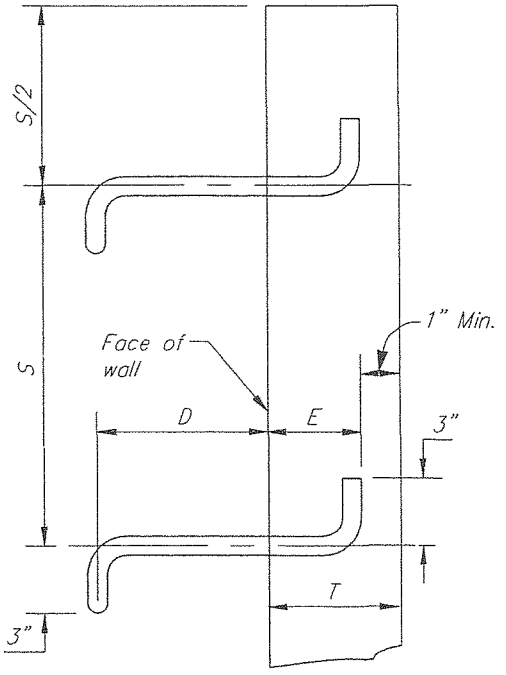
REVISIONS	SANITARY SEWER TRENCH	STANDARD DETAIL 607
	William Caldwell 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	



Top View



Front View



Side View

NO Steps

1. *Steps shall be fabricated of stainless steel conforming to ASTM A 276, 300 series and shall have a minimum diameter of 3/4".*

2. *Unless otherwise noted on drawings or Standard Details for specific structures: D = 5", E = 6" or T–1" whichever is less, S = 16" maximum, evenly spaced.*

3. *Bottom step shall be not more than 24" above floor or shelf.*

4. *Steps shall be cast into the manhole sections at time of manufacture.*

5. *Steel reinforced copolymer polypropylene plastic manhole steps, Model PS2–PFS, as manufactured by M. A. Industries, Inc., Kelly & Dividend Drives, Peachtree City, Georgia 30269, may be used in lieu of the above, when installed in conformance with the manufacturer's recommendations and spaced as set forth in Note 2 above.*

6. *Steps are required for any manhole 4' deep or greater.*

CITY OF BUELLTON - DEPARTMENT OF PUBLIC WORKS

REVISIONS	STAINLESS STEEL MANHOLE STEP	STANDARD DETAIL 608
	William Albrecht 6-14-95	
	REVIEWED BY: PUBLIC WORKS DIRECTOR DATE	

APPENDIX 5B

State of California Department of Health Services Guidance Memo No. 2003-02

Guidance Criteria for the Separation of Water Mains and Non-potable Pipelines

Memorandum

Date: April 14, 2003 **(Revised Date: October 16, 2003)**

To: Regional and District Engineers

From: David P. Spath, Ph.D., Chief *(Original signed by Dave)*
Drinking Water and Environmental Management
601 North 7th Street, MS 216
Sacramento, CA 95814
(916) 322-2308

Subject: **GUIDANCE MEMO NO. 2003-02: GUIDANCE CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES**

The purpose of this memo is to update guidance dated April 5, 1983 for consistency with proposed 2003 regulations. Should there be any modification to the proposed Water Works Standards that may impact the content of this guidance, the guidance will be amended accordingly.

GUIDANCE: CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES

BACKGROUND

When buried water mains are in close proximity to non-potable pipelines, the water mains are vulnerable to contamination that can pose a risk of waterborne disease outbreaks. For example, sewers (sanitary sewer mains and sewage force mains) frequently leak and saturate the surrounding soil with sewage due to structural failure, improperly constructed joints, and/or subsidence or upheaval of the soil encasing the sewer. If a nearby water main is depressurized and no pressure or negative pressure occurs, that situation is a public health hazard that is compounded if an existing sewer is broken during the installation or repair of the water main. Further, failure of a water main in close proximity to other pipelines may disturb their bedding and cause them to fail. In the event of an earthquake or other disaster, simultaneous failure of all pipelines could occur.

The most effective protection against this type of drinking water contamination is adequate construction and separation of non-potable pipelines and water mains. The Waterworks Standards (Title 22, Chapter 16, Section 64572) provide separation criteria for new construction. However, when these criteria cannot be met, the risk of contamination can be reduced by increasing the structural integrity of pipe materials and joints, and ensuring minimum separation requirements are met. Therefore, the following guidance details construction criteria for the installation of water mains and non-potable pipelines to minimize the risk of contamination of drinking water.

DEFINITIONS

- COMPRESSION JOINT - A push-on joint that seals by means of the compression of a rubber ring or gasket between the pipe and a bell or coupling.

- CONTINUOUS SLEEVE - A protective tube of high-density-polyethylene (HDPE) pipe with heat fusion joints or other non-potable metallic casing without joints into which a pipe is inserted.

- DISINFECTED TERTIARY RECYCLED WATER - Wastewater that has been filtered and subsequently disinfected in accordance with Section 60301.230, Chapter 3 (Water Recycling Criteria), Title 22, California Code of Regulations.

- HOUSE LATERAL - A sewer line connecting the building drain and the sanitary sewer main serving the street.

- SUPPLY LINE - Pipelines conveying raw water to be treated for drinking purposes in accordance with Section 64572 ©, **proposed** Water Works Standards.

- WATER MAIN – Means any pipeline, except for user service lines, within the distribution system in accordance with Section 64551.70, **proposed** Water Works Standards.

- RATED WORKING WATER PRESSURE - A pipe classification system based on internal working pressure of the fluid in the pipe, type of pipe material, and the thickness of the pipe wall.

- SANITARY SEWER MAIN - A gravity sewer conveying untreated municipal wastewater.

- SEWAGE FORCE MAIN - A pressurized sewer conveying untreated municipal wastewater.

APPLICABILITY

Note that the construction criteria presented in this document apply to house laterals that cross above a water main, but not to those house laterals that cross below a water main.

Water mains or non-potable pipelines that are 24-inches in diameter or larger may pose a higher degree of public health concern because of the large volumes of flow involved. Therefore, installation of water mains or non-potable pipelines 24-inches in diameter or larger should be reviewed and approved in writing by the Department on a case-by-case basis prior to construction.

In no case, should water mains and non-potable pipelines conveying sewage or other liquids be installed in the same trench.

REGULATORY REQUIREMENTS

Any new development project in which all the underground facilities are being constructed for the first time must comply with the following regulatory requirements:

Existing requirements:

Section 64630.(Title 22 CA Code of Regulations) Water Main Installation"

(c) Water mains shall be installed at least:

(1) Ten feet (3 meters) horizontally from and 1 foot (0.3 meters) higher than sanitary sewer mains located parallel to the main.

(2) One foot (0.3 meters) higher than sanitary sewer mains crossing the main.

(3) Ten feet (3 meters), and preferably 25 feet (7.5 meters), horizontally from sewage leach fields, cesspools, seepage pits and septic tanks.

(d) Separation distances specified in (c) shall be measured from the nearest outside edges of the facilities.

(e) Where the requirements of (c) and (d) cannot be met due to topography, inadequate right-of-way easements, or conflicts with other provisions of these regulations, lesser separation is permissible if:

(1) The water main and the sewer are located as far apart as feasible within the conditions listed above.

(2) The water main and the sewer are not installed within the same trench.

(3) The water main is appropriately constructed to prevent contamination of the water in the main by sewer leakage.

(f) Water mains shall be disinfected according to AWWA Standard C601-81 before being placed in service.

(g) Installation of water mains near the following sources of potential contamination shall be subject to written approval by the Department on a case-by-case basis:

(1) Storage ponds or land disposal sites for wastewater or industrial process water containing toxic materials or pathogenic organisms.

(2) Solid waste disposal sites.

(3) Facilities such as storage tanks and pipe mains where malfunction of the facility would subject the water in the main to toxic or pathogenic contamination.

Although the following requirements have not yet been adopted, they should be within the next two years and should be used as guidance for future construction.

Proposed requirements as of the date of this document:

Section 64572. Water Main Separation

(a) New water mains and new supply lines shall not be installed in the same trench as, and shall be at least 10 feet horizontally from, and one foot vertically above, any parallel pipeline conveying:

(1) Untreated sewage,
(2) Primary or secondary treated sewage,
(3) Disinfected secondary-2.2 recycled water (defined in section 60301.220),
(4) Disinfected secondary-23 recycled water (defined in section 60301.225), and
(5) Hazardous fluids such as fuels, industrial wastes, and wastewater sludge.

(b) New water mains and new supply lines shall be installed at least 4 feet horizontally from, and one foot vertically above, any parallel pipeline conveying:

(1) Disinfected tertiary recycled water (defined in section 60301.230), and
(2) Storm drainage.

(c) New supply lines conveying raw water to be treated for drinking purposes shall be installed at least 4 feet horizontally from, and one foot vertically below, any water main.

(d) If crossing a pipeline conveying a fluid listed in subsection (a) or (b), a new water main shall be constructed perpendicular to and at least one foot above that pipeline. No connection joints shall be made in the water main within eight horizontal feet of fluid pipeline.

(e) The vertical separation specified in subsections (a), (b), and (c) is required only when the horizontal distance between a water main and pipeline is ten feet or less.

(f) New water mains shall not be installed within 100 horizontal feet of any sanitary landfill, wastewater disposal pond, or hazardous waste disposal site, or within 25 feet of any cesspool, septic tank, sewage leach field, seepage pit, or groundwater recharge project site.

(g) The minimum separation distances set forth in this section shall be measured from the nearest outside edge of each pipe barrel.

ALTERNATIVE CRITERIA FOR CONSTRUCTION

Water Mains, and Sewers and Other Non-potable Fluid-carrying Pipelines

When new water mains, new sanitary sewer mains, or other non-potable fluid-carrying pipelines are being installed in existing developed areas, local conditions (e.g., available space, limited slope, existing structures) may create a situation in which there is no alternative but to install water mains, sanitary sewer mains, or other non-potable pipelines at a distance less than that required by the regulations [existing Section 64630 (proposed Section 64572)]. In such cases, through permit action, the Department may approve

alternative construction criteria. The alternative approach is allowed under the proposed regulation Section 64551(c):

> "A water system that proposes to use an alternative to the requirements in this chapter shall demonstrate to the Department how it will institute additional mitigation measures to ensure that the proposed alternative would not result in an increased risk to public health."

Appropriate alternative construction criteria for two different cases in which the regulatory criteria for sanitary sewer main and water main separation cannot be met are shown in **Figures 1 and 2**.

- **Case 1** - New sanitary sewer main and a new or existing water main; alternative construction criteria apply to the sanitary sewer main.

- **Case 2** - New water main and an existing sanitary sewer main; alternative construction criteria may apply to either or both the water main and sanitary sewer main.

Case 1: New Sanitary Sewer Main Installation (Figures 1 and 2)

Zone	***Special Construction Required for Sanitary Sewer Main***
A	Sanitary sewer mains parallel to water mains shall not be permitted in this zone without prior written approval from the Department and public water system.
B	If the water main paralleling the sanitary sewer main does not meet the Case 2 Zone B requirements, the sanitary sewer main should be constructed of one of the following: 1. High-density-polyethylene (HDPE) pipe with fusion welded joints (per AWWA C906-99); 2. Spirally-reinforced HDPE pipe with gasketed joints (per ASTM F-894); 3. Extra strength vitrified clay pipe with compression joints; 4. Class 4000, Type II, asbestos-cement pipe with rubber gasket joints; 5. PVC sewer pipe with rubber ring joints (per ASTM D3034) or equivalent; 6. Cast or ductile iron pipe with compression joints; or 7. Reinforced concrete pressure pipe with compression joints (per AWWA C302-95).

C If the water main crossing below the sanitary sewer main does not meet the requirements for Case 2 Zone C, the sanitary sewer main should have no joints within ten feet from either side of the water main (in Zone C) and should be constructed of one of the following:

1. A continuous section of ductile iron pipe with hot dip bituminous coating; or

2. One of the Zone D options 1, 3, 4, or 5 below.

D If the water main crossing above the sanitary sewer main does not meet the Case 2 Zone D requirements, the sanitary sewer main should have no joints within four feet from either side of the water main (in Zone D) and be constructed of one of the following:

1. HDPE pipe with fusion-welded joints (per AWWA C906-99);

2. Ductile iron pipe with hot dip bituminous coating and mechanical joints (gasketed, bolted joints);

3. A continuous section of Class 200 (DR 14 per AWWA C900-97) PVC pipe or equivalent, centered over the pipe being crossed;

4. A continuous section of reinforced concrete pressure pipe (per AWWA C302-95) centered over the pipe being crossed; or

5. Any sanitary sewer main within a continuous sleeve.

Case 2: New water mains Installation (Figures 1 and 2)

Zone ***Special Construction Required for Water Main***

A No water mains parallel to sanitary sewer mains shall be constructed without prior written approval from the Department.

B If the sanitary sewer main paralleling the water main does not meet the Case 1 Zone B requirements, the water main should be constructed of one of the following:

1. HDPE pipe with fusion welded joints (per AWWA C906-99);

2. Ductile iron pipe with hot dip bituminous coating;

3. Dipped and wrapped one-fourth-inch-thick welded steel pipe;

4. Class 200, Type II, asbestos-cement pressure pipe;

5. Class 200 pressure rated PVC water pipe (DR 14 per AWWA C900-97 & C905-97) or equivalent; or

6. Reinforced concrete pressure pipe, steel cylinder type, per AWWA (C300-97 or C302-99 or C303-95).

C If the sanitary sewer main crossing above the water main does not meet the Case 1 Zone C requirements, the water main should have no joints within ten feet from either side of the sanitary sewer main (in Zone C) and be constructed of one of the following:

1. HDPE pipe with fusion-welded joints (per AWWA C906-99);

2. Ductile iron pipe with hot dip bituminous coating;

3. Dipped and wrapped one-fourth-inch-thick welded steel pipe;

4. Class 200 pressure rated PVC water pipe (DR 14 per AWWA C900-97 & C905-97); or

5. Reinforced concrete pressure pipe, steel cylinder type, per AWWA (C300-97 or C301-99 or C303-95).

D If the sanitary sewer main crossing below the water main does not meet the requirements for Case 1 Zone D, the water main should have no joints within eight feet from either side of the sanitary sewer main (in Zone D) and should be constructed as for Zone C.

Water Mains and Pipelines Conveying Non-potable Fluids

When the basic separation criteria cannot be met between water mains and pipelines conveying non-potable fluids, the requirements described above for sanitary sewer mains should apply. This includes the requirements for selecting special construction materials and the separation requirements shown in Figures 1 and 2. Note that not all construction materials allowed for sanitary sewer mains will be appropriate for other non-potable fluid lines. For example, certain plastic lines may not be appropriate for the transport of some fuel products. The selection of compatible materials of construction for non-potable fluids is a decision to be made by the project engineer.

Water Mains and Sewage Force Mains

- Sewage force mains shall not be installed within ten feet (horizontally) of a water main.

- When a sewage force main must cross a water main, the crossing should be as close as practical to the perpendicular. The sewage force main should be at least one foot below the water main.

- When a new sewage force main crosses under an existing water main, and a one-foot vertical separation cannot be provided, all portions of the sewage force main within eight feet (horizontally) of the outside walls of the water main should be enclosed in a continuous sleeve. In these cases, a minimum vertical separation distance of 4 inches should be maintained between the outside edge of the bottom of the water main and the top of the continuous sleeve.

- When a new water main crosses over an existing sewage force main, the water main should be constructed of pipe materials with a minimum rated working pressure of 200 psig or the equivalent.

Water Mains and Tertiary Treated Recycled Water or Storm Drainage

The basic separation criteria for water mains and pipelines conveying tertiary treated recycled water or storm drainage lines are a 4-foot horizontal separation where lines are running parallel and a 1-foot vertical separation (water line above recycled or storm drainage) where the lines cross each other.

When these criteria cannot be met, the Zone A criteria apply where lines are running parallel, and the Zone C and Zone D criteria apply where the lines cross each other as shown on Figures 1 and 2. For these situations, the Zone "P" criteria are in effect and prohibit construction less than 1 foot in parallel installations and less than 4 inches in vertical (crossing) situations.

For tertiary treated recycled water and storm drainage lines, the Zone B criteria (requirements for special pipe) do not apply as the basic separation criteria is a four-foot horizontal separation criteria for parallel lines. The tertiary treated recycled water lines should be constructed in accordance with the color-coding, and labeling requirements per Section 116815, California Health and Safety Code of Regulations.

MISCELLANEOUS GUIDANCE

- More stringent requirements may be necessary if conditions such as high groundwater exist. HDPE or similar pipe may be required to provide flexibility to move without potential joint leaks.

- Sanitary sewer mains should not be installed within 25 feet horizontally of a low head (5 psig or less pressure) water main.

- New water mains and sanitary sewer mains should be pressure tested in accordance with manufacturer's specifications.

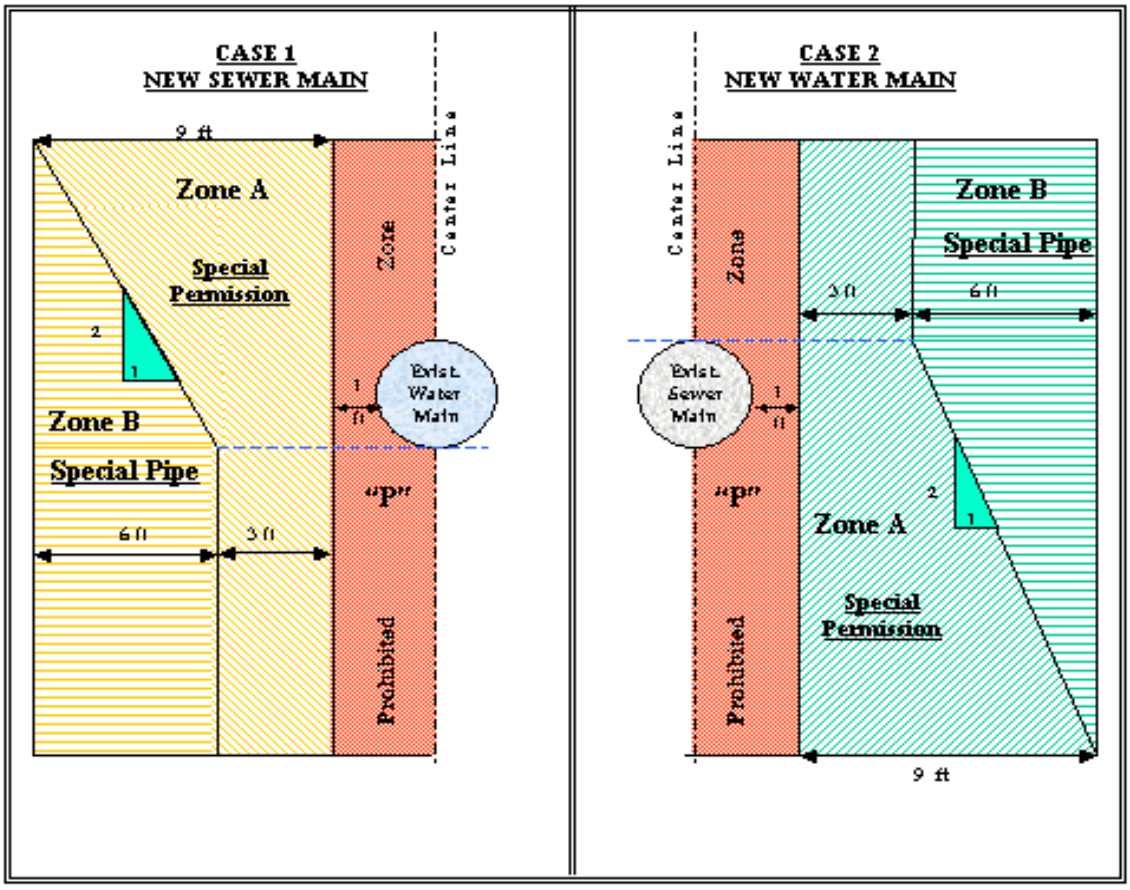
- When installing water mains, sewers, or other pipelines, measures should be taken to prevent or minimize disturbances of existing pipelines. Disturbance of the conduit's supporting base could eventually result in pipeline failure.

- Special consideration should be given to the selection of pipe materials if corrosive conditions are likely to exist. These conditions may be due to soil type and/or the nature of the fluid conveyed in the conduit, such as a septic sewage producing corrosive hydrogen sulfide.

NOTE: Dimensions are from the outside of the water main to the outside of the other pipeline, manhole, or sleeve.

FIGURE 1 PARALLEL CONSTRUCTION

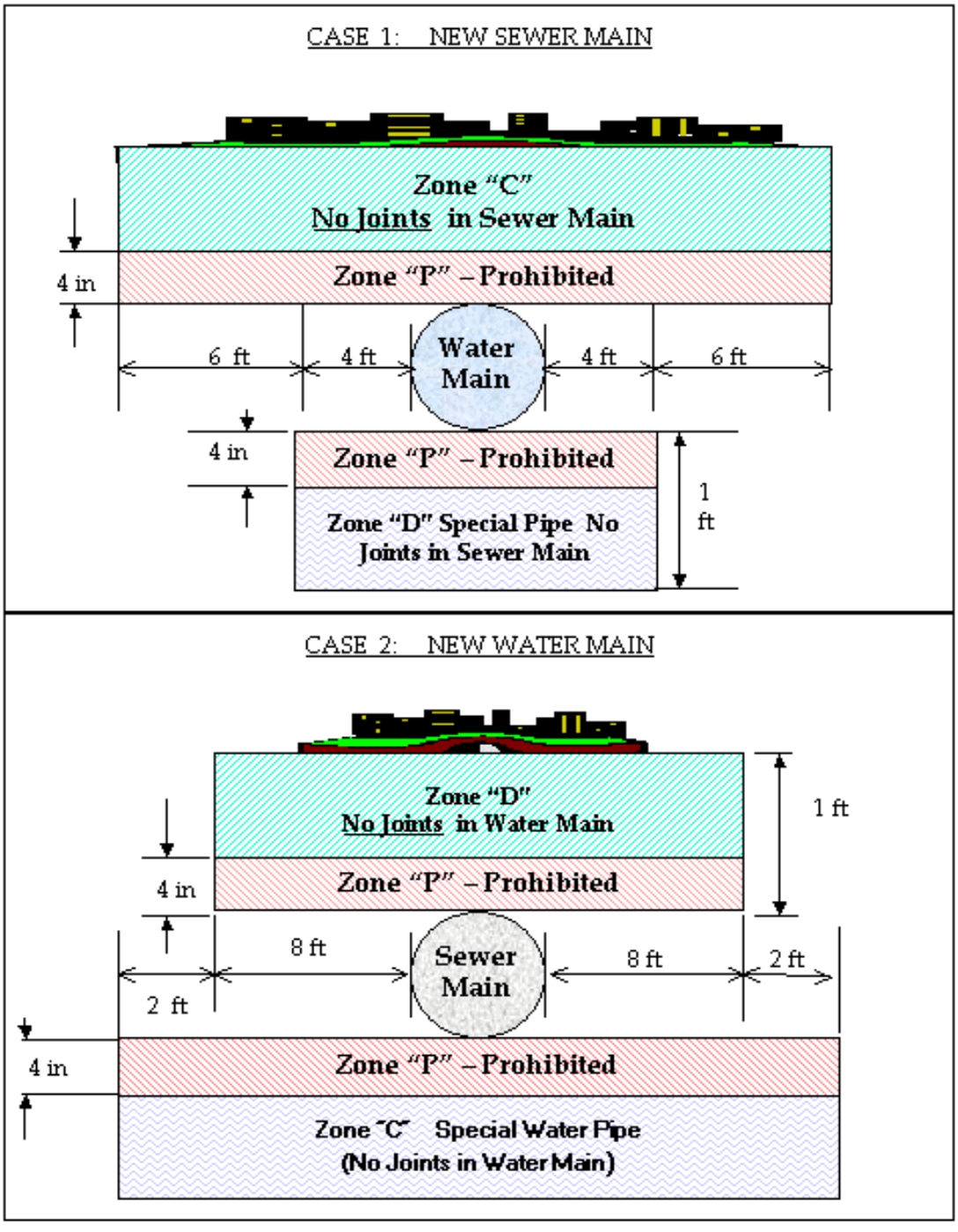
Not To Scale



Note: Zones identical on either side of center lines.

Zones "P" is a prohibited zone. Section 64630 (e) (2) California Code of Regulations, Title 22 (Current); or Section 64572 (a) California Code of Regulations, Title 22 (Proposed).

FIGURE 2 CROSSINGS
Not To Scale



ELEMENT 6 – REVISION RECORD

The City of Buellton's SSMP Element 6 – Overflow Emergency Response Plan has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
0	4/22/10	Formally Adopt SSMP.	Wallace Group/Rose Hess	City Council
1	12/12/13	Revisions based on findings of biannual audit.	Wallace Group/Rose Hess	Rose Hess
2	5/28/15	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council
3	6/15/16	Revisions based on findings of biannual audit.	Wallace Group/Rose Hess	Rose Hess
-	5/25/18	Revisions based on findings of biannual audit. Updates to notification and reporting overview.	Wallace Group/Rose Hess	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 6 - OVERFLOW EMERGENCY RESPONSE PLAN

The Overflow Emergency Response Plan (OERP) is summarized in this SSMP Element and provided in its entirety with the associated Emergency Operating Procedures (EOPs), in Appendix 6A. The OERP addresses issues such as SSO response, detection, mitigation, clean up, investigation, documentation, and reporting.

6.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(vi) states:

> Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, the 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 WDRs 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 OERP 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 to 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.

6.2 Initial SSO Notification Procedures [WDR D.13(vi)(a)]

If a member from the public witnesses a SSO, they either contact the City of Buellton City Hall at (805) 688-5177 or dial 9-1-1. The City has developed Emergency Operating Procedures (EOPs) for a standardized approach to responding to SSOs. These EOPs are on file at the City Public Works Department.

6.2.1 The City Public Works Department as the First Responder

If City Hall is contacted during normal business hours, which are 8:00 AM – 5:00 PM Monday through Friday excluding 12:00 PM – 1:00 PM daily and legal holidays, administrative staff calls the Public Works Director/City Engineer, who contacts the Lead Field and Utilities Worker

(Sewer) to respond to the SSO. City Staff are contacted in the order and with the contact information that is provided in City Emergency Operating Procedure: SS-EOP-02: SSO Notification, Attachment 2 to investigate the situation and documents the caller's information and the details of the SSO, such as date, time, and SSO location, located on the City's Customer Contact Report found in Management Procedure # SS-MP-02: Customer Contact Report. If City Staff needs assistance responding to the SSO, the first responder calls one of the emergency support contacts identified in **Table 6-1**, which have agreed to assist the City in the event of an emergency if they are available when called:

Table 6-1: Emergency Support Contacts

Company or Agency Name	Contact Name	Phone Number
City of Solvang Public Works Department	Nathan Giacinto *Wastewater Supervisor*	(805) 688-5575
Fluid Resource Management	Mike Ellison *Operator*	(805) 597-7100
Stewart's De-Rooting & Plumbing *Subsidiary of County Sanitation Company, Inc.*	Dispatch	(805) 688-5513

The City is also part of two mutual aid agreements, the California Disaster and Civil Defense Master Mutual Aid Agreement and the Public Works Mutual Aid Agreement, which are included in Resolution No. R92-41 and 08-24, respectively, in **Appendix 6A**.

The first responder also calls the Public Works Director/City Engineer to notify her when the SSO has been contained and mitigated. The Public Works Director/City Engineer also calls the City Manager to inform him of the SSO.

If City Hall is contacted after normal business hours, between 12:00 PM and 1:00 PM, on a holiday, or during the weekend, the call is forwarded to Echo Communications, a contracted answering service. Echo Communications Staff documents the caller's name, phone number, and address and calls the City on-call Staff person to inform them of the SSO notification. The City on-call Staff then contacts the informant to determine and document the logistics of the SSO, such as the location, approximate start time, and extent of the spill, and documents this information. The Staff on-call rotation order will be provided in the Public Works Call List provided in, SS-EOP-02: SSO Notification, Attachment 2.

The on-call Staff person will be the first responder and will contact City Public Works Staff for assistance if needed in the order and with the contact information included in SS-EOP-02: SSO Notification. If City Staff needs assistance responding to the SSO, the first responder calls one of the emergency support contacts identified in **Table 6-1**, which has agreed to assist the City in the event of an emergency if they are available when called.

The first responder also calls the Public Works Director/City Engineer to notify her of the SSO. The Public Works Director/City Engineer also calls the City Manager to inform him of the SSO.

If City Staff is not able to contact the Public Works Director/City Engineer, in the event of a SSO, the City Manager, is contacted and is responsible for coordinating the SSO response and notifying the appropriate City Staff for SSO response and regulatory agencies for SSO notification.

6.2.2 Emergency Services as the First Responder

If 9-1-1 is called to report a SSO, the Santa Barbara County Sheriff Department contacts City Hall at (805) 688-5177 as is outlined in SS-EOP-02: SSO Notification.

If the SSO occurs after hours, the Santa Barbara County Sheriff Department contacts the on-call Staff person with the contact information that will be provided in SS-EOP-02: SSO Notification, Attachment 2. The on-call Staff person will be the first responder and will contact City Public Works Staff for assistance if needed in the order and with the contact information that is provided in SS-EOP-02: SSO Notification.

If City Staff needs assistance responding to the SSO, the first responder calls one of the emergency support contacts identified in Table 6-1, which has agreed to assist the City in the event of an emergency if they are available when called. The first responder also calls the Public Works Director/City Engineer to notify her of the SSO. The Public Works Director/City Engineer also calls the City Manager to inform him of the SSO.

If City Staff is not able to contact the Public Works Director/City Engineer, in the event of a SSO, the City Manager, is contacted and is responsible for coordinating the SSO response and notifying the appropriate City Staff for SSO response and regulatory agencies for SSO notification.

6.2.3 Initial Regulatory Notification

The City ensures regulatory agencies are informed of all SSOs in a timely manner through the SSO Notification Procedure provided in Section 6.4: SSO Notification and Reporting Procedures of this SSMP Element.

6.3 SSO Response Program [WDR D.13(vi)(b)]

The SSO Response Program is comprised of the procedures and programs discussed in this Element and the following EOPs, which are maintained at the city Public Works Department:

- SS-EOP-01: Overflow Emergency Response Plan
- SS-EOP-02: SSO Notification
- SS-EOP-03: SSO Reporting
- SS-EOP-04: SSO Traffic and Crowd Control
- SS-EOP-05: SSO Volume Estimation
- SS-EOP-06: SSO Mitigation and Cleanup
- SS-EOP-07: Water Quality Monitoring
- SS-EOP-08: Surface Water Closure
- SS-EOP-09: SSO Response Documentation and Records
- SS-EOP-10: SSO Training Requirements

The City's Public Works Administrative Office is open and can receive notifications of SSOs from 8:00 AM to 5:00 PM, Monday through Friday, excluding 12:00 PM to 1:00 PM daily and legal holidays. After hours, on weekends, and on holidays, the City utilizes an Answering Service to initiate City Public Works Staff SSO notification efforts, and City Staff responses to SSOs.

Figure 6-1 illustrates the chain of command, which must be observed and followed when a SSO occurs:

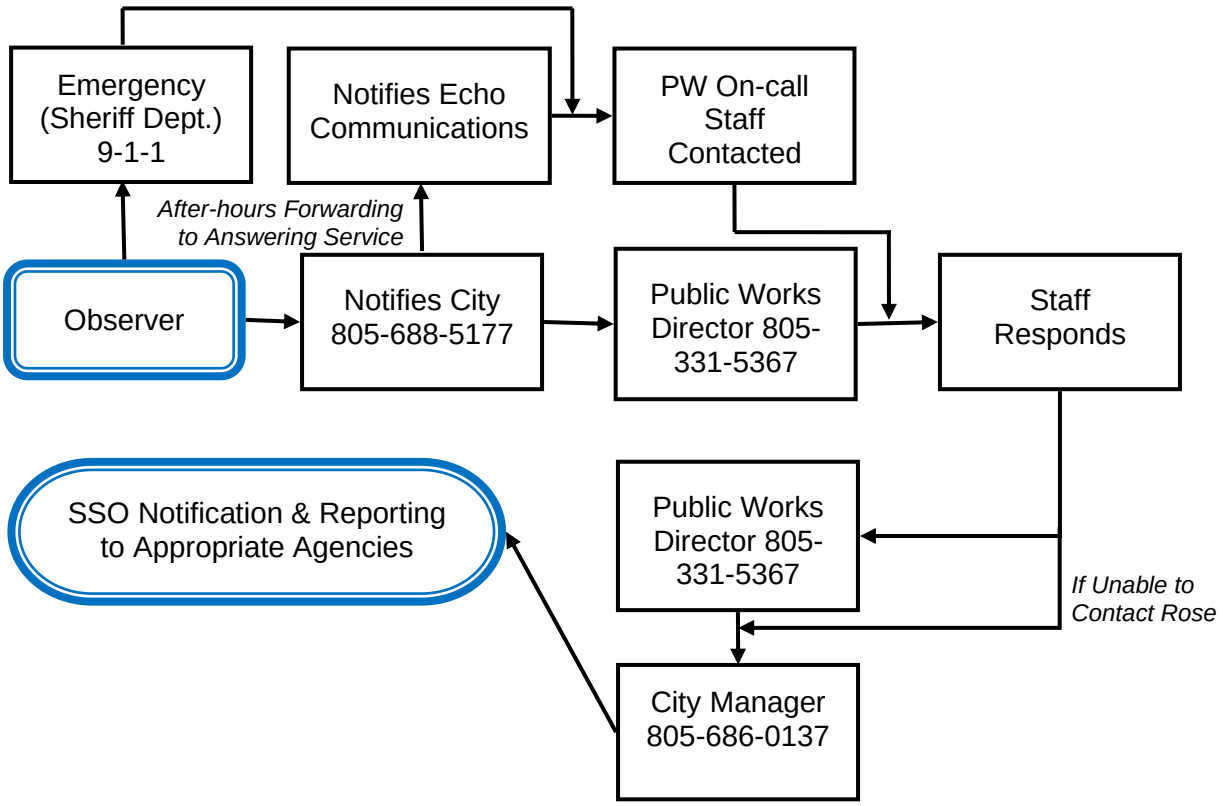


Figure 6-1: SSO Response Chain of Command

The details of City Staff's response to SSOs, which are identified in the chain of command, are provided in the EOPs referred to above in **Section 6.3**.

6.4 SSO Notification and Reporting Procedures [WDR D.13(vi)(c)]

This section of the OERP ensures proper notification and reporting of SSOs, which occur in the City of Buellton's sanitary sewer collection system, in order to protect public and environmental health. The SSO Notification and Reporting Procedures, SS-EOP-02 and SS-EOP-03, respectively, are outlined below.

An overview of the notification and reporting process is also illustrated on the following page in **Figure 6-2**. This overview is not inclusive of all of the notification and reporting requirements and procedures. The section of this SSMP Element corresponding to each SSO category for notifications and reporting must be referenced, and the SSO Notification and Reporting Procedures, SS-EOP-02 and SS-EOP-03, respectively, must be followed upon their completion.

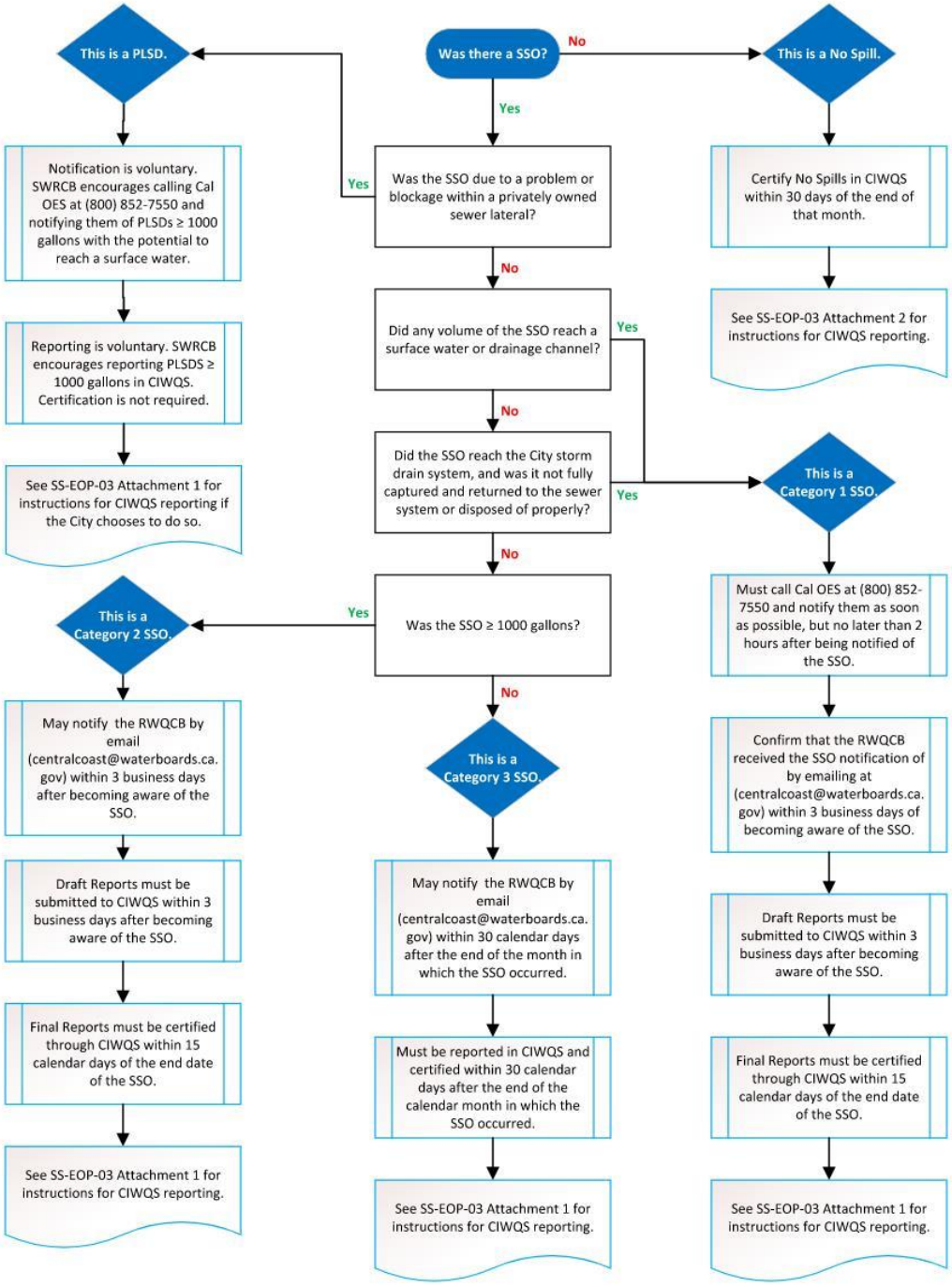


Figure 6-2: SSO Notification and Reporting Overview

6.4.1 SSO Notification Procedure

SSO notification procedures vary based on whether the SSO is classified as a Category 1, Category 2, Category 3, or PLSD. After notifying the RWQCB of any SSO, the Public Works Director/City Engineer should email RWQCB Staff, at **centralcoast@waterboards.ca.gov** to confirm that the report was submitted and received.

6.4.1.1 *Category 1 SSOs*

For any discharges of sewage **greater than or equal to 1,000 gallons** that result in a **discharge to** a drainage channel or **a surface water** or to the City storm drain system and is not fully captured and returned to the sewer system or disposed of properly, the City shall, as soon as possible, but no later than **two (2) hours** after becoming aware of the discharge, notify the California Governor's Office of Emergency Services (Cal OES) at 1-800-852-7550.

6.4.1.2 *Category 2 SSOs*

For a SSO **1,000 gallons or greater** in volume that **does not discharge to** a drainage channel or **surface water**, the Public Works Director/City Engineer may email RWQCB Staff, at **centralcoast@waterboards.ca.gov** to notify him of the SSO **within 3 business days** after becoming aware of the SSO.

6.4.1.3 *Category 3 SSOs*

If a SSO occurs due to a problem in the City's sanitary sewer collection system and does not reach a drainage channel, surface water, the City storm drain system, or is fully captured from the City's storm drain system and returned to the sewer system or disposed of properly and is **less than 1000 gallons** in volume, the Public Works Director/City Engineer may email RWQCB Staff, at **centralcoast@waterboards.ca.gov** to notify him of the SSO **within 30 calendar days** after the end of the calendar month in which the SSO occurred.

6.4.1.4 *PLSDs*

The City may voluntarily notify regulatory agencies, such as the RWQCB, of a private lateral sewage discharge (PLSD). SWRCB encourages notifying Cal OES of a PLSD if the PLSD is greater than or equal to 1,000 gallons with the potential to reach a surface water.

SWRCB also encourages notifying the appropriate regulatory agencies or notifying the responsible party that notification and reporting should be completed as required by Health and Safety Code Section 5410 et. seq. and Water Code Section 13271 if the PLSD is greater than or equal to 1,000 gallons regardless of the SSO destination.

6.4.2 SSO Reporting Procedure

SSO reporting procedures vary based on whether the SSO is classified as a Category 1, Category 2, Category 3, or PLSD.

6.4.2.1 *Category 1 SSOs*

Draft reports for Category 1 SSOs shall be submitted in CIWQS within three (3) business days of the City becoming aware of the SSO. Final reports for Category 1 SSOs shall be certified in CIWQS within fifteen (15) calendar days of the end date of the SSO. If CIWQS is not available for the submission of the Draft or Final SSO report, the required information must be faxed to RWQCB at (805) 543-0397.

The details of Category 1 SSO reports and their content and how to complete and submit the report in CIWQS is included as an attachment to SS-EOP-03: SSO Reporting.

For all Category 1 SSOs greater than or equal to 50,000 gallons, the City must also submit a Technical Report within 45 calendar days of the end date of the SSO. The Technical Report must include the information described in SS-EOP-03: SSO Reporting. The required information is outlined below and includes descriptions, diagrams, other documents and information, which outline the causes and circumstances of the SSO, the City's response to the SSO, and the water quality monitoring performed to evaluation the impact of the SSO:

- Causes and Circumstances of the SSO:

    1. Complete and detailed explanation of how and when the SSO was discovered.

    2. Diagram showing the SSO failure point, appearance point(s), and final destination(s).

    3. Detailed description of the methodology employed, and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.

    4. Detailed description of the cause(s) of the SSO.

    5. Copies of original field crew records used to document the SSO.

    6. Historical maintenance records for the failure location.

- Enrollee's Response to SSO:

    1. Chronological narrative description of all actions taken by enrollee to terminate the spill.

    2. Explanation of how the SSMP Overflow Emergency Response Plan was implemented to respond to and mitigate the SSO.

    3. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

- Water Quality Monitoring:

    1. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.

    2. Detailed location map illustrating all water quality sampling points.

6.4.2.2 *Category 2 SSOs*

Draft reports for Category 2 SSOs shall be submitted in CIWQS within three (3) business days of the City becoming aware of the SSO. Final reports for Category 2 SSOs shall be certified in CIWQS within fifteen (15) calendar days of the end date of the SSO. If CIWQS is not available for the submission of the Draft or Final SSO report, the required information must be faxed to RWQCB at (805) 543-0397.

The details of Category 2 SSO reports and their content and how to complete and submit the report in CIWQS is included as an attachment to SS-EOP-03: SSO Reporting.

6.4.2.3 *Category 3 SSOs*

Report and certify all Category 3 SSOs in CIWQS within thirty (30) calendar days after the end of the calendar month in which the SSO occurs. If CIWQS is not available, the required information must be faxed to RWQCB at (805) 543-0397.

The details of this report and its content and how to complete and submit the report in CIWQS is included as an attachment to SS-EOP-03: SSO Reporting.

6.4.2.4 *PLSDs*

PLSDs may be voluntarily reported in CIWQS. SWRCB encourages reporting a PLSD in CIWQS or notifying the responsible party that notification and reporting should be completed as required by Health and Safety Code Section 5410 et. seq. and Water Code Section 13271 if the PLSD is greater than or equal to 1,000 gallons regardless of the SSO destination.

If a PLSD is reported in CIWQS, the City must identify the SSO as occurring and caused by a private lateral, and a responsible party, who is not the City, should be identified, if known. Certification of PLSD reports is not required.

6.4.2.5 *No Spill Certification*

If there are no SSOs during a calendar month, the City must certify a “No Spill” certification in CIWQS within thirty (30) calendar days after the end the calendar month in which no SSO occurred. If CIWQS is not available, the required information must be faxed to RWQCB at (805) 543-0397.

If there are no SSOs during a calendar month, but the City reported a PLSD, the City shall certify a “No Spill” certification statement for that month.

6.4.2.6 *Amended SSO Reports*

If the City wishes to update or add additional information to a certified SSO Report, the City must complete this update or addition by amending the SSO report or adding an attachment to the SSO report in CIWQS within 120 calendar days after the SSO end date.

If a SSO report needs to be amended after this 120 calendar day deadline, the City may contact the SSO Program Manager, Victor Lopez, at Victor.Lopez@waterboards.ca.gov and request to amend the SSO report. The City is required to submit justification for why the additional information was not available prior to the end of the 120-calendar day deadline with this request.

6.5 OERP Training [WDR D.13(vi)(d)]

The City conducts annual training of City Staff on this SSMP Element and emergency operating procedures. The City will also require contractor personnel to follow the City's applicable emergency operating procedures through their contracts. The City will maintain a log of OERP Training at the Public Works office as training is completed.

SS-EOP-09: SSO Training Requirements also provides an outline of the City's training program in respect to SSO response and mitigation.

6.6 Emergency Operations Procedures [WDR D.13(vi)(e)]

The City of Buellton utilizes the 2012 12th Edition of the Work Area Traffic Control Handbook (WATCH) for traffic control, as identified in SS-EOP-04: SSO Traffic and Crowd Control.

The City is responsible for providing crowd control and contacts the Santa Barbara County Sherriff Department for assistance if it is necessary, as identified in SS-EOP-04: SSO Traffic and Crowd Control.

6.7 SSO Impact Mitigation Program [WDR D.13(vi)(f)]

The SSO Mitigation Program is comprised of the mitigation practices contained in SS-EOP-09: SSO Impact Mitigation.

SS-EOP-06: Water Quality Monitoring and SS-EOP-08: Surface Water Closure provides City of Buellton Staff information on posting river or creek warning and closure signs in the event that a SSO reaches one of the surface waters that run through or adjacent to the City and conducts the water quality sampling for the SSO impact assessment.

APPENDIX 6B

Mutual Aid Agreements

Resolution No. R92-41: A Resolution of the City of Buellton Approving California Disaster and Civil Defense Master Mutual Aid Agreement
Resolution No. 08-24: A Resolution of the City Council of the City of Buellton, California, Approving A Public Works Mutual Aid Agreement

RESOLUTION NO. R92-41

A RESOLUTION OF THE CITY OF BUELLTON APPROVING CALIFORNIA DISASTER AND CIVIL DEFENSE MASTER MUTUAL AID AGREEMENT

Section 1. NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BUELLTON DOES HEREBY FIND AND DETERMINE, as follows:

A. Earl Warren, Governor of the State of California, on the 15th day of November, 1950 executed the California Disaster and Civil Defense Master Mutual Aid Agreement on behalf of the State of California and all its Departments and Agencies;

B. It is to the benefit and in the interest of protecting and preserving the health, safety and general welfare of the City of Buellton, it residents and guests of the City that enter into and cooperate with the California Disaster and Civil Defense Master Mutual Aid Agreement;

Section 2. NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BUELLTON DOES HEREBY RESOLVE, as follows:

A. The California Disaster and Civil Defense Master Mutual Aid Agreement (set forth in Exhibit "A" attached hereto and incorporated herein by this reference) is approved and agrees to abide by said Agreement.

B. The Mayor shall execute this resolution on behalf of the City and the City Clerk shall certifies its passage and adoption and the City Attorney shall cause two certified copies hereof to be sent to the California State Emergency Council for filing with said Council.

PASSED AND ADOPTED this 20th day of February, 1992.

W. L. Bill TRAYLOR, MAYOR

ATTEST:

ROBERT F. GROGAN, CITY CLERK

CERTIFICATE

STATE OF CALIFORNIA)
COUNTY OF SANTA BARBARA) ss.
CITY OF BUELLTON)

I, ROBERT F. GROGAN, City Clerk of the City of Buellton, California, do hereby certify under penalty of perjury that the foregoing Resolution No. R92-41 was adopted by the City Council of the City of Buellton at an adjourned meeting held on the 20th day of February, 1992, and that the same was adopted by the following vote:

AYES: COUNCILMEMBERS LARANJO, POINTER, WILSON, MAYOR PRO TEM OLIVERA, MAYOR TRAYLOR

NOES: NONE

ABSTAIN: NONE

ABSENT: NONE

WITNESS my hand and the official seal of said City this 27th day of February, 1992.

Robert F. Grogan, City Clerk

EXHIBIT "A"

CALIFORNIA DISASTER AND CIVIL DEFENSE MASTER MUTUAL AID AGREEMENT

This agreement made and entered into by and between the STATE OF CALIFORNIA, it various departments and agencies, and the various political subdivisions, municipal corporations, and other public agencies of the State of California;

W I T N E S S E T H:

WHEREAS, it is necessary that all of the resources and facilities of the State, its various departments and agencies, and all its political subdivisions, municipal corporations, and other public agencies be made available to prevent and combat the effect of disasters which may result from such calamities as flood, fire, earthquake, pestilence, war, sabotage, and riot; and

WHEREAS, it is desirable that each of the parties hereto should voluntarily aid and assist each other in the event that a disaster should occur, by the interchange of services and facilities, including, but not limited to, fire, police, medical and health, communication, and transportation services and facilities, to cope with the problems of rescue, relief, evacuation, rehabilitation, and reconstruction which would arise in the event of a disaster; and

WHEREAS, it is necessary and desirable that a cooperative agreement be executed for the interchange of such mutual aid on a local, county-wide, regional, state-wide, and interstate basis;

NOW, THEREFORE, IT IS HEREBY AGREED by and between each and all of the parties hereto as follows:

1. Each party shall develop a plan providing for the effective mobilization of all its resources and facilities, both public and private, to cope with any type of disaster.

2. Each party agrees to furnish resources and facilities and to render services to each and every other party to this agreement to prevent and combat any type of disaster in accordance with duly adopted mutual aid operational plans, whether heretofore or hereafter adopted, detailing the method and manner by which such resources, facilities, and services are to

be made available and furnished, which operational plans may include provisions for training and testing to make such mutual aid effective; provided, however, that no party shall be required to deplete unreasonably its own resources, facilities, and services in furnishing such mutual aid.

3. It is expressly understood that this agreement and the operational plans adopted pursuant thereto shall not supplant existing agreements between some of the parties hereto providing for the exchange or furnishing of certain types of facilities and services on a reimbursable, exchange, or other basis, but that the mutual aid extended under this agreement and the operational plans adopted pursuant thereto, shall be without reimbursement unless otherwise expressly provided for by the parties to this agreement or as provided in Sections 1541, 1586, and 1587, Military and Veterans Code; and that such mutual aid is intended to be available in the event of a disaster of such magnitude that it is, or is likely to be, beyond the control of a signal party and requires the combined forces of several or several or all of the parties to this agreement to combat.

4. It is expressly understood that the mutual aid extended under this agreement and the operational plans adopted pursuant thereto shall be available and furnished in all cases of local peril or emergency and in all cases in which a STATE OF EXTREME EMERGENCY has been proclaimed.

5. It is expressly understood that any mutual aid extended under this agreement and the operational plans adopted pursuant thereto, is furnished in accordance with the "California Disaster Act" and other applicable provisions of law, and except as otherwise provided by law that: "The responsible local official in whose jurisdiction an incident requiring mutual aid has occurred shall remain in charge at such incident including the direction of such personnel and equipment provided him through the operation of such mutual aid plans." (Sec. 1564, Military and Veterans Code.)

6. It is expressly understood that when and as the State of California enters into mutual aid agreements with other states and the Federal Government that the parties to this agreement shall abide by such mutual aid agreements in accordance with law.

7. Upon approval or execution of this agreement by the parties hereto all mutual aid operational plans heretofore approved by the State Disaster Council, or its predecessors, and

in effect as to some of the parties hereto, shall remain in full force and effect as to them until the same may be amended, revised, or modified. Additional mutual aid operational plans, shall be adopted as follows:

(a) County-wide and local mutual aid operational plans shall be developed by the parties thereto and are operative as between the parties in accordance with the provisions of such operational plans.

Such operational plans shall be submitted to the State Disaster Council for approval. The State Disaster Council shall notify each party to such operational plans of its approval, and shall also send copies of such operational plans to other parties to this agreement who did not participate in such operational plans. Such operational plans shall be operative as to such other parties 20 days after receipt thereof unless within that time the party by resolution or notice given to the State Disaster Council, in the same manner as notice of termination of participation in this agreement, declines to participate in the particular operational plan.

(b) State-wide and regional mutual aid operational plans shall be approved by the State Disaster Council and copies thereof shall forthwith be sent to each and every party affected by such operational plans. Such operational plans shall be operative as to the parties affected thereby 20 days after receipt thereof unless within that time the party by resolution or notice given to the State Disaster Council, in the same manner as notice of termination of participation in this agreement, declines to participate in the particular operational plan.

(c) The declination of one or more of the parties to participate in a particular operational plan or any amendment, revision, or modification thereof, shall not affect the operation of this agreement and the other operational plans adopted pursuant thereto.

(d) Any party may at any time by resolution or notice given to the State Disaster Council, in the same manner as notice of termination of participation in this agreement, decline to participate in any particular operational plan, which declination shall become effective 20 days after filing with the State Disaster Council.

(e) The State Disaster Council shall send copies of all operational plans to those state departments and agencies designated by the Governor. The Governor may, upon behalf of any department or agency, give notice that such department or agency declines to participate in a particular operational plan.

(f) The State Disaster Council, in sending copies of operational plans and other notices and information to the parties to this agreement, shall send copies to the Governor and any department or agency head designated by him; the chairman of the board of supervisors, the clerk of the board of supervisors, and County Disaster Council, and any other officer designated by a county; the mayor, the clerk of the city council, the City Disaster Council, and any other officer designated by a city; the executive head, the clerk of the governing body, or other officer of other political subdivisions and public agencies as designated by such parties.

8. This agreement shall become effective as to each party when approved or executed by the party, and shall remain operative and effective as between each and every party that has heretofore or hereafter approved or executed this agreement, until participation in this agreement is terminated by the party. The termination by one or more of the parties of its participation in this agreement shall not affect the operation of this agreement as between the other parties thereto. Upon approval or execution of this agreement the State Disaster Council shall send copies of all approved and existing mutual aid operational plans affecting such party which shall become operative as to such party 20 days after receipt thereof unless within that time the party by resolution or notice given to the State Disaster Council, in the same manner as notice of termination of participation in this agreement, declines to participate in any particular operational plan. The State Disaster Council shall keep every party currently advised of who the other parties to this agreement are and whether any of them has declined to participate in any particular operational plan.

9. Approval or execution of this agreement shall be as follows:

(a) The Governor shall execute a copy of this agreement on behalf of the State of California and the various departments and agencies thereof. Upon execution by the Governor, a signed copy shall forthwith be filed with the State Disaster Council.

(b) Counties, cities, and other political subdivisions and public agencies having a legislative or governing body shall by resolution approve and agree to abide by this agreement, which may be designated as "CALIFORNIA DISASTER AND CIVIL DEFENSE MASTER MUTUAL AID AGREEMENT". Upon adoption of such a resolution, a certified copy thereof shall forthwith be filed with the State Disaster Council.

(c) The executive head of those political subdivisions and public agencies having no legislative or governing body shall execute a copy of this agreement and forthwith file a signed copy with the State Disaster Council.

10. Termination of participation in this agreement may be effected by any party as follows:

(a) The Governor, upon behalf of the State and its various departments and agencies, and the executive head of those political subdivisions and public agencies having no legislative or governing body, shall file a written notice of termination of participation in this agreement with the State Disaster Council and this agreement is terminated as to such party 20 days after the filing of such notice.

RESOLUTION NO. 08-24

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BUELLTON, CALIFORNIA, APPROVING A PUBLIC WORKS MUTUAL AID AGREEMENT

WHEREAS, it is to the benefit and in the interest of protecting and preserving the health, safety and general welfare of the City of Buellton, its residents and guests that the City enter into a Public Works Mutual Aid Agreement; and

WHEREAS, it is desirable that each of the parties to such an agreement should voluntarily aid and assist each other in the event that an emergency or disaster should occur; and

WHEREAS, it is necessary and desirable that a cooperative agreement be executed for the interchange of mutual aid on a local, countywide, regional, and statewide basis; and

WHEREAS, each party agrees to furnish resources and facilities and to render services to each and every other party to this agreement to prevent and combat any type of disaster in accordance with duly adopted mutual aid operational plans.

NOW THEREFORE, the City Council of the City of Buellton, California, does hereby resolve as follows:

A. That Public Works Mutual Aid Agreement, initially entered into between the Counties of Orange and Los Angeles and designated as "62170," set forth as Exhibit "A" as attached hereto and incorporated herein by this reference, is hereby approved.

B. The Mayor shall execute this Resolution on behalf of the City and the City Clerk shall certify as to its passage and adoption.

PASSED, APPROVED AND ADOPTED this 14th day of August, 2008.

Russ Hicks
Mayor

ATTEST:

Steven L. Thompson
City Clerk

I, Steven L. Thompson, City Clerk of the City of Buellton, do hereby certify that the foregoing Resolution No. 08-24 was duly adopted by the City Council of the City of Buellton at a regular meeting held on the 14th day of August, 2008 by the following vote of the Council:

AYES:	5	Council Members Andrisek, Pointer, Whitehair, Mayor Pro Tem Molesworth and Mayor Hicks
NOES:	0	
ABSENT:	0	
ABSTAIN:	0	

Steven L. Thompson
City Clerk

ORIGINAL

PUBLIC WORKS MUTUAL AID AGREEMENT

This Mutual Aid Agreement ("Agreement") is made and entered into by those parties who have adopted and signed this Agreement.

WHEREAS, the California Office of Emergency Services, the League of California Cities, the County Supervisors Association of California, and the American Public Works Association have expressed a mutual interest in the establishment of a plan to facilitate and encourage public works mutual aid agreements between political subdivisions throughout California; and

WHEREAS, the parties hereto have determined that it would be in their best interests to enter into an agreement that implements that plan and sets forth procedures and the responsibilities of the parties whenever emergency personnel, equipment and facility assistance is provided from one party's Public Works Department to the other; and

WHEREAS, no party should be in a position of depleting unreasonably its own resources, facilities, or services providing such mutual aid; and

WHEREAS, such an agreement is in accord with the California Emergency Services Act set forth in Title 2, Division 1, Chapter 7 (Section 8550 et seq.) of the Government Code and specifically with Article 14 (Section 8630 et seq.) of the Act.

NOW, THEREFORE, IN CONSIDERATION OF THE CONDITIONS AND COVENANTS CONTAINED HEREIN, THE PARTIES AGREE AS FOLLOWS:

1. For this Agreement, the following terms shall be ascribed the following meanings:

   a. "Coordinator" shall mean the person designated by each party to act on behalf of that party on all matters relative to mutual aid, to include but not be limited to requests, responses, and reimbursement.

   b. "Local Emergency" shall mean the actual or threatened existence of conditions of disaster or extreme peril to the safety of persons or property within the territorial limits of one of the parties caused by human or natural conditions such as air pollution, fire, flood, storm, wind, earthquake, explosion, transportation accident, hazardous material problem, tsunami, sudden or severe energy shortage, epidemic, riot or other occurrences, other than conditions resulting from a labor controversy, which occurrences, or the immediate threat thereof, are likely to be beyond the control of the personnel, equipment, or facilities of that party to this Agreement and which personnel, equipment or facilities of the other party are therefore desired to combat.

   c. An "Operational Area" for the coordination of public works mutual aid shall normally be a County and all the jurisdictions within the County that are parties to this Agreement. A different public works operational area may be established by the parties in some unique cases.

2. Coordinators designated by each party shall be designated by Title, Name, Address and Phone Number, and if said Coordinator changes, the other parties of the Agreement shall be notified in writing as soon as practical after the appointment has been made through the Agreement Coordinator designated in Paragraph 18 hereinafter.

3. When a Local Emergency has been proclaimed by party's governing body or authorized official, the Coordinator may request assistance.

4. When request for assistance is received, the assisting Coordinator shall promptly advise of the extent of response, provide whatever personnel, equipment, and/or facilities as can be provided without jeopardizing the safety of persons or property within their jurisdiction. No party receiving a request for assistance shall be under any obligation to provide assistance or incur any liability for not complying with the request.

5. When the assisting Coordinator's personnel, equipment, and/or facilities are no longer required or when assisting Coordinator advises that the resources are required within their own jurisdiction, the requesting Coordinator shall immediately arrange for the return of those resources.

6. Requesting party shall be responsible for the safekeeping of the resources provided by the assisting party. Requesting Coordinator shall remain in charge of the incident or occurrence and shall provide control and direction to the resources provided by the assisting party. The request may include for providing supervisory personnel to take direct charge of the resources under the general direction of the requesting Coordinator. Requesting Coordinator shall make arrangements for housing and feeding, assisting personnel, fueling, servicing, and repair of equipment if such support is requested by assisting Coordinator. Assisting party's personnel shall not be deemed employees of requesting party and vice versa.

7. The requesting party agrees to pay all direct, indirect, administrative and contracted costs of assisting party incurred as a result of providing assistance pursuant to this Agreement, based upon standard rates applicable to assisting party's internal operations. Payment shall be made within sixty (60) days after receipt of a detailed invoice. Requesting party shall not assume any liability for the direct payment of any salary or wages to any officer or employee of assisting party.

8. Requesting party shall hold harmless, indemnify, and defend the assisting party, its officers, agents, and employees against all liability, claims, losses, demands or actions for injury to, or death of, a person or persons, or damages to property arising out of, or alleged to arise out of or in consequence of, this Agreement provided such liability, claims, losses, demands, or actions are claimed to be due to the acts or omissions of the requesting party, its officers, agents, or employees, or employees of the assisting party working under the direction and control of the requesting party when the act or omission of such assisting party employee occurs or is alleged to occur within the scope of employment under the direction and control of the requesting party.

9. When mutual aid is provided, the requesting and assisting agencies, will keep account records of the personnel, equipment, and materials provided as required by Federal and State (NDAA) and FEMA guidelines to maximize the possibility of Federal and State disaster reimbursement. Each party shall have access to other party's records for this purpose.

10. Agreement shall take effect immediately upon its execution and shall remain in effect until terminated.

11. Any party may withdraw from agreement without cause upon delivery of sixty (60) days prior written notice to the Agreement Coordinator designated in Paragraph 18 hereinafter.

12. To the extent that they are inconsistent with this agreement all prior agreements for public works mutual aid between the parties hereto are hereby null and void.

13. Requests for mutual aid assistance under this Agreement when more than one County is impacted by a disaster, should be channeled through the appropriate Regional State Office of Emergency Services to ensure maximum effectiveness in allocating resources to the highest priority needs.

14. Requests for Public Works assistance from outside of an operational area should be channeled through the authorized emergency management organizations for the requesting and providing parties' operational areas.

15. Any controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled by arbitration in accordance with the Rules of the American Arbitration Association and judgment on the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.

16. This Agreement in no way acts to abrogate or waive any immunity available under the Tort Claims Act.

17. Initial signatories to this Agreement are:

    Los Angeles County
    Orange County

18. The County of Los Angeles shall act as the initial Agreement coordinator of this program for the purpose of:

    a. Receipt of new members to the Agreement.

    b. Maintaining a current list of signatory parties and representatives.

    c. Circulating annually a list of all parties and Representatives to all signatory parties.

    d. Arranging for amendments to agreement as may be necessary.

    The party acting as Agreement Coordinator may transfer these responsibilities to another party with the consent of that party and upon notification of the other parties to the Agreement.

19. All signatory parties agree that any other qualified public agency or quasi public agency may become a party to this agreement by executing a duplicate copy of this agreement and sending same to the Agreement Coordinator, initially the County of Los Angeles, addressed as follows:

The Los Angeles County Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331
Attention: Disaster Services Coordinator

IN WITNESS THEREOF, the parties hereto have executed this Agreement by their duly authorized officers on the dates hereinafter indicated.

ATTEST

Larry J. Monteilh
Executive Officer-Clerk of
the Board of Supervisors

BY Lorna C. Walton
DEPUTY

LOS ANGELES COUNTY

BY Edmund D. Edelman
CHAIRMAN, BOARD OF SUPERVISORS

ATTEST
SIGNED AND CERTIFIED THAT A COPY OF THIS DOCUMENT HAS BEEN DELIVERED TO THE CHAIRMAN OF THE BOARD.

BY Linda D. Ruth
LINDA D. RUTH JAN 3 1990
CLERK OF THE BOARD OF SUPERVISORS
OF ORANGE COUNTY, CALIFORNIA
APPROVED AS TO FORM
DeWitt W. Clinton
County Counsel

BY Jennifer M. Plewitt
PRINCIPAL DEPUTY

APPROVED AS TO FORM:
ADRIAN KUYPER, COUNTY COUNSEL
ORANGE COUNTY, CALIFORNIA

By: Sara R. Parks
Deputy

Nov 21, 1989

R-MCPW

ORANGE COUNTY

BY Don R. Roth
CHAIRMAN, BOARD OF SUPERVISORS

ADOPTED
BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

43 OCT 31 1989

LARRY J. MONTEILH
EXECUTIVE OFFICER

ELEMENT 7 – REVISION RECORD

The City of Buellton's SSMP Element 7 – Fats, Oils and Grease (FOG) Control Program has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
0	4/22/10	Formally Adopt SSMP.	Wallace Group/Rose Hess	City Council
1	12/12/13	Revisions based on findings of biannual audit.	Wallace Group/Rose Hess	Rose Hess
2	5/28/15	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council
3	6/15/16	Update appendices with current supporting documentation.	Wallace Group/Rose Hess	Rose Hess
-	5/25/18	Updates based on findings of SSMP Audit. Updates to appendices.	Wallace Group/Rose Hess	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 7 - FATS, OILS, AND GREASE CONTROL PROGRAM

The City of Buellton has over fifty (50) food service establishments (FSEs) within its jurisdiction. The distribution of types of FSEs is graphically portrayed below in Figure 7-1. The City implemented a Fats, Oils, and Grease (FOG) Control Program in 2008. The primary goal of the City FOG Control Program is to decrease the amount of FOG entering the sanitary sewer system to prevent SSOs.

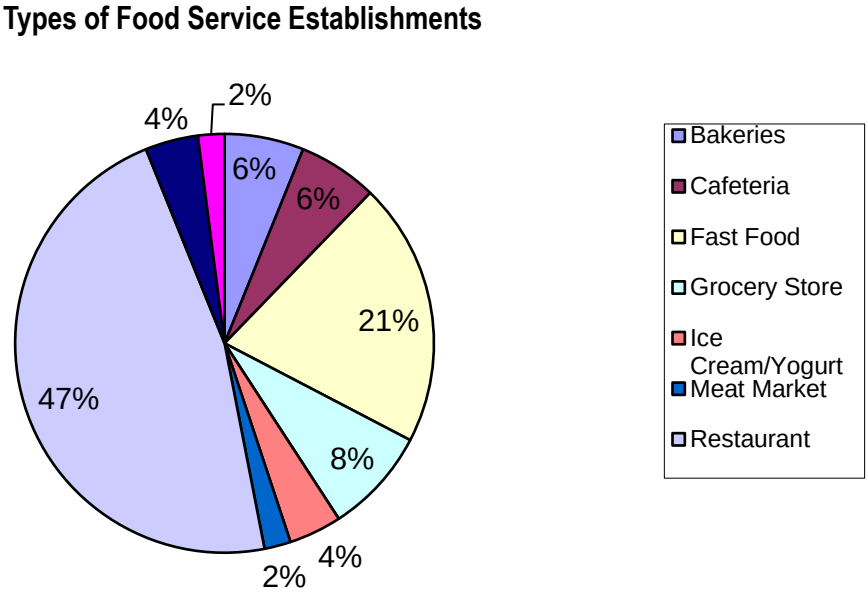


Figure 7-1: Types of Businesses Enrolled in the FOG Control Program in 2020

7.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(vii) states:

> Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification as to why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan 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 system 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 removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;

(e). Authority to inspect grease producing facilities, enforcement authorities, and whether the Agency has sufficient staff to inspect and enforce the FOG ordinance;

(f). An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and

(g). Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.

7.2 FOG Control Program Public Education and Outreach [WDR D.13(vii)(a)]

7.2.1 FSE Education and Outreach

The City's FOG Control Program includes outreach and education to its FSEs. Each FSE receives semi-annual site visits from the City's contractor, Wallace Group, who provided the FSE owner with a:

- FOG Control Program Flyer;
- FOG Best Management Practices (BMP) information;
- Grease Hauler List;
- Cleaning Record Forms.

FSEs are required to complete a FOG Permit Application and issued FOG Permits, which require each FSE to clean/pump their grease control devices (GCDs) at specified frequencies, follow BMPs, and keep records.

FOG Permits are non-transferrable and are re-issued annually after checking for facility changes. FSEs are inspected on a semiannual frequency. FSE compliance is tracked, and FSEs are assigned an appropriate timeframe to correct violations based on the type of violation observed. FOG Program materials are additionally available for FSEs on the City's website at: *https://www.cityofbuellton.com/departments/public-works.php*.

7.2.2 Residential Education and Outreach

The Buellton Buzz Newsletter, which is distributed to all city water service customers every other month, highlights public works topics, such as appropriate FOG disposal, which provides public education in an economically feasible manner. In addition to this newsletter, the City distributes Public Service Announcements on similar topics and provides additional household guidance on

FOG disposal on the City's website at: *https://www.cityofbuellton.com/departments/public-works.php*.

This FOG Program Flyer is also available to City residents at the City office.

7.3 FOG Disposal Facilities [WDR D.13(vii)(b)]

The City does not own or operate a separate FOG disposal facility. The FOG generated within the sanitary sewer system service area that enters the collection system becomes part of the wastewater stream treated at the wastewater treatment plant.

A list of pumping and waste hauling contractors in Santa Barbara County and the surrounding counties that haul FOG to facilities for disposal is available to commercial facilities enrolled in the City's FOG Control Program. This list is included in **Appendix 7A**.

7.4 Discharge Prohibition Legal Authority and SSO Prevention Measures [WDR D.13(vii)(c)]

The City of Buellton Municipal Code Chapter 14.24: Use of Public Sewers establishes requirements, which govern the installation, maintenance, and use of grease interceptor devices for FSEs in the City is provided in its entirety on the City's Website at: *http://qcode.us/codes/buellton/*.

Table 7-1 summarizes where the City established the legal authorities to prohibit FOG discharges and where measures are identified to prevent SSOs and blockages caused by FOG.

Table 7-1: Discharge Prohibition Legal Authority

WDR Requirement	Buellton City Municipal Code Section
Limit FOG discharges to collection system	14.24.030(f)
Identify measures to prevent SSOs and blockages caused by FOG	14.24.040

7.5 Grease Removal Devices Design, Installation, and Maintenance Requirements [WDR D.13(vii)(d)]

The table below summarizes where the City has adopted the requirement for FSEs to correctly design, install, and maintain grease removal devices.

Table 7-2: Grease Removal Device Design, Installation, and Maintenance Requirements

WDR Requirement	Buellton City Municipal Code Section
FSE to Install Grease Removal Device	14.24.040(a)
Grease Removal Devices – Design Standards	14.24.040(e) 14.24.050
Grease Removal Devices – Maintenance	14.24.050

WDR Requirement	Buellton City Municipal Code Section
Grease Removal Devices – Best Management Practices (BMPs)	14.24.050(a)
Grease Removal Devices – Record Keeping and Reporting	14.24.050(e)

7.6 FOG Control Program Inspection, Enforcement, and Staffing [WDR D.13(vii)(e)]

The City of Buellton's FOG Control Program inspection and enforcement legal authorities are described in Section 7.6.1 below, and FOG Control Program staffing is described in Section 7.6.2 below.

7.6.1 FOG Control Program Inspection and Enforcement

Table 7-3 summarizes where the City established the legal authorities to inspect grease producing facilities. The City is responsible for enforcement as outlined by City Municipal Code Chapter 14.72: Administrative Enforcement Remedies and Chapter 14.76: Judicial Enforcement Remedies, which are on the City's Website at: *http://qcode.us/codes/buellton/*. A list of Food Service Establishments (FSEs) permitted and inspected by the City is included in **Appendix 7B**.

Table 7-3: FOG Control Program Inspection and Enforcement Legal Authorities

WDR Requirement	Buellton City Municipal Code Section
Authority to inspect grease producing facilities	14.52.020 14.64.130
Authority to enforce FOG Program Requirements	14.72 14.76

7.6.2 FOG Control Program Staffing

Table 7-4 name the City and contract Staff who manage and implement the City's FOG Control Program. **Appendix 7C** includes a copy of the City's scope of services with Wallace Group for FOG Control Program Services through June 30, 2020.

Table 7-4: FOG Program Staffing

Name and Title	FOG Program Responsibilities	Contact Information
Rose Hess Public Works Director/City Engineer *City of Buellton*	▪ The Public Works Director is responsible for implementation of the City FOG Program. ▪ Responsible for receiving reports from the FOG control project manager summarizing the results of the biannual and annual inspections.	(805) 688-5177 Office E-Mail: roseh@cityofbuellton.com

Name and Title	FOG Program Responsibilities	Contact Information
	▪ Implementation of the contract between the City and Contracted FOG inspectors to conduct annual grease trap or interceptor inspection of all commercial properties and public education. ▪ Responsible for following the City Municipal Code enforcement process. ▪ Preparing and sending Public Notification Letters. ▪ Attending non-compliance meetings. ▪ Answering and or directing FOG Program questions to contracted staff.	
Kurt Greer Journeyman Utility Worker *City of Buellton*	▪ The Journeyman Utility Worker is responsible for the management of FOG High Maintenance Areas if and when future FOG HMAs are identified.	(805) 686-0137 E-Mail: sewer@cityofbuellton.com
Bill Callahan FOG Control Program Manger *Wallace Group*	▪ Assisting the City in the design, planning and setup of the FOG Program; ▪ Updates to the FSE Business Location List; ▪ Directing the Environmental Compliance Inspector in conducting initial, annual and compliance re-inspections; ▪ Conducting FSE initial, annual, and compliance re-inspections. ▪ Notifying and resolving the City FOG Program Compliance issues by drafting violation letters and updating the files for each FSE. ▪ Answering FOG Program questions.	(805) 544-4011 Office E-Mail: BillC@wallacegroup.us

7.7 Grease Problem Area Identification and Sewer Cleaning [WDR D.13(vii)(f)]

The City's sewer cleaning plan is to clean the entire gravity collection system every three years.

The City Journeyman Maintenance and Utility Fieldworker (Sewer Division) weekly directs Public Works Fieldworkers in the inspection of problematic sewer lines, which are also called high maintenance areas (HMA). Physical cleaning occurs based on Staff's assessment of the internal condition of these lines as described in Element 4 – Operation and Maintenance Program. The list of eleven (11) HMA, ten (10) of which are HMA due to the presence of FOG and/or roots, is included in Element 4.

Since the inception of the FOG Program in 2008, the City HMAs require cleaning less frequently due to FOG.

7.8 Source Control Measure Development and Implementation [WDR D.13(vii)(g)]

The City uses FSE and residential outreach, education, and the FSE FOG Control Program permitting and inspections as source control measures for sources of FOG discharged to the sanitary sewer system.

All FSE's that discharge to an HMA are permitted and inspected semi-annually as described above in **Section 7.6**.

APPENDIX 7A

List of Grease Hauling and Rendering Companies

Grease Hauling & Rendering Companies

This list is provided to Food Service Establishments (FSEs) only as a convenience and does not imply an endorsement of the services provided by any of the listed companies. and the City of Buellton (City) makes no claims or representations, explicit or implied, regarding the performance of the following service providers. The City encourages FSEs to exercise due diligence when hiring a pumping and/or waste hauling contractor. The list is based upon information available at the time and may not include every company offering such services.

San Luis Obispo & Monterey County	
All Valley Environmental, Inc.	(559) 498-8378
Ameriguard Maintenance Services	(559) 497-2925
Bay Pumping	(831) 320-5229
Green Line Liquid Haulers	(831) 372-5215
Clay's Septic & Jetting, Inc.	(805) 929-5065
Coastal Byproducts	(805) 845-8086
Salinas Tallow	(831) 422-6436
RP Environmental	(805) 929-5509
Valley Septic	(805) 541-1603
Triple J Grease Removal	(805) 878-4854
Marborg Industries	(805) 963-1852

IN NO EVENT SHALL THE CITY BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES OF ANY KIND WHATSOEVER WITH RESPECT TO THE SERVICES PROVIDED BY THE LISTED COMPANIES.

APPENDIX 7B

List of Food Service Establishments (FSEs)

2019-20 City of Buellton FOG Program Master

Food Service Establishment	Physical Address	Mailing Address	Permit #
Panda Express	211 E. Hwy 246, #101	1683 Walnut Grove Ave., Rosemead, CA 91770	FG-BU110
Decadence	201 Industrial Way, Ste. C	201 Industrial Way, Ste. C Buellton, CA 93427	FG-BU037
Jack-in-the-Box	250 East Highway 246	250 East Highway 246	FG-BU034
Pea Soup Andersen's	376 Avenue of Flags	PO Box 195, Buellton, CA 93427	FG-BU019
Parkway Market	265 Avenue of Flags	P.O.Box 1669, Buellton, CA 93427	FG-BU0118
Taco Roco	245 Avenue of Flags	PO Box 192, Buellton, CA 93427	FG-BU009
Industrial Eats	181 Industrial Way Suite B	PO Box 596, Buellton, CA 93427	FG-BU107
New West Catering	181 Industrial Way	PO Box 596, Buellton, CA 93427	FG-BU033
Tono's	501 Avenue of Flags		FG-BU028
Gino's Pizza	383 Avenue of Flags	383 Avenue of Flags	FG-BU024

Hitching Post II	406 East Highway 246	P.O. Box 2009, Buellton, CA 93427	FG-BU016
Starting Gate T-1 (Marriot)	555 McMurray Road	555 McMurray Road	FG-BU011
Starting Gate T-2 (Marriot)	555 McMurray Road	555 McMurray Road	FG-BU011
Firestone Walker Tap Room	620 McMurray Road	PO Box 1129, Buellton, CA 93427	FG-BU010
Mother Hubbard's	373-A Avenue of Flags		FG-BU007
Solvang Bakery	252 E. Hwy 246	PO BOX 1564, Solvang CA 93464	FB-BU104
Starbuck's Coffee	235 E. Highway 246	17700 New Hope St., Ste. 200., Fountain Valley, CA 92708	FG-BU109v
Morrell's Farm Fresh Dining	225-E McMurray Rd Buellton, CA 93427.	225-E McMurray Rd Buellton, CA 93427.	FG-BU0122
Houston Liquors	485 Avenue of Flags	PO Box 1995, Buellton, CA 93427	FG-BU102-v
Antonio's Pizzeria (closed Monday,Opens at 4:00 Tuesdays, prep by 2:00)	280 East Highway 246		FG-BU021
Pattibakes	240 East Highway 246 Suite 109	240 East Highway 246 Suite 109	FG-BU017
Albertsons (Need sample tube extension)	222 East Highway 246		FG-BU001
Summerland Wine Brands (Old location of Terravant Wine Company)	35 Industrial Way		TBD

Chipotle Mexican Grill (OUT OF BUSINESS)	235 E. Highway 246	1401 Wynkoop St., Denver, CO 80202	FG-BU108
Subway	270 East Highway 246 #103		FG-BU039-v
Oak Valley Elementary	595 2nd Street	595 2nd Street	FG-BU030-v
Carl's Junior	208 East Highway 246	208 East Highway 246	FG-BU026
Ellen's Danish Pancake House	272 Avenue of Flags	272 Avenue of Flags	FG-BU023
Rudy's Mexican Restaurant	234 East Highway 246	234 East Highway 246	FG-BU015
AJ Spurs	350 East Highway 246	P. O. Box 5459, Santa Maria, CA 93456	FG-BU014
China Panda	272 East Highway 246		FG-BU005
Burrito Loco	175 McMurray Road		FG-BU003
Jonata Middle School/ Community Center	301 2nd Street	595 2nd Street, Buellton, CA 93427	FG-BU0029-v
Jonata Middle School	301 2nd Street	595 2nd Street, Buellton, CA 93427	FG-BU0029-v
McDonald's	337 McMurray Road	212 S. Main St., Templeton, CA 93465	FG-BU0012
Sideways Inn	114 E. 246		FG-BU0119

Blender's in the Grass	234 East Highway 246	64878 Calle Real, Goleta, 93117	FG-BU0120-v
Shell Car Wash	90 E. Highway 246	90 E. Highway 246	FG-BU0121
Figueroa Mountain Brewery	45 Industrial Way	45 Industrial Way	FG-BU123
The Habit	209 E. Hwy 246		FG-BU0111
New West Grocery	181 Industrial Way	P.O. Box 596, Buellton	FG-BU0117
Campfire Grill @ Flying Flags	180 Ave. of Flags		FU-BU126
Quick and Clean Car Wash	25 W. Highway 246	25 W. Highway 246	FG-BU127
A-RU Japanese (New Owner)	225 McMurray Road Suite D		FG-BU124
Taco Bell (No longer Pizza Hut)	191 East Highway 246	PO Box 139, Buellton, CA 93427	FG-BU027
Woody's Yogurt & Juice Co.	234 East Highway 246		FG-BU013-v
Mi Pueblito Deli-Butcher Shop	375 Avenue of the Flags	P.O.Box 1669, Buellton, CA 93427	FG-BU0115
Burger King	238 East Highway 246	238 East Highway 246	FG-BU002
Eddies Grill (NEW FACILITY)	234 E. Hwy 246 j.carlosvilla@yahoo.com	1325 N. H Street, Lompoc CA 93436	FG-BU013
Mariscos La Rancherita (California Tacos) Closed Weds (Drop permit off)	383 Avenue of Flags	484 Fourth, Solvang, CA 93463	FG-BU128
Wingstop	214 E. Hwy 246	214-234 E. Hwy 246, Buellton CA 93427	FG-BU129
Quality Inn (Need permit app)	630 Ave. of Flags		New

La Botte Bistro (Call in January to set up apt)	225 McMurray Road	225 McMurray Road	FG-BU0116-V
God's Country Provisions (Need permit app)(Closed Mon-Tue)	252 East Highway 246	252 East Highway 246	TBD
Enjoy Cupcakes (Need permit app)	270 E. Hwy 246 Ste. 112	3063 Fairlea Rd. Santa Ynez, CA 93460	TBD
La Tequila (Need permit app)	35 West Highway 246		TBD
Al Fresco Picnic (CLOSED Permanently)	225 McMurray Road Suite	225 McMurray Road Suite	FG-BU110-v

APPENDIX 7C

FOG Program Management Contract - Scope

Task 2.0 Management of Fats, Oils, and Grease (FOG) Program FY 2020/21
The City's FOG Program has been implemented since 2009. Effective implementation of the program has been instrumental in reducing Sanitary Sewer Overflows (SSOs) to less than one (1) per year on average.

The FOG Program is an element of the SSMP whose primary purpose is to inform and direct Food Service Establishments (FSEs) to manage their FOG in order to prevent and reduce SSOs.

Task 2.1: FOG Program Management
Wallace Group will continue to perform FOG permitting, semiannual inspections, and re-inspections for the City at its FOG producing facilities for FY 2020/21. The FOG Program will include the following:

- One, one (1) hour meeting to confirm goals for the FY 2020/21 FOG Program
- A semiannual inspection of approximately fifty-four (54) facilities
- Performance of re-inspections when noncompliant conditions are identified
- Implementation of enforcement response with the City Public Works Director for facilities who remain noncompliant
- Permit renewal of facilities enrolled in the FOG Program
- Education and permitting of new facilities that opened for business in FY 2020/21 and removal from the FOG Program of those facilities that have closed
- Assistance with FOG Program related plan check for new facilities and projects undergoing remodel
- Issuance of monthly reports documenting FOG program status

Task 2.0 Deliverables:
- Electronic copies of all inspection reports (PDF format)
- Electronic copies of all permit applications and permits issued (PDF format)
- Monthly reporting of FOG program status (PDF format)
- Electronic copies of updated outreach materials provided to facilities as applicable (PDF format)
- Electronic copies of updated outreach materials for residential FOG education (PDF format)

Task 2.0 Schedule:
Upon receipt of the signed proposal, Wallace Group will schedule the FY 2020/21 FOG Program meeting after July 7, 2020 and schedule the next round of FOG inspections.

ELEMENT 8 – REVISION RECORD

The City of Buellton's SSMP Element 8 – System Evaluation and Capacity Assurance Plan has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
0	4/22/10	Formally Adopt SSMP.	Wallace Group	City Council
1	12/12/13	Revisions based on findings of biannual audit.	Wallace Group	Rose Hess
2	5/28/15	SSMP 5 Year Update	Wallace Group	City Council
3	7/15/16	Revisions based on findings of biannual audit.	Wallace Group	Rose Hess
-	5/25/18	Updates based on findings of SSMP Audit. Updates to appendices.	Wallace Group	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 8 - SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

The City of Buellton contracted with Wallace Group to complete a Sewer Collection System Master Plan (SCSMP). The SCSMP evaluated the collection system's capacity and assessed the need for a capital improvement plan (CIP) and implementation schedule to respond to hydraulically deficient areas identified in these evaluations. The SCSMP was completed in June 2020.

8.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(viii) states:

> The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer 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:
>
> (a). **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 the system) associated with conditions similar to those causing overflow events, estimates 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;
>
> (b). **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and
>
> (c). **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 may include an implementation schedule and may identify sources of funding.
>
> (d). **Schedule:** The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule may be reviewed and updated consistent with the SSMP requirements as described in [WDR Order 2006-0003-DWQ] Section D.14.

8.2 Evaluation [WDR D.13(viii)(a)]

A Sewer Collection System Master Plan (SCSMP) was completed in June 2020. The purpose of the 2020 Study was to provide the City with a hydraulic evaluation of the collection system and pumping stations and incorporate additional CCTV condition assessment data. The plan includes flow projections, hydraulic modeling, recommendations, and a final report and has been used as a basis for CIP budget planning and identification of problem areas.

The 2020 Study identified that the City's collection system does have sufficient capacity for current and projected flows under current General Plan build-out scenarios. According to the 2020 Study, "No locations were identified through the analysis as having insufficient capacity to meet the City's performance standards while conveying future wastewater flows."

A link to the 2020 Study which is on file at the City Public Works Department and is included in **Appendix 8A**.

8.3 Design Criteria [WDR D.13(viii)(b)]

The City currently has a set of design criteria, identified in Element 5. Criteria for sewer system hydraulic evaluation and capacity assurance are identified in Chapter 5 of the 2020 SCSMP.

There are currently no projects that require hydraulic upgrades that would require these design criteria. Hydraulic enhancement projects are not anticipated through the City's future build out based on the findings of the 2020 SCSMP.

8.4 Capacity Enhancement Measures [WDR D.13(viii)(c)]

The City's SCSMP did not identify areas of hydraulic deficiency based on the dry and wet weather hydraulic analyses. These findings are consistent with the findings of a similar study conducted in 2006. As a result, there are no City Capital Projects linked to hydraulic deficiencies.

8.5 Schedule [WDR D.13(viii)(d)]

This section is not applicable as there were no Capital Projects identified because of hydraulic deficiencies.

APPENDIX 8A

- Sewer Master Plan Scope of Work 2019
- 2020 Sewer Collection System Master Plan link: **https://www.cityofbuellton.com/departments/public-works.php**

Task 7.0 Sanitary Sewer Collection System Master Plan

Task 7.1 Project Management
This task includes day-to-day coordination of project activities, including scheduling and budget controls, staffing needs and coordination, client coordination, monthly status updates, and other related project management activities. This effort is based on the schedule duration provided within this proposal. This task shall also include quality assurance and quality control (QA/QC) activities to ensure the development of a high quality and complete master plan.

Task 7.2 Meetings
Wallace Group anticipates attending the following meetings as part of the sanitary sewer collection system master plan development process:

- Kick-off meeting with key Team members and City staff.
- Two project meetings
- One City Council Meeting
    - We will present a Draft Final report to the City Council utilizing a Power Point presentation that discusses the findings and recommendations

Wallace Group will prepare all agendas and meeting minutes for the kick off and project meetings.

Task 7.3 Existing Data Collection and Review
Following the kickoff meeting, we will review the documents provided and evaluate the information. We will provide the City with a summary of the items provided and findings on important information that will impact the report. This summary will be critical in ensuring that we fully understand the study area and the goals and objectives of the report.

Task 7.4 Sewer Flow Monitoring
Wallace Group will work with US Cubed to conduct sewer flow monitoring for a one-month period in 4 different locations within the City. The line sizes range between 8-inch and 15-inches. US Cubed will install the flow meters and conduct weekly downloads for a one-month duration during the monitoring period. Depending on weather conditions, this monitoring will provide Wallace Group with information on existing dry weather and wet weather conditions. We will analyze the flows, determine the diurnal peaks, estimate inflow and infiltration, and prepare a memo summarizing our findings for the City. It is requested that the City assist US Cubed with traffic control in locations of high traffic volume.

Task 7.5 GIS Map and Database
For the purposes of this proposal, it is assumed that the GPS based survey data collected by MNS for the 2006 Citywide Sewer Study is acceptable for use in the sewer model. Using the MNS data, Wallace Group will prepare the sewer model and use preliminary results to identify if there are any areas where more accurate survey information might be valuable. If additional survey data is required, Wallace Group can provide that service as an additional task.

Wallace Group will use the City's existing Sewer GIS along with the survey data from MNS to prepare to an ESRI ArcGIS 10.3 personal geodatabase for the City. Below is an example of the attributes that will be included in the geodatabase. Using currently available data, Wallace Group will populate as many fields as possible for the City's sewer collection system. Remaining fields can be populated by the City as data becomes available.

Sewer Pipe		Sewer Manhole		Lift Station
Diameter		Northing		Size
Material		Easting		Material
Location		Rim Elevation		Location
Type		Location		# of Pumps
Upstream Invert		Depth		As-built Plan Link
Upstream SMH ID		Invert		Digital Photo Link
Downstream Invert		SMH ID		Region
Downstream SMH ID		As-built Plan Link		
Slope		Digital Photo Link		
Length		Region		
As-built Plan Link				
Pipe ID				
Region				

We will develop the sewer geodatabase to allow for integration with the sewer modeling software. This will allow the City to efficiently transfer sewer collection system changes between the GIS and the sewer modeling software.

As an optional task, we can also prepare atlas maps of the City's collection system. These atlas maps are useful for documenting daily activities, identifying problem locations, and noting changes to the database.

Task 7.6 Preliminary Findings Memorandum

Wallace Group will use population and density information from the City General Plan along with information from the City's Wastewater Treatment Plant Facilities Evaluation, previous wastewater flow estimates, and data from the sewer flow monitoring conducted in Task 7.4 to determine the existing and future dry weather and wet weather flows. We will provide the findings of this information in a technical memorandum (30% Submittal). In addition, this memorandum will document our understanding of the City's collection system and the City's sewer system design criteria. This memorandum will form the basis of the Sanitary Sewer Collection System Master Plan. After we receive concurrence from the City with the findings of the Preliminary Findings Memorandum, we will proceed with the collection system modeling and preparation of the master plan.

Task 7.7 Collection System Modeling

We will use Innovyze sewer modeling program, InfoSWMM, to evaluate the condition of the existing collection system. We will model the collection system under dry weather and wet weather conditions for the existing and future loadings. We will only model the trunk system, typically 8-inch sewer mains and larger. Many 8-inch collector mains serving small developments that do not have future expansion potential will not be modeled. However, 6-inch trunk mains that collect or carry a reasonable amount of existing or future wastewater will be evaluated in the collection system model. We will provide a hard and electronic copy of the sewer model with instructions and explanations on the files at the end of the project. The proposed sewer mains to be modeled will be provided in the Preliminary Findings Memorandum (Task 7.6) to provide the City opportunity to comment on what sewer mains should or should not be analyzed.

Task 7.8 Draft Sanitary Sewer Collection System Master Plan

We will utilize the information determined in the previous tasks and prepare a Sanitary Sewer Collection System Master Plan. In addition, we will review CCTV reports for "hot spots" or high

maintenance areas (HMAs) in the City and we will incorporate our findings into the Master Plan Report. The Master Plan will provide a summary of the existing facilities, wastewater flows, identified system capacity deficiencies for existing and future conditions, recommended capital improvement projects (CIP), recommended operation and maintenance practices, and recommended inspection programs. The CIPs will be grouped into three categories:

- First Priority, those projects that require immediate (1 to 5 years) attention
- Second Priority, those projects that are reaching capacity (6 to 10 years)
- Third Priority, those upgrades that are required due to future development (duration depending on future development)

We will determine cost estimates for each of the CIPs and O&M activities, which will include construction and soft costs. We will submit a Draft Report for review and comment.

Task 7.9 Final Sanitary Sewer Collection System Master Plan
Wallace Group will incorporate any comments from City staff into the 100% final draft Sanitary Sewer Collection System Master Plan. The report will then be presented to the Council for review and approval. Following the City Council meeting, we will incorporate any additional comments from staff or the Council and provide the City with a final Sanitary Sewer Collection System Master Plan.

Task 7.10 Lift Station Evaluation (Optional)
As an optional additional task, Wallace Group can inspect the Zaca Creek Golf Course and Riverview Park Lift Stations; inventory capabilities of each facility; and collect relevant as-built plans, maintenance records, pump curves, and run logs. Inspection of the existing lift stations would be limited to visual observation of overall conditions of the lift station pumps, wet well and visible piping. Detailed mechanical review of the physical condition of existing pumps will not be provided. The review of each lift station will include analyzing pump cycle/run times based on actual pump run time data in conjunction with pump curves, corresponding force main velocities and headloss considerations, age and general condition of lift station and estimated useful life, reviewing existing lift stations relative to requirements for maintenance and confined space entry, and reviewing maintenance logs and other related documentation. We will request the City to conduct a pump down test to confirm lift station flow capabilities and compare against actual pump curves.

– Optional Task Fee: $6,000

Task 7.0 Deliverables:
We will provide the following deliverables:

- Document Review (electronic pdf)
- GIS Database - One (1) electronic copy
- 30% Technical Memorandum - One (1) hard copy and one (1) electronic
- 90% Draft Report – Four (4) hard copies and one (1) electronic pdf
- 100% Draft Report – Four (4) hard copies and one (1) electronic pdf
- 100% Final Draft Report – Four (4) hard copies and one (1) electronic pdf
- 100% Final Report – Four (4) hard copies and one (1) electronic pdf
- Final GIS Database and Maps - One (1) hard copy and one (1) electronic copy

ELEMENT 9 – REVISION RECORD

The City of Buellton's SSMP Element 9 – Monitoring, Measurement, and Program Modifications has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
0	4/22/10	Formally Adopt SSMP.	Wallace Group	City Council
1	12/12/13	Revisions based on findings of biannual audit.	Wallace Group	Rose Hess
2	5/28/15	SSMP 5 Year Update	Wallace Group	City Council
3	6/15/16	Revisions based on findings of biannual audit.	Wallace Group	Rose Hess
-	6/1/2018	Revised to incorporate May 2, 2018 Audit Findings and updates to SSO per Indicator Year.	Wallace Group	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 9 - MONITORING, MEASUREMENT & PROGRAM MODIFICATIONS

The City Public Works Director/City Engineer monitors the implementation of the SSMP elements in order to measure the effectiveness of the City's SSMP program in reducing SSOs. The manner in which each SSMP element is monitored and evaluated and the schedule with which the City completes this monitoring and evaluation is described in this SSMP Element.

9.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(ix) states:

> 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.

9.2 Establishing and Prioritizing SSMP Activities [WDR D.13(ix)(a)]

Table 9-1 outlines the relevant information maintained by the City to establish and prioritize appropriate SSMP activities:

Table 9-1: SSMP Implementation Management

SSMP Element	SSMP Information
1. Goal	This SSMP Element contains the City's goals for the operation, maintenance, and management of the sanitary sewer collection system, which provide focus to prevent and reduce the number of SSOs and mitigate SSOs that do occur.
2. Organization	A table containing names, job titles, roles, responsibilities, and contact information is contained in this SSMP Element, which allows the public, staff, and regulators to directly contact the person most knowledgeable for each aspect of the SSMP Program. An organization chart shows lines of authority.

SSMP Element	SSMP Information
3. Legal Authority	Appendices to this SSMP Element contain the City Municipal Code Chapters and Sections that provide the City with its legal authority to maintain and regulate the use of its sanitary sewer collection system and enforce on violations of its sewer ordinances.
4. Operation and Maintenance Program	Appendices to this SSMP Element document sanitary sewer system operation and maintenance activities, utilized to develop the City's Rehabilitation and Replacement Plan. Appendices include maps, lift station inspection reports, equipment and replacement part inventories, and the CIP and associated funding mechanisms.
5. Design and Performance Provisions	Appendices to this SSMP Element include the City of Buellton Department of Public Works Standard Details and City Municipal Code Sections regulating sanitary sewer design and construction. This SSMP Element also includes references to the *Greenbook: Standard Specifications for Public Works Construction.*
6. Overflow Emergency Response Plan	This SSMP Element includes notification and response protocols. Emergency operations procedures, and response and mitigation programs are referenced as separate City documents from the SSMP.
7. FOG Control Program	Monthly reports documenting FOG inspection results and enforcement actions are on file at the City Public Works Department. Additional FOG Program information is maintained on the City's website.
8. System Evaluation and Capacity Assurance Plan	This SSMP Element contains a Sewer Collection System Master Plan that includes hydraulic analyses and evaluation of the City's collection system. This evaluation shows that the City has adequate hydraulic capacity during dry and wet weather at 2020 population densities and for future build out.

SSMP Element	SSMP Information
9. Monitoring, Measurement, and Program Modifications	This SSMP Element will be updated annually with the number of SSOs that occur and their causes in a calendar year. This is the most important trend to document and the primary reason for the SSMP.
10. SSMP Program Audits	SSMP Audit Reports will be appended to this SSMP Element when they are generated, which is every two (2) years by May 2nd 2020, 2022, etc.
11. Communication Program	Appendices to this SSMP Element contain examples of public outreach articles, flyers, and pertinent City of Buellton website addresses.

9.3 SSMP Implementation Monitoring [WDR D.13(ix)(b)]

The Public Works Director/City Engineer is responsible for:

9.3.1 Element 1 – Goals

The City Public Works Director/City Engineer is responsible for monitoring the implementation of this SSMP Element. The City's sanitary sewer system goals will be evaluated and progress toward meeting these goals will be measured on an annual basis by the Public Works Director/City Engineer, who will submit a staff report to the City Council in February of each year to communicate the City's progress toward achieving the goals and implementation of the SSMP Elements.

9.3.2 Element 2 – Organization

The Public Works Director/City Engineer is responsible for monitoring the implementation of this SSMP Element. The organization charts and SSO chain of communication included in this SSMP Element will be reviewed and revised as appropriate annually in February each year.

9.3.3 Element 3 – Legal Authority

The Public Works Director/City Engineer will review the effectiveness of the City legal authorities in preventing SSOs annually. If changes are recommended, the City Public Works Director/City Engineer will discuss areas of deficiency and recommendations for updates to the City Municipal Code with the City Manager and City Attorney.

As of this revision to the SSMP, Revision 04, the City maintains the legal authorities stated by WDR Section D.13(iii).

9.3.4 Element 4 – Operation and Maintenance Program

The City is responsible for creating and maintaining a geographic information system (GIS) database that stores information on every component of the collection system. As each capital improvement project is completed, or changes are made to the collection system, the information in GIS is updated to include the new information.

Routine, preventive collection system operation and maintenance activities conducted by City Staff and contractors is documented in the City's Sewer Line Cleaning Log. Staff notes the physical attributes of the sewer line while it is maintained, logs the results of observed cleaning results, and makes recommendations for future maintenance activities for the section of line being cleaned when necessary. The information is entered into the Sewer Cleaning Log as a work history record and to create future cleaning schedules. The City plans to incorporate the collection system information into the City's GIS for easy reference and use in the next five (5) years.

The City SCSMP identified a rehabilitation and replacement plan to identify and prioritize system deficiencies based on information collected from CCTV data, physical inspections of manholes and sewer pipes.

Operations and Maintenance Training is documented in City Staff Training Logs.

Contractors implementing portions of this Operation and Maintenance Program are required to be appropriately trained on the activities they are completing through their contracts with the City and their licensing.

Critical parts and equipment, such as tools, pipe, trailer mounted jetter parts and portable pumps, are tracked through the City's inventory list. The City will update this list to account for new parts and equipment as they are purchased and to account for critical parts and materials used in the sewer collection and conveyance system and at lift stations on an ongoing/annual basis.

9.3.5 Element 5 – Design and Performance Provisions

The City of Buellton contracts design services to MNS Engineers, Inc.

The *Greenbook: Standard Specifications for Public Works Construction* is utilized by the City through references to Sections and Subsections of the *Greenbook* in the City of Buellton Department of Public Works Standard Details and as the City's procedures and standards for inspection and testing the installation of sanitary system components.

City Municipal Code Chapters 14.16: Building Sewers, Lateral Sewers and Connections and 14.20: Public Sewer Construction also provide design and construction provisions, and the State of California Department of Health Services' *Guidance Memo No. 2003-02: Guidance for the Separation of Water Mains and Non-potable Pipelines* is utilized to regulate the separation of water and sewer lines.

The Public Works Director/City Engineer is responsible for monitoring the implementation of this SSMP Element and will review these standards, specifications, and procedures annually and as changes occur.

9.3.6 Element 6 – Overflow Emergency Response Plan

The Public Works Direct/City Engineer is responsible for monitoring the implementation of this SSMP Element. The City's OERP, which includes emergency response procedures, will be reviewed and revised on an annual basis by the Public Works Director/City Engineer.

If a SSO occurs, the Public Works Director/City Engineer and Field Worker Staff will evaluate the effectiveness of the OERP to determine whether any modifications need to be made to the procedures and protocol contained in the OERP and make the revisions needed to improve the effectiveness of the City's SSO response and notification processes.

9.3.7 Element 7 – FOG Control Program

The Public Works Director/City Engineer is responsible for monitoring the implementation of this SSMP Element and its effectiveness at reducing SSOs on an annual basis. Wallace Group is responsible for submitting monthly FOG status reports to the Public Works Director/City Engineer to document food service establishment (FSE) permitting and inspections and responses to violations.

FOG Control Program changes necessitated by an increase in SSOs caused by FOG or an increase in the number of FSE's in violation will be developed by the Public Works Director/City Engineer.

9.3.8 Element 8 – System Evaluation and Capacity Assurance Plan

The City of Buellton through completion of the SCSMP evaluated the current collection system and provide recommendations for system improvements to meet the existing and future flow conditions. The City developed an initial CIP to address system deficiencies. System deficiencies were identified as structural and maintenance based rather than hydraulic.

The Public Works Director/City Engineer is responsible for reviewing and revising the associated capacity related projects, project schedules and funding every two years.

9.3.9 Element 9 – Monitoring, Measurement, and Program Modifications

The Public Works Director/City Engineer is responsible for the implementation of this SSMP Element, which is to be reviewed annually and revised as necessary. The review and revisions are to be documented on the revision record, which is the first page of each SSMP Element. The metrics contained in this SSMP Element are important tools in the determination of what tasks and projects contained in each SSMP Element are a priority from fiscal year to fiscal year.

9.3.10 Element 10 – SSMP Program Audits

The City Public Works Director/City Engineer was responsible for the SSMP Program Audit completed on in 2020 and is responsible for assuring future SSMP Program Audits are conducted and completed prior to the May 2nd deadline, continuously on a two year interval following the May 2, 2020 date. When conducting the SSMP Program Audit, City Staff must evaluate the effectiveness of each element of the City's SSMP. A comprehensive, effective review of the City's SSMP must be documented in a SSMP Program Audit Report.

The SSMP Program Audit process is outlined in SSMP Element 10 – SSMP Program Audits. Upon the completion of the each SSMP Program Audit, the City should evaluate the revisions necessary to correct any deficiencies identified in the Audit Report.

9.3.11 Element 11 – Communication Program

The Public Works Director/City Engineer is responsible for the implementation of this SSMP Element, which is to be reviewed and revised annually. Revisions must include examples of public outreach articles, flyers and pertinent City of Buellton website addresses.

SSMP Implementation is planned to be tracked in the *SSMP Implementation Monitoring Tracking Table* found in **Appendix 9A**.

9.4 Preventative Maintenance Program Assessment [WDR D.13(ix)(b)]

The City's Preventative Maintenance Program includes CCTV inspection, cleaning, visual manhole inspection, and HMA identification and maintenance and has been successful at maintaining a low incidence of SSOs between 2012 and 2019 with four (4) SSOs occurring over this eight (8) year period. The City's goal for SSOs is to have less than three (3) in a calendar year. These trends have been tracked in prior versions of the City's SSMP and continue to be tracked and analyzed in **Table 9-2**.

The improvements the City is making to its Preventative Maintenance Program are described in SSMP Element 4 – Operation and Maintenance Program and above in Section 9.3.4: Element 4 – Operation and Maintenance Program.

9.5 SSMP Updates [WDR D.13(ix)(d)]

The intention of the City is to use the SSMP a management tool for the proper operation and maintenance of the wastewater collection and conveyance system. As the document is utilized, any deficiencies or discrepancies will be corrected. Program elements will be updated based on performance evaluations, organizational, operational, and maintenance changes, new regulatory requirements, and repairs, replacements, and upgrades made to the collection system.

The City will review and revise the SSMP annually. The Public Works Director/City Engineer is responsible for revising and maintaining the SSMP. A revision record will be maintained to track changes.

9.6 SSO Trends [WDR D.13(ix)(e)]

The trends in the City of Buellton's SSOs for 2012 through 2019 are identified in **Table 9-2**. The cause categories identified in Table 9-2 are the causes available for use in the SSO Report in California Integrated Water Quality System (CIWQS). City Staff is responsible for determining which cause category is appropriate for each SSO when the SSO is reported in CIWQS.

Table 9-2: Number of SSOs per Indicator per Year

Indicator		2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
No. of SSOs		1	1	0	1	0	0	1	0		**4**
Locations with Multiple SSOs		0	0	0	0	0	0	0	0		**0**
Volume (gal)	Volume	25	750	0	1.0	0	0	900	0		**1676**
	Volume Recovered	0	300	0	0	0	0	0	0		**300**
	Volume Reached Surface Water	0	0	0	0	0	0	0	0		**0**
Causes	Debris	0	0	0	0	0	0	0	0		**0**
	Debris – General	0	0	0	0	0	0	1	0		**1**
	Debris – Rags	1	0	0	0	0	0	0	0		**1**
	Flow Exceeded Capacity	0	0	0	0	0	0	0	0		**0**
	FOG	0	1	0	0	0	0	0	0		**1**
	Operator Error	0	0	0	0	0	0	0	0		**0**
	Other	0	0	0	0	0	0	0	0		**0**
	Pipe Structural Problem or Failure	0	0	0	0	0	0	0	0		**0**
	Pump Station Failure	0	0	0	0	0	0	0	0		**0**
	Rainfall Exceeded Design	0	0	0	0	0	0	0	0		**0**
	Root Intrusion	0	0	0	1	0	0	0	0		**1**
	Vandalism	0	0	0	0	0	0	0	0		**0**

Table 9-2 illustrates that the City of Buellton has been proactive in operating and maintaining the sewer collection system to prevent SSOs. This Table will be updated annually and monitored as an indicator of O&M Program progress.

APPENDIX 9A

SSMP Implementation Monitoring Tracking Table

City of Buellton - SSMP Element 9: Monitoring, Measurement, and Program Modifications

SSMP Implementation is required to be monitored and documented in accordance with the City's SSMP. The Table below will be used to track SSMP implementation on an annual basis. Comments and/or supporting documentation when appropriate will be attached to a working copy of this Table and filed at the City Public Works Office.

SSMP Implementation Monitoring Tracking Table 2020 (City SSMP Section 9.3)

Element	Required Action	Date of Completion	Comments and/or Supporting Documentation
#1 Goals (See 9.3.1)	Annual evaluation of goals and progress toward meeting each goal.		
#2 Organization (See 9.3.2)	Annual review of Organization and SSO Chain of Communication for accuracy and effectiveness.		
#3 Legal Authority (See 9.3.3)	Annual review of City Legal Authority to prevent SSOs.		
#4 Operation & Maintenance Program (See 9.3.4)	Annual evaluation of: Map/GIS Updates, Sewer Line Cleaning, CCTV Evaluations, Manhole Inspections, Development of CIP/R&R Plans, Staff Training and Effectiveness of O&M Procedures, Critical Parts and Equipment List.		

#5 Design & Performance Provisions (See 9.3.5)	Annual evaluation of standards, specifications, and testing procedures.		
#6 Overflow Emergency Response Plan (See 9.3.6)	Annual evaluation of OERP and supporting EOPs. Effectiveness of these programs and procedures if a SSO occurs.		
#7 FOG Control Program (See 9.3.7)	Annual evaluation of FOG Control Program and effectiveness.		
#8 System Evaluation & Capacity Assurance Plan (See 9.3.9)	Annual evaluation of necessary changes to CIP and Design Standards as a result of Capacity related studies.		
#9 Monitoring, Measurement, and Program Modifications (See 9.3.9)	Annual evaluation of; SSMP Revision Record, Table 9.2 *Number of SSOs per Year*, and SSMP Implementation Monitoring Table.		
#10 SSMP Program Audits (See 9.3.10)	Annual review of prior years' Audit report and implementation of recommendations.		

#11 Communication Plan (See 9.3.11)	Annual evaluation of implementation of tasks identified in SSMP Table 11-1 *Communication Program Overview.* Completion of Annual Report to City Council – *SSMP Annual Status Report*		

ELEMENT 10 – REVISION RECORD

The City of Buellton's SSMP Element 10 – Sewer System Management Plan Program Audits has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
1	12/12/13	Revisions based on biannual audit.	Wallace Group	City Council
2	5/28/15	SSMP 5 Year Update	Wallace Group	City Council
3	6/15/16	Revised Element to reflect future audit dates. Updated appendix with current supporting documentation.	Wallace Group	Rose Hess
-	6/1/2018	Revised to incorporate findings from May 2, 2018 SSMP Audit	Wallace Group	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 10 - SEWER SYSTEM MANAGEMENT PLAN PROGRAM AUDITS

SSMP Program Audits are required to identify and correct weaknesses in the most current revision of the City's SSMP and provide a schedule to correct identified deficiencies. This SSMP Element outlines the audit process and identifies City Staff responsible for conducting or participating in SSMP Program Audits and generating the required SSMP Program Audit Report.

10.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(x) requires:

> 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.

10.2 SSMP Program Audits [WDR D.13(x)]

The City Public Works Director/City Engineer or their designee is responsible for assuring the SSMP Program Audit is conducted and completed prior to the May 2, 2022 deadline and continuously on a two-year interval following this date. Audits should be conducted with the cooperation of the Public Works Director/City Engineer and Field Worker Staff. When conducting the SSMP Program Audit, City Staff must evaluate the effectiveness of each SSMP Element. A comprehensive, effective review of the City's SSMP must be documented in a SSMP Program Audit Report.

Subsequent SSMP Program Audits must be conducted continuously on a two-year interval following the May 2, 2022 deadline referred to above with the next SSMP Program Audit and SSMP Program Audit Report due on or before May 2, 2022.

To assist in the audit process, the City should consider quarterly or semiannual reviews and revisions to specific SSMP Elements and associated supporting documents. These reviews and revisions will help ensure current operational practices and procedures are reflected in the SSMP and documentation of these activities is readily available during an audit by the Regional Water Quality Control Board, State Water Resources Control Board, or United States Environmental Protection Agency.

10.2.1 Summary of SSMP Program Audit Procedure

The SSMP Program Audit is completed using the following steps:

1. Gather appropriate documents using the SSMP Data & Records Request, which is provided in **Appendix 10A**.

2. Evaluate the effectiveness of the City's SSMP and compliance with each WDR requirement using the ranking methodology outlined in **Table 10-1**.

Table 10-1: SSMP Audit Ranking Criteria

Ranking	Ranking Basis
In Compliance	All requirements specified in the element are met.
Substantial Compliance	The majority of requirements in the element are met.
Partial Compliance	Half of the requirements in the element are met.
Marginal Compliance	Less than half of the requirements in the element are met.
Out of Compliance	None of the requirements in the element are met.

3. Write the SSMP Program Audit Report and attach all documents reviewed and used as evidence of compliance with the WDR.

4. Create a plan and schedule for updates to the SSMP based on changes in operational strategies or deficiencies found in the SSMP.

5. The next SSMP Program Audit Report must be signed and certified by a person designated as described in WDR J.1(i) before May 2, 2022. WDR Section J states:

> All applications, reports, or information shall be signed and certified as follows:
>
> (i) All reports required by this Order and other information required by the State or Regional Water Board shall be signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or by a duly authorized representative of that person, as described in paragraph (ii) of this provision. (For purposes of electronic reporting, an electronic signature and accompanying certification, which is in compliance with the Online SSO database procedures, meet this certification requirement.)
>
> (ii) An individual is a duly authorized representative only if:
>
> (a) The authorization is made in writing by a person described in paragraph (i) of this provision; and
>
> (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.

The SSMP Program Audit Report must be certified using the language provided below:

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

6. Keep the SSMP Program Audit Report on file with the SSMP. The SSMP Program Audit Report must be available to regulators and the public upon request, and SSMP Program Audit Report must also be publicly available on the City's website as an Appendix to the City's SSMP. A link to the City's last SSMP Program Audit Report, which was completed in March 2020, is included in this SSMP in **Appendix 10B**.

APPENDIX 10A

SSMP Audit Data & Records Request

SSMP DATA & RECORDS REQUEST

A. SSMP ADMINISTRATIVE			YES	LOCATED WHERE?	NO	N/A	COMMENTS
A1	a.	Has your agency enrolled in the State-wide GWDR and designated the responsible or authorized representative (LRO)?					
	b.	Provide a copy of the SSMP Certification in CIWQS.					
	c.	Provide a copy of the CIWQS print-out for all LROs and Data Submitters.					
	d.	Provide a copy of your Operational Report from CIWQS.					
A2	a.	Has your agency adopted a SSMP?					
	b.	Provide a copy of the SSMP.					
	c.	Provide a copy of the Meeting Minutes for the agency governing body's meeting during which the SSMP was adopted.					
A3	a.	Does your agency have a copy of the GWDRs available to agency staff? Where is it kept?					

B. GOALS			YES	LOCATED WHERE?	NO	N/A	COMMENTS
B1	a.	Has your agency developed SSMP and SSO reduction goals?					
	b.	Provide documentation that your agency has made progress toward meeting these goals.					

SSMP DATA & RECORDS REQUEST							
C. ORGANIZATION			**YES**	**LOCATED WHERE?**	**NO**	**N/A**	**COMMENTS**
C1	a.	Does your SSMP clearly identify the names and job titles the LROs?					
C2	a.	Does your SSMP have an organizational chart or table showing individual roles and responsibilities for implementation of the SSMP?					
	b.	Are names, titles, and telephone numbers provided in this chart or table?					
C3	a.	Is the chain of communication for reporting SSOs included in the SSMP?					
	b.	Are names, titles, and telephone numbers provided in this chain of communication?					

SSMP DATA & RECORDS REQUEST							
D. LEGAL AUTHORITY			**YES**	**LOCATED WHERE?**	**NO**	**N/A**	**COMMENTS**
D1	a.	Provide the sanitary sewer system use ordinances, service agreements, or other legally binding procedures or documents, which demonstrates the agency's legal authority:					
	b.	Prohibit illicit discharges					
	c.	Require that sewers and connections be properly designed and constructed					
	d.	Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency					
	e.	Limit the discharge of fats, oils, and grease and other debris that may cause blockages					
	f.	Enforce any violation of its sewer ordinances					
E. OPERATIONS AND MAINTENANCE (O&M)			**YES**	**LOCATED WHERE?**	**NO**	**N/A**	**COMMENTS**
E1	a.	Provide the following documents:					
	b.	An updated map of the agency's sanitary sewer system and storm drain system.					
	c.	A schedule for maintenance and cleaning of the sanitary sewer system.					
	d.	Documentation for maintenance and cleaning of the sanitary sewer system.					

SSMP DATA & RECORDS REQUEST						
e.	Documentation for scheduled and conducted activities, such as work orders and/or reports and invoices from contractors.					
f.	The O&M contract if the agency's collection system is operated and maintained by a contract operations firm.					
g.	The agency's Rehabilitation and Replacement Plan					
h.	» Summary of the agency's CCTV program and schedule. Include samples of inspections and summary of findings.					
i.	» List of current and planned projects					
j.	» Time schedule for planned projects					
k.	» Schedule for developing the funds needed for rehabilitation and replacement projects					
l.	Standard Operating Procedures for Sewer System Operations and Maintenance activities.					
m.	Training records for staff operations and maintenance activities and contractor operations and maintenance activities.					
n.	» All applicable licenses and certifications required for agency or contract staff. Provide documents stating this requirement.					
o.	Assessment of O&M Staff "Core Competencies" (Skills, Knowledge and Abilities)					

SSMP DATA & RECORDS REQUEST

	E. OPERATIONS AND MAINTENANCE (O&M) [CONTINUED]	YES	LOCATED WHERE?	NO	N/A	COMMENTS
p.	Equipment and replacement part inventories, including identification of critical replacement parts.					
q.	» If critical replacement parts are not kept in stock, identify and provide method in which these parts are acquired when needed (List of emergency contractors and/or suppliers).					
r.	» If critical replacement parts are not kept in stock, provide applicable mutual aid agreements.					

	F. DESIGN & PERFORMANCE STANDARDS	YES	LOCATED WHERE?	NO	N/A	COMMENTS
F1 a.	Provide the following documents:					
b.	Design and construction standards and specifications for:					
c.	» the installation of new sanitary sewer systems					
d.	» pump stations and other appurtenances specific to the agency's collection and conveyance system					
e.	» the rehabilitation and repair of existing sanitary sewer systems					

	f.	Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances specific to the agency's collection and conveyance system and for rehabilitation and repair projects.					
G. OVERFLOW EMERGENCY RESPONSE PLAN			**YES**	**LOCATED WHERE?**	**NO**	**N/A**	**COMMENTS**
G1	a.	Provide the agency's Overflow Emergency Response Plan					
	b.	Notification procedures ensuring that the primary responders and regulatory agencies are informed of all SSOs in accordance with the Monitoring and Reporting Program, Order No. 2013-0058-EXEC.					
	c.	A program to ensure an appropriate response to all overflows.					
	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.					
	f.	Procedures to address spill volume estimation.					
	g.	A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States.					
	h.	A program to ensure that all reasonable steps are taken to 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.					

SSMP DATA & RECORDS REQUEST							
H. FOG CONTROL PROGRAM			**YES**	**LOCATED WHERE?**	**NO**	**N/A**	**COMMENTS**
H1	a.	Provide the agency's Fats, Oils, and Grease (FOG) Control Program.					
	b.	If applicable: justification for why the agency does not have a FOG Control Program, because one is not needed.					
	c.	Evidence of the agency's public education outreach program that promotes proper disposal of FOG.					
	d.	List of acceptable FOG disposal facilities.					
	e.	Ordinance demonstrating the agency's legal authority to prohibit FOG discharges to the system and inspect FOG producing facilities.					
	f.	Evidence of FOG Control Program inspection and enforcement activities.					
	g.	Documentation of hot spots in the collection system, which are caused by FOG.					
I. SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN			**YES**	**LOCATED WHERE?**	**NO**	**N/A**	**COMMENTS**
I1	a.	Provide the agency's System Evaluation and Capacity Assurance Plan (SECAP).					
	b.	Evaluation determining whether the SECAP is necessary.					

SSMP DATA & RECORDS REQUEST						
c.	The agency's 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.					
d.	Program for the evaluation of system hydraulic deficiencies.					
e.	Evidence of design criteria utilized to address hydraulic deficiencies.					
f.	Short- and long-term CIP schedule necessary to address hydraulic deficiencies. Sources of funding for these long and short term projects.					

SSMP DATA & RECORDS REQUEST							
J. MONITORING, MEASUREMENT & PROGRAM MODIFICATIONS			YES	LOCATED WHERE?	NO	N/A	COMMENTS
J1	a.	Provide the following documentation, which demonstrates the following:					
	b.	Prioritization of appropriate SSMP activities.					
	c.	Efforts to monitor implementation and measure the effectiveness of the SSMP.					
	d.	Assessment of the preventative maintenance program.					
	e.	Updates to program elements.					
	f.	Identification of SSO trends.					

SSMP DATA & RECORDS REQUEST						
	g.	Evidence of mandatory information required by the Monitoring and Reporting Program, Order No. 2013-0058-EXEC, such as the CIWQS SSO supporting documentation.					
K. SSMP PROGRAM AUDITS			**YES**	**LOCATED WHERE?**	**NO**	**N/A**	**COMMENTS**
K1	a.	Provide historical SSMP Program Audit Reports.					
L. COMMUNICATION PROGRAM			**YES**	**LOCATED WHERE?**	**NO**	**N/A**	**COMMENTS**
L1	a.	Provide the agency's Communication Program and evidence of its implementation.					

APPENDIX 10B

SSMP Audit Report – May 2020 link:

https://www.cityofbuellton.com/departments/public-works.php

City of Buellton
SSMP Audit
March 16, 2020

Prepared By:

WALLACE GROUP®

CERTIFICATION

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

_____

Rose Hess, P.E.

Public Works Director/City Engineer – City of Buellton

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SCOPE AND PURPOSE

The State Water Resources Control Board (SWRCB) Sanitary Sewer System Waste Discharge Requirements Order No. 2006-0003-DWQ as amended by WQ 2013-0058-EXEC (herein SSSWDR Orders) require the City of Buellton (City) to implement and maintain a Sewer System Management Plan (SSMP).

The City has contracted with Wallace Group to Audit the current SSMP in order to evaluate the effectiveness of the SSMP and its implementation. The City SSMP is required to be audited every two (2) years.

The SSMP Audit measures compliance with section D.13 of the SSSWDR Orders and the effectiveness of the City's implementation of the current certified SSMP; Revision 3 dated June 15, 2018.

1.0	[SSSWDR, Section D.13.i]:	Goals
2.0	[SSSWDR, Section D.13.ii]:	Organization
3.0	[SSSWDR, Section D.13.iii]:	Legal Authority
4.0	[SSSWDR, Section D.13.iv]:	Operation and Maintenance Program
5.0	[SSSWDR, Section D.13.v]:	Design and Performance Provisions
6.0	[SSSWDR, Section D.13.vi]:	Overflow Emergency Response Plan
7.0	[SSSWDR, Section D.13.vii]:	Fats, Oils, and Grease Control Program
8.0	[SSSWDR, Section D.13.viii]:	System Evaluation and Capacity Assurance Plan
9.0	[SSSWDR, Section D.13.ix]:	Monitoring, Measurement, and Program Modifications
10.0	[SSSWDR, Section D.13.x]:	Sewer System Management Plan Program Audits
11.0	[SSSWDR, Section D.13.xi]:	Communication Program

AUDIT FORMAT

This SSMP Audit separately evaluates each SSMP Section using the following format:

- Applicable SSSWDR Section
- Audit Finding
- Ranking
- Reference Information
- Deficiencies
- Recommended steps and schedule to correct Deficiencies

The ranking criteria utilized in the Audit are provided in Table 1 below:

Table 1: SSMP Audit Ranking Criteria

Ranking	Ranking Basis
In Compliance	All requirements specified in the section are met.
Substantial Compliance	The majority of requirements in the section are met.
Partial Compliance	Half of the requirements in the section are met
Marginal Compliance	Less than half of the requirements in the section are met.
Out of Compliance	None of the requirements in the section are met.

SSMP AUDIT PARTICIPANTS AND SCHEDULE

This SSMP Audit assesses the effectiveness of the City's SSMP Revision 3, dated June 2018, and compliance with the SSSWDR Section D.13 requirements. The purpose of the Audit is to recognize accomplishments, identify deficiencies, and recommend corrective actions with a schedule to complete those actions. The Audit was conducted by the following Wallace Group Staff:

- Bill Callahan
  Senior Environmental Compliance Specialist - Wallace Group

Buellton Staff participating in the SSMP Audit were:

- Rose Hess
  Public Works Director/City Engineer – City of Buellton

The SSMP Audit was conducted Between January and March of 2020, the following table summarizes key dates and locations:

Table 2: City of Buellton 2018 SSMP, Revision 3 Audit Key Dates

Date	Location	Topic	Staff
January 6, 2020	City Office	SSMP Audit Kick Off SSMP Data and Records Request reviewed and records gathered.	Rose Hess and Bill Callahan.
March 16, 2020	City Office and Wallace Group Office	2020 SSMP Audit Draft Report Review and Final Report	Rose Hess, Bill Callahan

CITY 2020 SSMP AUDIT RESULTS

The City has made substantial progress in the development and implementation of their SSMP from Revision 0 of the SSMP certified in March 2010 to the current SSMP, Rev. 3 dated June 2018.
Maps, procedures, and forms continue to improve, and training is occurring more frequently. City Public Works staff working more effectively and efficiently to document what you do which has resulted in short- and long-term improvements to the level of service the City provides.

This audit concludes that six (6) sections are in compliance and three (3) sections are in substantial compliance and two (2) sections that are in partial compliance with the SSSWDR Orders. The City has been substantially compliant in the implementation of the SSMP. A summary of the results is presented in Table 3 below:

Table 3: City of Buellton 2018 SSMP, Revision 3 – 2020 Audit Results

SSSWDR Section D.13	SSMP Compliance with Required Subsection	City Effectiveness in the Implementation of SSMP Subsections	Schedule
1.0 Goals [SSSWDR D.13(i)]	**In Compliance**	The City provides five (5) goals which inform management of the City sewer system and its SSMP implementation.	Review Goals and determine if these need to be updated in the next 5-Year Update.
2.0 Organization [SSSWDR D.13(ii)]	**Partial Compliance**	The City names the City Manager, Marc Bierdizinski as a Legally Responsible Official (LRO) and John Sanchez as Data Submitter. Both of these persons are no longer employed with the City and should show a "separation date" in CIWQS. Rose Hess is correctly named as an LRO.	An update of the City Organization Chart was completed during the audit and should be included in the 5-Year Update.
3.0 Legal Authority [SSSWDR D.13(iii)]	**In Compliance**	The City Municipal Code currently contains the required legal authorities to manage discharges to the Public Sewers.	N/A

SSSWDR Section D.13	SSMP Compliance with Required Subsection	City Effectiveness in the Implementation of SSMP Subsections	Schedule
4.0 Operation and Maintenance Program [SSSWDR D.13(iv)]	**Substantial Compliance**	City completed cleaning in the majority of system sewer lines and completed the scheduled manhole inspections, and CCTV inspections between FY 2017/18 and FY 2019/20. A Rehabilitation and Replacement Plan should be developed from these inspections. The Operations Cost and Rate Analysis was completed at the end of 2016, presented to City Council, who adopted and implemented a sewer rate increase to support sewer operations and CIP.	The City needs to develop a formal Rehabilitation and Replacement Plan based on the CCTV results in the next 5-Year Update.
5.0 Design and Performance Provisions [SSSWDR D.13(v)]	**In Compliance**	The City has named and attached a set of Public Works Standard Details. The City follows Inspection and Testing Procedures in the current version of the Greenbook.	N/A
6.0 Overflow Emergency Response Plan [SSSWDR D.13(vi)]	**In Compliance**	Update Emergency Operating Procedures to reflect new staff and associated responsibilities. City SSO response and documentation appears to be adequate to meet MRP requirements.	Include new information in 5-Year Update.
7.0 Fats, Oils and Grease (FOG) Control Program [SSSWDR D.13(vii)]	**In Compliance**	City maintains an effective FOG Control Program.	Include new information in 5-Year Update.

SSSWDR Section D.13	SSMP Compliance with Required Subsection	City Effectiveness in the Implementation of SSMP Subsections	Schedule
8.0 System Evaluation and Capacity Assurance Plan (SECAP) [SSSWDR D.13(viii)]	**Substantial Compliance**	The City was substantially effective in in implementing this requirement. The 2006 City Sewer Hydraulic Capacity Study Update was postponed due to budgetary constraints and is scheduled for completion in FY 2019/20.	Include the results of the Sewer Capacity Update in SSMP Rev. 4 when completed.
9.0 Monitoring, Measurement, and Program Modifications [SSSWDR D.13(ix)]	**Partial Compliance**	The City should schedule a PW Department annual review of the effectiveness of each SSMP section and the effectiveness of the City's Preventative Maintenance Program and update the SSMP.	Next 5-Year Update
10.0 SSMP Program Audits [SSSWDR D.13(x)]	**In Compliance**	The City is completing its biennial audits. This audit was completed prior to the May 2, 2020 deadline.	May 2, 2020
11.0 Communication Program [SSSWDR D.13(xi)]	**Substantial Compliance**	The City has committed to formally updating the City Council annually on the status of the SSMP. He last formal update was presented to City Council in 2018. Identify new information in this element of the SSMP for communication on SSMP related items/issues in the next 5-Year Update.	Next 5-Year Update

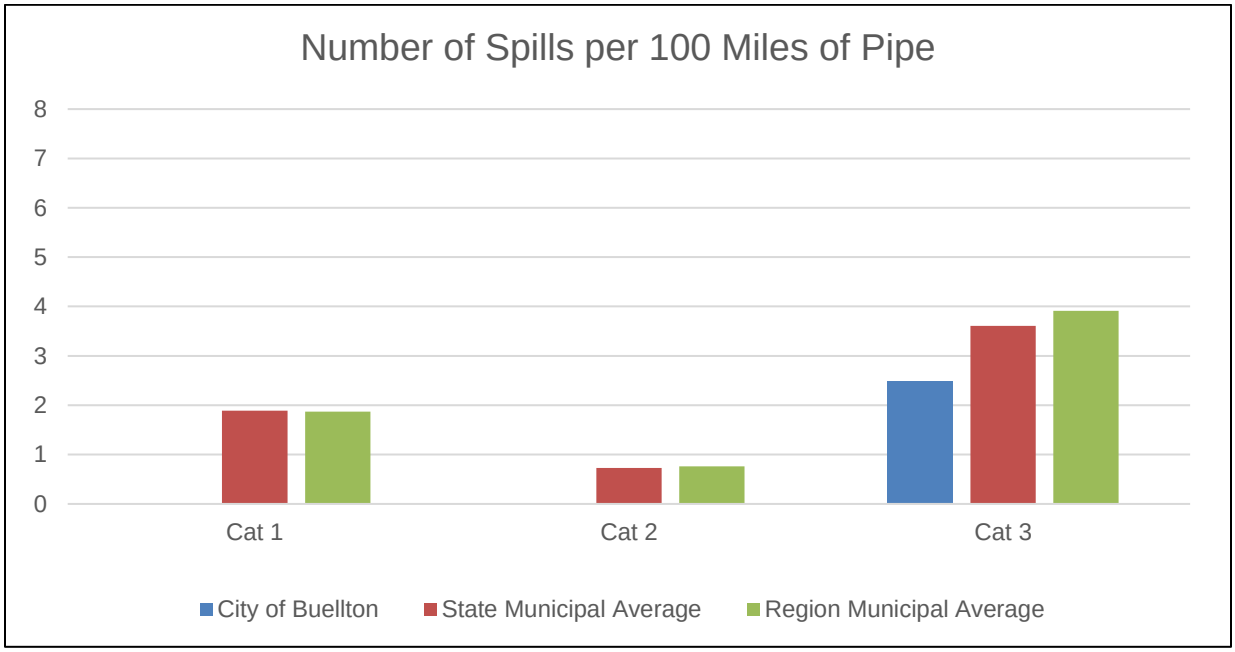
The following sections of this report describe the minor deficiencies above and address future additions and updates the City is required to make to its SSMP. The above list of updates is a summary and is not intended to replace the detail contained in the SSMP Audit Report.

It should be noted that the City is doing a good job with their Sewer System Overflow (SSO) reduction efforts for the number of SSOs when compared to State and Regional municipalities. The table below shows the City has zero SSOs for Category 1 and Category 2 and is below the State and Regional average for Category 3 SSOs:

Comparison to Municipal Agencies 2012 - 2019

Spill Rate: Number of Spills per 100 miles of Pipe per Year			
	Category 1	**Category 2**	**Category 3**
City of Buellton	0	0	2.49
State Municipal Average	1.89	0.73	3.61
Region Municipal Average	1.87	0.76	3.91

Category 1 = Spills of any volume that reach surface water.
Category 2 = Spills greater than or equal to 1,000 gallons that do not reach surface water.
Category 3 = Spills less than 1,000 gallons that do not reach surface water.

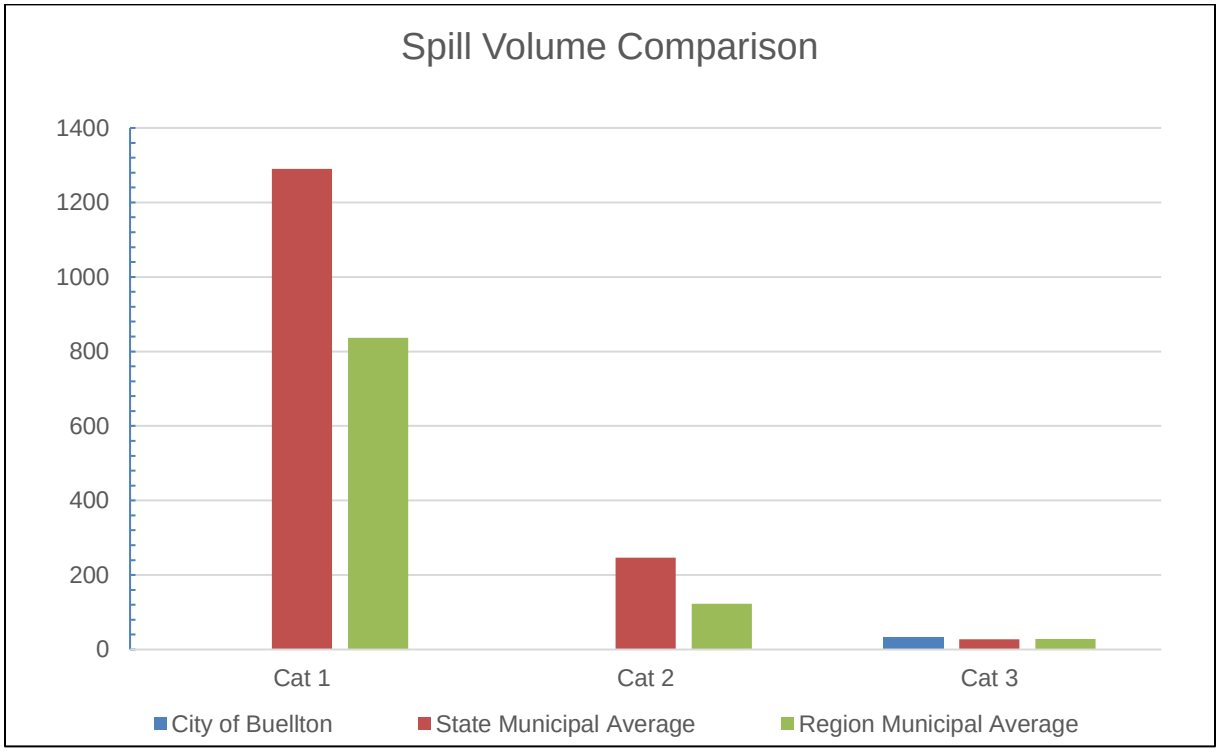


The City is also doing well in the Category 1 and Category 2 SSO classifications for SSO volumes when compared to State and Regional statistics. There is room for improvement regarding Category 3 SSOs as the City's SSO volumes are higher than State and Regional averages.

Comparison to Municipal Agencies 2012 - 2019

Net Volume of Spills in gallons per Capita per Year *Net Volume (volume spilled minus volume recovered) of SSOs, for which the reporting Enrollee is responsible, per capita (i.e. the population served by your agency's sanitary sewer system), per year.*			
	Category 1	**Category 2**	**Category 3**
City of Buellton	0	0	32.5
State Municipal Average	1289.98	246.85	27.76
Region Municipal Average	836.57	122.66	28.73

Category 1 = Spills of any volume that reach surface water.
Category 2 = Spills greater than or equal to 1,000 gallons that do not reach surface water.
Category 3 = Spills less than 1,000 gallons that do not reach surface water.


Spill Volume Comparison
1400
1200
1000
800
600
400
200
0
Cat 1
Cat 2
Cat 3
City of Buellton
State Municipal Average
Region Municipal Average

1.0 Goal [SSSWDR D.13(i)]

SSSWDR D.13 (i) states:

> *The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.*

Section D.13 (i): The City of Buellton (City) SSMP, Revision 3 dated June 15, 2016 includes five (5) goals as listed below.

1. Be available and responsive to the needs of the public, and work cooperatively with local, state, and federal agencies to reduce, mitigate, and properly report SSOs.

2. Maintain documentation and update each SSMP Element, which contains schedules and plans to complete operations and maintenance tasks, engineering studies, and SSO monitoring, reporting and record keeping requirements, on an annual basis.

3. Maintain the number of SSOs to less than three (3) in a calendar year.

4. Have zero (0) capacity related SSOs except those caused by storm events exceeding the design storm for that section of the collection system.

5. Have no more than one (1) SSO repeated within one (1) year from the same sewer line segment, manhole, or lift station.

Element 1 Sufficiency: In Compliance

Reference: City SSMP, Revision 3 June 2018 Page 1-1. The City has maintained a low level of SSOs over this two-year Audit period. There were zero (0) capacity related SOs, and no SSOs occurring in the same location. The City exceeded its goal for SSO reduction as there has only been one (1) SSO in the past two (2) years.

Deficiencies: None.

Recommendation: None.

2.0 Organization [SSSWDR D.13(ii)]

SSSWDR D.13(ii) states:

The SSMP must identify:

> *(a). The name of the responsible or authorized representative as described in Section J of this Order;*
>
> *(b). The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through 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).*

Section D.13 (ii)(a): Rose Hess and Marc Bierdzinski are the named LROs. John Sanchez is the named Data Submitter in CIWQS. Mr. Bierdzinski and Mr. Sanchez are no longer employed with the City and should be removed from CIWQS.

The section above is in partial compliance with the above requirement.

Section D.13(ii)(b): The names and telephone numbers of City staff and Contractors holding the following positions are included on Page 2-2 to 2-7 of the 2018 SSMP, Rev. 3:

- City Manager
- Public Works Director/City Engineer
- Deputy and Assistant City Engineers
- City Field Workers
- Code Enforcement/Finance Technician
- Revenue Specialist
- Environmental Compliance Specialist

Table 2-2 entitled “Staff and Contract SSMP Responsibilities and Contact Information” describes which position is responsible for each SSMP Element. This information needs to be updated to reflect current staff roles and responsibilities for new staff.

The section above is in partial compliance with the above requirement.

Section D.13(ii)(c): A chain of communication for reporting sanitary sewer overflows (SSOs) is provided on Pages 2-5 to 2-7. Figure 2-1, SSO Response Chain of Communication provides a flowchart of how the SSO chain of communication works. The chain of communication presented is up to date in that it references that an estimated SSO volume of greater than 1,000

to a storm drain or waterway of greater than 1,000 gallons is required to be reported within two (2) hours of becoming aware of the SSO to the California Office of Emergency Services (Cal OES). This table should be updated to identify the new City Managers name and contact information.

The section above is in substantial compliance with the above requirement.

Element 2 Sufficiency: Partial Compliance

Reference:

- City SSMP, Revision 3, June 2018, Pages 2-1 to 2-7.
- CIWQS Facility At-A-Glance Report (January 6, 2020)

Deficiencies: Marc Biredzinski and John Sanchez should be removed as LRO and Data Submitters in CIWQS. Marc Biredzinski should be removed from SSMP as LRO. If there is another staff member with these responsibilities, they should be included in the next SSMP Update. Other positions throughout this element require updating to reflect current staff roles and responsibilities.

Recommendation: Appendix 2A, City Council Members should include new terms and Appendix 2B, City Organization Chart to include new City staff. LRO and Data Submitter data should be updated in CIWQS. All other City staff roles and responsibilities should be updated to reflect new staffing over the past year.

3.0 Legal Authority [SSSWDR D.13(iii)]

SSSWDR D.13(iii) states:

Each Enrollee must demonstrate, through sanitary system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

(a). Prevent illicit discharges into its sanitary sewer system (examples include I/I, storm water, 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.

This section was reviewed against the following sections of the City of Buellton Municipal Code which are included in the City 2016 SSMP Revision 3 in Appendices 3A – 3M:

- City Municipal Code:
    - Title 14 Sewer Code

Section D.13(iii)(a): Illicit discharges such as storm water, debris, chemicals, waste, concrete, debris that obstruct, etc. are addressed in the following sections of City Municipal Code and outlined in Table 3-1, Page 3-1 in the City SSMP:

- City Municipal Code Referenced in SSMP:
    - Section 14.08.020
    - Section 14.24.010
    - Section 14.24.030

The section above is in compliance with the above requirement.

Section D.13(iii)(b): Proper design and construction of private connections are addressed in the following City Municipal Code Sections:

- City Municipal Code Sections Referenced in SSMP:
    - Section 14.16.010 – 14.16.100
    - Section 14.20.010 – 14.20.100

The section above is in compliance with the above requirement.

Section D.13(iii)(c): City currently does not own and therefore does not require access to maintain or repair any portion of a Lateral Sewer, House Sewer or House Drain.

City ensures access for inspection for portions of the lateral owned or maintained by a "Person" in:

- City Municipal Code Section Referenced in SSMP:
    - Section 14.52.020: Powers and Authorities of Inspectors.

The section above is in compliance with the above requirement.

Section D.13(iii)(d): City has the authority to limit the discharge of FOG and other debris that may cause blockages into the system in the sections of code specified below:

- City Municipal Code Section Referenced in SSMP:
    - Section 14.24.030 – 14.24.050

The section above is in compliance with the above requirement. See recommendations section below.

Section D.13(iii)(e): City has the authority to enforce any violation of its sewer ordinances in the sections of the Ordinances specified below:

- City Municipal Code Sections Referenced in SSMP:
    - Section 14.08.015 – 14.08.016
    - Section 14.24.100
    - Section 14.52.020
    - Section 14.72.010 – 14.72.090
    - Section 14.76.020 – 14.76.030

The section above is in compliance with the above requirement.

Element 3.0 Sufficiency: In Compliance

Reference: City SSMP, Revision 3 June 2018 Pages 3-1 to 3-3.

Deficiencies: None.

Recommendation: None.

4.0 Operation and Maintenance Program [SSSWDR D.13(iv)]

SSSWDR D.13(iv) states:

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

(a). Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities;

(b). Describe routine preventive and 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 Preventative Maintenance (PM) Program should have a system to document scheduled and conducted activities, such as work orders;

(c). Develop a rehabilitation and replacement plan to identity 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 condition 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- and long-term plans plus a schedule for developing the funds needed to the capital improvement plan;

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

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

Section D.13(iv)(a): All sewer assets and appurtenances are identified in the City's Sewer Atlas Map referenced in the SSMP, Rev. 3. Two separate map atlases are maintained by the City identifying sewer assets and storm water conveyance facilities that could be impacted by a SSO. Examples of the maps are included in this section of the SSMP in Figures 4-1, 4-2, and 4-3. Sewer Atlas information is integrated into GIS by MNS Engineering. The City's GIS mapping system is operational as of 2016.

The section above is in compliance with the above requirements. See recommendations section below.

Section D.13(iv)(b): The 2018 SSMP, Rev. 3 summarizes goals and Routine Preventative Operation and Maintenance (O&M) activities in this section. O&M relating to sewer line cleaning, and routine inspection performed by Buellton City staff is documented on the City's Sewer Line Cleaning and Routine Manhole Inspection Log.

The City issued an RFP for sewer line cleaning in May 2015 and hired Mainline Utility Company in July 2015 to clean approximately 1/3 of the collection and conveyance system. Cleaning and CCTV was completed in FY2015/16, FY2016/17, and FY2017/18. As a result of these three cleaning contracts, there were areas that required additional cleaning to facilitate CCTV investigations at various locations within the system. This additional cleaning and associated CCTV was completed in 2018/19.

Quarterly maintenance for two (2) City Lift Stations continues to be contracted to Fluid Resource Management (FRM) and documented in written reports. FRM provides additional emergency response for unscheduled maintenance at each of these Lift Stations.

City Staff inspects each Lift Station at a bi-weekly. Information recorded includes:

- Pump Run Time (hours)
- If Pumps were Tested in Hand and Auto
- Test Controls (floats)
- Seal Failure Light Check
- Test Alarms: Auto Dialer/Alarm
- Test Emergency Power Supply

If minor repairs are necessary based on these observations, staff completes them and logs these activities on the City Lift Station Log.

Sewer line cleaning and inspection activities, which are now limited to the City High Maintenance Areas (HMA), are recorded on a City Sewer Line Cleaning and Routine Manhole Inspection Log. The SSMP states on page 4-7 in Section 4.3.2 that inspection of HMAs occurs weekly, however the City Sewer Line Cleaning and Routine Manhole Inspection Form shows that HMAs are now inspected monthly. The form calls for the following information which is frequently missing:

- Date in Year/Month/Day
- Sewer Line Size and Material
- Footage
- Observed Sewer Line Conditions.

The SSMP requires updating to document the change in sewer line cleaning and lift station inspection frequency.

The results of all future sewer line cleaning and manhole inspections should be tracked and included in the SSMP on a semi-annual basis. This summary should include flow conditions, cleaning activities and their effectiveness, and the physical condition of each manhole. A summary of; visual and CCTV investigations, sewer line cleaning, and manhole inspection

records should be included in the SSMP to assist in the development of future rehabilitation and replacement projects within the collection system.

The section above is in substantial compliance with the above requirements. See recommendations section below.

Section D.13(iv)(c): The City SSMP states that future rehabilitation and replacement efforts will be contingent on the completion of three tasks; updates to the 2006 Citywide Sewer Study (CSS) scheduled for completion in fiscal year 2019/20, completion of contracted CCTV, Sewer Line Cleaning, Manhole Inspection project, and implementation of an Operations Cost and Rate Analysis in 2016. The current status of these tasks is as follows:

- CCTV/Sewer Line Cleaning & Manhole Inspection project started in 2015 with 1/3 of the system cleaned and inspected and was completed as scheduled in early 2018.
- Additional cleaning and CCTV investigations were completed in 2018/19
- An analysis, summary and rehabilitation plan based on the CCTV investigations is planned for completion in March 2020.
- The City is in the process of completing updates to the CSS (Sewer Collection System Master Plan Update) planned for completion in FY 2019/20.
- The Operations Cost and Rate Analysis was completed in the fall of 2016 and water and sewer rates were raised under City Council Resolution No. 16-19 at that time.

Results of these projects and studies need to be integrated into the City's SSMP.

The section above is in substantial compliance with the above requirements. See recommendations section below.

Section D.13(iv)(d): The June 2016 SSMP contains a list of classes and schedule for City Staff training.

The City has minimum requirements for each job description in the Utilities Department. This helps to ensure a basic understanding of the tasks required for each position. These job descriptions are found in Appendix 4I of the City's SSMP.

Documentation of Operations and Maintenance training and SSMP related training described on page 4-10 of the City SSMP was provided and occurred in July of 2016 and January 2018.

The section above is in compliance with the above requirements. See recommendations section below.

Section D.13(iv)(e): A list of collection system critical parts and equipment and a list of vendors for items and equipment not kept in stock was reviewed during this audit.

The section above is in compliance with the above requirements. See recommendations section below.

Sufficiency: Substantial Compliance

Reference: City SSMP Rev 3: June 2018 – Element 4 & Appendices, 2018-2019 Sewer Line Cleaning and Routine Manhole Inspection Logs, 2018-2019 Lift Station Logs, City Public Works Director correspondence regarding status of sewer line cleaning, CCTV, CSS and Rate Study, 2018 CCTV Reports.

Deficiencies:

This Section of the SSMP needs to be updated with the revised HMA list, inspection schedule and bi-weekly lift station inspection schedule.

Appendices need to be updated with the following:

- Example reports and a summary of contracted sewer line cleaning, CCTV, and manhole inspection results as they occur over the course of this and future Fiscal Years.
- A schedule and description of a Rehabilitation and Replacement (R&R) plan based on CCTV sewer line condition assessments and manhole inspection data completion.
- Add links to City FY Operating Budgets.
- Add pertinent information from FMP Update when complete.

Recommendation: Update the SSMP by the May 2020.

5.0 Design and Performance Provisions [SSSWDR D.13(v)]

SSSWDR D.13(v) requires:

(a). 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; and

(b). Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

Section D.13(v)(a): The City states in the June 2016 SSMP that it utilizes:

1. City of Buellton Department of Public Works Standard Details which is included in Appendix B of the SSMP
2. Greenbook: Standard Specifications for Public Works Construction
3. State of California Department of Health Services Guidance Memo No. 2003-02: Guidance for the Separation of Water Mains and Non-potable Pipelines.

Design and construction provisions for buildings and public sewers are incorporated into the City Municipal Code chapters 14.16 and 14.20. Appropriate sections are referenced in Table 5-1: Design and Performance Provisions.

The section above is in compliance with the above requirements.

Section D.13(v)(b): Procedures and standards for the acceptance testing and inspection of new and repaired sewer main and appurtenances are per the current version of the Greenbook Standard Specifications for Public Works Construction as specified on page 5-3 in the SSMP.

The section above is in compliance with the above requirements.

Element 5.0 Sufficiency: In Compliance

Reference: City SSMP, Revision 3 June 2018, Pages 5-1 to 5-3.

Deficiencies: None.

Recommendation: None.

6.0 Overflow Emergency Response Plan [SSSWDR D.13(vi)]

SSSWDR D.13(vi) states:

Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, the 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 WDRs or NPDES permit requirements. The SSMP identifies the officials who will receive immediate notification;

(d). Procedures to ensure that appropriate staff and contract 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 and prevent the discharge of untreated or partially treated 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.

Section D.13 (vi): The City SSMP gives a summary of the current program and SSO notification process that is in place. The City has a complete Overflow Emergency Response Program which includes individual Emergency Operating Procedures. These procedures which were adopted on May 28, 2015 are discussed below. These procedures are located in Appendix 6A of the City's SSMP.

Section D.13 (vi)(a): The City's SSMP provides a thorough overview of notification procedures to ensure primary responders and regulatory agencies are informed of a SSO in a timely manner. This information is located on pages 6-1 through 6-10 of the SSMP.

Section D.13 (vi)(b): A program and associated organizational flow chart or summary showing key positions and their responsibility to ensure appropriate response to all overflows is contained in the OERP section of the SSMP on pages 6-5 through 6-6.

Section D.13 (vi)(c): Procedures to ensure prompt notification to appropriate regulatory

agencies and other potentially affected entities were reviewed during this audit. The Listed procedures are as follows:

- SS-EOP-02: SSO Notification
- SS-EOP-03: SSO Reporting

Section D.13 (vi)(d): Procedures to ensure appropriate staff and contractor personnel are aware of, follow, and are trained on the OERP were reviewed during the audit. The Listed procedures are as follows:

- SS-EOP-01: Overflow Emergency Response Plan
- SS-EOP-10: SSO Training Requirements

Evidence of training for SSO related emergency response was provided from for 2020 during the audit.

Section D.13 (vi)(e): Procedures to address emergency operations, such as emergency traffic and crowd control, surface water quality monitoring, and other necessary response activities were reviewed during the audit. The listed procedures are as follows:

- SS-EOP-04: SSO Traffic and Crowd Control
- SS-EOP-05: SSO Volume Estimation
- SS-EOP-06: SSO Mitigation and Cleanup
- SS-EOP-07: Water Quality Monitoring
- SS-EOP-08: Surface Water Closure
- SS-EOP-09: SSO Response Documentation and Records

The sections above are in compliance with the above requirements.

Element 6.0 Sufficiency: In Compliance

Reference: City June 2018, SSMP Revision 3, EOPs for Emergency Response to SSOs.

Deficiencies: None.

Recommendation: Continue to schedule and complete EOP training each FY. Update Emergency Operating Procedures to include new staff and associated emergency response procedures.

7.0 Fats, Oils, and Grease Control Program [SSSWDR D.13(vii)]

SSSWDR D.13(vii) states:

> *Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan 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 system 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) and the development of design standards for such 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 establishment of 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 section identified in (f) above.*

After the issuance of the SSS WDR in 2006, the City determined that FOG is an on-going problem in the sewer collection system and a FOG Program was needed. There are over Fifty (50) Food Service Establishments in its service area and the City initiated a FOG Control Program in 2008.

In this Audit, the FOG Plan presented in the SSMP Revision 3 was evaluated against the Section D.13(vii) requirements above. The effectiveness of the FOG Program was evaluated at the end of this section.

Section D.13(vii)(a): The June 2018 City SSMP Revision 3, page 7-2, presents a plan in this section to conduct outreach to business and the residents of the City. The City has a Semi-annual Commercial FOG Inspection Program in which outreach and education measures are implemented. A residential outreach program is conducted through the City's newspaper: *The Buellton Buzz* and FOG control was discussed in the August 2018 edition.

The section above is in compliance with the above requirement. See recommendations below.

Section D.13(vii)(b): The City SSMP Revision 3, page 7-2 and 7-3, states that information is available to Food Service Establishments (FSEs) on how to dispose of FOG generated within the City's service area through the City's FOG Control Inspection Program.

Appendix 7B to the June 2018 City SSMP Revision 3 contains a list of recommended FOG waste haulers.

The section above is in compliance with the above requirement.

Section D.13(vii)(c): The legal authorities to prohibit discharges to the collection system and identify measures to prevent FOG-caused SSOs are located in Chapter 14.24 of the City Municipal Code.

The section above is in compliance with the above requirement.

Section D.13(vii)(d): The City has developed and implemented a FOG permit application, cleaning log, Best Management Practice Manual, etc. which is referred to in SSMP Revision 3, Section 7.2. Grease Control Device Design, Installation, and Maintenance Requirements can be found in the City's Municipal Code Chapter 12.14.040 and 21.14.050.

The section above is in compliance with the above requirement.

Section D.13(vii)(e): The City Municipal Code Sections 14.52, 14.64, 14.72, and 14.76 give the City the authority to inspect and enforce violations of its FOG Program. The City SSMP Revision 3 on page 7-4 states that contracted staff performs inspections and enforces the City's FOG program and requirements.

The section above is in compliance with the above requirement.

Section D.13(vii)(f): The City SSMP Revision 3 states on Page 7-6 that it has identified sections of the collection system, which are subject to grease blockages and has established an inspection/cleaning maintenance schedule for these high maintenance areas (HMAs). The map associated for these HMAs is found in Element 4 Operations and Maintenance: Figure 4-4.

The section above is in compliance with the above requirement.

Section D.13(vii)(g): The City SSMP Revision 3 provides information regarding the development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each FOG induced HMA. These HMAs are addressed through, routine inspection and cleaning, public outreach and education, and the commercial FOG Control Program.

The section above is in compliance with the above requirement.

FOG Program Effectiveness: The City is experiencing a moderate rate of Class III SSOs (2.49 SSOs per 100 miles of collection system per year) than the State average (3.61 SSOs per 100 miles of collection system per year) and Regional Average (3.91 SSOs per 100 miles of collection system per year). Of the four (4) SSOs that occurred in the last seven (7) years, one was caused by FOG. Based on these comparisons, the City's FOG Control Program appears to be effective.

Sufficiency: In Compliance

Reference:

- SSMP Revision 3, June 2018, p. 7-1 through 7-6 and Appendix 7A -7E
- City Municipal Code Chapter: 14.24, 14.52, 14.64, 14.72, 14.76
- 2019 Inspection Reports
- 2019 FOG Permits
- CIWQS City Operation Report History dated January 6, 2019.

Deficiencies: None

Recommendation: None

8.0 System Evaluation and Capacity Assurance Plan [SSSWDR D.13(viii)]

SSSWDR D.13(viii) states:

> *The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system sections for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:*
>
> *(a). Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to a SSO discharge 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;*
> *(b). Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and*
> *(c). 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.*
> *(d). Schedule: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D.14.*

Section D.13(viii)(a-d): The June 2018 SSMP Rev. 03 continues to refer to the 2006 Citywide Sewer Study (CSS) that evaluated hydraulic conditions of the City sewer system. While the 2006 Study does meet portions of the requirements in this section, it does not provide an analysis of wet weather flows or conditions associated with new development since 2006.

The City currently plans to update the 2006 CSS Study with a Sewer Collection System Master Plan (SCSMP) during fiscal year 2019/2020.

The section above is in substantial compliance with the above requirements. See recommendations below.

Sufficiency: Substantial Compliance

Reference: City June 2018 SSMP Rev 3, Page 8-1 to 8.3.

Deficiencies: Update the June 2018 SSMP to reflect a new due date of FY 2019/20 on Page 8-2 to update the 2006 CSS Study.

Recommendation: Update the SSMP as described above and include information on capacity deficient portions of the system with a plan, schedule and budget to address deficient areas of the system.

9.0 Monitoring, Measurement, and Program Modifications [SSSWDR D.13(ix)]

SSSWDR D.13(ix) states:

The Enrollee shall:

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

Section D.13(ix)(a): The City maintains relevant information necessary to establish and prioritized SSMP activities in the SSMP and maintains records associated with O&M activities, such as sewer cleaning records and manhole inspection records.

The section above is in compliance with the above requirement.

Section D.13(ix)(b) and (c): The City committed to presenting a staff report from the Public Works Department to the City Council annually in February. There was no evidence of this reporting taking place in February 2018 or February 2019 at the time of the audit.

The section above is out of compliance with the above requirement.

Section D.13 (ix)(d): The City SSMP is in its third revision to the SSMP and completed the 5-Year update as required. Revisions were based on the biennial audits which were completed in 2016, and 2018. The implementation and Monitoring Tracking Table included in Appendix 9A was not completed over the past two years as committed to in the current version of the SSMP.

The section above is in partial with the above requirement.

Section D.13(ix)(e): The City June 2018, Rev 3 SSMP tracks the frequency, location, cause, and volume of SSOs in Table 9-2. SSO Trends are also summarized in Table 9-3 this section.

The section above is in compliance with the above requirement.

Sufficiency: Partial Compliance

Reference: City SSMP June 2018 Revision 3, Page 9-1 to 9-8 & Appendix 9A.

Deficiencies: The City partially met the requirement to formally evaluate the implementation or effectiveness of each SSMP Section.

Recommendation: Deliver updates to the City Council each February on the status of the SSMP and utilize templates provided in SSMP to evaluate SSMP performance.

10.0 Sewer System Management Plan Program Audit [SSSWDR D.13(x)]

SSSWDR D.13(x) states:

> *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.*

Sufficiency: In Compliance

Reference: City SSMP June 2018 Revision 3, Page 10-1 to 10-3 & Appendix 10A and 10B.

Deficiencies: None. The City scheduled and conducted this Audit on or before the due date of May 2, 2020.

Recommendation: Schedule future SSMP Audits prior to May 2nd of 2022, 2024, 2026, continuing on a biannual basis.

11.0 Communication Program [SSSWDR D.13(xi)]

SSSWDR D.13(i) states:

> *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 communications with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.*

Section D.13 (xi): The City SSMP Revision 3 adopted on June 2018; it needs to be uploaded to the City website for public review: www.cityofbuellton.com.

The City discusses multiple sources used to communicate with stakeholders on the programs and associated contents of the SSMP. The following table outlines the Communication Program overview since the last SSMP Audit in May 2018:

Activity	Frequency	Stakeholders
City Website	Year-round	All
FOG Control Program	Twice a Year	FSEs
Buellton Buzz	Every other Month	Residential
Santa Ynez Valley News	Quarterly	All
Buellton BBQ Bonanza	Annually	All
Household Hazardous and Solid Waste	Quarterly	All
Facebook	Year-round	All
Pretreatment Program	Annually	Industrial Users
City Council Meetings	Annually	All
Public Works Office	Year-round	All

A sample of Communication Program examples from 2018 – 2020 were provided by the City. The following documents were reviewed:

- City of Buellton Public Works Webpage: SSMP, FOG information
- Buellton Buzz, February and April 2018
- PW Department Public Service Announcement for FOG; and
- Fats, Oils, and Grease (FOG) Program Flyer
- City Satellite System Correspondence: O&M of Private Sewer Systems
- FAQ City Website: Sewer Rates and Sewer Rate Analysis

- Flyer: Non-Flushable Items

The City does not identify satellite systems connected to the City sewer system in the SSMP, however the City has a list developed and has created outreach materials for satellite systems.

Documentation of Satellite Outreach was presented during the audit.

Sufficiency: Substantial Compliance

Reference: City SSMP June 2018 Revision 3, Page 11-1 to 11-3 and Appendix 11A of City SSMP.

- City of Buellton Public Works Webpage: SSMP information
- City of Buellton Public Works Webpage: Fog Program Documents
- Buellton Buzz, February and April 2018
- PW Department Public Service Announcement for FOG; and
- Fats, Oils, and Grease (FOG) Program Flyer
- City Satellite System Correspondence: O&M of Private Sewer Systems
- FAQ City Website: Sewer Rates and Sewer Rate Analysis
- Flyer: Non-Flushable Items

Deficiencies: The 2018 SSMP, Rev. 3 needs to be uploaded to the City website. The City Council should receive formal written communication, ideally in the form of a City Staff Report, annually at a minimum.

Recommendation: Update the SSMP by May 2, 2020.

Records List by SSMP Section

1.0 Goals – See Records under Sections 2 - 11

2.0 Organization

a. SWRCB CIWQS Facility at a Glance City of Buellton January 6, 2020.
b. June 2018 SSMP Rev. 3 City of Buellton Organization Chart: Updated 2019.

3.0 Legal Authority

a. Buellton Municipal Code Title 14 Sewer Code:
    i. 14.08 – Use of Public Sewers Required
    ii. 14.16 – Building Sewers, Lateral Sewers and Connections
    iii. 14.20 – Public Sewer Construction
    iv. 14.24 – Use of Public Sewers
    v. 14.52 – Powers and Authorities of Inspectors
    vi. 14.72 – Administrative Enforcement Remedies
    vii. 14.76 – Judicial Enforcement Remedies

4.0 Operation and Maintenance Program

a. Appendix 4: Operations and Maintenance Program
b. 2019 City Lift Station Logs
c. 2019 City Sewer Line Cleaning and Routine Manhole Inspection Log,
d. City of Buellton Hot Spot Cleaning List,
e. 2017 Examples of Pipeline Observation System Management (POSM) Sewer Line Cleaning, Closed Caption Television (CCVT) and Manhole Inspection Logs
f. 2019 Examples of a Fluid Resources Management (FRM) Quarterly Lift Station Maintenance Report – River View,
g. City Critical Parts and Equipment Inventory
h. City of Buellton November 2016 Notice of Changes in Water and Wastewater Rates,
i. City 2017/18 and FY 2018/19 CIP
j. 2020 SSMP and EOP Training Record

5.0 Design and Performance Standards

a. City Sanitary Sewer Details 601 – 608
b. Buellton Municipal Code: Chapter 14.16 Building Sewers, Lateral Sewers and Connections
c. Buellton Municipal Code: Chapter 14.20 Public Sewer Construction
d. State of CA Memo dated 4/14/03 – Guidance Criteria for the Separation of Water Mains and Non-Potable Pipelines

6.0 Overflow Emergency Response Plan

a. 2020 OERP and SSO EOP Training Record
b. Appendix 6B: Mutual Aid Agreements

7.0 Fats, Oils, and Grease Program

a. List of FSEs, Inspection Schedule and Record
b. 2019 FOG Permits
c. 2019 FOG Inspection Reports
d. City FOG FAQ for FSE's handout
e. City FSE handout for storm water education
f. 2018, August FOG Outreach Article: *Buellton Buzz*

8.0 System Evaluation and Capacity Assurance Plan (SECAP)

a. Sewer Master Plan Study Scope

9.0 Monitoring, Measurement, and Program Modifications

a. SWRCB CIWQS Facility at a Glance and City Operational Report; January 6, 2020
b. Appendix 9A1: Annual Sanitary Sewer System MMPM Tracking Sheet

10.0 SSMP Audits

a. City of Buellton 2018 SSMP Audit Report

11.0 Communication Program

a. Buellton Buzz –Feb 2018, Apr 2018
b. City Water and Wastewater Rate FAQ
c. Satellite System Correspondence 2019 – EPA Sewer Maintenance Guidance Documents

ELEMENT 11 – REVISION RECORD

The City of Buellton's SSMP Element 11 – Communication Program has undergone the following revisions:

Revision No.	Revision Date	Description of Revisions	Revision Completed By	Revision Approved By
1	12/12/13	Revisions based on biannual audit.	Wallace Group	City Council
2	5/28/15	SSMP 5 Year Update	Wallace Group	City Council
3	6/15/16	Update appendices with new supporting documentation and implementation information in Communication Program Overview.	Wallace Group	Rose Hess
-	6/1/2018	Update Element based on May 2, 2018 SSMP Audit Findings (add communication documentation)	Wallace Group	Rose Hess
4	June 2020	SSMP 5 Year Update	Wallace Group/Rose Hess	City Council

ELEMENT 11 - COMMUNICATION PROGRAM

Communicating the objectives of the SSMP and the importance of sanitary sewer system management practices to the public is essential. An informed public can assist and support the City by reducing customer caused blockages, which will potentially decrease SSOs.

11.1 Regulatory Requirements

WDR Order No. 2006-0003-DWQ Section D.13(xi) states:

> 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.

11.2 Communication Program [WDR D.13(xi)]

The purpose of the program is to educate stakeholders, which include residential, industrial, and commercial users of the collection system, on the effectiveness, importance and implementation of having a SSMP. **Appendix 11A** contains examples of outreach materials the City utilizes to help educate members of the public on the status of the SSMP and SSMP related programs. Public awareness of different components of the SSMP is accomplished through different mediums and they may reach different audiences. The following are activities that the City of Buellton practices to increase awareness and education about the importance of having a properly constructed, maintained, and operated collection system.

Table 11-1: Communication Program Overview

Activity	Frequency	Stakeholders	Year Implemented			
			2018	2019	2020	2021
City Website	Year-round	All	X	X		
FOG Control Program	Twice a Year	FSEs	X	X		
Buellton Buzz	Every other Month	City Water Service Customer	X	X		
Buellton BBQ Bonanza	Annually	All	X	X		
Pretreatment Program	Annually	Industrial Users	X	X		
City Council Meetings	As Needed	All	X	X		
Public Works Office	Year-round	All	X	X		
Satellite Outreach	Annual	Satellite Sewer Systems	X	X		

11.2.1 City Website

Information posted on the City website, https://www.cityofbuellton.com/, includes links to the City SSMP, SSMP Audits, FOG Control Program information, Industrial Waste Discharge Program Pretreatment Program information, Council meeting minutes and agendas, flyers, education material, public service announcements, and links to the City Facebook page.

11.2.2 FOG Control Program

Since 2008, FSEs are inspected twice a year, excluding variances, which are inspected once a year, to ensure they are employed the correct FOG disposal practices. Food Service Managers are educated on best management practices (BMPs) and ways to minimize the amount of FOG being introduced into the sewer system. The City of Buellton receives monthly reports from Wallace Group on the results of the program.

11.2.3 Buellton Buzz

The City distributes the Buellton Buzz every other month along with water bills. The newsletter covers a variety of topics that may include tips on how to flush responsibly, collection system maintenance, preventative measures citizens can take to reduce damage to the collection system, residential FOG BMPs, etc.

11.2.4 Buellton BBQ Bonanza

The City hosts the Annual Buellton BBQ Bonanza for the City residents. At the BBQ, the City staffs a Public Works Department Booth with information about sewers, storm drains, water conservation methods, water, etc. The booth gives the public an opportunity to interact with the Public Works Staff and allow them to ask questions concerning any services they offer.

11.2.5 Pretreatment Program

The City Pretreatment Program educates, inspects and permits Industrial Users of the sewer collection system. The main purpose of the program is to prevent and/or minimize materials, such as winery waste, that have the potential to impact the sewer collection system and wastewater treatment plant from being discharged.

11.2.6 City Council Meetings

City Council Meetings are held on the second and fourth Thursdays of each month in the council chambers. SSMP updates, status reports and audits are presented to the public during a council meeting to receive input on the document from the public. Annual Reports to the City council on the status of sewer operations, maintenance and the SSMP are maintained at the Public Works Department.

11.2.7 Public Works Office

The Public Works Office has copies of educational material, public service announcements, and Staff that provide assistance and education to the public.

11.2.8 Satellite Sewer System Outreach

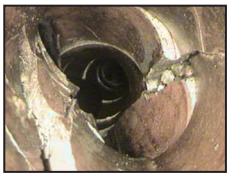
The Public Works Director sends out an annual outreach letter to systems which are satellite to the City sewer system. This letter informs these private systems of operation and maintenance options and procedures to ensure these systems are in adequate working order based on industry standards.

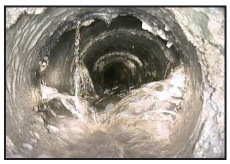
APPENDIX 11A

Communication Program Examples

City of Buellton Satellite System Communication Information
2019 Public Service Announcement
City of Buellton Public Works Webpage: SSMP, FOG information
Fats, Oils, and Grease (FOG) Program Flyer
Non-Flushable Wipes Flyer
Buellton Buzz Articles
FAQ Sewer Rates

Do You Know the Condition of Your Sewer System?





U.S. EPA | WATER INFRASTRUCTURE OUTREACH

United States Environmental Protection Agency

Why perform a condition assessment?

The compelling reason to perform a condition assessment of your collection system is to preserve the existing valuable infrastructure, minimize O&M and avoid emergencies and unexpected costs. Condition assessment of your collection system is an investment in managing risk. Knowing the structural condition of your underground assets will allow you to avoid emergencies, prioritize repair and replacement projects, and plan for the future.

In a condition assessment, data and information are gathered through observation, direct inspection, investigation, and monitoring. An analysis of the data and information helps determine the structural, operational, and performance status of capital infrastructure assets. A good written protocol, consistently applied, will help define the assessment. Use new data collection techniques to get the most out of your program. Implementing a pro-active program based on information and systematic assessment removes some of the politics and second-guessing from decision-making.

Performing a condition assessment has a cost, but prioritizing work by focusing on critical assets and the maintenance and replacement needs for your collection system is an essential step toward better management.

Online Tools & Contacts

For more information on Condition Assessment:
WasteWater Collection System Toolbox
www.epa.gov/region1/sso/toolbox.html

Other Online Resources:
Sustainable Water Infrastructure
water.epa.gov/infrastructure/sustain/sustainable_infrastructure.cfm

Aging Water Infrastructure
www.epa.gov/awi/con_assessment.html

Gina Snyder 617-918-1837 snyder.gina@epa.gov
Jack Healey 617-918-1844 healey.jack@epa.gov

Pipeline Defects
www.nassco.org

Liquid Assets Video
liquidassets.psu.edu/

Structural

If a sewer pipe is about to fail and you don't know about it, is it a problem? Structural problems can cause major headaches.

CCTV is one of the best tools available to check the condition of your buried assets. During CCTV field inspections, pipe defects and maintenance issues are discovered and classified using a standardized coding system. Following data analysis, structural condition information is used to estimate a pipe's performance, remaining useful life and to plan for the future and make decisions about pipe repair or replacement.

CCTV inspections also reveal maintenance issues, which aid the manager in making any necessary operation or maintenance changes.

- collapses
- fractures
- sags

Maintenance

Maintenance issues are the leading cause of backups and overflows of collection systems. Condition assessment helps utilities discover maintenance and capacity issues before they become maintenance problems. Knowing how your collection system really works will identify Trouble Spots and lead to preventive maintenance decisions, rather than being reactive to the consequences of emergency incidents. Implementing a pro-active program based on information and systematic assessment provides a manager with the tools to improve decision-making and solid information on which to base staffing and funding decisions.

- grease
- roots
- debris

Capacity

Hydraulic capacity is a primary performance measure for a wastewater collection system. Capacity (both hydraulic and treatment) can be taken up by clean water entering the sewer collection system. It may be obvious, based on dry weather and wet weather flows, that rainwater or groundwater inflow or infiltration (I/I) is a problem.

CCTV evaluation can determine the specific location and cause of I/I in many cases, however, flow data gathered by flow meters has been used to guide sewer system capacity management for decades. Flow data can be used as a tool in condition assessment either to identify areas for further CCTV inspection or to quantify the severity of I/I identified during CCTV work.

- excess flow
- infiltration
- inflow

Template for Developing Sewer Collection System Preventive Maintenance and Sewer Overflow Response Plans

Assistance for Capacity, Management, Operations and Maintenance of your Sewer Collection System

U. S. Environmental Protection Agency, Region 1

Working Document, November 2009 Version

Preventive Maintenance Programs [November-2009 version]

Overview

A good preventive maintenance program is key to keeping a wastewater collection system in good repair. It helps preserve capital investment while preventing service interruptions and the excessive infiltration/inflow (I/I) and system failures that can result in Sanitary Sewer Overflows (SSOs). Putting together a good preventive maintenance program also helps you to better understand your system and how it works under various conditions.

Preventive maintenance activities can include, but are not limited to:

- *Scheduled cleaning and inspection of gravity sewers and siphons; more frequent cleaning in those areas with a history of stoppages due to sediment, roots, debris, and fats, oils, and grease to minimize the potential for SSOs*
- *Root control in areas that are known to have recurring SSOs or premature structural damage due to root intrusion*
- *Recording, investigating and resolving customer complaints*
- *Fats, Oils, Grease, Odor, Corrosion prevention programs and controls*
- *Pump station inspections, maintenance, repair and emergency power load tests*
- *Scheduled inspection and/or cleaning as needed of force mains and siphons*
- *Force main air release valve maintenance*
- *Maintenance activity records to support appropriate analysis and reporting*
- *Easement maintenance for access to collection system components*
- *Evaluation and assessment*

Many systems have operators with a great deal of expertise and knowledge of how their system functions and where the trouble spots are. Unfortunately, this knowledge and information is often not written down. Preparing a written maintenance plan provides an opportunity to capture and document all those details – the institutional knowledge and experience - that will be essential for operating an effective maintenance program into the future. For example, planning for routine operations such as sewer cleaning should incorporate staff knowledge of known problems. Data on stoppages or other operational problems can be collected in field logs or computer-based information systems and reviewed regularly by system managers for prioritization. Spreadsheets and software programs can be used to help prioritize maintenance activities. Work orders and field logs should be written and used in a way that will help you track progress, update your schedules, and continue to optimize your program.

Please contact for comment and/or questions:

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E-mail:healey.jack@epa.gov

or

Gina Snyder, EPA New England
Tel: (617) 918-1837
E-mail: snyder.gina@epa.gov

Instructions for Using the
Preventive Maintenance Plan Template for Wastewater Collection Systems

This is the Beta Version of a model Preventive Maintenance Plan Template that has been prepared by the U.S. Environmental Protection Agency's Region 1 assistance office. This Preventive Maintenance Plan Template is for collection systems to use in developing their own preventive maintenance plans. It is designed to help you document your knowledge as well as better understand your collection system. And by knowing your system, you can improve operations and implement preventive maintenance practices to help reduce or eliminate Sanitary Sewer Overflows (SSOs). As a template document, this must be customized to fit your particular system. Follow the steps and instructions below.

Please be aware that completion of this template does not relieve a community or wastewater system of its responsibility to comply with all applicable federal, state, and local laws, regulations and/or applicable permits, and does not constitute a waiver or supersede the terms and conditions of any federal or state requirements or regulations regarding the operation and maintenance of a wastewater collection or conveyance system. This template is not an EPA or state guidance document and should not be relied upon to identify regulatory requirements. The community is solely responsible for ensuring that it takes the steps necessary to ensure compliance with all the applicable requirements of federal, state and local laws. The suggestions herein should not be construed to constitute EPA or state approval of any method or specific equipment or technology installed or utilized by a collection system.

• Save a (dated) copy of this file on your computer to be used as a working document.

• Brackets have been used to denote where you insert information "[Insert information]". As you type in the information indicated, it will automatically replace the bracketed directions. Delete what does not apply to your system, add other information that you have.

Italicized (*italic)* instructions describe the topic and provide guidance. All instructions (including this page) should be deleted from your final plan document.

• Examples are provided in some sections. These are suggested responses for assistance only and should be deleted from your final document.

• Two or more choices may be provided in the instructions separated by an "OR". Choose the most appropriate option for your system, delete the other, and edit your choice accordingly.

• Amend the tables, lists and figures as necessary to reflect your system.

• Add your own attachments and/or renumber attachments, as appropriate.

• Date your final preventive maintenance plan, and make it available at your facility. Use it to assist you in communicating, training and completing inspections and monitoring. Update the plan as your procedures change.

Consider your preventive maintenance plan a work-in-progress. Modify it as you incorporate experiences and insights from staff, and continue the maintenance and improvements to your system.

Each system is different. Only you can determine the procedures that will work for you.

[Insert City/Town name] Sewer System Maintenance Plan
[Insert date]

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d. Complaint Response
e. Reactive Response Summary

8. EQUIPMENT AND TOOL INVENTORY
   a. Essential day-to-day items
   b. Spare Equipment and Tools

9. CAPACITY MANAGEMENT
   a. Lateral replacement Program
   b. Sewer Capacity Certification/ Connection Policy

10. RESOURCES AND BUDGET
   a. Budget Process
   b. Rate Setting, Budgetary Policies and Financial History
   c. Historical Rate Review
   d. Operating and Maintenance Expense
   e. Capital Improvement Program Overview
   f.. Capital Improvement Plan

11. SEWER SYSTEM MAINTENANCE PLAN UPDATES
   a. Plan Update Process
   b. Monitoring, Measurement, and Program Modifications

Appendix A- Sewer Overflow Emergency Response Plan
[The following are examples of what you might have as appendices, edit the following suggestions to meet your needs]
Appendix B- Overflow Reporting Contacts
Appendix C- Contact Information for Key Staff
Appendix D- City/Town Sanitary Code (SUO)
Appendix E- Private Lateral Information for Back-ups
Appendix F- FOG outreach information examples
Appendix G- Examples: Manhole Inspection form; Blockage card
Appendix H- Pretreatment Program
Appendix I- Current Fiscal Year Budget
Appendix J- Inter-municipal Agreement
Appendix K- SOP for Sewer Line Cleaning
Appendix L - SOP for CCTV
Appendix M- SOP for Manhole Entry

Note: Sewer preventive maintenance planning is a requirement in a number of states. For example, Rhode Island Department Of Environmental Management Office Of Water Resources Regulations: Rule 5 (B) requires submittal of an Operation and Maintenance Plan, Rule 5 (H) indicates required elements of the plan; New Hampshire NPDES permits require O&M plans for sewer collection systems. Please check your requirements and edit this document to ensure compliance with those applicable to your system.

1. COLLECTION SYSTEM MANAGEMENT

a. Goals

Goals are an important aspect of any preventive maintenance plan. They provide focus for your staff to continue good work and implement improvements in your wastewater collection system management. As you work to improve your programs, your goals can be a solid reference point not only for staff but for public officials and citizens.

[Insert City/Town name]'s preventive maintenance plan (PMP) covers the assets we manage in our wastewater collection system and is one component of our overall Capacity, Management, Operations and Maintenance (CMOM) Plan. The PMP combines preventive, predictive and corrective maintenance strategies with our best management practices. The CMOM Plan and PMP have been prepared to help [Insert City/Town name] effectively manage our wastewater collection system and achieve the following goals:

Review the goals in the list below. Add or subtract and edit as needed to match your goals. For example you could add your goals for level of customer service.

Goals

- Prevent public health hazards
- Protect the environment
- Comply with regulations
- Minimize the frequency of SSOs
- Mitigate the impact of SSOs
- Minimize disruptions in service
- Minimize complaints
- Provide quick response to any disruption in service that occurs
- Protect [Insert City/Town name]'s large investment in the sewer collection system by maintaining maximum capacity and extending the useful life of the associated assets
- Prevent unnecessary damage to public/private property
- Efficiently use the funds available for the maintenance of the infrastructure and the operation of services
- Reduce expenditures for emergency maintenance
- Convey wastewater to the [Insert City/Town name or name of plant] waste water treatment facility with a minimum of infiltration, inflow and exfiltration
- Provide adequate capacity to convey peak flow
- Provide immediate, responsive, and efficient service to all emergency calls
- Provide a safe work environment for employees, employers, and residents in [Insert City/Town name]
- Perform all operations in a safe manner to prevent personal injury
- Utilize evolving technology to increase our effectiveness and efficiency
- Provide reliable service now and into the future

b. Organization

Information about staffing and the organization of the wastewater collection system agency can be provided in either a tabular form or as an organizational chart. This section should be used to identify administrative and maintenance positions responsible for implementing the PMP and CMOM Plan, including the chain of communication for reporting SSOs. An example

organizational chart, annotated at the bottom to identify responsibilities, is shown in Figure 1.

The organizational chart identifies the agency staff responsible for implementing, managing, and updating the PMP/CMOM Plan.

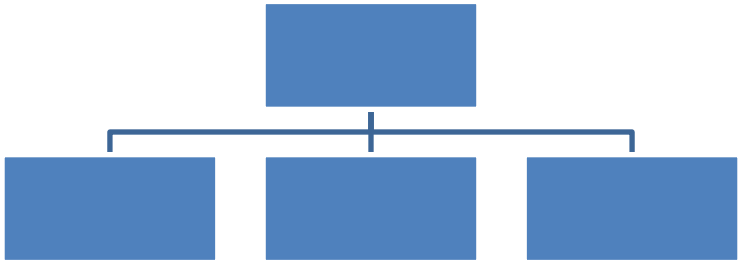
Edit one of the following two paragraphs to describe your organization and delete the one you do not use:

This paragraph is for a stand-alone wastewater department with a collection system division:
[Insert City/Town name]'s [Insert "Water Pollution Control Department (WPC) " or whatever you call your department] is an independent department responsible for [Insert "all" or list the aspects that the department covers] aspects of wastewater collection system and treatment. The [Insert which division is responsible (e.g., "Collection System Division")] division is responsible for the operation and maintenance of the collection system, with the exception of [Insert any exceptions, such as "pump stations"], which are maintained by the wastewater treatment facility staff. The collection system division has a staff of [number] full-time and [number] part-time operation and maintenance positions. Contractors are used for maintenance activities and emergency support when [Insert a description of when contractors are called in]. Figure 1 shows the organizational structure of the [Insert "Water Pollution Control Department (WPC) " or whatever you call your department].

"OR"

This paragraph is for a wastewater division that is part of another town department (e.g. Public Works or DPW):
[Insert City/Town name]'s [Insert "Sewer Division" or whatever you call your division] is under the [Insert "Department of Public Works, DPW" or the department that oversees the sewer collection system] and is responsible for [Insert "all" or list the aspects that the department covers] aspects of our wastewater collection system and treatment, with the exception of [Insert any exceptions, such as "pump stations"], which are maintained by [Insert who else is involved with system maintenance]. The [Insert "Sewer Division" or whatever you call your division] has a staff of [number] full time and [number] part time operation and maintenance positions. Contractors are used for some maintenance activities and for emergency support. Figure 1 shows the organizational structure of the [Insert "Department of Public Works, DPW" or the department that oversees the sewer collection system].

Figure 1- [Insert City/Town name] [Insert "Sewer Division" or whatever you call your division] Organizational Chart - *[This is an example simplified chart – add your own organizational chart, or click on the chart box below and use Word tools to add more boxes]*



[Insert "Sewer Division" or whatever you call your division] has [Insert number] full time and [Insert number] part time employees. The [Insert "Sewer Division" or whatever you call your division] [Insert "is" or "is not"] fully staffed *[if not fully staffed, instead indicate your plans for staffing up]* and operates under the following organizational structure:
[Edit the following list as necessary to include the roles of personnel within your City/Town and Collection System, job descriptions should include where you require a specific grade of licensure, where it is required:]

[Insert title eg, "General Manager" or "Public Works Director"] – Establishes policy, plans strategy, leads staff and delegates responsibility, allocates resources, authorizes outside contractors to perform services, and may serve as public information officer. [Insert the name of the current incumbent] is our [Insert title eg, "General Manager" or "Public Works Director"].

[Insert "City" or "Town" or if your department has an engineer]Engineer – Prepares wastewater collection system planning documents, manages capital improvement delivery system, documents new and rehabilitated assets, and coordinates development and implementation of CMOM Plan. [Insert City/Town name]'s Engineer is required to have a Professional Engineer's License.

[Insert "Collection System Supervisor" or appropriate title] –Manages field operations and maintenance activities, provides relevant information to agency management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews. [Insert City/Town name]'s [Insert "Collection System Supervisor" or appropriate title] is required to have a Grade [Insert appropriate level] Operator's License. [Insert the name of the current incumbent] is our [Insert "Collection System Supervisor" or appropriate title].

Inspector – Ensure that new and rehabilitated assets meet [Insert "city" or "town"] standards, works with field crews to handle emergencies when contractors are involved, and provides reports to [Insert "City" or "Town Engineer and Collection System Manager" or appropriate titles for your system]. [Insert "Sewer Division" or whatever you call your division] has [Insert number] inspectors.

Field Crew – Conduct staff operations and preventive maintenance activities, mobilize and

respond to notification of stoppages and SSOs (e.g., mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators). [Insert "Sewer Division" or whatever you call your division] has [Insert number] staff on our field crew. *[Include if some are part time and/or work for other departments as well.]*

Administrative/Public Relations – Support staff operations and preventive maintenance activities, assist with data entry and quality control, handle billing, dispatch, payroll, customer response, outreach, education, and other support functions as needed. *[Include a description if you have your own administrative and/or PR staff or if you coordinate with other departments for these services and whether some are part time.]*

Relation to Other Municipal Functions

[Insert "WPC " or whatever you call your department] [Insert "is a separate utility in" City/Town name, or "is not a separate utility, but rather a stand-alone Department within" City/Town name's department of ___] *[Note: for example, your Sewer Division may be within DPW]*. It is responsible solely for management, operations and maintenance of the wastewater collection and treatment facilities. No [Insert "Sewer Department" or your department name] personnel are utilized for the benefit of other [Insert City/Town name] functions or other utilities *[if personnel are shared, edit out the word "No" and indicate how they are shared]*. Many activities of the [Insert City/Town or System Name] sewer collection system are supported by the following [Insert City/Town Name] departments and partners:
[Use the following to indicate links to or relationships with other departments that currently exist, or will be linked and the future. Delete those not applicable.]

- Collection system mapping is supported by [Insert GIS Department, Assessor's Office, or other name]. This department also provides support, policy recommendations, and advice concerning [Insert City/Town Name]'s future growth and development, and is responsible for maintaining and updating [Insert "Sewer Department" or your department name]'s GIS existing sewer infrastructure mapping system.
- Resources and budget are overseen by [Insert finance committee, water and sewer advisory committee or board]
- Contingency equipment and replacement inventories are [Insert "shared by" or "funded by" if applicable, eg, Fire Department or DPW if shared resources]
- Training for [Insert training programs such as safety, operations, management, etc.] is provided through [Insert Narragansett Water Pollution Control Association, NEWEA, New England Interstate, RI DEM, or other training partner, if any]
- Outreach to plumbers and building contractors is done by [Insert Town Department, state program, or trade association partner if any]
- Design and Construction Standards for installation, rehabilitation and repair are overseen and reviewed by [Insert Engineering Department or other oversight]
- Standards for inspection and testing are developed by the [Insert Engineering Department or other oversight]
- Inspection of grease interceptors/separators is performed by the [Insert Health Department or other oversight]
- Outreach for Fats, Oils and Grease is performed jointly by [Insert "Sewer Department" or your department name] personnel and [Insert Health Department or other oversight]
- Personnel hiring and administration are performed by [Insert Human Resources Department or other name] which also provides [Insert the other functions that the department performs]

• Procurement of non-routine equipment, services or supplies is authorized by [Insert "the Town Manager" or name of department that authorizes and at what level (e.g., "over $5,000")]
• Legal Counsel provides legal services and advisory opinions to the [Insert "Sewer Department" or your department name] on departmental issues, contracts and agreements, and is responsible for handling all claims against the [Insert "Sewer Department" or your department name] and prosecuting violations of all Sewer Use Ordinances.
• The [Insert "Public Works Department" or name of department] provides paving services to [Insert "Sewer Department" or your department name] on all sewer repairs performed within public streets and works to coordinate street-paving schedules with sewer work.
• The [Insert City/Town name] Clerk / Treasurer Department maintains copies of Resolutions and [Insert "city" or "town"] Ordinances passed by the [Insert City/Town name] [Insert "Aldermen", "Selectmen", city or town "Council", or other body] related to the operation of the [Insert "Sewer Department" or your department name].

c. Training

Your PMP should include a description of your training program and indicate whether any changes or improvements are anticipated in the near future.

A collection system with untrained or poorly trained personnel runs a greater risk of experiencing problems. A successful training program requires management commitment and the recognition of training as a budget expense item. An ongoing training program should incorporate accepted safety practices. It should also address the skills necessary to perform emergency response as well as routine operations and maintenance. An effective training program will include the following elements:

- *Collection system mission, goals, and policies*
- *Mandatory training requirements identified for key employees*
- *Safety training*
- *Tracking and measuring job performance and on-the-job training*
- *A process for evaluating the effectiveness of training*
- *Assurance that new employees receive training*

Training can take many forms including on-the-job or in-house training, certification programs, and special classes or seminars from a number of different sources (e.g., manufacturers or consultants, regulatory agencies, professional associations, or educational institutions).

Edit the following paragraph to reflect your program:
[Insert City/Town name]'s training program provides a mechanism for educating employees and establishing their technical competence through the [Insert training programs you use, such as NEWEA voluntary] certification program. [Insert City/Town name] utilizes a combination of in-house skill training and the purchase of specialized training through state and national associations, the self-study technical wastewater training courses offered through California State University – Sacramento, conferences and vendor training programs to enhance skills for performing daily work duties and provide certified operators continuing education hours. Skills training for [Insert "Sewer Department" or your department name] employees includes, but is not limited to:

Edit to reflect training that you do to the following list:

- Routine Line Maintenance
- Heavy Equipment Operation
- Maintenance Equipment Operation
- Line Testing and Inspection
- Infrastructure Installation
- Pump Station Operation and Maintenance
- Electrical and Instrumentation
- Emergency Response
- Public Relations
- Safety
- [Insert others that you specify]

Edit to reflect your safety training:
Safety training is obtained from training agencies including [Insert specify training programs that you use]. [Insert City/Town name] expects employee adherence to the following written safety policies and procedures.

- Confined Space Entry
- Hard Hat Policy
- Vehicle Operation Policy
- Seat Belt Policy
- Respiratory Protection Program
- Excavation Safety Policy and Program
- Chlorine Safety Policy
- Injury Reporting Policy
- Post Accident Drug Testing Policy
- Safety Teams and Committee Policy
- Personal Protective Equipment (provided for the employee)
- First Aid, CPR and AED (First aid supplies are available in office areas and vehicles)
- Flaggers
- Hazard Communication Program
- Defensive Driving Program (employees who are required to maintain a commercial driver's license must complete a four (4) hour defensive driving course)

Training records are maintained for each employee in [Insert what you use, e.g., a training database or a log book, etc.]. The [Insert "Sewer Department" or your department name] maintains appropriate safety equipment including *(edit the following)*: protective clothing, safety glasses, hard hats, gloves, respirators, filters, harnesses, tripods, hoists, fire extinguishers and self-contained breathing apparatus. The [Insert "Sewer Department" or your department name] also maintains and calibrates atmospheric testing equipment. Lights, barricades, signage and exhaust fans are also available [Insert "at the DPW yard" or "on the trucks" or other location where you keep such equipment].

d. Customer Service

The citizens in many communities often know very little about the wastewater treatment and collection services performed for them. Your customers may only become aware of the collection system and its owner or operator when the system fails to work as designed, an overflow occurs, or through articles in local newspapers, or public announcements on radio or television. Collection system representatives should create opportunities to build community support to help citizens understand the need to support the operation and maintenance of their system. Examples of public relations activities include:

- talking to schools and universities
- presentations to local officials and businesses about the wastewater profession
- presentations to citizens, building inspectors, public utility officials, and members of the media

An effective customer service and public relations program also requires that all inquiries, requests, and complaints are addressed in a timely fashion. Complaint information can help you further develop or revise your programs to better address areas of concern. Keep in mind that collection system field crews influence the public's confidence in the collection system owner or operator. Personnel should be trained to receive complaints and maintain a data base with the following:

- *Date and nature of the complaint or request*
- *Location of the problem*
- *Name, address, and telephone number of the customer*
- *Cause of the problem*
- *To whom the follow-up action was assigned*
- *The initial date of the follow-up action*
- *Date the complaint or request was resolved*
- *Total days to end the problem*
- *Feedback to the customer as follow up*

Remember, everyone has different skills, and while you may choose to designate specific individuals to interface with the public, it is important that all employees have some training on dealing with complaints. All employees should understand the value of an effective customer service and public relations program.

Part of customer service also means letting customers know if their service is going to be affected by your plans or programs. For example, affected customers should be notified before work begins on major construction or maintenance. Notification methods may include door hangers, newspaper notices, fliers, signs, and announcements on radio or television. Information should also be provided to residents on cleanup and safety procedures following basement backups and other overflows.

1. Complaint Management Program

Complaints and requests are received by various means (e.g., phone calls, e-mail, other [Insert City/Town name] departments, and occasionally in person). Regardless of the nature or means of receipt, all complaints and requests are entered via the dispatcher into our [Insert e.g. spreadsheet, database, logbook, etc.]. Entries include the following detailed information about the complaint/request:

[Edit the following list:]

- Receiver of complaint / dispatcher
- Time and date of request
- Form number (Work Order)
- Complainant information (Name, address, call back phone number)
- Location of the problem
- Type of complaint (Codes, e.g. home back up, odor, manhole overflow, etc.)
- Specific request
- Personnel assigned to complaint
- Findings type, including cause of problem
- Complaint closeout information
- Date complaint closed

Once a complaint is assigned, our field personnel perform an investigation. If the problem cannot be immediately resolved, [Insert department, e.g. DPW, Sewer Department] will generate a work order to take appropriate action for permanent correction of the problem. If [Insert City/Town name] is not responsible for correcting the problem, the [Insert department, e.g. DPW, Sewer] will provide the complainant with guidance on a recommended course of action. Once an investigation has been completed, the staff enters closeout information into the [Insert e.g. spreadsheet, database, logbook, etc.]. **Attachment** [Insert attachment number] depicts a typical form from the dispatch [Insert e.g. spreadsheet, database, logbook, etc.].

2. Public Information and Education Program

[Insert City/Town name] uses a variety of outlets for providing information and education to customers. The outlet(s) used to disseminate information is often based on the type of information and the targeted audience. [Insert City/Town name] [Insert "routinely uses" if you already have a program or "plans to use" if you are developing your program] the outlets listed below to help [Insert "the City" or "the Town"] provide its citizens with the most up-to-date information possible:

[Edit to reflect your programs and consider indicating under what circumstances you utilize each outlet]

- [Insert City/Town name] Public Relations Coordinator
- [Insert City/Town name] Cable TV Channel
- [Insert City/Town name] Website
- Local Media (TV and Newspaper)
- Neighborhood / Town Hall Meetings
- [Insert City/Town name] [Insert "Board of Selectmen", "Council", etc.] Agenda
- Public Hearings
- Personal Visits / Phone Calls
- Door Hangers
- Sign Postings
- Customer Mailings
- School Fair Activities

[Insert City/Town name] [Insert "has had" if you already have a functioning program, or "plans to develop"] good community relations regarding issues with the operation and maintenance of our collection system. Types of information and education provided to our customers are as

follows:
You may have outreach programs for particular projects or capital improvements and educational programs or pamphlets and instructions that are generally available. Both are important. Edit the following lists to reflect your outreach programs (if you plan to develop some of these, but don't have them yet, indicate what's in the works):

Information and Education Programs

Sewer System Evaluation Survey Work	Sewer Use Ordinances
Major Repairs and Rehabilitation	Types of Waste Treated
New Construction	Industry Pretreatment Requirements
Road Closures	Wastewater Treatment Processes
Point Repairs for Street Paving	Customer Emergency Response
Sewer Use Rates	Grinder Pump Operation and Maintenance
Grease Handling Information	Complaint Procedures
Grease Disposal Pamphlet	Service Connection Requirements
Private Hauler Instructions	Wastewater Collection and Treatment

e. Information Management and Geographic Information Systems

Many Municipalities have been shifting their information management from paper to computer maintenance management systems (CMMS). A CMMS is designed to manage the data needed to track a collection system's operation and maintenance. It can be integrated with a Geographic Information System (GIS). A GIS used to map and quickly locate system parts and facilities can include multiple layers of identifying information such as a sewer map, storm sewer map, manhole location and ID, catch basin location and ID, dates of pipe cleaning and repair, and features such as pipe location, diameter, material, and condition, etc. The GIS also typically contains base information such as streets and parcels.

The CMMS is only as accurate as the data used to develop it. Regardless of the information management style, a collection system should have written instructions regarding the use of the management information systems.

Information management and tracking includes:

- *System features such as pipe size, type, age, location, condition assessment, etc.*
- *Inspection scheduling and tracking*
- *Flow monitoring*
- *Planned maintenance*
- *Parts inventory*
- *Customer service and complaints*
- *Overflow, safety and reportable incidents*
- *Emergency response*
- *Employee training*

[Describe your information management program, the following paragraph is a common model, but if your system is integrated and/or handled entirely by your department, edit accordingly]

[Insert City/Town or System Name] uses [Insert name of computer program, and/or description of spreadsheets, and/or hardcopy files, log books] to manage information on our collection system. This [Insert 'system' 'data' or other description and 'is' or 'is not' depending on whether your systems are integrated]' connected to [Insert City/Town or System Name]'s Geographic

Information System (GIS) through [Insert description of your agreement, or the process you use to link the two, eg, the microsoft access database used for the CMMS]. [Insert City/Town or System Name] receives support from [Insert any details on other departments, eg, Assessor's Office if using their GIS, Information technology if you have access, etc.]. Table [Insert number] shows the information that is included in our GIS of the collection system.

Knowledge of the location of all wastewater collection system facilities is essential to effective management. This requires the maintenance of up-to-date collection system maps. The maps can be available in hard copy or electronic format. The benefit of an electronic format is that it provides a more sophisticated tool for prioritizing repair, replacement, or rehabilitation projects, and for producing work orders for sewer cleaning and other maintenance activities. Sewer maps should include at least the basic information shown in the table below. Additional attributes which may be useful are shown in the column to the right of the basic attributes. Some of this basic information may be included as part of the GIS or CMMS database linked to the map instead of on the map itself. Pump stations should also be indicated on the map, although their technical information can be too complex to display on a map sheet, and it may be more appropriate to place it in the GIS and/or your CMMS database. Service lateral data can optionally be included.

[Use the table below to include those elements that are in your information system, and which are under development, if any. Edit the description to include how the ID numbers or identifiers are developed for your ID numbering system (e.g., are they simply numerical from 1 to some number going south to north, is there a street or other location association coded into the IDs, etc. This assumes your system is not a combined system; if you have combined sewers, also include a row to indicate information, such as outfall locations, that you have stored or plan to store in your GIS mapping system.]. Include additional rows to describe storm water system map information if you have it.

Table [Insert number]: **Collection System Map Information included in [Insert City/Town or System Name]'s GIS**

Manholes Basic Map Information - ID number or other unique identifier - Location, with reference to streets and property lines - Depth - GPS coordinates - Size	**Manholes Additional Map Information** - Date built - Rim elevation - Invert elevation - Material Type - Worker safety information
Pipes and Siphon Basic Map Information - ID number or other unique identifier - Location, with reference to streets, surface waters, property lines and manholes - Size - Direction of flow - Length - Material type - Date built	**Pipes Additional Map Information** - Slope - Pipe invert elevations - Plan or as-built ID number - Service laterals
Pump Stations Basic Map Information - ID number - Location	**Pump Stations Additional Map Information** - Additional information on drawings

- Capacity	[Insert where the drawings are located], and in the CMMS
Force Main Basic Map Information - ID number or other unique identifier - Location, with reference to streets, surface waters, and property lines - Direction of flow and pump station associated - Length - Material type - Location of air release valves - Date built - Capacity	**Force Main Additional Map Information** - Slope - Invert elevations - Plan or as-built ID number
[Insert other collection system information stored in your GIS]	[Insert other collection system information stored in your GIS]

[Edit the following list. If you plan, but have not yet begun, implementation of a particular system, create a separate list indicating your planned additions]
System information managed in our [Insert name of computer program, and/or description of spreadsheets, and/or hardcopy files, log books] includes:

General

- Parts inventory
- Equipment and tools
- Purchase orders
- Revenue

Collection System

- Continuous Sewer System Assessment
- Collection system mapping
- Collection system inventory
- FOG compliance
- Flow monitoring
- SSO/Emergency response

Personnel

- Department staff
- Safety incidents
- Training
- Job performance

Maintenance program

- Routine and Priority Planned maintenance (cleaning, etc.)
- Inspection scheduling and tracking
    - Manhole
    - Pipeline (Closed Circuit Television (CCTV), camera)
    - Pump station
- Work Orders
- Monitoring/Sampling scheduling for [Insert type of monitoring, e.g., hydrogen sulfide, etc.]

- Vehicle maintenance

Customer service program
- Complaints
- Customer service response
- Billing information

Any activity performed by department personnel is generated and tracked through the [Insert "CMMS" or indicate your information management process]. The [Insert "CMMS" or indicate your information management process] produces [Insert the time frame for your process such as "daily, weekly, quarterly, and bi-annual"] written work orders for the performance of routine maintenance as well as repairs and corrective actions in response to inspection findings or customer complaints. Upon completion of the task(s), data related to the work order is entered into the [Insert the software product(s) or indicate your hardcopy process (such as if you use log books)] for tracking performance and historical information on [Insert all aspects of your system that are covered by your Info Management System, such as pump station equipment, manholes, pipeline testing, etc.]. The [Insert "CMMS" or indicate your information management process] (along with the SCADA system (see Pump Station section 4)) serves as [Insert City/Town or System Name]'s information management system for the all of the collection systems operation and maintenance.

[Include a brief description of your security for your information management systems]

Our [Insert "CMMS" or indicate your information management process] is operated through our Local Area Network (LAN). The system is backed up [Insert appropriate details] and access is restricted. Passwords are provided to [Insert City/Town or System Name] employees designated for access, [Insert list of who has access and at what level if it varies]. [Insert any other appropriate details]

[Include an appendix containing your procedures, protocols, inspection checklists, and examples of the forms used for tracking and managing this information so a new employee, for example, would be able to get an overview of how your process works]

Examples of procedures and forms are provided in Appendix [Insert Appendix reference].

f. Legal Authorities and Controls

Legal authority refers to powers granted to the wastewater collection system agency to provide services to the public, typically through sewer use ordinances, service agreements, and other mechanisms. The Town/City should describe its legal authority to control the type and quantity of wastewater discharged to the collection system, including its legal authority to:

- *Control the quantity and quality of wastewater from new development and satellite collection systems*
- *Control sources of infiltration and inflow*
- *Control sources of Fats, Oils and Grease (FOG)*
- *Require proper design and construction of new and rehabilitated sewers and connections*
- *Require proper installation, testing and inspection of new and rehabilitated sewers*
- *Access all components of the collection system*

If legal authority does not currently exist for any of the elements above, your plan should indicate a schedule of activities to obtain the proper legal authority (see appendix guidance for a

copy of a Model Ordinance).

1. Sewer Use Ordinance

[Insert City/Town or System Name] has established and implemented regulations regarding the use of the wastewater collection system. [Insert City/Town or System Name] has a comprehensive sewer use ordinance, consistent with EPA's model ordinance, in place since [Insert year]. As regulations and requirements have changed, [Insert City/Town or System Name] has passed additional ordinances to address those issues. Ordinances are kept up-to-date and are available electronically at [Insert URL for city/town web address or e.g., http://www.municode.com/, or if your ordinances are not available on the internet, insert "by contacting" and indicate email or mailing address].

[Edit the following section to include as much of the following as applies to your system]
The items addressed through our sewer ordinances include: sewer use and standards, access to pipelines and structures, FOG management, pretreatment requirements, service connections, hauled waste/septage, user rates, permitting of flows into the system, inflow/infiltration control, enforcement of proper design, installation, and testing standards, and inspection requirements for new and rehabilitated sewers. [Insert City/Town or System Name] also has agreements with [Insert names of agreements with other communities and any other legal issues pertinent to the use of the sanitary sewer]. [Insert City/Town or System Name] reviews the adequacy of user rates annually (see Resources and Budget, Section [Insert Section number]).

2. Joint Sewer System Agreement

*[**If you have a treatment plant and agreement(s) with nearby town(s)** to accept and treat their wastewater, use this paragraph and edit the following section as needed. If separate agreements are in place for multiple towns, describe the arrangements for each town. If you have a fairly simple joint sewer system agreement, consider editing the following to describe your current agreement. Provide a separate description for those that you plan to include when you renew your agreements.]*
[Insert City/Town or System Name] has a sewer maintenance agreement to convey wastewater and provide limited maintenance for the Town of [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] sewer collection system since [Insert year]. The latest agreement is dated [Insert date]. The main items in the agreement are described below:
Edit the following:
• [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] has purchased capacity rights from [Insert City/Town or System Name] for potentially [Insert number] connections based of a unit flow rate of [Insert number] gallons per day (gpd) per connection.
• [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] retains ownership of sewers within the sewer user's corporate limits.
• [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] is assessed an annual sewer charge updated each [Insert the time of year or date when the sewer charge is updated according to your agreement]. The sewer maintenance service charge includes: costs for sewer maintenance [Insert details], wastewater treatment, and contribution to the sewer reserve fund.
• [Insert City/Town or System Name] provides limited maintenance for the sewer system within the portion of [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] that discharges to [Insert City/Town or System Name]'s collection system. Maintenance includes routine inspection, rodding, unplugging or flushing of the main sewer.

• [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] is responsible for repairs and CCTV inspection of their own collection system.
• [Insert City/Town or System Name] is responsible for determining the annual sewer maintenance service charge to [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant]. The sewer maintenance service charge includes: costs for sewer maintenance, wastewater treatment, and a sewer reserve fund.
• [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] is responsible for system repairs of the part of [Insert City/Town or System Name]'s system that coveys [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] flow to the treatment plant. [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] is also responsible for paying its portion of major capital improvement for the joint sewer system.
• [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant] is required to adopt a master plan for the current and future development within the Town's service area to be used for capacity development within our system.

To date, [Insert City/Town or System Name] [Insert "has not" or "has", if there have been legal issues, add a sentence describing them] encountered legal issues regarding wastewater flow from [Insert Town(s) or System Name(s) for sewer users sending waste to your treatment plant].
[If you have had legal issues with wastewater flow, consider adding a description of actions taken and current status]

"OR"
***[If you have a collection system and you have an agreement with a treatment plant** to accept and treat your wastewater, include edits to the following section. If you have a fairly simple joint sewer system agreement, you may want to consider editing to include the bullets that describe your current agreement and have a separate description for those that you plan to include when you renew your agreement.]*
[Insert City/Town or System Name] has had an agreement with [Insert Town or System Name of treatment plant or system that accepts your wastewater] for treatment of [Insert City/Town or System Name]'s wastewater since [Insert year]. The latest agreement is dated [Insert date]. The main items in the agreement are described below:
• [Insert City/Town or System Name] has purchased capacity rights for potentially [Insert number] connections based on a unit flow rate of [Insert number] gallons per day (gpd) per connection from [Insert Town or System Name of treatment plant or system that accepts your wastewater].
• [Insert City/Town or System Name] is assessed an annual sewer charge from [Insert Town or System Name of treatment plant or system that accepts your wastewater] each [Insert the time of year or date when the sewer charge is updated according to your agreement]. The sewer maintenance service charge includes: costs for sewer maintenance [Insert details if the wastewater plant also helps maintain your collection system], wastewater treatment, and a sewer reserve fund.
• The annual sewer charges include [Insert City/Town or System Name]'s portion of major capital improvement for the joint sewer system.
• [Insert City/Town or System Name] is required to adopt a master plan for the current and future development within the [Insert "City" or "Town"]'s service area in order to provide input for [Insert Town or System Name of treatment plant or system that accepts your wastewater]'s capacity and capital planning.

To date, [Insert City/Town or System Name] [Insert "has not" or "has", if there have been legal issues, add a sentence describing them] encountered legal issues regarding wastewater flow sent to [Insert Town or System Name of treatment plant or system that accepts your wastewater].

[If you have had legal issues with wastewater flow, consider adding a description of actions taken and current status]

2. GENERAL INFORMATION ABOUT THE [INSERT CITY/TOWN] SANITARY SEWER SYSTEM

General information should include a description of the wastewater collection system and the customer service area such as:

1. A narrative description of your service area, including names of the towns/cities and communities served or in the same system as your town/city,
2. Indicator information such as population served by the system, average daily flow, the total length of sewer, size range of pipe diameter, number of and a description of sewage pump stations, whether on-site of portable alternative power sources are available,
3. Range and average age of sewers,
4. SSO history, and
5. A map of the wastewater collection system showing the locations of primary sewers (interceptor, outfall & trunk sewers) and sewage pump stations

a. Wastewater Treatment and Collection System Description

[Insert City/Town name]'s first formal wastewater collection system dates back to [Insert year about when sewer first installed] and the first wastewater treatment facility was constructed in [Insert year when WWTP installed]. The collection system transports wastewater to the treatment facility, [Insert Name of treatment facility], located at [Insert street location and if in different city/town] .

(Example for continuing narrative, edit or re-write the following section to describe your system)
The oldest part of the system is the downtown area along the [Insert Name of area, e.g. Pleasant River], which also has the highest density of commercial customers. In [Insert date], [Insert City/Town name] and the [Insert "City" or "Town"] of [Insert Name] (the [Insert "City" or "Town"]) entered into an agreement to construct a treatment facility to treat the wastewater from both communities. Since [Insert date] [Insert City/Town name] has operated a [Insert number] mgd [Insert type of treatment] treatment facility that provides secondary wastewater treatment for both communities. The last major upgrade of the wastewater treatment facility was completed in [Insert year] and included [Insert brief description of what was upgraded]. The treated wastewater is discharged to the [Insert Name of receiving waterbody].

[Insert City/Town name] and the [Insert "City" or "Town"] each own the wastewater collection system within our respective jurisdictions and maintain our own collection systems. [Insert City/Town name]'s collection system includes [Insert number] pump stations and approximately [Insert number] miles of sewers, ranging in size from [Insert number] inches to [Insert number] inches in diameter. [Insert City/Town name] also has [Insert number] private pump stations that [Insert City/Town name] is not responsible for maintaining.

[Insert City/Town name] does not own or maintain any portion of the sewer laterals that drain each privately owned parcel or property beyond the property line. However, we do work with homeowners to prevent backups into their homes.

[Insert City/Town name or name of authority that operates your collection system] staff and contractors perform planned maintenance tasks at scheduled frequencies. Frequencies are established based on experience and collection system information to minimize the risk of

blockages or equipment failures that could lead to sewer overflows (see Cleaning, Inspection and Assessment, Section [Insert number]). Some portions of the wastewater collection system are maintained more frequently than others based upon past history and their importance to the effective operation of the wastewater collection system. Staff and/or contractors also perform unplanned maintenance (see Sewer Overflow Response Plan, Appendix [Insert number] *[Appendix number A, or if separate plan –give title and date]*.)

b. Collection System Details

- Service Area: [Insert number of square miles Square miles
- Population Served in primary community: [Insert population number
- Population in interconnected community: [Insert population number, by municipality if more than one
- System Inventory owned by [Insert City/Town name], below:

Miles of gravity sewer	Miles of force main	Number of manholes	Number of pump stations		Number of siphons	Number of air relief valves
			Public	Private		

- Number of Service Connections:

  Residential: Commercial: Industrial: Total:

- WWTF Flow Characteristics in MGD

Annual Average Daily System Flow	Average Daily Dry Weather Flow	Peak Wet Weather Flow	Treatment Plant Design Capacity (MGD)	
			Average:	Maximum Flow:

c. Age Distribution of Collection System

[Insert City/Town or System Name] conducts an ongoing program to assess the structural condition and maintenance needs of the collection system as a part of our Cleaning, Inspection and Assessment program described in section [Insert number] and our capital planning described in Resources and Budget section [Insert number], below. [Insert City/Town or System Name] has categorized our sewer system by age and size:
[Use the following age brackets, or if your system can be categorized differently, edit the following:]

- Pre 1920
- 1920-1940
- 1940-1960
- Post 1960

The ages of the components of our wastewater collection system are as follows:

Age	Gravity Sewer miles	Force Main miles	Number of pump stations
0-25 years			
26-50 years			

51-75 years			
> 76 years			

d. Length of Pipe by Diameter
[Insert extra row(s) for pipes of more than one type of pipe material (see example for 8-inch, below). Delete rows that aren't applicable.]

Pipe Diameter (inches)	Length (lineal feet)	Material	Replacement Cost per foot
3			
4			
6			
8	[7800]	[VCP]	
[e.g. 8]	[5500]	[PVC]	
10			
12			
14			
15			
16			
18			
24			
30			
36			
42			
45			
48			
Greater than 48			
TOTAL			

e. Sanitary Sewer Overflow History
[Insert City/Town or System Name] has experienced [Insert number] of sanitary sewer overflows (SSOs) since [Insert year, e.g. use previous five years history]. The following table describes the overflow dates, locations, quantities and causes.

Table [Insert Table number]: Sanitary Sewer Overflow History *[add rows/edit as needed]*

SSO date	Location	Volume released	Cause of release

To assure sewer capacity [Insert City/Town or System Name] [Insert "has developed", "is developing", or a combination that describes your activities] programs to address capacity, inflow/infiltration, and condition of our collection system. These programs are described in Section [Insert section number or numbers, eg. Section 3 of this document includes assessment

and section 9 includes capacity assessment...].

f. System Map

A [Insert description, e.g., general, or overview] map of the system is shown in Figure [Insert Figure number]. The map [Insert "is" or "will be" depending on how far along you are in mapping your system] updated by [Insert a description of the process by which you keep the map up to date]. *[If you have not developed a map, describe your process and schedule for developing a complete map of your system. Describe any features from the map (or for your mapping plans) that you want your staff or other readers to know.]*

3. CLEANING, INSPECTION AND ASSESSMENT PROGRAM

A good cleaning, inspection and assessment program is an integral part of understanding how your wastewater collection system operates. It is essential for keeping a system in good repair and minimizing the blockages, Inflow/Infiltration and failures that can result in SSOs.

Preventive maintenance protects your investment in your collection system. Higher frequency cleaning of gravity sewers, for example, should be scheduled in areas with a history of overflows, stoppages, FOG, root and odor control problems. Force mains and air release valves should be inspected and cleaned as needed to maintain pump station efficiency and prevent back ups. Maintenance of electrical and mechanical components of pump stations, addressed in Section 4, is also a critical component of preventive maintenance. Each component of the collection system should be inspected, cleaned and televised on a schedule determined by condition and maintenance needs.

This section should include your description of how and when you clean, inspect and evaluate your collection system. It should also include step-by-step protocols of your cleaning and inspecting program and standardized protocols and procedures for evaluating and categorizing the condition or your wastewater collection system tied into your plans for operational improvements to maintain collection system integrity and reduce the frequency of SSOs.

A full cycle of assessment may be needed to establish a cleaning, inspection and assessment program. As you work through these cycles you'll make improvements and changes to the schedule. As the condition (criticality, performance, capacity, remaining life, redundancy) of each component is assessed, you can develop a schedule for repair and replacement. This effort is time well spent as you move towards managing the assets of your system.

Some portions of your system may have self-cleaning velocities and be in good structural condition. Incorporating screening into the Inspection portion of your Cleaning, Inspection and Assessment program can be useful for identifying segments not needing cleaning or further investigation by CCTV. Screening can also be done using various other technologies including zoom camera technology.

Note: A pipe and manhole identification system is needed to establish this program. A number of different options can be used to do this. For example, subdivide your system into sewer shed areas, with manholes identified by their sub-areas (e.g., MH 2-220 would be a manhole numbered 220, in area 2, or, if part of your system is a combined sewer, you might use CSS to denote the combined sanitary sewer, CSS-2-220).

In [Insert your timeframe, e.g. 2007] [Insert City/Town or System Name] began development of our preventive maintenance plan (PMP). This includes our Cleaning, Inspection, and Assessment program to assess the maintenance needs and structural condition of the entire collection system. The goal of this program is to complete the entire system assessment within [Insert number for your goal e.g., 5] years.

[Insert City/Town or System Name] began the cleaning, inspection and assessment program with a focus on the known problem areas and the older sections of [Insert City/Town name]. The results from the cleaning, inspection and assessment program are used to categorize the cleaning

frequency and the repair or replacement needs for each component. Critical infrastructure components will also be identified and assessed. Previous knowledge of the condition of the sewer system has also been used to establish more frequent cleaning scheduled for identified problem areas.

The cleaning, inspection and assessment efforts are performed by [Insert "sewer department staff", "a combination of municipal staff and contractors", or a description of who does the work in your system"]. All data is entered into the [Insert your tracking mechanisms, eg. field logs, computer-based information systems, describe what you use]. *[If you do not currently use a CMMS, you should edit the paragraph above and indicate your anticipated schedule for implementing one]*

The cleaning, inspection and assessment program includes: sewer cleaning, CCTV inspection of piping, visual inspection and classification of the manhole structures and their flow channels, an evaluation of the condition of the pipes and manholes, [Insert all techniques that you use, using the following list, edit and/or add other techniques you use]. Results from the assessment program are used to categorize the cleaning and inspection frequencies for both the sub-areas and problem pipe-sections (described in more detail below and in Gravity Line Preventive Maintenance, Section 4).

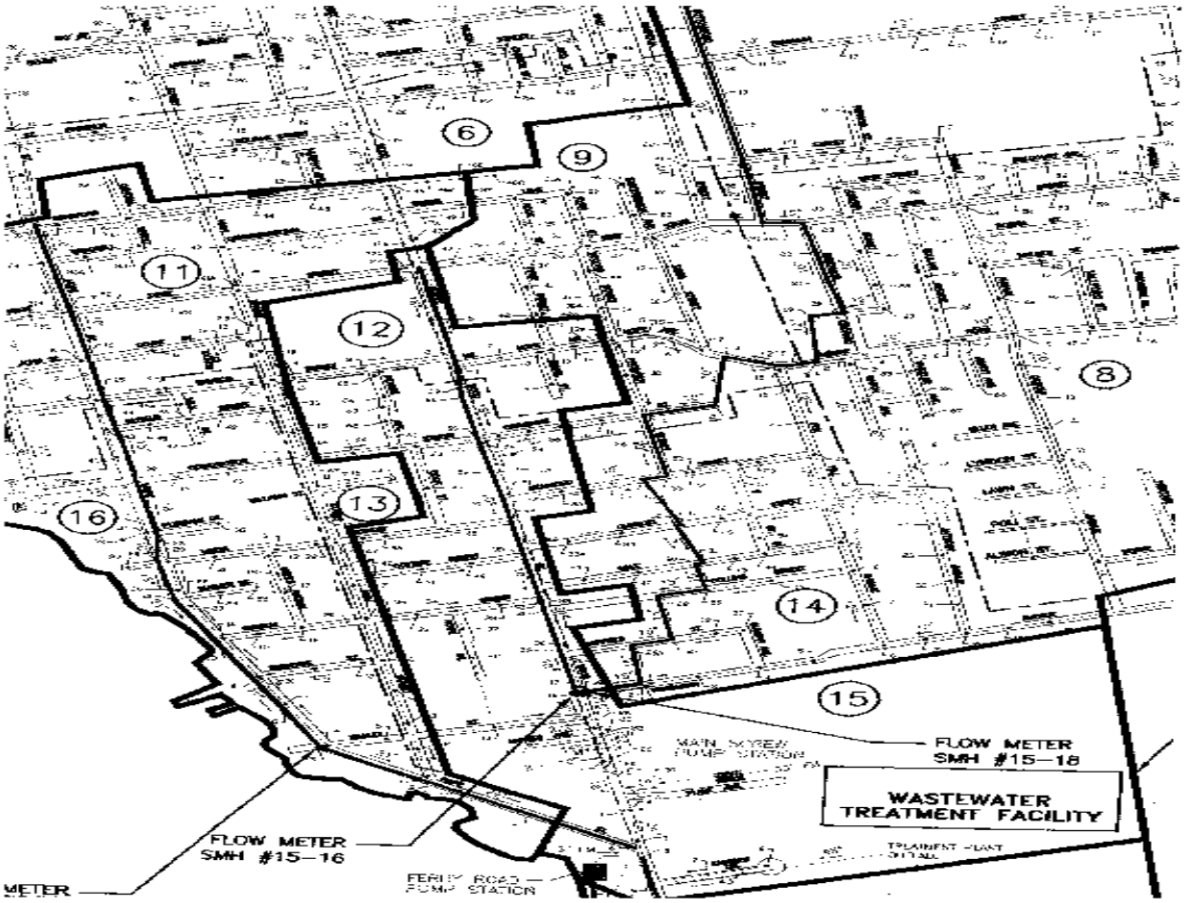
The cleaning and CCTV schedules are closely coordinated. As [Insert City/Town or System Name]'s goal is to have a complete cleaning, inspection and system assessment every [Insert number for your "long term" (5 or more year interval) e.g., 5 years] years, approximately [Insert number] percent of the system is reviewed by CCTV each year. Approximately [Insert number] percent of the system is cleaned annually: the cleaning performed each year includes the priority cleaning plus [Insert number, e.g. 20] percent of the remaining parts of the collection system, factoring in the intermediate and long term interval cleaning schedules. Most of the system cleaning is for gravity lines, as described in more detail in Section b, below.

Information from cleaning and inspections (see Inspection section, below), including any findings, is entered into [Insert your tracking mechanisms, eg. field logs, computer-based information systems, describe what you use], and incorporated into the maintenance software for scheduled maintenance and capital improvement. This information is also used to update this long term Preventive Maintenance Plan (PMP).

a. Cleaning

Our primary sewer maintenance activity is sewer line cleaning. The [Insert City/Town or system name] service area is divided into [Insert number] sewershed areas as shown in Figure [Insert Figure #].

The following Figures provide examples of how a system can denote their subareas, delete these figures and replace it with your map(s).


6
9
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13
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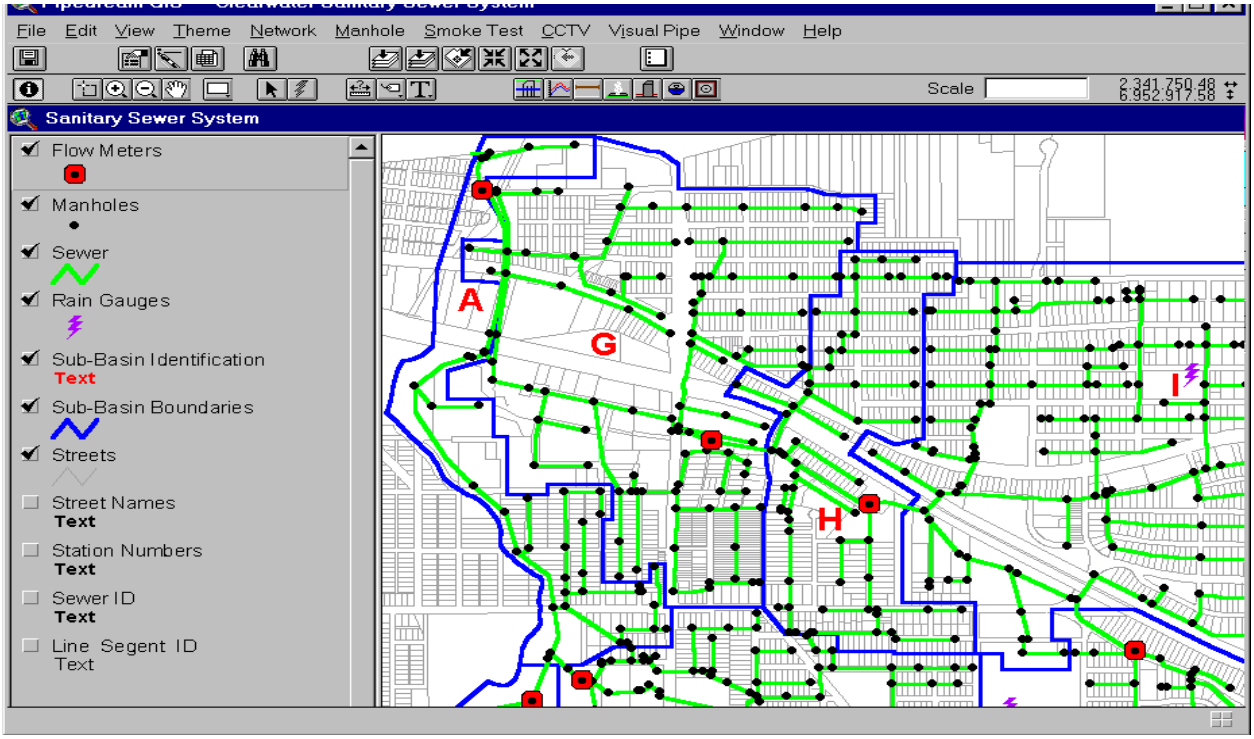
15
FLOW METER
SMH #15–18
WASTEWATER
TREATMENT FACILITY
FLOW METER
SMH #15–16
METER
FERRY ROAD
PUMP STATION


File Edit View Theme Network Manhole Smoke Test CCTV Visual Pipe Window Help
Scale
Sanitary Sewer System
Flow Meters
Manholes
Sewer
Rain Gauges
Sub-Basin Identification
Text
Sub-Basin Boundaries
Streets
Street Names
Text
Station Numbers
Text
Sewer ID
Text
Line Segent ID
Text
A
G
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I

The cleaning of sewer lines, manholes, siphons and other appurtenances is categorized as: priority (annual or more frequent cleaning); intermediate (2-5 year interval); or long term (6 or more year interval).

Cleaning Schedules – Priority Cleaning

Pipe-sections on a priority cleaning frequency are identified based on known Trouble Spots and Critical Service Areas lists. The Trouble Spots (see Table [Insert number]) have a history of blockages or overflows as noted in the table below. The Critical Service Areas (see Table [Insert number] and Figure [Insert number]), locations where sewer malfunction would lead to major disruption, are inspected and maintained at greater frequency due to the importance of their function. Inverted siphons of all diameters are typically treated as trouble spots and receive higher frequency care due to potential grease build up and/or debris settling.

[Edit and/or combine the following two tables for your system]

Table [Insert number]: Collection System Inventory of Trouble Spots and Schedule for Priority Cleaning

Location	**ID #** *(eg GIS #)*	**Description of problem**	**Cleaning Schedule**
Pipe segments			
[e.g. River St.]	*[e.g. MH55-54]*	[e.g. Grease Accumulation]	[e.g., Q]
		[e.g., Roots, Grease Accumulation]	[e.g., SA]
		[e.g.,Silt Accumulation, flat slope]	[e.g.,A]
Manholes			
Air Relief Valves			
Cleanouts			
Siphons			
Easements			
[Add other areas as needed]			

* Schedule Key: (M/Q/SA/A) = Monthly, Quarterly, Semi-Annual, Annual *[use others as appropriate to your system]*

Table [Insert number]: Collection System Critical Service Areas

Component	**Location**	**Description**	**Cleaning Schedule**	**Contact #**
Critical Facilities Served				
Hospitals/Nursing Homes				
Schools				
Food/Beverage Processing				
Prisons				

Other Institutions				
[Add other components as needed]				

Cleaning - Gravity Lines Routine Cleaning

This section details schedules for the routine cleaning of each sub-area of the collection system. Figure [Insert figure number] color codes the collection system into each section and associated cleaning frequency. Table [Insert table numbers] lists which areas are on each of the schedules.

This template assumes you are beginning your program, and the following paragraph describes the start up. It can be edited once you are further along, to reflect your planning process.
During the first cycle of the Cleaning, Inspection and Assessment program, each pipe and manhole [Insert "is" or "will be" depending on whether you are just starting, or have a program in place] evaluated to determine cleaning frequency. A pole camera [Insert "is" or "will be"] used to evaluate each sewer line to determine the need for cleaning and/or a CCTV structural inspection. A pipe section that has not been cleaned in over 5 years, but has been evaluated using the pole camera and shown that cleaning is not warranted, is assigned to the long term cleaning frequency (5+ years). If the camera evaluation indicates a need for cleaning, the pipe section [Insert "is" or "will be"] put on the intermediate cleaning frequency. The cleaning schedules for other pipe sections in the sub-area will determine whether the cleaning frequency will be closer to [Insert number e.g. 2] years or [Insert number e.g. 5] years.

The priority cleaning schedule (described above) includes [Insert number of linear feet] linear feet of sewer; the intermediate schedule [Insert number of linear feet] linear feet, and the long term schedule [Insert number of linear feet] linear feet. Sewershed areas [Insert descriptors or names for the oldest areas - those which are of concern, eg "Sewershed Areas A and B"] have the oldest pipes, [Insert dates and types of pipe material, such as "clay pipes dating from pre-1930", etc.]. Sewershed [Insert identifier for the top priority maintenance area], has the highest percentage of sewers on the priority cleaning schedule due to the number of restaurants and potential for grease stoppages. For other sections of our gravity sewer, the routine cleaning schedule is listed in the tables below and revised as necessary based on findings and as reported by the crews to the supervisor.

Example Cleaning Frequency for 2-5 year: *Table Example (delete when completing template)*

Sewershed area name	*Pipe Diam. (in)*	*Length of segment (lf)*	*Pipe Material*	*Notes*
Sewershed Area 1				
Main St., between Elm and Maple MH1-2200 to MH1-2500	*12*	*1500*	*Ductile Iron*	*Roots expected MH1-2220 and MH1-2250*
Main St., between Maple and Oak. MH1-2750 to MH1-2810	*12*	*1300*	*Ductile Iron*	*Roots expected between MH1-2770 and MH1-2800*
Sewershed Area 2				
First Ave., between Washington and Lincoln MH2-1100 and MH2-1400	*12*	*2200*	*HDPE*	*Sediments problematic between MH2-1200 and MH2-1280*

Two-to-Five-Year Cleaning Frequency Table [Insert number] *[insert additional rows or delete rows as needed]*

Sewershed area name	Pipe	Length of	Pipe Material	Notes

	Diam. (in)	segment (lf)		
[Insert name of area 1]				
[Insert name of first segment, eg. street name]	[Insert number]	[Insert number]	[Insert material]	[Insert notes]
[etc.]				
[Insert name of area 2]				
[Insert name of first segment, eg. street name]	[etc.]			

Five-plus-Year Cleaning Frequency Table [Insert number] *[insert additional rows or delete rows as needed]*

Sewershed area name	Pipe Diam. (in)	Length of segment (lf)	Pipe Material	Notes
[Insert name of area 1]				
[Insert name of first segment, eg. street name]	[Insert number]	[Insert number]	[Insert material]	[Insert notes]
[etc.]				
[Insert name of area 2]				
[Insert name of first segment, eg. street name]	[etc.]			

[Edit the following paragraph to include the details of your tracking program]
All cleaning records are kept in a [Insert database, spreadsheet, or details of how you track] that tracks the following:

- date, time and location of cleaning activity;
- specific lines cleaned;
- equipment used;
- identity of cleaning crew;
- number of passes needed to clean the line;
- presence of root, grease, or debris; and
- problems identified or other follow up actions necessary.

Each line segment cleaned is identified by an upstream and downstream manhole number. A log is submitted for each day of work completed. Attachment [Insert attachment number] provides the log form. Support from [Insert name of contracting company] is also used for cleaning and repairs, and for emergencies during non-business hours.

Manhole deficiencies are also noted in cleaning logs (see Section b, below). Information about manholes requiring attention is provided to [Insert name of person the crews report to, or title such as "the supervisor"] and either a repair work order is issued or it is added to the capital repair schedule. *[A system for characterizing the condition of manholes should be established, see example logs in appendix. See manhole ID fact sheet at http://www.epa.gov/region1/sso]*.

b. Pipe and Manhole Inspection

Planned manhole and pipe inspections are coordinated with the cleaning program and generally follow the cleaning schedule. However, as [Insert City/Town or system name] implements the first cycle of the PMP, and establishes cleaning frequencies and repair schedules, inspection by zoom camera will be used to help establish those cleaning frequencies. The cleaning, inspection

and assessment program goal is to inspect the entire collection system within [Insert number for your goal e.g., 5] years. During the first cycle of the PMP, prior to cleaning, a [Insert the type of camera equipment that you use, e.g. pole, zoom, crawler, etc.] camera is used to screen a pipe section to determine the cleaning frequency and whether a full CCTV screening is needed to assess its structural condition or other deficiencies. [Insert City/Town or system name] uses our [Insert the type of camera equipment that you use] to document:

- the structural condition of the pipe
- root intrusion
- grease
- protruding taps
- evidence of inflow and infiltration (I/I) or surcharging
- manhole pave-overs, and
- other deficiencies that factor into condition assessment

Planned video inspections are generally scheduled to follow the planned cleaning schedule. However, in the event of a blockage, a video inspection assesses the cause of the blockage. After the blockage is removed the line is evaluated with a pole camera again to determine if an inspection with a CCTV crawler is needed to assess the condition of the pipe. [Insert City/Town name] uses a [Insert equipment that you use, e.g. "pole camera"] for this assessment.

All newly constructed sewer lines are required to be CCTV inspected by the contractor or developer to verify as-built drawings and ensure the line has no construction defects. Additionally, all new pipes and manholes are required to be [Insert "pressure" or "vacuum"] tested to ensure tightness and prevent release of sewer odors and future infiltration of storm water. This inspection and testing process must be completed prior to backfilling and before [Insert City/Town name] will accept the infrastructure from the construction contractor. [Insert a sentence or two to describe your program for electronic maps or one-year performance of the new infrastructure if you require it]

The following table ([Insert number]) lists the schedule for the types of cleaning and inspections that are performed.

Table [Insert number]: Combined Routine Cleaning and Inspection Schedule

Description	*H/ NC	Information on asset	Monthly	Semi-Annual	Annual	2-5 year	> 5 year
[Insert a description that you use for each segment or component that you maintain, including main lines, service laterals, maintenance structures and pumping stations, etc..]		[Insert information associated with the pipe segment/manhole/component, such as age, particular issues maintenance personnel need to know, or if a trouble spot, etc.]	[Insert the codes to describe required work]	[Insert the codes to describe required work]	[Insert the codes to describe required work]	[Insert the codes to describe required work]	[Continue inserting the maintenance function using your codes]

Description	*H/ NC	Information on asset	Monthly	Semi-Annual	Annual	2-5 year	> 5 year

Table Legend:
***High Priority (H) Non-critical (NC)**
**** Work Codes:**
Clean (C) ***Rodding (R), Jetting (J), Root Cutting (RC), [etc.],***
Visual Inspections: Inspect General condition and overflow evidence **(G),**
Inspect for Surcharging evidence **(S),** Inspect for loose bricks/mortar, **(L),** Inspect for evidence of I&I **(I/I),**
CCTV Inspection (*specify* **pole camera PC, crawler camera CC, camera on jetter CJ),**
Flow Monitoring **(FM),** Smoke or Dye testing **(T),** Assess Condition **(A),**
Clean and Assess Condition (C&A), ***[continue the list using your operations]***

Manhole inspections help keep our asset inventory up to date and are used not only to update collection system maps, but to determine structural condition. During manhole inspections, field crews take a complete inventory of each manhole including construction materials, ring size, depth to invert, flow conditions and evidence of problems according to the checklist in Appendix [Insert appendix number]). Information is recorded in [Insert name of computer program, and/or description of spreadsheets, and/or hardcopy files, log books] and used to schedule maintenance and repairs. A digital camera is used during the inspection to document defects.

Manhole inspection results are reviewed for condition rating. Those needing repair (rated [Insert high-priority rating number, e.g. 5]) are placed on a priority schedule, and routine repairs are coordinated with re-paving work, see Section 5.When repairs are recommended, as described below, work orders are created and entered into [Insert your tracking mechanisms, eg. field logs, computer-based information systems, describe what you use].

[Insert personnel description for manhole repairs, such as "Repair crews" or the name of the contracting company] are responsible for completing structural repairs to manholes. Repairs include invert work, frame and cover grade adjustment, and frame and cover replacement. More comprehensive repairs, such as complete relining of the manhole structure, are performed by [Insert description comprehensive repairs, such as the name of the contracting company]. As noted in Section [Insert section number], Equipment and Tool Inventory, [Insert City/Town or system name] maintains an inventory of frames and covers. Work is completed based on priority as noted on work orders which are tracked and completed in our work order database.

[Edit the following paragraph for your system, or if you use a contractor service, make appropriate changes]
The [Insert manhole crew or the name of your contractor] rehabilitates manhole cones and risers as identified by the inspections. [Insert manhole crew or the name of your contractor] operates a trailer-mounted grout machine for spraying the inside of manholes and uses chemical grout to stop specific leaks. Work orders are created and entered into [Insert "the database" or other description of what you use]. Repairs are made on a priority basis.

c. Assessment

Edit the following paragraphs to describe what you do. If you are not currently scheduling CCTV and/or do not have a system in place to record your results, edit to indicate your schedule to develop and implement CCTV and condition assessment software programs.
While routine cleaning and visual inspection are used to assess the condition of manholes and surface facilities, CCTV video inspections are the primary method used to assess the condition of the sewer pipes. All records are entered into [Insert name of computer program, and/or description of spreadsheets] (see Information Management section).

The results from routine inspection and monitoring are used to prioritize areas needing CCTV inspections to assess pipe condition such as manholes with evidence of slow flow or surcharging. The assessment is logged into [Insert name of computer program, and/or description of spreadsheets] using conventional defect criteria (see attachment [Insert attachment number]). *[If you are not currently using defect codes, a description of Pipeline Assessment and Certification Program (PACP) defect codes can be found by searching the internet. A number of systems have also created simplified codes. If you have already done some CCTV work, include a description such as edits to the following:]* In [Insert year], [Insert number length of feet] feet of pipe were inspected. The [Insert "tapes" if video, or "DVDs"] have been reviewed and condition assessments entered into [Insert name of computer program, and/or description of spreadsheets].

Pipe condition information is used to determine short and long term maintenance strategies including increased cleaning, root treatment, sewer line repair, or replacement. The condition assessment helps establish the cleaning frequency and inform [Insert City/Town or System Name]'s capital planning. As more condition assessment information becomes available, the priority of capital projects may change. Sewer line repair or replacement projects are also coordinated with re-paving schedules, see Section 5.

Condition assessments document the following details and deficiencies: *[add others as appropriate to your system]*

1. Characteristics including pipe diameter, and age and type of material
2. Dips in line
3. Grease build-up
4. Root intrusion
5. Sediment accumulation and encrustation
6. Structural condition, including cracks, corrosion and erosion
7. Joint alignment and movement
8. Reverse slope
9. Obstructions
10. Deformations in line

[Insert City/Town name]'s [Insert name of computer program] software includes a defect assessment table where each asset (pipe, manhole, pump, etc.) is rated for specific criteria (e.g., roots, grease, sedimentation, cracks, etc.). Based on the criteria ratings, the [Insert name of computer program] assigns an overall rating for each asset. A ranking of each asset, based on its condition assessment rating (see Table [Insert Table #]), is then used for prioritizing capital repairs and replacement.

The following tables provide examples of common condition ratings. Insert the rating description you use
Table [Insert Table #]

Condition Rating	Condition Description	Maintenance Required
0	New	Normal
1	Excellent Condition	Normal
2	Minor Defects Only	Minor
3	Backlog Maintenance	Significant
4	Requires Major Renewal	Renew
5	Almost Unserviceable	Replace

The following table provides an example of common assessment factors. Insert a description of the method you use or plan to use

Assessment Factor	Consideration	Scale
Criticality	*How critical is the service of this asset?*	*0 (noncritical) – 10 (critical)*
Performance	*What level of performance is it providing?*	*New to unserviceable (on a scale of 0 to 5)*
Impact of Failure	*Is there a process, environmental, or safety issue?*	*0 (no issue) - 3 (significant) for each impact category*
Capacity	*Is it capable of meeting system needs?*	*Undersized – Oversized*
Remaining Life	*How much of its design life is used up?*	*Percentage from 0 to 100%*
Redundancy	*Does the component have a back up?*	*From 0 (no back up) to 200%*

d. Staffing and Equipment

[Edit the following paragraph to include the details of your program. Edit as necessary to indicate who (including contractors) is doing the work.]

[Insert City/Town or system name] has [Insert number] staff trained for cleaning, inspection and assessment, and they are deployed in [Insert the number of people in cleaning crews (usually two or three)] person crews [Insert time frame such as "year round"] for cleaning. Inspection work is coordinated with [Insert a description of your crew(s) for inspections, or if you use a contractor, put in the name], with oversight from [Insert who oversees the use of the inspection equipment, for example, the assistant superintendent]. [Insert who reviews the inspections (usually it is personnel trained with the software) e.g., "The GIS technician", "The assistant superintendent", or other] works with [Insert name of contractor or software, if used] on assessing the condition of our collection system, using [Insert techniques for assessment, if used].

[Insert time frame such as "Each day" or "At the beginning of the week"] crews are assigned a specific area of the collection system with an associated map and are responsible for cleaning all lines (or, in the case of preliminary evaluation, determining if cleaning is needed) within the assigned area within the specified time frame. Appendix [Insert number] contains detailed cleaning procedures that crews must follow. Crews receive training on use of equipment and how to address problems that might be encountered while cleaning the collection system (roots, fats, oils and grease, and [Insert other issues crews are trained on]), including when to call in outside contract services.

Crews report back on a daily basis on progress and problems including any inconsistencies between the map and the actual sewer lines which are noted and submitted with their log to [Insert name of person the crews report to, or title such as "the supervisor"] for entry into the

database and correction of mapping or location errors. As the crews perform cleaning and evaluation, the long term cleaning schedule for the entire sub-area is reviewed to determine if any lines designated for long term cleaning need to be cleaned before the crew moves to a new area.

Cleaning crews perform manhole inspections during cleaning and [Insert number or description (e.g., "all of our", or "one-third of our"] manholes are inspected in the average year.
[Add a paragraph to briefly describe the adequacy of your staffing and any staffing needs you have identified to implement your preventive maintenance program. If you need more staff to implement your program, you should include a time frame for increasing staffing and then update this plan as you move forward with staffing and program improvements.]
[Insert a paragraph describing the number of staff needed for your programs and where you have gaps in staffing]

[Edit the following paragraph to include the details of the equipment used by your crews or, if you use a contractor, the equipment they will use]
The following equipment is available for cleaning:
[Insert equipment type such as rodding or jet equipment and/or vactor truck] is used to clean most lines. The standard attachment used is [Insert equipment detail such as spinning jet or power rodder]. Root saws are attached to the jetting equipment and used as needed. [Insert "Jetting equipment" and/or "Rodding equipment"] is used to remove blockages from lines. Rodding equipment is used to clean easement lines that are difficult to access with the jet equipment and lines that are difficult to traverse with large jet nozzles. Equipment inventory is covered more fully in Section 8.

4. GRAVITY LINE PREVENTIVE MAINTENANCE

a. Fats, Oils and Grease (FOG)

Fats, Oils and Grease, otherwise known as "FOG", can be a significant cause of sewer blockages that lead to SSOs. Specific areas in your system with FOG issues should be identified for priority cleaning in Section 3.a. Identification of FOG blockage "trouble spots" and their causes is usually based on blockage history, line investigation, and inspection of FOG dischargers (such as restaurants). Once identified, FOG trouble spots can be addressed through targeted outreach and additional regulation. A wastewater collection system FOG program includes the following elements:

- *Identification – Identify areas or line segments of your wastewater collection system subject to grease stoppages.*

- *Sewer Cleaning - Establish a prioritized preventive cleaning schedule for each area (and all sources of grease) or line segment with FOG problems. An interim high-frequency cleaning program can be the first step in addressing the problem.*

- *Source Control – Develop and implement source control measures for each area of the wastewater collection system identified with FOG problems.*

- *Facility Inspection – Inspect grease-producing facilities, with priority given to previously identified problem areas.*

- *Legal Authority – Ensure your city or town has adequate legal authority to: prohibit discharges of excessive grease to the collection system, levy fines as appropriate, and enforce your ordinance.*

- *Enforcement – Legal authority is most useful when you take action when your requirements are not followed. You should have a program to inspect and enforce your sewer use ordinance.*

- *Outreach – establish an outreach program to educate and inform business, industry and citizens about how to reduce FOG discharges and the costs and impacts of FOG in your system.*

Grease and grease-like products can significantly increase the likelihood of sewer overflows. Grease can also cause blockages or aggravate blockages due to roots or structural deficiencies. Restaurants, cafeterias, and other food service facilities, as well as industrial facilities, can discharge grease as part of their normal sanitary flows that can lead, in time, to blockages, backups and overflows. *[If you have a FOG control program, edit the following. If you do not have a FOG control program, but have problems with FOG, you may need to clean those areas more frequently as an interim measure, and edit the following to describe your time line for developing a program]* The discharge of fats, oils and grease (FOG) is regulated through our [Insert "pretreatment" or if you regulate it through another program or department, specify] program; however, backups can sometimes occur. Areas of the collection system with known grease problems are identified on Table [Insert table number]- Trouble Spots, in Section 3.a.

[FOG programs, because they deal with food issues, are commonly coordinated with a local or regional Board of Health. If you already have a FOG program working with your Board of

Health, edit the following paragraph]
[Insert City/Town name] began assessing FOG in the collection system in [Insert year], and found most blockages in the [Insert which areas, e.g., "commercial", or describe where there are Food Service Establishments (FSE): restaurants, supermarkets, schools and hospital cafeterias] areas were due to FOG. Although commercial facilities account for a high percentage of the grease blockages, they are not the only contributors of grease to the collection system, as [Insert details that pertain to your system such as industrial users, areas with summer rentals (or other areas)] and residents in general, also contribute grease to the system. In [Insert year], the Board of Health and [Insert department, eg. City/Town DPW] worked cooperatively to develop a FOG program. The purpose of the program is to minimize the introduction of fats, oils, and grease into the [Insert "City" or "Town"]'s wastewater collection system. The FOG program includes education for commercial /industrial facilities and residents, annual inspection and periodic sewer cleaning. Details of our FOG program are found in Appendix [Insert number].

["OR"

If you do not have a FOG program working with your Board of Health, edit the following paragraphs. If you run your own FOG program, edit to describe your program.]
The [Insert name of City/Town] Health Department is tasked with the inspection of all Food Service Establishments (FSEs) which is an important element in managing FOG at FSEs. The Health Department has agreed to assist [Insert sewer department] in inspecting and assuring compliance of FSEs with our FOG Control Program. [Insert sewer department] has had [Insert details of meetings, agreements with your Board of Health, describe what you have done to date] with the Health Department and will be meeting [Insert details of when your next meeting is] to formalize their agreement to assist with inspection of grease traps and maintenance records for all FSEs within our service area.The FOG program will include education for commercial /industrial facilities and residents, annual inspection and periodic sewer cleaning.

[If you do not have a FOG program, continue editing the following paragraphs to indicate what work you have planned to address FOG issues in your system, otherwise delete.]
To implement this process as quickly as possible, sewer cleaning crews were interviewed regarding known / unknown problem areas. Concurrently, we are conducting a review of line cleaning work orders, historical SSOs due to grease, and historical claims, to identify problem areas for further investigation and evaluation for grease management.

In [Insert year(s)], all FSEs [Insert "were" or "will be"] visited to develop a database of contacts and to determine the types of FOG removal technologies employed at each facility. A seminar with the FSEs [Insert "was" or "will be"] held to provide information on the grease problem and the [Insert City/Town name] inspection program. A map was developed showing the food service establishments and grease hotspots. [Insert details such as "The EPA and state agency were contacted for assistance,..." and what type of assistance they provided]. An informational brochure was mailed to all residents and posted [Insert "with" other information that you include on your website] on [Insert City/Town name]'s website.

The [Insert position, e.g., City (orTown) attorney or legal counsel] reviewed the existing sewer use ordinance and found that it grants authority to [Insert City/Town name] to regulate discharges to the sewer system, including grease. [Insert City/Town name]'s sewer use ordinance prohibits discharges to the collection system containing more than [put in number that applies, such as 200] ppm of FOG, or at levels that interfere with the operation of the system. The ordinance also authorizes inspection of facilities during normal business hours.

[If your community or system has enacted policies and procedures, use the following paragraph to describe what you have done. If not, consider implementing a program and describe your plans in the following paragraphs]
The [Insert "City" or "Town", and organization (e.g., council, Board of Selectmen)] enacted a policy and procedures requiring all commercial and industrial grease generating facilities to install and maintain a grease interceptor or automatic grease removal device, and maintain records of maintenance and operation. The policy also includes annual inspections of FSEs that will be done by our [Insert "pretreatment staff" or if you regulate it through another program or department, specify] and the Board of Health. The annual inspection is [include the cost of the inspection if there is a charge, or "free"]. If the grease interceptor has not been maintained (with documented removal of accumulated grease and cleaning), has been bypassed, or if significant grease is discovered within the service connection, [Insert City/Town name] will issue a letter to the owner giving notice of the ordinance/policy non-compliance and requiring action be taken to prevent further discharge of grease into the system. A follow-up inspection will require a fee of [indicate the cost of follow up]. If the non-compliance is not remedied within [indicate time frame allowed by ordinance or policy] days, the policy states that the enforcement authority of the sewer use ordinance may be invoked.

[Insert City/Town name] has a [insert contractor and name, or equipment that the system owns and uses] to clean the sewers in these problem areas at a high priority frequency (See Table [Insert table number from Section 3]. All emergencies are handled by [indicate how emergencies are handled, e.g., contractor, or if there is a 24-hour number and city/town department to handle them] (see the [Insert City/Town name] Sewer Overflow Response Plan).

[If your FOG program has been successful, consider editing the following paragraph, or describe how you intend to improve your FOG program]
To date, the FOG program has been effective in reducing blockages due to grease, and [Insert City/Town name] has not needed to implement a permit program or require FSEs to monitor for FOG. [Insert City/Town name] is also evaluating data to see if the cleaning frequency in [specify if specific areas are being evaluated] can be reduced. [include a sentence about keeping materials and/or webpage up to date and any ongoing FOG program work]

b. Root Control
Roots can be a significant cause of sewer blockages in some areas of your collection system, potentially leading to SSOs. Problem areas with root intrusion should be identified in the priority cleaning in Section 3.a. Identification of these blockage "trouble spots" and their causes is usually based on blockage history and line investigation. Areas with root intrusion should be addressed when you identify trouble spots and set your sewer cleaning schedule. Identify areas or line segments of the wastewater collection system subject to root blockages and establish a prioritized preventive cleaning schedule for each. An interim high-frequency cleaning program can be the first step in addressing the problem. Mechanical removal is the most common form of root control. This template section is written for a mechanical removal program. If you have a chemical root control program, replace the following with a description of your program.

[Insert City/Town or system name] currently uses mechanical root removal for sewer lines with chronic root problems (see Table [Insert number]: Collection System Inventory of Trouble Spots and Schedule for Priority Cleaning in Section 3**)**. Root saw attachments are standard equipment on cleaning trucks. When a crew encounters roots during routine cleaning, a hydraulic saw is attached to the jetter and used to cut and remove the roots. The severity of the problem is

recorded on the daily log, and if necessary, the pipe section is placed on the list for priority cleaning.

Cutting a tree's roots is like pruning the tree, and stimulates root growth into the system. Consequently, mechanical treatment must be repeated every year or two, which is factored into the cleaning schedules. *[If the system is using chemical treatment for roots or considering the use of chemical treatment, edit the following sentence, otherwise, delete]* [Insert City/Town or system name] is also investigating a chemical root treatment program to control root growth in the collection system.

Root control is also a major part of easement maintenance, as described in Section [Insert section number].

c. Service Laterals

[If you do work on service laterals, edit the following paragraph. If, instead, you refer the owner of the service lateral to a list of plumbers, edit the paragraph to indicate how owners access that information]

While [Insert City/Town or system name] maintains service laterals from the property line to the sewer main (portions in the public right-of-way), the service lateral from the building to the property line is the owner's responsibility. [Insert City/Town or system name] will repair laterals that are located in the public right-of-way when responding to service complaints. If a complaint is received and the [system or department name] field crew determines that the problem is limited to the section of the lateral between the property line and the main, the "lower" lateral will be rodded out if needed (at no cost to the customer) if a cleanout is available at the property line. [Insert City/Town or system name] also televises this portion of the lateral if needed. Since [Insert year], [Insert City/Town or system name] has averaged approximately [Insert number of feet] ft of service lateral CCTV inspections per year.

If service lateral problems are found to be the result of blockage or a collapse in the portion of the lateral under the property owner's responsibility, the field crew provides the property owner with [Insert a description of the information you provide and attach a copy or reference your webpage where the information is accessible].

[Insert City/Town or system name] is evaluating our flow monitoring data to determine the amount of infiltration from laterals and will consider funding lateral rehabilitation if it proves to be cost effective. We are also considering adding a requirement that service lateral condition be evaluated as part of a home the sale.

5. EASEMENTS and PAVING: MAINTENANCE AND ACCESS

Pipeline easements are often a critical link in a collection system. You need to know where your easements are and maintain them to ensure ready accessibility in the event of an emergency. If you do not know the location of all easements, and more importantly, the locations of your collection system components within the easements, a plan must be developed to locate them. Outline your plans for easement maintenance. Provide access by removing obstacles or by having equipment readily available for cleaning, inspection, assessment, and repair.

a. Maintenance of Right of Way and Easements

Easements give [Insert City/Town name] the right to install and maintain sewer and water facilities on property not owned by the [Insert "city" or "town"]. Easements in [Insert City/Town name] are usually no more than [Insert distances to fit what your system has, eg, "20"] feet wide, but run from [Insert distances to fit what your system has, eg, "several hundred"] feet to [Insert distances to fit what your system has, eg, "several miles"] in length. [Insert City/Town name] has [Insert number] sewer access easements. These easements are recorded as deed records that are accessed through [Insert City/Town name]'s [Insert e.g., assessor's department, or location such as County Registry of Deeds]. The Inventory of Sewer System Easements (Table [Insert number], below) lists the easements for the sewer collection system. Figure [Insert number] shows the location of the easements.

Table [Insert number]: Inventory of Sewer System Easements

Location	**Assoc. Manhole ID #** *(eg GIS #)*	**Owner of Property**	**Comments**	**Type of maintenance, frequency, and responsible party**
[e.g. End of High Street through conservation land to Main St.]	[e.g. MH 5-54]	[e.g., Town Conservation Commission]	[e.g. contact conservation administrator when scheduling maintenance. Attend conservation hearing]	[e.g., Sewer Dept. inspects annually, DPW removes brush, as needed]

Easements are important for our ability to operate and maintain our collection system. [Insert City/Town name or department name]'s goal is that all easements remain clear of any fences, buildings, gardens, trees, shrubs and extensive landscaping, to allow equipment access for maintenance of the collection system. [Insert City/Town name or department name] is not liable to repair or replace any such items that are removed in the process of completing repairs or maintenance on the collection system. Crews are, however, instructed to work with the property owner whenever possible. *[If you have summary information on your rights to access easements, whether it is deed information or bylaws, etc., it might be worthwhile to summarize it here so that crews can have it readily available should they need to know the basis for their authority]*.

[Edit the following paragraph to provide the information on your maintenance activities that you think is important for your staff and town to know]
Maintenance of easements is accomplished in various ways. Easements on privately-owned parcels are often maintained by the owner. The Building Inspector refers construction questions as they arise, to the sewer department. Easements on public land are maintained by the entity responsible for property upkeep, as indicated in the Inventory of Sewer System Easements, Table [Insert number]. The [Insert department] uses signage on many of the manholes within easements to make it easier for field crews to locate them and for property owners to see their location. Manholes in easements are inspected as part of our ongoing preventive maintenance program.

[If you have easements with limited access, use the following paragraph and table to outline your plans for improving access.]
[Insert City/Town name or department name] has a program to identify and improve easement

access where needed. Table [Insert table #], below, lists those areas.

Table [Insert number]: List of Collection System Easements with Limited Access

Location	**Manhole IDs** *(eg GIS #)*	**Owner of Property**	**Description of Access Problem**	**Plans to Improve Access**
[e.g.Runs north side of property at 20 Main St. through to Elm St.]	[e.g. MH10-54 to MH 10-667]	[e.g., John and Mary Doe]	[e.g. The NE corner of the Doe's garage is on top of the easement]	[e.g., Contact the Doe's by [date], work with property owner to develop plan for access]

[If your system includes manholes that you haven't been able to locate in the field, use the following paragraph and table to define your plans for identification and maintenance.]
[Insert City/Town name or department name] has a program to identify manholes that have been paved over, or are on department maps but not found in the field. Table [Insert table #], lists the manhole locations and the schedule for locating and uncovering them.

Table [Insert number]: List of Suspected Manhole Locations to be Cleared

Physical Location of Manhole	**Manhole IDs** *(eg GIS #)*	**Description of Suspected Problem**	**Schedule for Manhole Access**	**Date for Manhole Access**
[e.g. in Main St. at the corner of Elm and Main.]	[e.g. between MH A-4 and MH A-10]	[e.g. Manhole suspected paved over in 2000]	[e.g., line scheduled for CCTV investigation [date], will confirm if Manhole is paved over]	[insert date by which manhole must be cleared]

b. Street Paving Coordination

[Edit the following paragraph to provide the information on your maintenance activities that you think is important for your staff and town to know]

[Insert city/town name]'s Public Works department is responsible for coordinating street resurfacing and ensuring that all utilities are aware of scheduled resurfacing. A prioritized list of streets to be paved on a [Insert number of years your paving schedule is revised on, eg, "5"] year schedule is developed each budget year. This list is distributed in [Insert month] to [Insert specific departments, such as wastewater division] to facilitate coordination of all underground work. Each department assesses the condition of their associated infrastructure to determine where repairs may be necessary, and notifies Public Works as to which streets need underground infrastructure work completed prior to resurfacing.

[Consider including an example list or format that illustrates your town's process.]
When the [Insert department, e.g. wastewater division] obtains the resurfacing list from Public Works, maps are reviewed for the presence or absence of sewer lines. If a street does not have a sewer line under the pavement, it is released immediately. The streets remaining on list are cross-checked with the results of our Cleaning, Inspection and Assessment program, to locate sewer

lines that may need repair or replacement in the same time frame as the street repaving plans.

As sewer lines are inspected and assessed under our Cleaning, Inspection and Assessment program (See Section 3), repairs are scheduled in conjunction with the repaving schedule whenever possible. Sometimes work is performed on a priority basis so that repairs are completed on the highest priority street, working in coordination with the Public Works paving schedule. In this case, the Cleaning and Inspection schedules are modified to coordinate with Public Works' schedule. Upon completion of the sewer repairs for an individual street, it is released to Public Works for resurfacing.

During paving work, the [Insert department who does the work, e.g., whether it is Public Works or the wastewater division, or if it is part of your contracted operations] prepares manholes prior to the re-paving of any street with sewer lines. [Insert a sentence or two to describe how manholes are protected, restructured, or repaired during paving].

6. PUMP STATION/FORCE MAIN MAINTENANCE

[Edit the following paragraphs to describe your equipment and any private pump stations. Delete any text not applicable to your system.]

[Insert City/Town name] owns and operates [Insert number] wastewater pump stations listed in **Table** [Insert number]. The collection system also includes [Insert number] grinder pumps that service homes along the [Insert details of where any grinder pumps are located, eg. along Lake Name] and [Insert number] private pump stations. The pump stations owned and operated by [Insert City/Town name] are routinely checked by trained personnel. The maintenance for the grinder pumps and private pump stations is the responsibility of [Insert "city" or "town" or name of your department, or if the responsibility of the owners, describe].

The performance of the [Insert City/Town name] pump stations is monitored through [Insert frequency, e.g., "daily"] inspections [Insert "and our SCADA system", if you have SCADA]. During these inspections, [Insert job position who does this work] reviews pump run hours, totalized flow, wet well levels and alarms. Back-up generators are exercised monthly. On an annual schedule, [Insert name of contractor or department that does this function] pumps the wet wells, removes grease build up, and calibrates the floats. Specific pump station inspection protocols are attached in Appendix [Insert number] for each of [Insert City/Town name]'s [Insert number] pump stations.

Inspection, maintenance and repairs are recorded on [Insert your tracking mechanisms, eg. log book(s), computer-based information systems, describe what you use] at each station and logged into the computerized maintenance management system (CMMS). If a problem or maintenance issue is encountered, personnel must also report it [Insert timeframe, e.g., 'immediately" or "by the end of their shift"] directly to the [Insert position, e.g., supervisor] for resolution. The CMMS [Insert how generated, e.g., "automatically" or if supervisor prints out on a monthly schedule] generates work orders for repairs and routine maintenance. Repairs are a higher priority than routine maintenance.

[Insert City/Town name] [Insert "has"," has recently installed", or "plans to install"] a Supervisory Control and Data Acquisition (SCADA) system for the [Insert names or references for pump stations that have SCADA] pump stations. The SCADA remotely controls and

monitors pump station operations, and sends alarms to the [Insert position, e.g., supervisor] in the event of a malfunction or emergency. The SCADA system records all activities at a pump station and provides a hard-copy printout for backup documentation. The SCADA provides continuous status of pump station operations for the following items: *[edit list to add or delete what you are monitoring or plan to monitor with your SCADA]*

- Number of pumps in operation
- Status of pumps (including operational alarms)
- Current pumping flow rate
- Historic flow rate (24 hour Flow Chart)
- Pump start / stop cycles
- Power status (including power failure alarms)
- Wet well conditions (depth, lead / lag elevations, etc.)
- Personnel status (entry / exit alarms)

[Edit the following paragraph to reflect the status of your system]
Pump stations with the remote monitoring capabilities of an installed and fully functioning SCADA can be evaluated to determine the need for daily physical inspections.

[If you do not have SCADA in all stations, and if you are evaluating the maintenance of private pump or lift stations, edit the following paragraph, otherwise, delete]
Other pump stations will be included in the SCADA system in future years as funding allows. [Insert City/Town name] is also discussing assuming the responsibility for maintenance of the grinder pumps for the homes along the [Insert areas with grinder pumps, e.g. along Lake name, etc.].

[Edit the following table to include pump station and description as well as inspection frequency. If all pump stations are inspected on the same frequencies (various equipment may require daily checks while other equipment may require quarterly inspections e.g.), you may want to delete the column]
Table [Insert table number]. **Pump Station Locations**

Pump Station Location	**Description**	**Inspection Frequencies***

*** D = daily; W = weekly; M = monthly; Q = quarterly; SA = semiannually; A = annually**

Table [Insert table number]. **Pump Station Equipment** *[repeat table/ rows, as needed. Separate tables can be created if equipment varies at different pump stations, or a column can be added to indicate the equipment at each pump stations]*

Equipment	Number	Specifications
Pumps	[number]	[include meter specifications- eg, Brand and Model, rpm, size impeller, rating and serial numbers]
Motors		[include motor specifications- eg, Brand and Model, rpm and hp, volts, amps and serial numbers]
Control Panel		[include specifications- eg, Brand and model number, types of alarms, amp rating and serial number(s)]

Float Switches		[include specifications- eg, Brand and model number, volt and amp rating]
Valves		[include specifications- eg, Brand and model number(s), type (eg plug, check), and size(s)]
Air Compressor		[include specifications- eg, Brand and model number, volt and hp rating]
Meters		[include specifications- eg, Brand and model number and details]
Alternate Power Sources	[number]	[include details of what you have for alternate power]

Manufacturer's Operation and Maintenance (O&M) manuals for equipment are located in [Insert location(s) where manuals are kept e.g., "each pump station and a copy at the DPW offices"].

Pump rebuilding, motor rewinds, and HVAC repairs for the pump stations are contracted to [Insert names of vendors who do this work]. Repairs to motor control centers, flow meters, remote monitoring equipment, valves, and macerators are typically repaired by [Insert City/Town name] maintenance crews. In general, any replacement parts that are difficult to acquire are kept in stock by the [Insert who has parts, e.g. Sewer Division]; other parts are obtained from local vendors or the manufacturer's service center (See Spare Parts Inventory). As pumps and other parts are replaced, [Insert City/Town name] is making an effort to standardize pumping station equipment as much as possible.

Whether repairs are made by local vendors or by [Insert City/Town name] personnel, all repairs are recorded and tracked with the [Insert "CMMS" or your software, spreadsheet or database].

a. Mechanical and Electrical Maintenance

The size of the pump station and its related equipment determine its specific mechanical and electrical maintenance needs. The [Insert title of responsible person in your system, e.g. maintenance supervisor] is responsible for incorporating the routine maintenance of each pump station into the [Insert "database", "CMMS", or whatever method you use to track this work]. The [Insert title of responsible person in your system, e.g. maintenance supervisor] uses manufacturers' Operation and Maintenance manuals to establish action items for pump station equipment. Pump stations listed in Table [Insert table number] have individual inspection protocols attached in Appendix [Insert number]. A general description of weekly and bi-annual maintenance performed on pump stations by the [Insert who does your maintenance, e.g. Sewer Division] is listed as follows:

[The following lists are provided only to show how a program can be described. Edit to reflect what is required by equipment manufacturers, what you have been doing and what you would like or need to include in your preventive maintenance program]

Mechanical Maintenance/Inspections	Electrical Maintenance/Inspections
Daily	
Review pump run hours Review totalized flow Check wet well levels, check for debris, turbulence or unusual noise Check alarms Ensure that all switches, controls and valves are in	Ensure all breakers are on Ensure that all switches and controls are in the correct position

the correct position Pick up litter, general housekeeping Record findings in log book	
Weekly	
Log pump hours Check hydraulic levels Operate each pump Check drive belt Check bearings and packing Check for pump vibrations, unusual noise, and excessive heat Check pump and pump base connections Check chart recorder for routine pump performance Check valve operations and signs of leakage Lube and grease equipment (as required by manufacture) Check, clean and maintain property [include odor control or grinder screens as applicable to your stations]	Check chart recorder Check Motor Control Centers (MCC) Check level controllers Check electrical service feed Check remote monitoring equipment Check indicator and alarm lamps Check general electrical items (lighting, etc.) Check and release intrusion alarm
Monthly	
	Check back up generator Exercise stand by power
Bi-Annual	
Replace hydraulic fluids and oils (as required by manufacturer) Inspect pumps (oil levels, seals, packing, bearings, etc.) Replace packing Inspect pump impellers and clearances Inspect discharge piping Check outflow pressure Calibrate gauges (including pressure gauges used in monitoring) Check for corrosion problems Exercise check valves Check air release valves Check floats/bubbler system (clean and/or replace) Inspect building and grounds Check operation of building heat and fans Inspect HVAC equipment Check building security	Inspect internal Motor Control Center components Check insulation resistance Inspect & grease electrical contacts Inspect electrical pump cables Inspect electrical breakers Perform amperage readings on equipment Check MCC for proper operations Check Generator: oil level water level [*if a level gauge is installed]* fuel level inspect hoses and belts check piping for leaks check battery condition
Annual	
Pump the wet wells Remove grease build up Service and calibrate all instrumentation: flow meters, level sensors, alarms, elapsed time meters and telemetry equipment	Alternate Power Sources checked and run as part of emergency drill

Capacity and discharge head in the pump stations are reviewed annually, following confirmation that the pumps are in good working order. Changes in capacity and discharge head are evaluated to determine whether cleaning of the force main is warranted.

All mechanical and electrical maintenance activities are recorded on a log sheet at each station and entered and tracked by the [Insert "CMMS" or your software, spreadsheet or database]. The [Insert "CMMS" or your software, spreadsheet or database] [Insert how generated, e.g., "automatically" or if supervisor prints out on a monthly schedule] generates work orders for both weekly and bi-annual preventive maintenance actions. These work orders are left in an “open” format until maintenance crews enter completion comments pertaining to the work order. Any problems or maintenance issues noted by crews are reported to the [Insert title of responsible person in your system, e.g. maintenance supervisor] for resolution.

[Edit the following paragraph to reflect the number of force mains and air release valves in your system. Delete if you have no force mains and change the table of contents.]

b. Force Main Maintenance

[Insert City/Town name] currently has [Insert number] force mains in the collection system with a combined length of [Insert number] miles. The [Insert name designation of force main] force main has [Insert number] air release valves located at the high points: [Insert locations]. *[Repeat the previous sentence for each force main that has one or more air release valve]*. The [Insert name designation of force main] is not long enough to warrant air release valves. Our system includes a total of [Insert number] air release valves. [Insert City/Town name] inspects and maintains the air release valves semi-annually by back flushing the valves with clean water using a minimum of 30 psi. All air release valves and valve vaults are inspected for signs of corrosion, connection point leakage, or improper operating characteristics.

The pressure on the discharge side of the pump is used to determine the need for force main cleaning. If the backpressure is more than 25% greater than the expected total operating head, the discharge pipe will be cleaned. Pressure gauges are calibrated during the [Insert frequency] inspection.

[If your system has private pump stations, include details on your requirements and responsibilities below, otherwise delete the following section and change the table of contents. Note: in Rhode Island, operations and maintenance plans are required to address private pump stations.]

c. Private Pump Stations

[Insert City/Town name] currently has [Insert number] private pump stations that discharge an average of [Insert number] gallons per day to the collection system. These privately owned and operated pump stations are required to [Insert details of what you or your town require when these stations are installed; e.g. requirements for inspection, maintenance and/or emergency response capabilities or contracts]. The following table lists the private pump stations, owners and locations in [Insert City/Town name].

Table [Insert table number]: **Private Pump Stations** *[repeat table/ rows, as needed. A separate table should be created if you have details on the equipment at different private pump stations]*

Pump Station Name	Location	Owner	Owner/operator contact information

Of the [Insert number] of private pump stations in [Insert City/Town name], [Insert number] have a history of service calls and overflows. The history of these issues since [Insert year, e.g. 2003] is summarized in table [Insert table number], below.
[For any private pump stations that have a history of problems and/or SSOs, include in the following table. If none, delete the paragraph above and the following table.]
Table [Insert table number]: **Private Pump Station History Since** [Insert year, e.g. 2003]
[repeat table/ rows, as needed.]

Pump Station Name	# Service Calls	# SSOs	Issue/Resolution

[If your system has problems with corrosion, include details on your corrosion control processes below, otherwise delete the following section and change the table of contents]

d. Corrosion control

The dissolved oxygen content of the wastewater is often depleted in the wetwell of the [Insert name or names of problem stations] pumping station. This wastewater passing through the force main not only lacks oxygen, but often contains sulfides. These sulfides have led to corrosion in [Insert description of where corrosion has been noted, whether pump station equipment or force main valves, or concrete pipes, etc.]. Frequent [Insert what you do e.g.,"cleaning and maintenance", "treatment by ____ " product, etc.] of [Insert description of where or which pumping station(s) or area of force main] is required to prevent solids and grease buildup and minimize corrosion due to the high concentration of sulfides. *[If you use chemical treatments to increase oxygen or control sulfides, include a description of specifically what you want your crews to know to do]*.

7. REACTIVE MAINTENANCE

A comprehensive Preventive Maintenance program should include procedures to address unplanned events. The foundation of planning for the unexpected is knowing the capabilities and limitations of your staff and resources. The next step is to formulate contingencies for all types of upsets that your system has encountered in the past or could encounter in the future.
Just as your preventive maintenance program is based on a prioritization specific to your system; likewise, reactive maintenance should involves a prioritization process to determine the timeframe for repairs. Emergency response is always a top priority, however, other unplanned events may need scheduled repairs.

Use this section to describe how you react to unexpected maintenance issues and how you incorporate corrective actions into your preventive maintenance program. This template provides a few key principles, but it will be up to you to assign your priorities for reactive maintenance. Specific procedures for reacting to an overflow are provided in the template section in Appendix A (a template for a Sewer Overflow Response Plan (SORP)), and the following is written assuming you have used the SORP in the Appendix. If you use an alternative emergency response plan, edit references to the SORP that appear in this chapter. Finally, consider developing a comprehensive list of contractors, technical sales representatives, consulting engineers, and material supply companies that you may need in the event of an unplanned event.

This chapter outlines the process used by [Insert City/Town name or system name] to respond to non-overflow, unplanned maintenance needs in our collection system. It also provides an overview of responsibilities for emergency events. While Chapter 3 outlines [Insert City/Town name or system name]'s preventive maintenance and [Insert "Appendix A" or other title for your emergency response plan] details [Insert City/Town name or system name]'s response procedures for emergency sewer overflows, this chapter is written to address those unscheduled maintenance events that don't result in overflows or backups of sewage into basements. *[If you keep copies of the SORP separately, or if are not using the appendix, include the following information, otherwise delete:]* The [Insert "Sewer Overflow Response Plan" or other title for your emergency response plan] is available at [Insert description of where the plan is kept]. Crews are trained on sewer overflow emergency response as [Insert "as part of that plan" or, "with the Local Emergency Planning Commission (LEPC)" or other method to describe the training for emergency response].

The following programs are typically utilized in a reactive maintenance situation: *[edit the following list to include other programs you may use, or delete those you do not have]*

- [Insert name of program you use] - information management system
- Equipment and supplies
- Customer service
- Water Quality Monitoring - [Insert your lab location or name of laboratory that you use]
- Pump station programs - [Insert details to direct your crews or the reader if you have more information]

Sewer Overflow Response - [Insert "see Appendix A" or other location for your plan] – is always a priority situation, details are provided in [Insert City/Town name or system name]'s Sewer Overflow Response Plan (SORP).

Responsibilities for reactive maintenance are assigned by the [Insert title (such as sewer system supervisor, DPW director) for who assigns the tasks] based on level of priority for response (as noted in the table [Insert table number], below).

a. Corrective Maintenance

The key aspect of corrective or reactive maintenance is to determine how to prioritize repair needs so that they do not become critical and result in overflows. The following paragraphs provide some examples, and a table that can assist in outlining your plans; however, the way you respond will depend on the characteristics of your system.

Most repair needs are identified while conducting routine maintenance, inspections and assessments. Because there is such a wide range of potential unexpected events that it is not possible to prescribe the appropriate repair for every possible scenario, [Insert City/Town name or system name] has established a prioritization scheme for determining the timing of repairs outlined in Table [Insert table number], below. This is based on the types of problems that have occurred in the collection system in the past or could occur in the future. While this contingency analysis focuses on system upsets that would not result in immediate sewer overflow, the response timing is based on the potential for a resulting sanitary sewer overflow. Overflow response is covered in Appendix A.

Low-risk items, such as light bulbs or [Insert specify examples of parts that are considered non-critical], and small non-critical valves, are planned for run-to-failure, and as such, are not part of the PM Program. These items are replaced when they fail. When assets critical to the process fail, they are scheduled for corrective maintenance either on an urgent or routine schedule. Some of these repairs are handled under the operations and maintenance account, and some must be put in as capital improvements as part of our asset management activities depending on asset cost and life expectancy. Assets valued at greater than [Insert number] dollars and with a useful life of greater than [Insert number] years are included in the capital budget.

Corrective maintenance repairs include (but are not limited to):

[Edit the following listing to include or eliminate those repairs that you want to list for your crews to know and consider when using this plan]

- cleaning to eliminate flow problems that are noted during inspections
- spot repair or replacement of a pipe that shows signs of deterioration
- replacing a rattling or failed manhole cover
- repairing or replacing a pump that is becoming clogged or has been damaged by debris
- responding to, investigating and mitigating customer complaints (see the SORP, Appendix A, for response to complaints of sewer overflows)
- repairing system parts subject to vandalism

Corrective maintenance response is outlined in Table [Insert table number]

b. Scheduling

Scheduling of repairs runs the range from repairing components found to be in substandard condition during inspection, immediate repairs to pump stations that are malfunctioning, to major, capital-intensive, repair projects, such as a manhole-to-manhole pipe replacement or rehabilitation (see Appendix A for manhole to manhole pumping on an emergency overflow). An emergency, however, always supersedes scheduled maintenance. Timing of other repairs is done by [Insert a brief description of how you schedule these larger repair projects, e.g. include if you incorporate into capital planning, software and/or if it is put to a commission or town board].

Major replacement or rehab may be capitalized outside of the annual operating budget when [Insert description for when you go out of the Capital Program to fund repairs. Provide as much description as you think will be useful to your crews and other users of this plan].

Table [Insert table number]: **Collection System Non-Emergency Response and Repair Priority** *[include your information in the following table, some examples are provided, add additional rows as needed]*

Problem	**Response Time**	**Action**	**Repair Time Goal**
[Insert problem eg "Failure of pump in [name of] pump station"] *add rows for other pump stations with different holding capacities*	[Insert time, eg "[name of] pump station has a holding time of 2 hours"]	[Insert action, eg, "switch to back up pump, assess repairability of pump or contact [name of] pump supplier"]	[Insert goal such as "within 1 hour of pump alarm"]
[Insert problem, eg, "potential pipe failure identified during CCTV inspection"]	[Insert time, eg "Within one working day of report"]	[Insert action eg. "Contact [name of contractor] under [name of contract] and schedule repair"]	[Insert time goal]
[Insert problem, eg, "Inspection shows evidence of system surcharging, no ongoing overflow"]	[Insert timing such as "Within 1 day of receiving report or discovering problem"]	[Insert action eg, "Clean sewer line and/or check for proper downstream pump station operation and repair as needed. Re-evaluate problem following cleaning/repair. Begin I&I evaluation and corrections if not corrected."]	[Insert time goal such as "Within # hours of arriving on site for cleaning and station repairs. Initiate I&I evaluation and corrective actions within # days"]
[Insert problem, eg, "Failure of Backup Power System during test"]	[Insert timing such as "Within # days of receiving report or discovering problem"]	[Insert actions such as how you would assess whether the equipment could be repaired, and "repair" or "replace" equipment]	[Insert time goal such as "Within 10 days of response"]
[Insert problem eg., "Complaint of odor" or "rattling manhole", etc.]	[Insert timing such as "within # days of report"]	[Insert action you want your crews to take]	[Insert time goal]

c. Tracking and Recording Repairs

[Insert "Sewer department staff" or more detailed description of who is responsible] document corrective maintenance needs [Insert "in the log book", or "in the [specify maintenance tracking] system", or your reference for work order system] at the time of the event. Corrective maintenance tasks are recorded [Insert "in the log book" or "[specify name of recording form" or reference for where crews report completion] when completed and then [Insert who enters the information into your data files] inputs them into our [Insert "CMMS database" or other system that you use for tracking]. CCTV or other failure analysis may also be done by staff as a corrective maintenance task after a problem occurs when [Insert a brief description of when crews would be expected to use CCTV] to diagnose the cause of the problem and recommend repairs and schedule changes if needed. Findings may lead to a spot repair of the pipe, root cutting, root foaming with an herbicide, re-cleaning for grease or debris removal on a periodic preventive basis, and if so, these tasks are included in an update of our schedule as described in Section 3, Cleaning, Inspection and Assessment.

d. Complaint Response

A strong complaint response program begins with a clear channel for complaints to come into the department with well-trained staff taking the information from complainants. Establish who will be answering calls and provide training on communication skills to handle the calls. Widely advertising the complaint number will help to get the word out (local newspapers, city/town website, bill stuffers, community connections, local cable TV - are all ways to advertise and get the word out). Create a tracking system to log complaints and follow ups use it to help you assess where your trouble spots and problem areas are. This information should be used to update your preventive maintenance schedules and policies.

The [Insert name of department that responds] is responsible for responding to sewer service complaints. Complaints are generally related to sewer stoppages, overflows, or odors. Response is performed by the [Insert "collection system staff" or reference to your crew(s)] during work hours ([Insert your hours of operation where calls are answered by the name of department that responds a.m. to p.m.]) and by [Insert "the supervisor on call" or name of contractor if you use a contractor on call for off hours, or reference to your off hours contact(s)] during off work hours ([Insert the hours that an outside number responds p.m. to a.m.]). The [Insert name of department that responds] provides directions for after-hours service on [Insert your program, e.g., "the answering machine at [##-####]"] and on our website [Insert web address].

Complaint response includes both assessing the complaint and resolving the problem. The majority of our complaints are related to [Insert where most of your complaints come from, such as "stoppages in lateral sewers", "fats, oils and grease in the Main Street line", some combination or description of where your complaints are from]. During work hours, a cleaning crew is diverted to remove stoppages. During non-work hours, [Insert city/town name] uses [Insert your method for after hours, such as the department that responds or the name of the contractor] on stand-by to address complaints. See Customer Service, Section [Insert Section #, Template Section is 1.d.] and [Insert "Sewer Overflow Response Plan" or other title for your emergency response plan] for further details.

The [Insert "City" or "Town" or name of department that responds] tracks these complaints and response activities [Insert "in a spreadsheet", "in our CMMS", or describe the method you use to track complaint and response], evaluates response time, trouble spots and [Insert other uses for your logs], and uses the information to assess our performance, update this plan and prioritize

repairs.

e. Reactive Response Summary
The companion Sewer Overflow Response Plan (SORP) Template (Appendix A) has extensive detail that can be used and edited to develop your system's emergency response plan. Edit the information to fit your needs (e.g., you may or may not want home phone numbers in a widely distributed public document, but your crews should have the information they need. You can also cut and paste and edit the following information from the SORP in the appendix).

For detailed response information, refer to [Insert "Sewer Overflow Response Plan" or other title for your emergency response plan]. This chapter does not cover overflow response, in the event of a spill or overflow, see the SORP and contact the following:

Response Coordinator & Alternate
[Insert Name of Superintendent or key person for contact
Office - [Insert Telephone Number of Superintendent
Home - [Insert Home Telephone Number

[Insert Name of Next in Charge
Office - [Insert Telephone Number of Next in charge
Home - [Insert Home Telephone Number

[Insert Information for others if needed

[Insert reporting info, e.g., "Rhode Island Dept. Environ. Mgmt. 401-222-4700"] (during business hours, and see [Insert "Sewer Overflow Response Plan" or other title for your emergency response plan])

[Insert Information for others if needed]
As recommended in the SORP template, in addition to this basic information, you should have a detailed map of your system and a communication plan should phones and radios not work. For example, arrange places to meet and designate less technical ways to share and distribute information.

8. EQUIPMENT AND TOOL INVENTORY

Continued system 'operation and maintenance' requires an adequate inventory of replacement parts. The process of identifying critical parts considers manufacturer's recommendations, local availability and the experience of maintenance staff. If you have major equipment, you may also want to include it in your Asset Management program. To the extent that equipment, especially pump station equipment, can be standardized, this can help limit the size of the parts inventory that you need to keep on hand.

a. Essential Day-to-Day Items

[Insert City/Town name or system name] provides operations and maintenance crews with the essential work related items they use on a day-to-day routine basis. Should new or replacement equipment or tools be needed, the crew leader notifies the [Insert title such as "superintendent"]. The [Insert title such as "superintendent"] will issue the crew leader stocked items. For non-stocked items, the [Insert title such as "superintendent"] advises the crew leader of a local vendor [Insert City/Town name or system name] and requests a purchase order for the needed item(s). The crew leader will then procure the requested items through the local vendor in an "in-stock" format.

b. Spare Equipment and Tools

[Insert City/Town name or system name] keeps a limited supply of spare equipment and tools for personnel. In lieu of maintaining a full supply of spare equipment and tools for personnel, [Insert City/Town name or system name] has an annual "supply bid" for essential common equipment and tools. This bid requires the vendor to maintain "in-stock" items listed in the annual bid, and the vendor must have a local storefront for item pick-up. Non-bid equipment and tools can be purchased in amounts up to [Insert number of dollars e.g., "seven thousand"] dollars ($[Insert dollar amount, eg. "7,000"].00).

The large equipment and tools needed for certain tasks *[you may want to put specifics in here]* are obtained through current rental contracts or purchased through the [Insert name of department, e.g., "Procurement"] Department for permanent acquisition of the item for [Insert City/Town name or system name].

An inventory of the equipment and tools used by [Insert City/Town name or system name] to maintain the wastewater collection system is provided in Table [Insert table number]. A list of supplies and essential spare parts necessary to be kept on site for normal and emergency use is included in Table [Insert table number]. The estimated remaining life of the equipment inventory was calculated based on the date of manufacture, an estimate by [Insert City/Town name or system name] of the useful life expected, and factors that might be expected to extend or reduce the life of the equipment (e.g., repairs or hard use). The [Insert a description of any equipment that is going to need replacement or upgrade in the near future] equipment in the inventory requires replacement in [Insert an estimate of when youexpect replacement]. Specialized attachments are often used with these tools to perform specialized maintenance tasks such as [Insert details on specialized equipment, eg., "root removal or dislodging grease stoppages"].

[The following is an example table of Current Equipment and Tool Inventory. Delete it and insert rows into the table below it for entry of the equipment/tools that you want to inventory. Note that due to repair, maintenance or use history, equipment may exceed its typical useful life or may need to be replaced sooner.]

Description	*Model Year*	*Use*	*Typical Useful Life, yrs*	*Estimated Year for replacement*
Tractor/Backhoe	*2001*	*Sewer repairs*	*15*	*2017*
Flushing Truck (Jetter)	*2004*	*Sewer flushing*	*10*	*2014*
Vac-Con Sewer Cleaner (Combo Jet/Vacuum)	*1999*	*Sewer flushing/vacuuming*	*10*	*2010*
Dump Truck (2-Yard)	*2005*	*Haul sewer debris*	*10*	*2015*
Service Truck (Ranger)	*1995*	*Sewer supervisor truck*	*10*	*2010*
Service Truck (Stand-by)	*1995*	*Sewer service truck*	*10*	*2009*
Compactor/Rammer	*1999*	*Sewer trench compaction*	*10*	*2010*
Gas Generator (2)	*2002*	*Portable power for hand tools and lighting*	*5*	*2008*
Diesel Generator	*1996*	*Emergency generator*	*12*	*2008*
Sewer Power Rodder (2)	*2000*	*Sewer lateral and easement rodding*	*10*	*2010*
Root Cutters	*1999*	*Sewer pipe cleaning*	*10*	*2009*
CCTV Video Camera	*2003*	*Televising sewer laterals*	*10*	*2013*
Centrifugal Pump (3)	*1998*	*Sewer bypass pump*	*10*	*2010*
Mobile Radios (6)	*2003*	*Field vehicle*	*5*	*2008*
Gas Detection Monitor	*2001*	*Confined space entry*	*5*	*2010*
Safety Tripod	*2000*	*Confined space entry*	*10*	*2012*
Computers/GIS Photography	*2003*	*Sewer system management*	*4*	*2008*

Table [Insert table number]: **Current Equipment and Tool Inventory**

Description	Model Year	Use	Typical Useful Life, yrs	Estimated Replacement Year
[Insert equipment description]	[Insert year]	[Insert description of use]	[Insert number of years expected from the equipment]	[Insert year you estimate you will need to replace the equipment]

Table [Insert table number]: **Supplies and Essential Spare Parts**

Description	Use	Quantity On hand
[Insert description of supply or part]	[Insert description of use]	[Insert number]

9. CAPACITY MANAGEMENT

The capacity of a collection system is determined by the size and condition of its parts. Generally, system operators know if they have capacity problems contributing to overflows.

You should be assessing capacity within the collection system as you note whether any portions of the system are subject to surcharging and overflows. These assessments and your overflow report tracking provide information that is critical for planning and decision making to:

Set up and conduct priority cleaning
Direct extraneous flow investigation(s)
Implement capacity evaluation program(s) and the need for hydraulic models
Implement programs for detecting, identifying and removing inflow and infiltration (I/I) sources
Address the prevention of sanitary sewer overflows
Determine whether new connections may be permitted
Determine rates and your fee structure for future connections.

Even when the treatment plant flows are within the designed capacity of the treatment plant, there could still be capacity issues in the collection system. Any portion of the collection system could be receiving flows in excess of its design capacity, or could be surcharging, due to capacity limitations associated with inadequate size, inadequate cleaning or other physical restrictions. Where these conditions are suspected or verified, you should use specific evaluation methods to determine the sources of the physical restrictions and whether excessive extraneous flows are entering the collection system.

a. Capacity Background

[Insert City/Town Name or name of system]'s collection system [Insert "has", "has not to date", or how you would describe your system's current capacity] exceeded design capacity to contain wastewater flows from the [Insert "city" or "town"]. *[If you have known capacity issues in only certain areas of your system, you can include a sentence or two about that here.]* The following tables and discussion summarize the state of our system capacity to carry and contain flows.

[Edit any of the following paragraphs that apply to describe the state of your evaluations and capacity of your collection system]

Sanitary sewer overflows and building and basement backups caused by capacity restrictions in [Insert City/Town Name]'s collection system have historically occurred in the following collection system locations.

[Insert information in the table listing specific sewer segments and causes of the capacity issues. This table is directed at capacity issues and not other SSOs with other causes]

Date	**Location of Capacity Problem**	**Cause of Capacity Issue**
[Insert date or dates]	[Insert specific location of concern]	[Insert known cause or causes or suspected cause]

[Insert City/Town Name or name of system] has undertaken the following evaluations to identify

and remedy the causes of these capacity issues:
Use the following table to list and describe major findings of any capacity assessments, extraneous flow or other engineering evaluations including infiltration/inflow (I/I) or extraneous flow investigations, sewer system evaluation survey (SSES) investigations, Capacity Assessments, and/or hydraulic models, what they covered and when they were done.

Study Title	Scope of Study	Date
[Insert description of study or name of report]	[Insert description of area covered by the study]	[Insert date]

[Insert City/Town Name] has implemented the following measures to remedy and/or alleviate the capacity issues identified in the above table:
[Provide as much detail as possible to indicate the work you are doing and plans for maintaining the capacity of your collection system.]

Circumstances can vary from system to system. This template recommends that you list the scope and date of the activities performed in response to your investigations using the following topic items to help provide details on your programs and the work you have done and plan to do. Add others that pertain to your collection system:

- *Non-structural rehabilitation measures i.e. manhole and sewer testing & sealing programs*
- *Structural rehabilitation measures i.e. elimination of pipe restrictions; elimination of storm sewer--sanitary sewer cross connections, storm sewer catch basin redirection; manhole, sewer, and private lateral replacement; construction of relief sewers, force mains, pump station expansions etc.*
- *Development and calibration of hydraulic models*
- *Evaluation of the extent and capacity of storm water collection systems*
- *Implementation of extraneous flow and illicit discharge home inspections during property transfers*
- *Implementation of private extraneous flow incentive or disincentive (fines or flow surcharge) programs*
- *Increased cleaning to maintain collection system capacity*
- *Implementation of Fats, Oils & Grease programs*
- *Periodic review of flows received from satellite communities*
- *Implementation of sewer/DPW reviews of building permits*

[Insert paragraphs describing your programs]

In light of ongoing capacity issues, [Insert City/Town Name] plans to implement the following measures to remedy and prevent capacity restrictions that result in surcharges and sanitary sewer overflows in the collection system:

At this point, describe your City/Town or sewer department's specific plans and schedule to further investigate or evaluate the causes of any capacity issues that you have in your collection system, and how you plan to implement the measures necessary to resolve the capacity issues. This information should be updated annually. Include a discussion of your assessment as to whether the work can be performed by your workforce or outside contractors and provide a discussion of your plans to finance these activities or refer your reader to the budget Section 10.

[Insert paragraphs describing your plans and schedule(s)]

b. Sewer Capacity Certification/ Connection Policy

[Most communities have a program to assess capacity and effects of new development on its collection system. Edit the following to describe what your system does]

Sewer Capacity Certification is a process where any new development requiring the connection of its sanitary sewer service to the [Insert City/Town Name or name of sewer system] sewer system is reviewed to determine whether adequate sewer system capacity exists to convey the new wastewater flow from the proposed development to our wastewater treatment facility. A capacity certification analysis by a professional engineer is required for all developments of [Insert number, such as "three"] or more units.

Separate from the connection fee, developers of newly-constructed homes and businesses are required to pay a sewer capacity charge for removal of infiltration/inflow (I/I) from the system. The fee is based on removing an amount of I/I equivalent to [Insert number you require, such as three or ten, e.g.] times the requested additional wastewater flow. The monthly capacity charge is assessed for [Insert number] years after connection, but property owners can save [Insert number] percent of overall charges if they choose to pay a lump sum upfront.

c. Lateral replacement program

[The following provides a description of programs to address I/I issues with sewer laterals, edit to match what your system does]

[Insert City/Town Name] has [Insert number of miles] miles of sewer mains and an almost equal length of private service laterals. The [Insert "City" or "Town" and political organization, e.g. City Council or Town Board of Selectmen] [Insert "passed", "has been asked to pass", "is considering adopting", etc. to match your programs] a policy that remedial work to remove infiltration within a sewer shed will also include private service lateral investigation and replacement if necessary. [Insert City/Town Name] will pay up to [Insert percent or maximum dollar amount] to repair or replace private service laterals. [Insert City/Town Name] will CCTV the service lateral at no cost.

10. RESOURCES AND BUDGET

Funding and budgetary support form a foundation for the operation of the collection system. The planning process for your CMOM and Preventive Maintenance Plan should include an assessment of whether your resources (funds and staffing) are adequate for an acceptable delivery of services to the public, including capital repair and replacement. Further details on Asset Management concepts and determining your level of service are outside the scope of this template, but well worth considering as you improve your plans and programs.

You may have a facilities plan or a capital improvement plan that you use in budgeting for repair and replacement. You can bring that information into this template, work from the tables in this chapter, or use a software program that you already have. Remember, however, that following up on the preventive and reactive maintenance plans and issues in your collection system may require increases in budgets, both capital and operations and maintenance.

The resources required for effective wastewater collection system operation, maintenance, and repair include:

• A reliable, consistent, and sufficient funding source for both the operating budget and capital replacement plan. (A user-supported rate-paying structure, commonly known as an enterprise fund, is the strongest funding mechanism and is separate from general fund revenue sources.)

• A formal operation and maintenance budget and expenditure plan. – An operations and maintenance (O&M) budget includes all annual costs of operating and maintaining the collection system, including staff, equipment, tools, consumables (utilities, chemicals, etc.), contract services, spare parts, debt payments, and support facilities such as equipment yards or utility service centers. The O&M budget is usually funded by the sewer user charges and miscellaneous revenue. Some utilities have a policy requiring that funds should be available to pay for operating expenditures for up to 180 days at any one time. Funds in excess of this maximum balance can be transferred to the capital improvement fund. Also, the Government Accounting Standards Board includes recommendations on depreciation of assets. Depreciation expense would be included in the O&M budget and the revenues to offset the depreciation would usually be found in the capital improvement or reserve fund.

• A capital improvement plan (CIP) sufficient to ensure the continued longevity of the system. – A CIP includes all on-going funding for major rehabilitation or replacement of the collection system as it wears out, and upgrading of the system because of expansion. Costs include planning, design, construction, and inspection of new or rehabilitated facilities.

• Other resources may be required, such as contract services for operations and maintenance.

Perhaps the question that is most frequently asked is "How much will it cost to rehabilitate our sanitary sewer system and operate and maintain it in a way to prevent failures?" In order to answer this question, several decisions must be made.

- *How much needs to be budgeted?*
- *Will a rate increase be required?*
- *Are other revenue sources available?*
- *Will a bond be necessary?*
- *What are the program's priorities?*

- *Is it crucial to abate I/I from private property?*
- *Can studies be conducted in-house?*
- *Can some of the rehabilitation work be done in-house?*
- *Can the program be phased? How long?*
- *Are there O&M savings?*

Although a proactive assessment program will require some up-front capital investments, such as equipment and hardware, cities and towns can expect cost-recovery within a 3-5 year period (or less) depending on the reduction level of emergency repairs.

The following subsections have been written to provide an outline of your community's budget process, the history of your budgeting and your rates, and a description of your planning process for both preventive maintenance within the operations and maintenance context and repair/rehabilitation within the capital projects context.

a. Budget Process

[Insert your department's name]'s budget process complies with the [Insert City/Town name] budget cycle, which requires that the annual budget be completed by [Insert date (month, day) by which time you have to complete your budget] of each year. For the Collection System operations and maintenance budget, the process begins with last year's numbers and projected needs for [Insert number of years] years into the future.

[Insert your department's name] works with [Insert consultant or committee name(s) that you work with on budget] to prepare for [Insert "budget hearings" or what type of presentations you may make to get your budget passed]. [Insert a further overview of your process, timing and which committee(s) you go through to get a budget passed].

b. Rate Setting, Budgetary Policies and Financial History

[Insert City/Town name or name of your department, who sets rates]'s rate-setting policies are based on the following principles:
Edit the following list to include your requirements
1. Rates and fees will be based on the actual cost to deliver each service.
2. Current rates must be sufficient to cover current costs and to meet all bond covenants.
3. Rates will include funding for Capital Improvement Plan projects included in an annually updated [Insert number, e.g. "ten"]-year financial plan (both operating and capital).
4. Rate increases will be [Insert a statement of your principles such as "implemented in a gradual and predictable manner, avoiding large one-time rate increases."]
5. Contributions to and usage of a rate stabilization fund, as needed. Each year, after reviewing pay-go financing and any other non-recurring financing uses of excess operating cash, the annual rate stabilization fund deposit, if any, is determined. This fund was established in [Insert year] and its balance at the end of FY-[Insert year] was [Insert number] dollars.

Edit or add to the following to fit your history. If you do not have reserve or enterprise funds, indicate if it has been considered in your community or whether you have plans to implement this type of funding.
[Insert City/Town name or name of your department] operates as [Insert how you operate, e.g. "an Enterprise Fund" or "a division of the DPW budget", etc.]. [Insert City/Town name or name

of your department]'s revenue is generated from user fees, connection fees from new customers, pretreatment permits, fines, engineering review and inspections, interest earnings, and other miscellaneous income.

The [Insert time frame for user charges, e.g. "semi-annual"] user charge has two components: an administrative service charge and a volume charge based on [Insert what your fees are based on e.g., "average water use"]. [Insert City/Town name or name of your department]'s expenses included operation and maintenance, debt service, and capital reserve fund replenishment.

c. Historical Rate Review

Our current sewer rate structure is based on [Insert what your fees are based on e.g., "metered water use"]. Customers are billed [Insert time period eg; "quarterly"] for wastewater services based on [Insert percentage (usu. between 80 and 100)] % of the metered water use. In addition to flow charges, customers are also assessed a base charge to recover fixed costs. See Table [Insert table #], for a summary of user rates for the last [Insert # years included in table] years.

The comprehensive nature of the Preventive Maintenance program will result in increases in the sewer user rates starting in [Insert year] to implement our preventive maintenance and asset management program. Although the expectation is that reactive maintenance costs will decrease as the preventive sewer cleaning program is implemented, an initial increase in costs to initiate the preventive program and establish baseline cleaning, inspection and assessment schedules (reviewed in Chapter 3) is expected. The rate increase also included [Insert other things included, e.g., "GIS improvements to the collection system map and establishing a computerized maintenance management system", etc.]. As CCTV data is provided, future rate increases to address capital improvements may also be expected.

The following table shows [Insert City/Town name or name of your department]'s sewer rates over the last [Insert number of years, five or ten] years.

Table [Insert number]: **Sewer User Fee History** [*Add rows as needed]*

Fiscal Year	**% Rate Increase**	**Base Charge**	**Residential Rate $/100cf**	**Commercial Rate $/100cf**
Avg. Increase				

d. Operating and Maintenance Expense

Estimated operating expenses for FY 2008 totaled $ [Insert number]. This is a [Insert either percentage, or qualifier, eg "slight increase" "increase" or "decrease"] over the FY 2007 operating budget of $ [Insert number].

Operating and maintenance expenses include:
Edit the following list to include all that your O&M budget incorporates

- Employee salary and compensation
- Operating supplies
- Utilities
- Repair and maintenance
- Professional services
- Routine capital outlay
- Debt service expenses for repair and replacement

If you have done an analysis, include the follow sentence and attach your analysis.
Current year and projected future expenses are shown in the User Fee Revenue Requirement Analysis at the end of this chapter.

Edit the following to include the services that you contract:
Professional Services includes planning and engineering studies for replacement projects.
Contractor Services includes contractual work for cleaning sewer lines and manholes, CCTV, and improvements to the collection system map.

Routine Capital Outlay includes items that are considered capital assets and are purchased from annual operating revenue rather than through bonds or the capital reserve fund. Items such as vehicles, specialized maintenance equipment, pumps, motors, office equipment and other smaller items generally costing less than $ [Insert number].

Debt service is the annual principle and interest payments for bonds, loans and other fiduciary instruments owed by [Insert City/Town name or name of your department]. The debt service supports capital improvement projects. [Insert City/Town name or name of your department]'s policy is to not accumulate a maximum debt greater than [Insert number] percent of the operating budget.

e. Capital Improvement Program Overview

The Capital Improvement Plan (CIP) is part of the long-term CMOM planning, which uses the Cleaning, Inspection, and Assessment program (see Chapter 3) to evaluate the existing system and to recommend improvements needed to correct existing deficiencies. The CIP also incorporates our Capacity Assessment (Chapter 9) program to assess projected needs for maintaining the integrity of the collection system and expanding sewer capacity to accommodate growth by providing a detailed [Insert number]-year capital improvement program.

Capital projects are evaluated based on [Insert a description of how you determine the capital projects and how your CIP is developed. For example, if you use the cleaning, inspection and assessment program results, describe how you go from CCTV to CIP]

[Insert City/Town name or name of your department] has [Insert number, or description, such as "many"] ongoing projects in its Capital Improvement Program. [Insert City/Town name or name of your department] develops a long-range CIP program covering a [Insert number]-year period that is updated annually. The CIP describes each proposed project, the budgeted cost for the project and the financing source(s). The CIP was primarily funded with [Insert your source of

funds, e.g. SRF or bonds...] authorized in [Insert year(s)], plus additional funds from the capital reserve fund. The [Insert year] [Insert funding, e.g. SRF loan, or bond] was for the amount of $ [Insert number].

The capital reserve funds result from the balance of funds remaining after the payment of all operating and maintenance, debt service and other expenses. The capital reserve fund also accounts for the depreciation expense in the O&M budget. The reserve funds are primarily used for:
[Edit the following to include your use of the balance of funds]

- Non-bond funded capital projects
- Additional funds for bonded projects
- Emergency repair and maintenance

The available reserve funds generally range from $ [Insert number] to $ [Insert number]. The amount varies based on the number of connection fees collected and increases in revenue as each annual budget is prepared.

f. Capital Improvement Plan

Appendix [Insert number] shows the proposed CIP adopted by [Insert City/Town name or name of your department]. The CIP shows both funded and un-funded projects. The un-funded projects are included for tracking purposes and to allow for changes in the priority of the projects and as funding levels change. The CIP summary is found in Table [Insert number], below.

The total [Insert number]-year CIP exceeds $ [Insert number]. The current pace of project completion has been [Insert description, e.g., "growing steadily due to availability of funds", or "keeping up with growth and revenue generated by ___", or "limited by the availability of funds and the size of the staff" etc.].

Estimated total debt service for fiscal year [Insert current year] is $ [Insert number], which is [Insert number] % of the O&M budget.

In discussing growth and capacity, you should refer to the capacity issues identified for your system as you developed Chapter 9. The fees that you charge for future development should reflect the true cost of the additional flows to your collection system. The true costs include both the new operations and maintenance from adding sewers and the downstream costs as supported by your capacity studies and other known issues. Edit the following to reflect the character of population growth and capacity in your community.

1. Population Growth

[Insert City/Town name] has been growing steadily for a number of years. In the 1990 census, the population of [Insert City/Town name] was [Insert number]. By 2007, the population had grown to [Insert number], an average growth of [Insert number] percent per year. The long range population growth for [Insert City/Town name] is expected to [Insert what the projections estimate, e.g., "continue at this rate", "level out", etc.] through the year [Insert number], reaching a population of [Insert number].

[Insert City/Town name] issued [Insert number] housing permits between [Insert years for which you have data, eg, 1997-2007], indicating an average of [Insert number] of permits each year.

The following goes into further detail on your potential capacity and capital needs. If you have capacity problems, further edit the following paragraphs to include your constraints.
If you have it, include a list of CIP projects, rating, and estimated cost. If not, this should be part of your update plans to be included in Chapter 11.

2. Capacity and Fees

The service capacity and treatment of [Insert number of gallons estimate you use, e.g., 180] gallons per day (GPD) per residential equivalent plus [Insert percent estimate you use, e.g., 15] percent reserve capacity meets the needs of the current service area and provides for additional capacity to accommodate projected residential growth through the year [Insert year you use]. This service capacity includes current average sewer demands of [Insert number of gallons] MGD and growth-related reserves of [Insert number of gallons] MGD for a total sewer capacity for the [Insert name of your system] Collection System and [Insert name of the Treatment Plant for your system] Wastewater Treatment Plant of [Insert number of gallons] MGD.

The growth related projections utilize a [Insert percent estimate you use, e.g., 2-3] % average yearly growth for new sewer services within the existing sewer service area basin. (See Table [Insert table number] Capital Facility Requirements to [Insert year you use]).

Based on the expected population growth of [Insert City/Town name], the collection of connection fee revenue can be expected to [Insert what the projections estimate, e.g., "continue at this rate", "level out", etc.] through the next [Insert number e.g., 10] year financial planning period.
[The following assumes that you have connection fees that are based on CIP needs. If not, edit the paragraph to explain how capacity needs are funded, and if you have plans to increase connection fees to pay for upgrades, indicate those plans.]
Connection fees are used to fund planned capital improvements and are set based on those plans. The current capital program identifies $ [Insert number] in capital projects to meet the projected future growth needs. With the new housing unit growth over the next [Insert number e.g., 10] years expected to be [Insert number] units, the single family residential connection fee will need to be increased from the present level of $ [Insert number] by [Insert number] % per year reaching $ [Insert number] in the year [Insert year] to provide full funding of capital requirements for growth as planned in the current capital program.

3. Capital Facilities Projects and Financing. The total cost of the planned [Insert number of projects] capital and non-capital projects during [Insert year range you use] period is $[Insert dollar total number for your capital projects estimate]. One project is classified as a capacity project, [Insert description of capacity project(s)], at a cost of $[Insert dollar total number for your capacity projects estimate]. [Insert number of projects] projects are classified as non-capacity projects at a proposed cost of $[Insert dollar total number for your non-capacity projects estimate]. (See Table [Insert table number]).

4. **Operating Impact of Service Capital Improvements.** The cost of operating the proposed capital improvement projects during the next five-year period is estimated at $[Insert total dollars] (See Table [Insert table number].).

5. [Insert name of your collection system] [Insert year range you use] Capital Improvement Plan Projects Map Key. The following pages show location maps of all Sewer Utility projects for the [Insert year range you use] Capital Improvement Plan cycle.

i. [Insert projects e.g. Force Main repair (2008-2010)]
Continue with list, use list in table below for estimates of costs and budgets. If your capital plan includes the details, consider appending it instead.
….

Table [Insert table number]: Sources and Uses of Funds

Sources of Funds (x $1,000)							
Sources of Funds	Expenditure 2007	Expenditure 2008	2009	2010	2011	2012	2013
Existing Revenue	[Insert total dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]
Sewer Utility Fund							
Federal/State Grants							
Loan from General Fund							
Cash from Bond Financing							
Investment Income							
[Insert rows for others]							
Total Sources Of Funds							
A. Operations and Maintenance Uses of Funds							
Salaries	[Insert total dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]
Repair and Maintenance							
Supplies and Expenses							
Professional Services							
Contractual Services							
Depreciation							
Utilities							
[Insert rows for others]							
Subtotal:							
B. Capital Uses of Funds							
[Insert projects, e.g. "Force Main Repair (2008-2010)"]	[Insert total dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]	[Insert dollars]

[Insert rows for others]							
Debt Service							
Subtotal:							
Total Uses of Funds:							

This summary combines information found in the annual [Insert City/Town name or name of your department] Budget and the Capital Improvement Plan. It provides a single document for the [Insert name of any boards or commissions your department is overseen by], staff members, and the public to understand the scope, cost, funding, and status, of planned sewer improvement projects proposed to be undertaken by [Insert City/Town name or name of your department].

11. SEWER SYSTEM PREVENTIVE MAINTENANCE PLAN UPDATES

It is important that your preventive maintenance plan remain current and reflect your actual program operation. Outlining how you will ensure the program described in this plan remains current and useful over time will help to make that happen.
Changes to your cleaning, inspection and assessment program, new or modified infrastructure, increased system demand, new or modified operations and maintenance protocols, or changed organizational structure, for example, will likely necessitate updates to your plan.
Several strategies can help you keep your plan up to date, but having a few set procedures will help ensure it remains current and useful. Examples of actions which could be used, include:

• Set aside a particular time to do your update,
• Obtain specific funding to carry out periodic reviews or participate in coordinating meetings,
• Check in with collection system staff, either individually or through meetings, at periodic intervals. Review your plan for effectiveness and identify potential areas for improvement that can be incorporated into your plan during the year.
• Set a final date for update.
• Prepare progress reports documenting effectiveness, potential changes, and/or a summary of program activities on a periodic basis,
• Solicit peer review by another city/town department or an outside collection system.

a. Plan Update Process

[Insert City/Town name or name of your department] will complete [Insert timeframe, e.g., "annual", "bienniel", "as-needed", etc.] reviews of our Preventive Maintenance program and this plan beginning in [Insert date, e.g., "January 2009"]. The review will consider the progress that has been made in developing and implementing our Preventive Maintenance Program, the results of our monitoring program described in Section b., below, and will incorporate updates to this Plan including:

- Changes to organizational structure, information management, contacts, and system maps,
- Changes to information on the collection system, such as the size and age of pipes, to incorporate information on repairs completed during the year,
- Incorporation of successful cleaning, inspection and assessment program improvements during the past year,
- Changes to our Sewer Use Ordinance and Fats, Oils and Grease programs,
- Updates to our pump station inspection and maintenance program,
- Updates as we evaluate our collection system capacity and complete [Insert refrence to any plans that you described in Chapter 9, Capacity],
- Budget and Capital Planning updates,
- [Insert others]

As the sewer inspection history of any segment of pipe is retrievable electronically and the data is used to develop condition ratings, this aids in prioritizing future sewer rehabilitation projects, maintenance activities, and updating this plan. The latest version of our Preventive Maintenance Plan will be made available at [Insert where the plan is kept, and webpage reference, if applicable] and old versions will be collected and recycled.

b. Monitoring, Measurement, and Program Modifications

A key reason for updating your plan is to improve its effectiveness. Therefore, a key element of updating the plan is measuring the effectiveness of your programs, including the reduction of SSOs.
Effectiveness should be measured by developing and tracking performance indicators on a regular basis. Performance indicators should be selected to meet the goals you laid out in Chapter 1.
Some examples of performance indicators include:

- *Number of SSOs over the past 12 months, distinguishing between dry weather overflows and wet weather overflows*
- *Volume distribution of SSOs (e.g. number of SSOs < 100 gallons, 100 to 999 gallons, 1,000 to 9,999 gallons, > 10,000 gallons)*
- *Volume of SSOs that was contained in relation to total volume of SSOs*
- *SSOs by cause (e.g. roots, grease, debris, pipe failure, pump station failure, capacity, other).*
- *Number of stoppages over the past 12 months*
- *Stoppages by cause*
- *Average time to respond to an SSO*
- *Relationship of capacity-related SSOs to storm event return frequency*
- *Ratio of planned sewer cleaning to unplanned sewer cleaning*
- *Backlog of repair, rehabilitation, and replacement projects*
- *Customer complaints and/or feedback*

As noted in Chapter 1, [Insert City/Town name or name of your department] maintains complaint and blockage records in a [Insert "log", "spreadsheet", name of database, or combinations if you have more than one way that you track, etc.], maintains our records of cleaning and other preventive maintenance activities, and records problems (e.g., excessive debris, observed manhole defects) identified through regular sewer maintenance activities in our [Insert "forms attached in Appendix __", "spreadsheet", name of database, to describe how you track, etc.].

The sewer inventory, mapping and maintenance database [Insert "currently under development" if you don't have it up and running as of this writing], discussed in Chapter 1, [Insert name of your program], tracks and utilizes records related to any sewer segment in our system. Using [Insert name of your program if you use computer tracking, otherwise describe your method of tracking complaints and followup], complaints and service are recorded and linked to preventive and reactive maintenance activities.

The information available in the [Insert name of the software program you use to track or link complaints, problems and maintenance follow up] and the SSO reporting system, are used to help measure the effectiveness of our program by tracking various parameters related to service calls and our maintenance and inspection activities. We also measure our effectiveness by comparing SSO trends from previous years and identifying system components that continually contribute to system failures. Specifically, we currently [or if you do not currently measure your effectiveness, Insert your plans for what you will be using to track and evaluate] track the following parameters with which to measure the effectiveness of this Plan and its effectiveness in reducing SSOs and meeting the goals we set (described in Chapter 1):
[Edit the following to include what you will be using]

- Number of SSOs per year

- Volume of SSOs per year
- Number of dry weather SSOs per year
- Number of SSOs per year by cause (e.g., roots, grease, pipe failure, I/I, pump failure or other deficiency, etc.)
- Response time to SSOs and other service calls (time from call received to first responder arriving on site)
- Length of gravity sewers cleaned annually
- Actual versus scheduled cleaning dates for gravity sewers
- Length of gravity sewers CCTV inspected annually
- Record of pump station maintenance work orders completed annually
- Percent of system rehabilitated (repaired or upgraded) each year
- Number of FOG inspections and compliance with FOG requirements
- Improvements in capacity due to reductions in I/I
- Service reliability as measured by [Insert how you measure, such as time for responding to complaints, repair backlog, environmental indicators that you use]
- Safety history/incidents
- Ratio of funds spent on preventive maintenance versus reactive and emergency response

This information will be assessed and reported to [Insert "our sewer commission" or the name of the board or annual meeting where you report] during our [Insert "annual update" or describe your reporting process] as we keep [Insert City/Town name] officials and coordinating departments up to date with our infrastructure work. Changes to this Preventive Maintenance Plan will address issues identified through this monitoring program and during our [Insert "annual update" or describe your reporting process] and review.

Appendix A: Sewer Overflow Response Plan

This document provides a template for a Sewer Overflow Response Plan. It contains response procedures and examples provided from a number of sources.

[Please note: This section of the template has been based on the reference documents and does not include all potential emergencies or all potential responses to emergencies. The person(s) writing this plan must identify potential emergencies and choose the appropriate procedures for each situation. The attached responses can be used to assist in this. Modify them to fit your city/ town department, and customize the specific response procedures for each type of overflow that your system may have - adding details specific to your response needs and capabilities, adding other procedures that may be needed to meet the requirements of your system, and/or deleting those you do not need].

Many of the protocols in this document are derived from an appendix to the New England Interstate Water Pollution Control Commission (NEIWPCC) document "Optimizing Operation, Maintenance, And Rehabilitation of Sanitary Sewer Collection Systems," developed in December 2003 with funding from the Environmental Protection Agency. Refer to that document for more emergency response information. You may also want your system to consider broader emergency response when adding details to this plan.

This plan should be completed and used, and then reviewed and adjusted at periodic intervals as needed for continued accurate communication of your procedures and contact information.

This plan should, in general, be available in the yard office or other building commonly accessible to, and frequented by, wastewater collection system personnel.

The plan should utilize the most current information on the collection system. For larger systems, a structured analysis, or risk assessment, should be made of the collection system, treatment plant, and community to identify vulnerable areas and determine the effect and relative severity to collection system operations, equipment and public safety and health, in the event of a failure. The risk assessment should concentrate on such factors as topography, weather, sewer system size, and other site-specific factors that reflect the unique characteristics of the system. Once the areas of vulnerability are known, appropriate plans can be put in place to ensure collection system operations continue for the duration of the overflow response.

As you complete this plan, clearly identify the steps your staff should take in the event of overflow situations. Include information on when to initiate and cease response operations. Be as specific as possible about your collection system and repair equipment. Instructions should be available that explain how to operate equipment or systems during a non-routine event when they are not fully inoperable but are not functioning as intended. To ensure safety of the public and the collection system staff, procedures for response plans should be understood and practiced by all personnel.

Procedures should be specific to the type of event that could occur. Keep detailed records of all past responses in order to constantly improve response training, as well as the method and timing of future responses. The ability to deal with SSOs depends on the knowledge and skill of the responding crews and the availability of the proper equipment. The crew should be able to rapidly diagnose problems in the field under stress and select the right equipment needed to correct the problem. If resources are limited, consideration should be given to mutual aid agreements and contracting with other departments or private entities for response in some emergency situations, such as an emergency that would exceed the capacity of your staff.

Working with the Template:

In this template document, you will find instructions in Italics, and areas indicating "[Insert …]" *(which are shaded gray in the electronic version) information that you should fill in following the instruction noted in the shaded line. When you have developed your information, delete the italics sections. Click on each shaded area and as you type your information into the* "[Insert" *area, it will be overwritten with your input.*

Please be aware that completion of this template does not relieve a community or wastewater system of its responsibility to comply with all applicable federal, state, and local laws, regulations and/or applicable permits, and does not constitute a waiver or supersede the terms and conditions of any federal or state requirements or regulations regarding the operation and maintenance of a wastewater collection or conveyance system. This template is not an EPA or state guidance document and should not be relied upon to identify regulatory requirements. The community is solely responsible for ensuring that it takes the steps necessary to ensure compliance with all the applicable requirements of federal, state and local laws. The suggestions herein should not be construed to constitute EPA or state approval of any method or specific equipment or technology installed or utilized by a collection system.

SEWER OVERFLOW RESPONSE PLAN

FOR

[INSERT FACILITY OR SYSTEM NAME

[INSERT FACILITY LOCATION/ADDRESS

[Insert Date of Plan

[Insert you or your engineer's name
[Insert Address
[Insert town, state, zip
[Insert phone
[Insert fax
[Insert email

SEWER OVERFLOW RESPONSE PLAN

TABLE OF CONTENTS *(to be finalized with final document)*

1. RESPONSE INFORMATION

RESPONSE COORDINATOR & ALTERNATE

[Insert Name of Superintendent or key person for contact
Plant - [Insert Telephone Number of Superintendent
Home - [Insert Home Telephone Number

[Insert Name of Next in Charge
Plant - [Insert Telephone Number of Next in charge
Home - [Insert Home Telephone Number

[Insert Information for others if needed

GOVERNMENTAL RESPONSE UNITS

1.	[Insert City/Town Fire Department	Tel. [Insert Telephone Number, usu. 911
2.	[Insert City/Town Police Department	Tel. [Insert Telephone Number, usu. 911
3.	[Insert City/Town Ambulance	Tel. [Insert Telephone Number, usu. 911
4.	[Insert Emergency Responder	1-800- [Insert Telephone Number
5.	[Insert City/Town Power Co.	1-800-[Insert Telephone Number
6.	[Insert City/Town Medical Center	[Insert Telephone Number
7.	[Insert state and other agencies, e.g., "RI DEM"]	[Insert Telephone Number (during business hours, and see Section 5, below)

[Insert Information for others if needed]

In addition to this basic information, you should have a detailed map of your system and a plan for how to communicate if phones and radios don't work. For example, arrange places to meet and designate less technical ways to share and distribute information.

The first response step when a Sanitary Sewer Overflow (SSO) occurs is to notify [Insert Name of Superintendent or key person for contact] – [Insert he or she] is responsible for managing the response and making key decisions. Their responsibility is to assess the situation and initiate a series of response actions based on the type and severity of the event. The table below identifies the key personnel who will be responding in emergency situations.
[Edit the responsibilities as appropriate, in the table, below]

Responsibilities Chart

Name and title	**Responsibilities during a SSO response**	***Contact numbers***
[Insert Name of Superintendent or key person for contact [Insert title, such as "Superintendent"	Responsible for overall management and decision making for the sewer collection system. Takes the lead for managing the response to a SSO, providing information to **regulatory agencies**, the public and news media. Responsible for determining the need to contact Fire department (for response to toxic spills and containment booms, eg), local conservation department(s), and/or town officials.	Phone: [Insert phone number Cell: [Insert phone number
[Insert Name of person in charge of operations	In charge of operating the collection system, performing inspections, maintenance and relaying critical information, assessing facilities, and providing recommendations to the [Insert title, such as "Superintendent". Responsible for organizing crews for response.	Phone: [Insert phone number Cell: [Insert phone number
[Insert Name of person who will take incoming calls	Responsible for administrative functions in the office including receiving phone calls and keeping a log of events. Will provide a standard carefully pre-scripted message to those who call with general questions. Additional information will be released through the [Insert title, such as "Superintendent".	Phone: [Insert phone number
[Insert Name of Field Staff Field Staff	Delivers emergency notices and supports collection system operator.	Phone: [Insert phone number Cell: [Insert phone number

[Edit the following paragraphs to outline the procedure you want your staff to follow in recording the report of an overflow. Training for personnel who receive phone calls from the public is recommended to ensure the information is recorded accurately.]

1. Recording the Report of Possible Sanitary Sewer Overflow (SSO)

Generally, telephone calls from the public reporting possible sewer overflows/ basement back ups are received at the [Insert Appropriate Town Department details].

For phone calls reporting overflows and back ups, the [Insert Appropriate title such as "telephone operator" or "DPW dispatcher"] obtains all relevant information available regarding the overflow including:

a. Time and date of the call;
b. Specific location of the overflow;
c. Description of problem (e.g., what is overflowing, extent of spill, if the cause is obvious, etc.);
d. Time possible overflow was noticed by the caller;
e. Caller's name and phone number;
f. Observations of the caller (e.g., odor, duration, back or front of property); and
g. Other relevant information that will enable the [Insert name of department] to quickly locate, assess and stop the overflow.

See Appendix [Insert appendix number (an RI DEM log as an example is an appendix to this template)] for the phone log used. This information is also recorded in an Initial Overflow Report (Ref. [Insert Appendix or Section for this information]) and the [Insert Appropriate title such as "telephone operator" or "DPW dispatcher"] notifies [Insert name of department]. See more detailed procedures in Sections 4 through 6, below.

2. Confirming Overflows

A [Insert name of department] sewer response crew is dispatched by [Insert "Sewer Superintendent", Name of Superintendent or other title and name of dispatcher] to confirm the overflow (See Section 5, below).

3. Reporting Overflows

The [Insert name of department] completes a Sewage Overflow Report (Ref. [Insert Appendix) within 24 hours of the sewer overflow confirmation and provides the information by phone to the [Insert state and other agencies, e.g., "RI DEM"] (and see Section 6).

2. INTRODUCTION

Our collection system is an integral part of the [Insert "City" or "Town"] of [Insert City/Town name]’s unseen infrastructure, taking sanitary wastes from residences, commercial establishments and industry to the [Insert name of treatment facility] on [Insert location of treatment facility, (eg, "Chestnut Street in Pleasantville")]. If the capacity of the collection system is exceeded, or if blockages occur, overflows may result. Untreated wastewater overflows that occur upstream of the treatment plant are called Sanitary Sewer Overflows (SSOs). SSOs are a threat to public health and the environment because the SSO may discharge pollutants such as pathogens, floatable materials, toxics, and other pollutants, all of which may impact public health, drinking water supplies, water quality and/or aquatic ecosystems.

2.1 Goals

The goal of this Sewer Overflow Response Plan (SORP) is to document [Insert City/Town name]’s plans for mitigating or preventing potential emergency overflows whenever possible, to prepare [Insert City/Town name]’s personnel and responding departments to deal efficiently with the effects of such events, and to protect health, environment, and property.

Quick response to an SSO will minimize the overflow impacts on public health, water quality, the environment, and customer service. This SORP is designed to ensure that appropriate crews are immediately dispatched to all reported SSOs to stop the overflow as quickly as possible; to minimize the effects of the overflow on public health and the environment; to minimize the impact of the overflow on collection system operations; and to report the overflow to the appropriate regulatory agencies, and to the public when warranted. The objectives of this plan include controlling waste discharge and providing procedures for managing sanitary sewer overflows, preventing harm to public health and the environment, and satisfying regulatory and reporting requirements.

Additional objectives of the SORP are to: provide appropriate customer service, protect collection system personnel and the wastewater treatment plant, protect all parts of the collection system [Insert "and wastewater treatment plant", if applicable], and protect private and public property beyond the collection and treatment facilities.

This plan will be updated as necessary to reflect any changes in staffing or notification requirements, including contact numbers. It should and must be revised as insight and experience dictate.

This plan is prepared pursuant to [If you have a bylaw or permit, insert that information here and whether it is pursuant to or required by the bylaw/permit].

2.2 This SORP is organized into the following sections:
Overview (Description of Collection System)
Overflow Notification procedures
Response to Overflows
Overflow Reporting

3. OVERVIEW

This section provides a general description of the [Insert "City" or "Town"] of [Insert City/Town

name]’s collection system and critical facilities. Response personnel must be familiar with the collection system and its components to effectively execute the response procedures described in this plan. For further details on the collection system, crews are directed to our Preventive Maintenance Plan (PMP).

The [Insert "City" or "Town"] of [Insert City/Town name] has a population of approximately [Insert population] of which approximately [Insert percentage of population on the sewer system] percent are served by our collection system. The sewered area extends from [Insert descriptor of northern boundary of area served] to [Insert descriptor to encompass area served] as shown in Figure [Insert figure number]. The sewer system is divided into [Insert number of sub-areas (sewersheds or tributary areas)] areas, all of which feed into the [Insert treatment plant name and Town, if you are a satellite system] located on [Insert location of treatment plant (eg, "Chestnut Street in Pleasantville")]. The [Insert number of sub areas or "sewersheds" in your system] areas are: [Insert names or descriptors of sub-areas or sewersheds]. The collection system map provides detail in Figure [Insert figure number]. *[Attach a map figure that shows the general layout and sub-divided areas of your collection system. This may be the same map used in designing your preventive maintenance program]*.

[Insert City/Town name]’s wastewater collection system includes the following components: approximately [Insert number of feet] linear feet of sanitary sewers; [Insert number of siphons] siphons; [Insert number of feet] linear feet of force main; and [Insert number of pumping stations] pumping stations. The system is comprised of components ranging in age from [Insert earliest known age for sewers] to [Insert most recent age for sewers]. Materials include [Insert description of materials such as vitrified clay pipe, asbestos cement, etc.]. The collection system is described in detail in the PMP which is available at [Insert location(s) where crews can access the PMP, and URL if it is on the web].

[For some activities and facilities, even a slight chance of failure is too great a threat. Typical critical facilities include for example, major interceptors, force mains and siphons, and pumping stations that serve hospitals. These facilities should be given special consideration when formulating your plans]
[Insert City/Town name]’s collection system contains several critical facilities. Depending on the specific critical facility, a sewer system failure could potentially impact [Insert those that apply such as: wetlands, drinking water supplies, parks or playgrounds, surface waters, basements or streets (flooding), and any other critical facilities e.g. shellfish beds]. Critical collection system facilities are described later in this section.

[It can be helpful to your response capabilities to have identified vulnerable areas up front. If you have insight or experience with areas in your system where problems are most likely to occur, put the information into the following paragraphs, amending as needed.]

3.1 Specific Known Vulnerabilities

Certain areas of [Insert City/Town name] are known to be more vulnerable to system blockages and overflows than others and require additional maintenance. These vulnerable areas include: the [Insert information about where the areas needing closer attention are located, such as "sewer line serving the Main Street restaurants downtown, between Elm and Oak']. In addition, [Insert background details on pipelines that are adjacent to vulnerable areas such as rivers or lakes potentially affected by overflows that you would want your crews or the public to be aware of] can potentially affect the [Insert information about local waters, such as river or streams' names, if applicable].

[If you have historic flooding, edit the following paragraph to describe, otherwise, delete]
[Insert details on historical flooding] has been the cause of some problems in the past. Advanced weather prediction is not always accurate and extreme precipitation can develop without adequate warning. High intensity storm events can also impact areas in the [Insert "city" or "town"] that are located above designated flood plains [Insert a description of areas subject to historical flooding].

Potential impact areas for each of the [Insert number of sewersheds or tributary areas] sub-areas of the collection system have been identified, with the following vulnerabilities:

> [Insert a 'quick list' of vulnerable areas and impact areas for each of the sub-basins or sewersheds identified in your system. For example, your "Area 1" may be near a stream, while "Area 2" maybe impact shellfish beds.].

A review of past maintenance records and citizen complaints from [Insert beginning date for review] to [Insert date that review went through] indicates that [Insert types of problems shown in the review, eg. FOG, roots, etc.] have consistently contributed to the occurrence of SSOs in [Insert how many of your sub-areas areas have these problems] areas. [Insert City/Town name] has increased maintenance (as described in the PMP) in these areas in response to the problems identified.
[Edit the following if you have identified areas, or use the tables from your Preventive Maintenance Plan and insert here]
Based on this information, the following trouble spots have been identified as critical facilities within the collection system sub-areas.
Table [Insert number] *[insert additional rows or delete rows as needed (using the Table drop down menu to,> insert >row, or >delete >row)]*

Collection System Sub-Area	Trouble Spot Location
[Insert your designation for sub-area]	[Insert location (e.g., Main Street Pump Station]

[Edit the following section if your system includes siphons, otherwise, delete]
3.1.1 Siphons
A siphon, or depressed sewer, is a dip in a pipeline designed to pass under something, such as a stream or conduit. An inverted siphon is always full of wastewater under pressure and below the hydraulic grade line of the collection system. [Insert City/Town name]'s collection system includes [Insert number] siphons. Siphon locations are described in Table [Insert number]. A siphon is considered a critical facility because of their location near surface waters and under major transportation facilities.

Table [Insert number] Siphons *[insert additional rows or delete rows as needed]*

Siphon Location	Diameter (in)	Pipe Material	Year Built (/rehabbed)	Potential Impact Ares(s)
[Insert siphon location description]	[Insert diameter]	[Insert material]	[Insert year]	[Insert description so that your crews understand what will be affected]
[etc.]				

3.1.2 Pump Stations
[Insert City/Town name] has [Insert number of pumping stations] pumping stations in [Insert

number of sub-areas or sewersheds] of the collection system sub areas (see Table [Insert number]). Of the [Insert number of pumping stations] pumping stations, there are [Insert number of pumping stations that you consider are the critical ones] major pumping stations:

- [Insert list of critical pumping stations, where each is located, where its flow comes from and where it conveys it to. Add other details that you feel would best help your crews]

The [Insert number] other pump stations within the collection system primarily serve as lift stations with pumping capacities ranging from [Insert number] to [Insert number] MGD.

Table [Insert number] Pumping Station Details and Potential Impact Areas *[insert additional rows or delete rows as needed]*

Pumping Station Identification	Station Type	Max Flow (MGD)	Alarm system/ Emergency Power	Year Built (/rehabbed)	Potential Impact Area(s)
[Insert name of area 1]					
[Insert name of first station in Area]	[Insert type, eg., wet well/dry, submersible, etc]	[Insert number]	[Insert system and type of generator, portable generator, contractor, etc.]	[Insert year]	[Insert description so that your crews understand what will be affected]
[etc.]					
[Insert name of area 2]					

[Edit the following section if your system includes force mains, otherwise, delete]

3.1.3 Force Mains

The [Insert City/Town name] waste water collection system includes [Insert number] force mains with a total length of [Insert number] linear feet (lf). The force mains range in age from [Insert year of oldest] to [Insert year of youngest]. The size and material for each of the force mains are shown in Table [Insert number].

Table [Insert number] *[insert additional rows or delete rows as needed]*

Sub area name	Force main Diameter (in)	Force main Length (lf)	Pipe Material	Year Built (and rehabbed)
[Insert name of area 1]				
[Insert name of first segment, eg. street name]	[Insert number]	[Insert number]	[Insert material]	[Insert year]
[etc.]				
[Insert name of area 2]				

[If you have rehabilitated or replaced any of your force mains, include a brief description of the work]

All force mains have been identified as critical facilities because of the large volume of flow that they carry. Some of these force mains are located near [Insert sensitive areas near force mains including both environmentally sensitive areas such as wetlands, and transportation critical areas such as interstates and railroads] which are considered to be potential impact areas. Failures

along these force mains can result in extensive damage and/or inconveniences to the public. The force mains and impact areas are listed in Table [Insert number].

Table [Insert number] Force Main Potential Impact Areas *[insert additional rows or delete rows as needed]*

Location of Force Main	Pump Station	Potential Impact Area(s)
[Insert locational description of force main segment]	[Insert name of associated pump station]	[Insert brief description of potentially affected areas that you want your crews to be aware of]

[Insert details regarding any other critical facilities that you have identified in your collection system]

Specific response procedures vary according to the type of facility where the emergency is occurring. Response procedures for each of the critical facilities identified in this section are specified in Section 5. The emergency response procedures reflect the types of facilities and the likely types of failures and vulnerabilities in our collection system. Notification response, Section 4, below, provides the process and contacts for reporting sewer overflows.

4. OVERFLOW NOTIFICATION PROCEDURE

4.1 Overview

When an SSO or other collection system emergency occurs, a number of individuals must be notified. Depending on the size and severity of the problem, different notifications are needed. While minimum notification procedures are in place for all overflows, more specific notification procedures are required for more severe overflows. For example, a small, contained overflow with no impact to a water body or other sensitive area will have fewer notification requirements than an overflow that has discharged into surface water.

4.2 Receipt of Information Regarding an SSO

An overflow may be detected by [Insert City/Town name] employees or by others. [Insert name of department or system] is the primary department responsible for responding to SSOs. The [Insert Department] is responsible for acting based on received phone calls or reports of possible sewage overflow from the wastewater collection system, and providing immediate response to investigate and/or correct the problem.

[Reiterate here as much of the section on Recording the Report of Possible Sanitary Sewer Overflow (SSO) from pages 5-6 as you feel will be needed for your crews and the public, or simply refer to Section 1.]

Generally, telephone calls from the public reporting possible sewer overflows are received at the [Insert Appropriate Town Department details]. Information is collected and dispatched as described in Section 1, Response Information.

[etc.]

[Insert name of department, or the specific person and position responsible] will confirm the overflow and implement measures to stop the overflow as noted in our procedures in Section 5, below.

[Insert name of department, or the specific person and position responsible] completes a Sewage Overflow Report (Ref. [Insert Appendix) within 24 hours of the sewer overflow confirmation and provides the information by phone to the [Insert Agency, e.g., "Rhode Island Department of Environmental Management"] ([Insert Agency, e.g., "RI DEM"]). A written report is submitted within 5 days per [Insert Agency, e.g., "RI DEM"] requirements.

If the overflow may affect beach or swimming areas, or public drinking water intakes, the [Insert name of department] shall notify the [Insert Agency, e.g., "RI DEM"] and the [Insert any other Agencies, e.g., "Rhode Island Department of Health (RI DOH)"] by phone within two hours of becoming aware of the discharge.

If the overflow results in a fish kill, the [Insert name of department] shall notify the [Insert Agency, e.g., "RI DEM"] by phone within two hours of becoming aware of the results of the fish kill.

The [Insert name of department] superintendent is responsible for reviewing, updating and signing the final Sewage Overflow Report. Sewage Overflow Reports, clean up information and [Insert other documentation of the overflows that you keep] are kept in [Insert your filing and document control system e.g. "[name] files in the Collection System Office" or "spreadsheets on the Local Area Network share drive"] and reviewed [Insert frequency, e.g. "annually"] for [Insert what you use the review for, e.g. "budgeting" "staffing recommendations", "to determine trouble

spots and cleaning schedules", etc.].

Pump/lift station failures are monitored by [Insert if you have alarm system] and received by the [Insert name of department]. The [Insert position title] on duty immediately conveys all information regarding alarms to [Insert name to be contacted] to initiate the investigation.

4.3 **Notification Matrix**

The notification matrix is shown in Table [Insert Table number] to outline the responsibilities of staff for notification when a sanitary sewer overflow occurs. This is also presented in Figure [Insert Figure number] which provides a flow chart to help collection system staff and crews understand the notification process. *[Append a notification flow chart, if you have one, or delete reference to figure]*

Table [Insert Table number] Notification Matrix *[add others, or notes, as necessary]*

	Operator/Dispatcher Contacts Crew and Superintendent	Supervisor/Superintendent [Insert name] [Insert phone number] [Insert cell phone number] CONTACTS this column:		
		In touch with Dispatched crew(s)	**Contacts Outside Contractor, if necessary** [Insert name] [Insert phone number]	**Contacts Fire Department or emergency responders as needed:** **[Insert contact information]** [Insert phone number]
	Crew Goes to site Keeps in touch with Superintendent and Dispatcher **[Insert contact information]** [Insert phone number]	Superintendent contacts [Insert position title for Commissioner of Public Works] [Insert name] [Insert phone number] [Insert cell phone number] [Insert position title for Commissioner of Public Works] contacts local government officials in this row if needed.		
	[Insert backup crew or additional information] [Insert contact details as needed]	**[Insert state agency, e.g., "RI DEM"]** [Insert name] [Insert phone number] [Insert cell phone number]		
		Local Health Department [Insert name] [Insert phone number] [Insert cell phone number] [Insert other contact info]		
	Crew files logs and reports to Superintendent	**Department of Health (DOH)** Water Supply: [Insert phone number] Recreation: [Insert phone number] (After Hours: [Insert phone number])		

5. RESPONSE TO OVERFLOWS

Response procedures provide guidance for the evaluation, mitigation and correction of the conditions that are causing or contributing to an unpermitted discharge of untreated waste water. The primary objectives of these emergency response procedures are to provide standard protocols, minimize risk, and protect public health and the environment,

Emergency response procedures appropriate to the vulnerabilities, sensitive areas and critical facilities identified for [Insert name of department] have been developed. These procedures reflect best management practice.

The [Insert name of department] [Insert title (e.g., "supervisor" or "superintendent") and name of person] or [Insert title (e.g., deputy superintendent) and name of person who is alternate] dispatches sewer maintenance personnel with appropriate equipment to confirm and contain the overflow, and determine the cause. Crews and equipment are available to respond to any SSO locations. The [Insert Town/City Sewer Dept. name] currently has [Insert number] crew members available for response during the day shift ([Insert time : a.m. to : p.m.) and [Insert number] crew members during the evening shift ([Insert time : a.m. to : p.m.). The [Insert name of department] relies on [Insert description of equipment (e.g., radio, telephone)] communication to dispatch personnel to the scene of the overflow.

While investigating emergencies the crew should maintain radio contact with the Dispatcher at all times to keep them informed of the progress and any problem(s). Upon completing an assignment, and before returning to the Yard, the crew should call the Dispatcher by radio for any other assignment or update.

Consideration should be given on how you determine "on call" needs, add your criteria to the following:
Additional maintenance personnel are placed "on call" by the [Insert title (e.g, superindentent)] in the event extra crews are needed.
[At this point in preparing your plan from this template, you should consider including a figure to flowchart or summarize the Sewer Overflow Action Plan].

5.1 Preliminary Assessment

Upon arrival at the reported sewer overflow site, and based on observations, the sewer response crew may request additional personnel, material, supplies, and equipment from the [Insert detail on who will provide additional needed material/personnel].

[Include any procedures that your personnel should take such as photographing, or if they need to get permission to enter private property]

In all cases, response crews report their findings, including possible damage to private and public property, to the [Insert title (e.g, superindentent)] immediately upon making their investigation. If [Insert title (e.g, superindentent)] has not received findings from the field crew within one (1) hour, the [Insert title (e.g, superindentent)] contacts the response crew to determine the status of the investigation.

The [Insert position title] will visit the site of the overflow, if possible, to ensure that provisions of this overflow response plan are met. The [Insert position title] is responsible for informing the

[Insert Agency, e.g., "RI DEM"] of all SSOs within 24 hours of becoming aware of the release.

If hazardous substances are suspected in the overflow, personnel are to contact the Fire Department via [Insert number (often 911)] immediately.

5.2 SSO General Equipment

The following items are available to response crews. These items are stored [Insert where items are available, e.g. in each sewer department truck, or divide list into where the items are available to the crews]. Personnel are responsible for ensuring supplies are appropriate and in working order and are responsible for obtaining additional supplies as needed. A full description of departmental staffing and equipment (including emergency equipment) is available in [Insert chapter/section of PMP with list].

[Edit the following listing to include what you have and add anything you want your crews to maintain]

Job Site Safety Equipment:

Ladder (extra heavy duty industrial with IA duty rating), traffic wand, traffic control devices such as flags and cones, flashing barricades, caution tape [Insert other equipment].

May Need: safety harness and lifeline, tripod, safety rope, gas detector, silt fencing, flag stands, barricades, and detour arrowboard, [Insert other equipment] .

Construction Materials:

Clean rags, tape, assorted hand tools (e.g., screwdrivers, wrenches, hammers, brooms, sledge hammers, pry bars), bucket with rope, assorted ropes, picks and shovels, Spray Paint. [Insert other equipment].

Personal Safety Equipment:

Hard hat, safety glasses, safety vests, gloves, rain suit, steel toed work and/or rubber boots, isopropyl alcohol, and ear protection, [Insert other equipment].

First Aid Kit, flashlight, waterless soap and hand towels, [Insert other equipment].

Other:

Sandbags, sand trap, log forms, camera and video, portable blower and sufficient hose, assorted mirrors, high intensity flash light, gas meters, dye, [Insert other equipment].

Inspection:

As with any vehicle or major equipment, the operator should perform a pre-use inspection before beginning work activities, [Insert other equipment].

Crews are instructed to have and use the job site and personal safety equipment that is appropriate for each emergency situation.

Confined Space Entry:

For permit required confined space entries, all personnel shall refer to the procedure in the Code of Federal Regulations, 29 CFR 1910.146. *If your state regulations have separate requirements, you should add that information here.*

The following specific response procedures are contained in the following pages[1]:
[Edit the following specific procedures to include your equipment, staffing levels, and procedures]
Note: For each of these template entries, c*ustomize the response procedures for your situation and modify them as necessary to fit your city/ town department. You may need to add details specific to your response needs and capabilities, add additional procedures that may be needed to meet the requirements of your system and/or delete procedures that are not applicable.*

PROBLEM: Sewer Blockage or Back up into Basement
PROBLEM: Overflowing Sewer Manhole Resulting from Surcharged Trunk Sewer (No backup into building)
PROBLEM: Cavities and Depressions in Streets and Lawns
PROBLEM: Partially or Totally Blocked Siphon
PROBLEM: Sewage Force-Main Break
PROBLEM: Sewer Main Break/Collapse
PROBLEM: Air Release and Vacuum Relief Valve Failure
PROBLEM: Waste Water Pump Station Alarms General Response Actions
PROBLEM: Pumping Station Failure Caused by Secondary Power Failure During Power Outage
PROBLEM: Pumping Station Failure Inside Valve Pit, pump or valve failure (submersible type application)

[1] *Response procedures derived from the New England Interstate Water Pollution Control Commission (Boott Mills South , 100 Foot of John Street, Lowell, MA 01852-1124) "Optimizing Operation, Maintenance, And Rehabilitation of Sanitary Sewer Collection Systems," developed in December 2003 with funding from the Environmental Protection Agency*

PROBLEM: Sewer Blockage or Back up into Basement *[customize procedures for your situation, adding or deleting details or procedures to fit your city/ town department]*

EMERGENCY PROCEDURES:

- Dispatcher refers to sewer maps for location and to determine critical facilities and sewer sub-area to provide to dispatch crew. If the area of the complaint is served by a pump station, check to confirm whether any alarms from the pump station have been received.
- Dispatch the crew immediately to the complainant address with details. Crew notifies complainant/property owner(s) when they are on site.
- If the flow is questionable (not reasonable for the given service area) go to the upstream manhole to visually compare flows.
- If the flow from both manholes is reasonable for the area, notify the property owners that the problem is in their service lateral and to contact a plumber or sewer service contractor to relieve the blockage as described under '**Steps to be Taken By Property Owners When Sewage Back-Up Is Determined to be Due to Blockage In Private Lateral Connection'**. Provide homeowner with handout from [Insert department or description of hand out, or use the "Steps to be Taken by Porperty Owners...' as a handout]
- If the downstream manhole is full and there is a potential for overflow, immediately begin the set up for pumping around the blockage (see "Overflowing Sewer Manhole" procedure)
    - Request additional manpower and equipment as needed (e.g. excavating crew, bypass pumping equipment, etc.)
    - Set up pump out equipment and hoses from the upstream manhole to the nearest flowing manhole below the blockage.
- Continue checking manholes downstream until a dry manhole is found indicating a blockage upstream.
    - See "Overflowing Sewer Manhole" procedure for pumping around the blockage while the line is repaired
    - Note, if no blockage is found and the problem is attributable to a pump station problem refer to Pump Station responses.
- If vactor and jetter are available, jet line and have vactor clear. If not, install the proper size sandtrap in the downstream invert of the manhole before clearing the blockage to capture the debris.
- Remove the debris from the manhole and observe it to try to determine the cause of the blockage.
- Use the necessary equipment to relieve the blockage, either by jet flushing or power rodding (if jet flushing is not sufficient to clear the blockage, request staff to bring power rodding equipment).
- Notify supervisor and describe the blockage. The supervisor will notify the proper authorities and agencies (See responsibility chart).
- Cordon off the area if ponding occurs on the street or easement (public or private).
- Collect as much of the sewage as possible, disinfect according to policy (see [Insert where your policy is, or include a description here]), notify surrounding homes (superintendent notifies appropriate officials, as needed).
- Notify [Insert "the television crew" or vendor name for CCTV inspection, or if supervisor makes the call] to schedule a television inspection.

- If the blockage is in a public line, relieve the blockage, clean up the property owner's basement as per policy on disinfecting. If blockage is determined to be in property owner's lateral connection, direct property owner to [Insert what your policy is for handling homeowners' lines] to clear the line.
- Make out a report indicating the time of the call, a description of the problem, repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file the [Insert Agency, e.g., "RI DEM"] Overflow Notification Log and Overflow Report Form as required (see responsibilities chart).

NOTES:

1. When available, use collected debris to try to determine the cause of the blockage. Confirm removal of all debris from the manhole.
2. Record the water damage to all items in the basement. Record all actions taken (from start to finish) in log/record book, including equipment and personnel that were utilized.

Sewer Blockage or Back up into Basement, Minimum Levels of Staffing (people): 2	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit if available (sand trap) • Rodding machine & associated cleaning/cutting attachments (sand trap) • Standard harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter – for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• Closed Circuit Television camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic) • Sand trap

[*Edit the following or replace with your handout, customizing for your situation, adding or deleting details or procedures to fit your city/ town department]*

[Insert department name]

STEPS TO BE TAKEN BY PROPERTY OWNERS WHEN SEWAGE BACK-UP IS DETERMINED TO BE DUE TO BLOCKAGE IN PRIVATE LATERAL CONNECTION

After the Collection System crew has checked the [Insert "city" or "town"] sewer for blockage and has found that the public sewer is not blocked, they will notify the property owner. It is [Insert City/Town name]'s [Insert "city" or "town"] policy that if the main sewer is clear then the property owner must hire a licensed plumber, drain layer, or sewer cleaner to free any blockage, which might exist in the private lateral. The property owner is responsible to pay for this activity.

NOTE: PROPER RODDING PROCEDURE GUIDELINE FOR PROPERTY OWNERS TO CLEAR PRIVATE LATERAL SEWER CONNECTION

If the blockage is found in the portion of the sewer house connection located within private property, the owner must hire a licensed contractor to perform the necessary repair work, under permit and inspection from the [Insert department name].

The [Insert department name] requires proper rodding procedures. In cases where a property owner needs to free a blockage within their lateral, the plumber must use a 4" cutter at the end of the rod. If they can't break through the blockage, they will then start using smaller cutters back up to 4". If the plumber relieves the blockage, they must then rod the house connection to the main sewer line.

All repair work on the sewer house connection must be performed under permit issued by the [Insert department name] to a licensed contractor, and will be inspected by the local [Insert department name] personnel.

WARNINGS:

If the property owner, licensed plumber, drain layer or sewer cleaner does not call the [Insert department name] and request the public sewer line to be checked prior to rodding, the [Insert department name] will not assume liability if the problem is located in the public sewer line.

If there is a blockage, but no record of the house connection, the owner must prove where the blockage is located. This can be done by excavation or electronic locator in the presence of an inspector.

PROBLEM: Overflowing Sewer Manhole Resulting from Surcharged Trunk Sewer (No backup into building) *[customize procedures for your situation, adding or deleting details or procedures to fit your city/ town department]*

EMERGENCY PROCEDURES:

- Dispatch the crew immediately to the problem location.
    - Refer to sewer maps for location of sewers (private lands, flow patterns, manholes, etc.) and determine if the area is served by a pump station before responding to the call.
- Go to the location of the overflowing manhole to assess the immediate danger to public health or the environment.
- Determine the location of the blockage by inspecting the downstream manholes until a dry manhole is found. Immediately begin the set up for pumping around the blockage
    - Request additional manpower and equipment as needed (e.g. excavating crew, bypass pumping equipment, etc.) or to help with evaluating options for pumping around the blockage.
    - Set up pump out equipment and hoses from the upstream manhole to the nearest flowing manhole below the blockage.
- Install the proper size sandtrap in the downstream invert of the manhole before clearing the blockage to capture the debris. Remove the debris from the manhole and assess it to try to determine the cause of the blockage.
- Use the necessary equipment to relieve the blockage, either by jet flushing or power rodding. If jet flushing is insufficient to clear the blockage, request [Insert staff or contractor or inter-town agreement info] to bring power rodding equipment.
- If it is imminent that the waste water will be released into wetlands, receiving waters or a drinking water supply watershed, contact [Insert who you call with septage or vactor to try to capture, include any details the crew will need] and notify supervisor, who will call in extra crew and coordinate emergency equipment. The supervisor will also notify the proper authorities and agencies including the fire department to set up flotation booms across streams, brooks, etc. if necessary. (See responsibility chart)
- Gather and remove sewage related debris and organic matter from the affected area.
- If the wastewater is in the streets/roads (public or private), use sand bags or [Insert other equipment you use] to contain the waste water to minimize any impact to public health or the environment.
- Sandbag nearby catch basin inlets or paved leak-offs to prevent the waste water from entering the drainage system and causing potential contamination to the receiving waters.
- Cordon off the area if ponding occurs.
- Collect as much of the sewage as possible, disinfect according to policy, notify surrounding homes (superintendent notifies appropriate officials, as needed).
- If the waste water jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the local and state boards of health and the local park superintendent.
- Complete a report indicating the time of the call, description of the problem, repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file the [Insert Agency, e.g., "RI DEM"] Overflow Notification Log and Overflow Report Form.

Overflowing Sewer Manhole, Minimum Levels of Staffing (people): 2-3	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit if available (sand trap) • Rodding machine & associated cleaning/cutting attachments (sand trap) • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Caution Tape • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment • Sand bags	• CCTV camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic) • Caution tape • Sand trap • Floatation booms if necessary

PROBLEM: Cavities and Depressions in Streets and Lawns *[customize procedures for your situation, adding or deleting details or procedures to fit your city/ town department]*

EMERGENCY PROCEDURES:

- When a call is received from the public, confirm the following:

    1. That the problem area is in fact a cavity or depression and not a missing or low manhole cover, gate box cover or catch basin grate.
    2. The location of the reported cavity and the name and address of the party making the call.

- If the caller indicates the problem is severe, extensive or obviously associated with the sewer or water system, investigate and barricade the condition if it appears appropriate to do so. Lights and barricades should be used if the situation is dangerous. Notify the water company immediately to aid in the cause investigation.
- When checking a depression over a main sewer, it is important to check the main sewer at both the upstream and downstream manholes adjacent to the depression to determine if there is a restriction of flow. If there is a blockage, it may indicate a possible main sewer break.
- If the cavity is a result of a sewer failure, refer to procedures for sewer main collapse and repair as appropriate.
- If it has been determined that it is a cavity or depression caused by other utilities (storm drain, water main, etc.), the crew should notify the [Insert responsible party for your streets in system, eg., DPW or Highway Department], and request that they take over the repair.
- The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file [Insert Agency, e.g., "RI DEM"] Overflow Notification Log and Overflow Report Form.

Cavities and Depressions in Streets and Lawns , Minimum Levels of Staffing (people): 1	
Minimum Emergency Equipment	**Specialized Equipment**
• Safety cones/barricades • Refer to emergency procedures for sewer break if confirmed	• Caution tape

PROBLEM: Partially or Totally Blocked Siphon *[customize procedures for your situation, adding or deleting details or procedures to fit your city/ town department]*

EMERGENCY PROCEDURES:

- Dispatch sewer crew to failing siphon immediately.
- *If you have double siphons and can divert flow to the parallel siphon, add to this procedure.*
- If sewage is discharging to the environment, follow instructions defined in "Overflowing Sewer Manhole Resulting from Surcharged Trunk Sewer" for containment and cleanup.
- Bring a high-velocity jet-flushing vehicle immediately to the site if a blockage is discovered.
- If the cause of a blockage is unknown, use a single port cutting nozzle attached to the jet-flushing machine.
- Insert the proper size sandtrap in the downstream invert of the downstream manhole to trap the debris causing the blockage.
- Using the high velocity jet-flushing, start flushing the siphon between 1000 and 1500 psi against the flow. Work the nozzle back and forth until minimal debris is observed in the down stream manhole.
- If the blockage is grease related, use [Insert descriptor for what you use, e.g. grease solvent] in accordance with policy. Care should be observed when working with chemicals. Refer to Material Safety Data Sheets (MSDS) prior to use.
- The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file [Insert Agency, e.g., "RI DEM"] Overflow Notification Log and Overflow Report Form.

Partially or Totally Blocked Siphon, Minimum Levels of Staffing (people): 4	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit if available (sand trap) • Grease solvent, if needed • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• TV camera unit • Truck with hoist • Vactor unit • Caution tape • Sand trap • Floatation booms if necessary • Self Contained Breathing Apparatus (SCBA)

PROBLEM: Sewage Force-Main Break *[customize procedures for your situation, adding or deleting details or procedures to fit your city/ town department]*

EMERGENCY PROCEDURES:

- Dispatch a crew to the site to assess the situation, including determination of who and what might be affected and the immediate danger to the environment.
- Refer to sewer maps for location of sewers (private lands flow patterns, manholes, etc.) and determine the pump station associated and which critical facilities are in the area.
- Set up traffic cones and barricades as needed.
- Initiate measures to contain the sewer overflow, protect any streets, public areas, catch basin inlets, etc. that might be subject to flooding, and collect wastewater that has been discharged so as to minimize impact to public health and the environment.
- Determine if it will be possible to pump around the break, from the pump station wetwell to the force main discharge manhole or other accessible manhole, and if so, prepare to pump around the break as described below:
    - Request additional manpower and equipment as needed (e.g. excavating crew, bypass pumping equipment, etc.)
    - Set up pump out equipment and hoses from the wetwell to the nearest sewer discharge point.
    - Draw down the wet well as much as possible to maintain the low level.
    - Lock-out and tag-out (LOTO) the pumps in the pumping station.
- If pumping around the break is not possible, utilize the vactor truck or septage hauler ([Insert hauler contact information]) to draw down the wet well as much as possible and maintain a low level.
- Call in additional crews as necessary to help contain the sewer overflow. Set up flotation booms across streams, sandbag storm drains, etc., as necessary.
    - Check the tributary area to determine if the discharge will affect any receiving waters.
    - If it is determined that the receiving water may be affected, the supervisor should notify the proper authorities or agency.
    - If the wastewater is in streets/roads (public or private), contain the waste water to the extent possible with sandbags or [Insert other equipment you use].
    - Sandbag nearby catch basin inlets or paved leak-offs to prevent the wastewater from entering the drainage system and causing potential contamination to the receiving waters.
    - Cordon off the area if ponding occurs.
    - Collect as much of the sewage as possible, disinfect according to policy (see [Insert where your policy is, or include a description here]), notify surrounding homes (superintendent notifies appropriate officials, as needed).
    - If the wastewater jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the local and state boards of health and the local park superintendent.
    - Gather and remove sewage related debris and organic matter from the affected area.
- Drain the force-main:
    - Close down the gate valve on the upstream side of the discharge check valve in the pumping station.
    - Open the check valve by hand and secure it in place.

    - Slowly bleed the force-main back into the wetwell by slowly opening the gate valve on the discharge side of the pump, but only to the point where the force-main stops leaking and there is enough room to make the repair. Constant communication must take place between the crew located at the break and the crew located at the pump station.
    - Close the gate valve and return the check valve to its normal operating position and then fully open the gate valve.
- Repair force main break as per policy.
- After the repair is complete, remove LOTO and return the pumps to normal operating position.
- Run the pump in the hand manual position to fill the force-main (Care must be taken during filling of force main – use only one pump during filling). Once completed, observe several pumping cycles before completely back-filling the excavation.
- Upon confirmation of adequacy of the repair, backfill the excavation (if necessary) and restore surface conditions to match existing conditions.
- While the crew is restoring the excavation, the crew leader should conduct a preliminary assessment of damage to private and public property. The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file [Insert Agency, e.g., "RI DEM"] Overflow Notification Log and Overflow Report Form.

Sewage Force-Main Break, Minimum Levels of Staffing (people): 4-5	
Minimum Emergency Equipment	**Specialized Equipment**
• Portable bypass pumping units • Hoses • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• CCTV camera unit • Truck wit hoist • Vactor unit or septage hauler • Power saw (circular) • Pipe cutter (hydraulic) • Caution tape • Sand trap • Floatation booms if necessary • Self Contained Breathing Apparatus (SCBA)

PROBLEM: Sewer Main Break/Collapse *[customize procedures for your situation, adding or deleting details or procedures to fit your city/ town department]*

EMERGENCY PROCEDURES:

- Dispatch a crew to location of break/collapse immediately while referring to the sewer maps for location of sewers (private lands flow patterns, manholes, etc.) to determine which critical facilities are in the area.
- Crew sets up signs, barricades, and/or barrels for traffic control and public safety, rerouting traffic as necessary and deploying traffic control measures such as police or flag person as needed.
- If it is a main line break, the Superintendent shall notify the appropriate authorities and town officials immediately.
- Request additional manpower and equipment as needed based on initial damage assessment (e.g. excavating crew, equipment to pump around the break, etc.)
- Pumping around the break from the upstream manhole to the downstream manhole may be required. If necessary, set up bypass pumping equipment. If not necessary, prepare for repairs while the pipe is flowing.
- Call in additional crews to set up flotation booms across streams, install sandbags, etc., as necessary. Unless special conditions exist, **pumping around the failed sewer main is a priority** before containing the overflow.
- Gather and remove sewage related debris and organic matter from the affected area.
- If the wastewater is in the streets/roads (public or private), use sand bags or [Insert other equipment you use] to contain the wastewater to minimize any impact to public health or the environment.
- Sandbag nearby catch basin inlets or paved leak-offs to prevent the waste water from entering the drainage system and causing potential contamination to the receiving waters.
- Cordon off the area if ponding occurs.
- Collect as much of the sewage as possible, disinfect according to policy, notify surrounding homes (superintendent notifies appropriate officials, as needed).
- If the waste water jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the local and state boards of health and the local park superintendent.
- Determine the location of the break/collapse and make any necessary repairs. Use repair procedures consistent with policy. If the break is on the pipe length, then a repair can be made with a wrap-around sleeve. If the break is at the bell, then a bell-joint clamp may be used.
- Upon confirmation of adequacy of the repair by [Insert title of person who inspects, e.g. "the superintendent", or "the [city or town] engineer"], backfill the excavation (if necessary) and restore surface conditions to match existing conditions.
- To restore the sewer line to full capacity, the crew should remove any debris that may have entered and accumulated in the sewer line downstream and upstream from the break/collapse. The crew should clean the sewer line as described below.
- Install the proper size sandtrap in the downstream invert of the downstream manhole to trap any debris which may have accumulated in the sewer line.
- Using a high velocity jet-flushing vehicle, begin flushing from the downstream manhole against the flow to the upstream manhole.
- Repeat this procedure for several upstream and downstream pipe reaches.

- The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file [Insert Agency, e.g., "RI DEM"] Overflow Notification Log and Overflow Report Form.

Sewer Main Break/Collapse, Minimum Levels of Staffing (people): 4	
Minimum Emergency Equipment	**Specialized Equipment**
• Portable bypass pumping units • Hoses • Jet flushing unit if available (sand trap) • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• CCTV camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic) • Sand trap • Caution tape • Floatation booms and sand bags as necessary • Self Contained Breathing Apparatus (SCBA)

PROBLEM: Air Release and Vacuum Relief Valve Failure *[customize procedures for your situation, adding or deleting details or procedures to fit your city/ town department]*

EMERGENCY PROCEDURES:

- These valves require frequent inspection and maintenance. Their failure is often found during routine inspections. Both these types of valves may fail to operate reliably if grease is allowed to accumulate in the valve or on the operating mechanism.
- Inspection crew should inspect valves in accordance with the specific manufacturer's recommendations.
- Attach fittings at the top and the bottom to permit back flushing of all valves upon initial installation or retrofit upon failure.
- Isolate the valve from the force-main by closing the shutoff valve attached to the force-main.
- To clean the internal components of the valve(s), attach a back-flushing hose to a pressurized water source using a quick disconnect coupling.
- Place a blow off discharge hose in a container to collect the back-flush water from the blow off valve. This is wastewater that should not be discharged onto the street or into the valve pit.
- Open the shutoff valve and back-flush the valve through the blow off valve at the bottom.
- If you are using a potable (drinking) water source, provide the system with an anti-siphon device or back flow to prevent contamination of the potable water.
- Make out a report indicating the time of the call, description of the problem, repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, file [Insert Agency, e.g., "RI DEM"] Overflow Notification Log and Overflow Report Form.

Air Release and Vacuum Relief Valve Failure, Minimum Levels of Staffing (people): 3	
Minimum Emergency Equipment	**Specialized Equipment**
• Hose with quick disconnect fitting and anti siphon device • Blow off discharge hose and waste container • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• CCTV camera unit • Truck with hoist • Vactor unit • Power saw (circular) • Pipe cutter (hydraulic) • Caution tape • Self Contained Breathing Apparatus (SCBA)

PROBLEM: Wastewater Pump Station Alarms General Response Actions

[You will need to develop a trouble shooting guide for your pump stations to walk your crews through specifics associated with each station. Choose the appropriate procedures for your situation and modify them to fit your city/ town department.

Various types of level sensors may be present in the pump station, including bubbler systems, float switches, transducers, or rod-type probes. Similarly various types of controls may be present for pump cycling including pneumatic systems, simple relays and/or computerized processors. The responding crew should be fully capable and trained in the proper function of each of these systems present within the municipality. Trouble shooting these controls is specific to the unit. Consequently, the O&M manual for the level sensor system and pump controls should be consulted during a failure.]

EMERGENCY PROCEDURES:

- Send an individual to the station indicating an alarm as soon as possible for a Priority Alarm. **Responders should bring a detailed station-specific trouble-shooting guide with them for that particular station.** If serious trouble is found, call for additional assistance and keep an individual at the station until further instructions are received.
- Always check with the power company when an alarm goes on to see if there is a power outage in the area, although a power failure that has not been reported to the power company can occur at a pump station. The pole number nearest the station should be reported.
- Personnel called in to investigate pump station alarms shall respond to the station even if the alarm has cleared prior to their arrival. All alarm conditions are to be checked and logged. Use the following guidelines and follow confined space entry procedures if applicable:

Wetwell/Drywell Type Stations

1. Observe all safety precautions per training.
2. Check the atmosphere within drywell with gas meter prior to entering.
3. Upon entry, identity the storage capacity in the well. This will give some indication of the time available for response. If flooded, skip to pump-out steps under “Pumping Station Failure inside valve pit, pump or valve failure” procedure.
4. Take your time entering the drywell. Never enter a flooded drywell.
5. Note any unusual odors - i.e. burning electrical equipment or paint.
6. Listen and note any unusual noises.
7. Check for heat around pump motors and pump bearing housings. Note any which seem unusually hot.
8. Observe every piece of equipment in the station. Note anything that looks out of place.
9. Record all gauge readings including wet well level, hour meters, flow charts, on-off levels, psi gauges on pump, rpm (on VFD’s) and anything else that you feel is significant.
10. Using available information and the trouble shooting guide, systematically run through the system. Use a process of elimination to identify the cause of the failure. Check the level controls, check pump operation using manual position, check pump output by pressing on check valve counterweight as defined in the trouble-shooting guide. Once the cause of the problem is isolated, engage mechanical or electrical disciplines for repairs.

11. Emergency personnel should be absolutely certain that the cause of the pump station alarm or failure has been properly identified and corrected prior to leaving the station.
12. Reset any/all alarm feature indicator lights.

Submersible Type Stations

1. Take all safety precautions per training.
2. Check the atmosphere within the wetwell with a gas meter prior to working over the top.
3. Note any unusual odors - i.e. burning electrical equipment, hot or smoking oil, or paint.
4. Listen for any unusual noises and note if pump(s) are running.
5. Observe every piece of equipment in the station (pay specific attention to the level control system). Note anything that looks out of place.
6. Record all gauge readings from the control panel including: wet well level, hour meters, flow charts, on-off levels, psi gauges on pump, rpm (on VHD's) and anything else that you feel is significant.
7. Using available information and the trouble-shooting guide, systematically run through the system. Use a process of elimination to isolate the cause of the failure. Check level controls, check pump operation using manual position, check pump output by observing the check valve counterweight as defined in the trouble shooting guide. Once the cause of the problem is isolated, engage mechanical or electrical disciplines for repairs
8. Emergency personnel should be absolutely certain that the cause of the pump station alarm or failure has been properly identified and corrected prior to leaving the station.
9. Reset any/all alarm feature indicator lights.

- Check the O&M manual to trouble shoot the level sensor system and pump controls
- Pumps may be checked easily for operation by checking the arm of the check-valve in the discharge line of an operating pump. If it feels "spongy" (or soft) when downward pressure is applied with the palm of the hand, the pump is pumping. If a breaker is off and the pump motor is hot to the touch, DO NOT attempt to reset and start. If a pump motor is simply warm, one attempt to restart can be made. Turning the selector switch to manual will normally start a pump, and the check valve arm should move upwards. If the pump has lost prime or is lugged, the check valve will not open.

Wastewater Pump Station Alarms General Response Actions, Minimum Levels of Staffing (people): 2	
Minimum Emergency Equipment	**Specialized Equipment**
• Gas meter-for oxygen deficient, explosive or toxic gases • Self Contained Breathing Apparatus (SCBA) • Harness and lifeline	• As applicable for trouble-shooting

PROBLEM: **Pumping Station Failure Caused by Secondary Power Failure During Power Outage** *[customize procedures for your situation, adding or deleting details or procedures to fit your city/ town department]*

EMERGENCY PROCEDURES:

- Dispatch pump station crew to the pumping station immediately. The crew needs to bring the auxiliary generator for that specific station as a backup, assuming that repair to the dedicated generator cannot be made immediately.
- Upon entry, identify the storage capacity in the well. This will give some indication of the time available for response. If flooded, skip to pump-out steps under "Pumping Station Failure inside valve pit, pump or valve failure" procedure.
- Dispatcher shall request the assistance of the power company in restoring power to the station if necessary. Determine the estimated time of arrival of the power company crew and then notify the pumping station operators.
- As they approach the pumping station, the pumping station crew should check the overhead power lines for fuses that might have blown or down power lines. If the crew notices a blown fuse or down power line, identify the location and pole number(s), and notify the dispatcher to relay this information to the power company.
- Lock out and tag out (LOTO) the main line, disconnect (if applicable).
- Check all components of the dedicated generator to determine failure cause. Use the manufacturer-prepared trouble-shooting guide to aid in diagnosis. If it cannot be repaired immediately, connect the portable generator to the auxiliary power connection located outside the building. Examine plug type and ensure consistency. Use adapters as necessary.
- Go through the specific procedures for starting the generator to supply power to the station.
- Obtain the services of a qualified generator repair facility to address the dedicated generator failure.
- Once fully repaired, disconnect the portable generator and reconnect the dedicated unit. Operate the dedicated unit through several pump cycles. Check unit for regular exercise.

Pumping Station Failure Caused by Secondary Power Failure During Power Outage, Minimum Levels of Staffing (people): 2-3	
Minimum Emergency Equipment	**Specialized Equipment**
• Harness and lifeline • Flash light • Emergency lighting • Portable generator • Gas meter-for oxygen deficient, explosive or toxic gases	• Power testing equipment

PROBLEM: **Pumping Station Failure Inside Valve Pit, pump or valve failure (submersible type application)** *[customize procedures for your situation, adding or deleting details or procedures to fit your city/ town department]*

EMERGENCY PROCEDURES:

- Dispatch pumping station crew to the pumping station immediately.
- Prior to viewing the wetwell, measure the atmospheric conditions for sufficient oxygen and the presence of explosive or toxic gases.
- Upon arrival the crew should identity the storage capacity in the wetwell. This will give some indication of the time available for response. If flooded, skip to pump-out steps.
- Inspect the main controls looking for failure indications. Check processor to determine failure if applicable. If pump failure is determined, skip to wetwell inspection steps.
- Inspect the valvepit. Observe all valves and force mains. If flooded, arrange to pump out the valve pit. If failure within the valvepit is detected, skip to pump-out steps.
- Constantly monitor the atmospheric conditions while working in or above the wetwell. Inspect the wetwell. Check the wetwell floats or level control system, bar rack and pump volute area for clogging or other problems.

Pump-Out Steps

- If pump failure, determine if pump out is necessary. If unnecessary, skip to repair procedures.
- Pump the flow with portable pumps. Call additional crew to bring appropriate portable pump(s) including all required lengths of suction and discharge hose, to the pumping station if necessary. Upon arrival of the portable pump, connect the appropriate lengths of suction hose that will suspend all the way into the wetwell, and then connect enough discharge hose to pump into appropriate manhole or connection (if so equipped). Go through the procedures for starting the portable pump, and begin pumping.

Repair Steps

- Lock out and tag out (LOTO) the main line, disconnect (if applicable).
- Monitor the atmospheric conditions for sufficient oxygen and the presence of explosive or toxic gases. If safe, enter valve pit or wet well and inspect the piping and valves for cause of failure.
- Complete repairs to pipe, pump or valve as per policy. If permanent materials are not readily available, install temporary repairs until the permanent repairs can be completed.
- Restore facilities to normal and inspect other components of the force main and pumping system for signs of similar failure.
- Shut down portable pumping operation. Do not disconnect hoses until repair is checked for leaks. Operate pumps to check repair under pressure and normal operating conditions.
- If no leaks are observed, return pumps to normal conditions by removing LOTO. Monitor pumps to check lead/lag operations.
- Make out a report indicating the time of the call, description of the problem, the repair work done, personnel present and equipment used.

- File [Insert Agency, e.g., "RI DEM"] Overflow Notification Log and Overflow Report Form.

Pumping Station Failure Caused by Force-Main Break inside valve pit, pump or valve failure, Minimum Levels of Staffing (people): 2-4	
Minimum Emergency Equipment	**Specialized Equipment**
• Harness and lifeline • Flash light • Emergency lighting • Portable pumps and hoses • Gas meter-for oxygen deficient, explosive or toxic gases	• Self Contained Breathing Apparatus (SCBA)

5.3 Emergency Support

[Programs for emergency support have been developed for the water and wastewater sector. Information can be found at http://www.awwa.org/Government/content.cfm?ItemNumber=3837. Agreements, formally known as Water/Wastewater Agency Response Networks (WARN), are developed to facilitate an effective and efficient flow of personnel and resources after an emergency. By adopting the WARN approach to mutual aid and assistance, drinking water and wastewater utilities in each state are able to sign a single agreement covering issues such as indemnification, workers' compensation, and reimbursement. If you do not have an agreement with nearby municipalities and /or outside companies, consider developing one, but in the meantime, delete whichever of the following paragraphs do not apply]

Addressing some problems may require resources beyond [Insert Town/City Sewer Dept. name] forces. This is particularly true of main line breaks where there is a risk of a significant sewer overflow. In these situations, [Insert Town/City Sewer Dept. name] may enlist the aid of [Insert "an emergency contractor" or name of Town "under our mutual aid agreement"]. [Insert Town/City Sewer Dept. name] maintains a general services agreement with several companies for situations that require the prompt reconstruction of sewer lines.

[for emergency services contracts, edit the following:]

These companies are capable of mobilizing construction equipment and personnel quickly to handle emergency assignments. The [Insert Town/City Sewer Dept. name] contract for emergency sewer repairs requires the contractor to respond to the site within [Insert timeframe] hours of notification to mobilize. This response time and the level of response will vary due to several factors, some are identified below:

- Location of the sewer repair in relation to the contractor's equipment yard
- Scope of the repair, size of sewer, depth of sewer and volume of flow
- The size, type and availability of equipment and number of workers
- The time of day, day of the week and the proximity to a holiday
- Weather conditions, clear, rain, snow, extreme cold or heat

[If you have a contractor for overflows, complete and include the following portion of the template]

Spill Contractor: [Insert name of outside contractor and phone number]

In the event of a spill that cannot be controlled by the [Insert Town/City Sewer Dept. name] Response Team, [Insert name of outside contractor] will provide professional services for the removal and disposal of contaminated material. Also, in the event of a tank rupture, the tank will be repaired or replaced by [Insert name of outside contractor] per the direction of the [Insert Town/City name] Fire Department. The following is a list of other spill contractors:

[Insert listing of your contractors]

[If you have a mutual aid agreement include the following information]

Mutual Aid Agreement

Mutual Aid Agreements have been executed by the [Insert position and/or name of person who set up the agreement] with the following organizations to supply equipment, materials, and personnel in an emergency situation:

[Edit the following details and lists to indicate with whom and what is available by mutual aid]

[Insert Town and Deparment name] Public Works Department

Equipment, Materials, and Personnel

Dump trucks, flatbed trucks, backhoe

Portable pumps, auxiliary personnel

Contact: [Insert Position title and name]
Telephone: [Insert phone number for mutual aid]

[Insert Town and Deparment name] Fire Department
Equipment, Materials, and Personnel , ventilating fans

Contact: [Insert Position title and name]
Telephone: [Insert phone number for mutual aid]

6. OVERFLOW REPORTING

6.1 Overview

The [Insert name of department or system person responsible and their title] completes an Overflow Report (See Appendix [Insert number]). The Responsibilities Chart in Section 1 and the Notification Matrix in Section 4 provide guidance on proper reporting. The [Insert name of department or system person responsible and their title] or designee promptly notifies appropriate department and agencies when the overflow is eliminated. The information collected will also provide the [Insert name of Town and name of department] with valuable information to inform decisions regarding collection system rehabilitation and replacement, scheduling, staffing, equipment needs, budgeting and updating this and other emergency response plans.

Note: [Insert Agency, e.g., "Rhode Island Department of Environmental Management"], Office of [Insert Title of contact group, e.g., "Water Resources' Operations and Maintenance Section (O&M Section)"] must be contacted within 24 hours of when the community becomes aware of an SSO. Between the hours of 8:30 AM and 4:00 PM, the O&M Section can be reached at [Insert phone #, e.g., "401-222-4700"]. When calling to report a wastewater emergency or bypass, it is important to actually speak with a [Insert Agency, e.g., "RI DEM"] staff member, DO NOT leave a recorded message. If someone from the O&M section is not available, speak with the receptionist and give them the general information; they will then contact an appropriate staff member. If you call outside of business hours, call the [Insert Agency, e.g., "RI DEM"]'s emergency hotline at [Insert phone #, e.g., 401-222-3070]. See Appendix [Insert appendix #] for a copy of the [Insert Agency, e.g., "RI DEM"] reporting form to print and fill out.

6.2 Reporting Details

Edit the following to include the details you want to be sure that your staff capture

- The dispatcher provides details on the time, location, description, and map locations of overflows
- The start time of the sewer overflow is determined by one of the following methods:
    a. Date and time information received and/or reported to have begun and later substantiated by a sewer investigator or response crew;
    b. Visual observation; or *[Include the following bullet point if you have a SCADA system that you will be using when reporting]*
    c. Pump station and lift station flow charts and other recorded data. At major pump stations this information is available from the Treatment Plant SCADA System.
- The stop time of the sewer overflow is determined by one of the following methods:
    a. When the blockage is cleared or flow is controlled or contained; or
    b. The arrival time of the sewer investigator or response crew, if the overflow stopped between the time it was reported and the time of arrival.
- An estimation of the rate of sewer overflow is made by one of the following criteria (See Appendix [Insert number] for guidance on estimating sewer overflow volumes and flow rates):
    a. Direct observations of the overflow; or measurement of actual overflow from the sewer main.
    b. When the rate of overflow is known gallons per minute (GPM), the duration of the overflow is multiplied by the overflow rate; or when the rate of overflow is not known, the surrounding area is investigated for evidence of ponding or other indications of overflow volume.
- Visual observations should be recorded for any unusual observations

• Photographs and videotapes are taken at the event and response when possible.
• The nature and extent of any damage or impacts to public/private property are assessed.
• Repair crews provide a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used

Reports are kept in [Insert what you use as your recordkeeping system, whether a file a database or an excel spreadsheet] and evaluated [Insert how often, e.g., quarterly, annually] to determine patterns and trends and to provide input to our asset management program. *Add any details that you feel should be included in emergency response related to your asset management program.*

6.3 Customer Satisfaction

The [Insert who is responsible for follow up, e.g., supervisor, sewer investigator, or response crew] confirming the overflow follows up in person or by telephone with the citizen(s) reporting the overflow. The cause of the overflow and its resolution will be disclosed.

In the event of a longer term emergency response, the following table indicates who will be responsible for communicating with the public and the media:

Designated spokesperson and alternates

Spokesperson	**Alternate 1**	**Alternate 2**
[Insert name of primary spokesperson, and their position]	[Insert name of alternate spokesperson and their position]	[Insert name of alternate spokesperson and their position]

Appendix [Insert number] *[make changes as needed, this example is from Rhode Island]*

RI DEM PUMP STATION/COLLECTION SYSTEM OVERFLOW QUESTIONNAIRE

Wastewater Treatment Facility/municipality reporting_____

1. Location of overflow:_____
2. Who notified WWTF/municipality?_____
3. Time and date of above notification_____
4. Date overflow started:_____ Time overflow started:_____

5. Date overflow ended:_____ Time overflow ended:_____

6. Cause of failure: _____
_____

7. Amount of overflow:_____

8. Was overflow treated with emergency chlorination?_____ Time chlorination started:_____ Amount of chlorine used:_____

9. What waterbody did the overflow discharge to?_____

10. Detail chronology of events leading to failure/overflow: _____
_____
_____

11. Detail chronology of response indicating all steps taken to minimize the amount of overflow:
_____
_____
_____

12. If applicable, were septage haulers and/or emergency generators used to minimize the amount bypassed? (If use was possible but not implemented, why not?)
_____
_____
_____

13. What actions are being taken to mitigate and/or prevent further occurrences?
_____
_____
_____

14. Notification of RIDEM (during business hours #: 222-4700; 24-hour emergency #: 222-3070) Person Notified_____ Date/Time:_____
By_____

Appendix [Insert number]

Guidance on estimating sewer overflow volumes[1]

A variety of approaches exist for the estimation of the volume of a sanitary sewer overflow. This appendix documents methods that are often employed. Other methods are also possible. The person preparing the estimate should use the method most appropriate to the SSO using their judgment.

Method 1 "Visual Estimate"

The volume of very small spills can be estimated by imagining the amount of water that would spill from a 5-gallon bucket or 50 gallon barrel. If the spill is larger than the amount of liquid from a 50 gallon barrel, try to visualize how many barrels the standing water would fill and them multiply by the number of barrel volumes by 50. This method can be useful for contained spills that are not more than a couple of hundred gallons.

Method 2 "Measured Volume"

The volume of some small spills can be estimated using this method if it is not raining. The shape dimensions and depth of the spilled wastewater are needed to use this method. The shape dimensions are used to calculate the area of the spill and the depth calculates the volume.

1. Sketch the shape of the contained area of sewage
2. Measure or pace off the dimensions and add the dimensions to your sketch
3. Measure the depth in several locations and then average the depth for the spill. (If the shape and depth vary, break your sketch into sections and calculate the volume of each by repeating the steps below)
4. Convert the dimensions to feet (if they are not in feet to begin with)
5. Calculate the area using the following formulas (depending on the shape of the spill):

Rectangle	Area = length X width
Circle	Area = diameter X diameter X 0.785
Triangle	Area = base X height X 0.5

6. To get the volume in cubic feet, multiply the area times the average of the depths you measured
7. Multiply the volume by 7.5 to convert to gallons

Method 3 "Duration and Flow Rate"

Calculating the volume of spills where it is difficult or impossible to measure the area and depth requires a different approach. In this method separate estimates are made of the duration (the elapsed time from the start of the overflow to the time the spill is stopped) of the spill and the flow rate.

Start time can be difficult to establish. Here are two approaches to estimating start time:

For very large overflows, changes in flow on a downstream flow meter can be used to establish the start time. Typically, the daily flow peaks are "cut off" of flattened by the loss of flow. This can be identified by comparing hourly flow data on the downstream flow meter.

Conditions at a spill site may change with time. Initially, there will be limited deposits of grease and toilet paper. After a few days to a week, the grease forms a light colored residue. After a few weeks to a month the grease turns dark. In the latter two cases the quantity of toilet paper and other materials of sewage origin increase in amount. These changes with time can be

[1] Adapted from information in the following guidance and reporting document: http://www.swrcb.ca.gov/rwqcb2/news_items/sso%20reporting%20requirements%20nov%2011%202004.pdf

used to estimate the start time in the absence of other information.

Sometimes it is simply not possible to estimate the start time and the date that the overflow was first observed should be used on the form.

End time is usually much easier to establish. Field crews on site observe the “blow down” that occurs when the blockage has been removed. The end can also be observed in downstream flow meter readings.

Flow Rate:

One way to estimate flow rate is to look at changes in flow rates in the downstream flow meters to estimate how much of the flow rate was lost during the spill (this generally only works for large SSOs)

A second way to estimate flow rate is to base it on up-stream connections: Once the location of the spill is known, the number of upstream connections can be determined from records or your computerized system. Multiply the number of connections by 200 to 250 gallons per day per connection or 8-10 gallons per hour for each connection (or other flow rates that are consistent with your data for your connections).

Once duration and flow rate have been estimated, the volume of the spill is the product of the duration in hours (or days) times the flow rate in gallons per hour (or gallons per day).

[The following pages provide forms and information that you can fill in and can use to supplement your plan. If you decide not to use these forms, remember to delete them from the template prior to saving it as your final plan]

Service/repair notification list

Electrician day	Electrician night
Electric Utility day	Electric Utility night
Plumber day	Plumber night
Pump Specialist day	Pump Specialist night
Soil Excavator day	Soil Excavator night
Equipment Rental day	Equipment Rental night
Other	Other
Other	Other

Notification procedures

Notifying collection system customers

Who is Responsible:	
Procedures:	

Alerting local law enforcement, state drinking water officials, and local health officials

Who is Responsible:	
Procedures:	

Contacting service and repair contractors

Who is Responsible:	
Procedures:	

Procedures for issuing a health advisory

Who is Responsible:	
Procedures:	

Other procedures, as necessary

Who is Responsible:	
Procedures:	

[Example:] **Power outage**

Assessment	The [Insert Town/City Sewer Dept. name] system is vulnerable to power outages, experiencing an average of [Insert number] outages per year that last several hours. The system does not have a back-up generator but has a connection so that a generator can be rented and plugged into the system. Storage is able to hold the pump station flow for several hours until power is restored.
Immediate actions	1. Assess whether the outage is likely to last more than 6 hours. If not, be on alert for changing conditions and monitor holding capacity. If yes, complete the following steps: 2. Call on availability of back-up generator at [Insert name] Rentals. 3. Call on septage hauler at [Insert name] and arrange to collect overflow while waiting for generator. 4. Obtain generator if available. 5. Connect generator to system and resume operations. 6. Implement overflow response actions to inform customers to cut back on water usage until power is restored.
Notifications	1. Power Company – Let them know that a sewer collection system is experiencing an outage and the generator will be turned on until power is restored. 2. [Insert name] Rentals – Obtain generator. 3. Customers – cut back on water usage until power is restored.
Follow-up actions	1. Turn off and disconnect back-up generator. 2. Return system to general power supply. 3. Inspect alarms and pumping facilities to ensure proper operation. 4. Return generator to [Insert name] Rentals.

Training and Rehearsals

[Any training should have a purpose, appropriately selected personnel, and qualified instruction and supporting materials.

Training can be conducted in a variety of ways, including attending training classes or bringing in experienced trainers for on-site training and exercises. On-site exercises with experienced trainers are very useful, as they involve activities that are specific to your own system. Personnel can practice emergency communications, isolating parts of the system, inspecting system components, and learning what to look for in case of a security breach. It is also important to train staff on risk communications or how to communicate with the media and customers during an emergency.

When planning training, consider your system's size, the type and complexity of its components, staff needs, and operational needs. Periodic training reinforces previous efforts, as people often forget things that they don't use very often. It also provides an opportunity to train new staff and learn about new problems, new techniques, and changes in equipment. Be aware of current and upcoming training topics, especially hot topics that tend to come around as a result of a specific event.]

Training

Emergency response training is essential. [Insert Town/City Sewer Dept. name]'s training educates system personnel about emergency situations and resulting effects on our wastewater system, public health and environmental impacts, and also provides an opportunity to practice responses.

Example: **Training**

Staff position training needs and expectations.

Position	**Training needs and expectations**
System Manager	Response communications, emergency response planning, issuing health advisories
System Operators	Response communications, emergency response planning, suspicious activity training
Field support	Response communications, suspicious activity training
Administrative Support	Response communications, emergency response planning

Emergency rehearsals

[Emergency rehearsals, sometimes referred to as "table-top exercises" are valuable tools to make sure employees are always prepared to respond. Ideally, rehearsals are set up by the system manager and are unannounced to employees. During these rehearsals, employees are required to conduct actual responses. They make phone or radio calls, perform inspections, respond to inquires, and do other tasks. Get assistance from partners such as local health or environmental jurisdictions and local emergency response people.

Practicing for an emergency is the only real way to thoroughly evaluate the emergency response plan and the system's ability to implement it. The final step of a rehearsal is to evaluate and discuss the results. Conduct a staff meeting to go over the results and get input from those involved in the rehearsal. Then make modifications or set up training to be better prepared.]

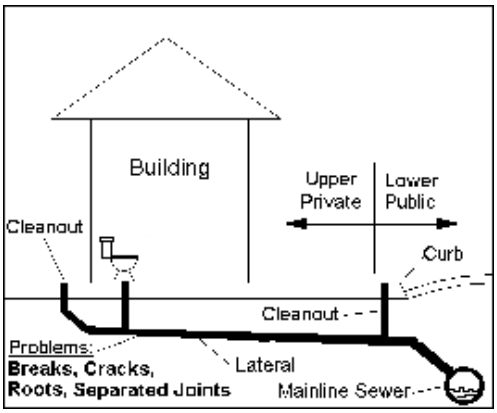
Example: **Emergency rehearsals**

Schedule for drills, tabletop exercises, and other ways to practice emergency response:

Event	Description	People and organizations involved	Date
Rehearsal	Conduct actual emergency drill	System staff	Unannounced
On-site training drills	Conduct specific drills, i.e, communications, pipe line breaks, sampling with a professional trainer	System staff and professional trainer	May 20xx

Sewer Smart Planting Guide

What you need to know to avoid causing planting-related sewer problems



Your home's sewer is connected to the sewer "main" (a large pipe often running under the street) via a pipe known as a "lateral" that extends from your home, across your property and into the sewer main. Responsibility for maintenance of this lateral varies from community-to-community, but, in most cases the homeowner is responsible for the line at least out to the property line.

Regardless of who is responsible, blockages in the lateral are always bad news for the homeowner as they can lead to slow downs or complete stoppages of the flow of waste from the home and into the sewer main. When either of these situations occurs, an overflow of the home's own sewage out of the lowest opening in the home (downstairs toilet, shower, etc.) is the likely result.

Is My Lateral at Risk of Tree Root Invasion?

Depending on the age of your home, your sewer lateral may be made of either tile, cast iron, concrete or plastic. No matter the construction, your lateral is filled with water and other nutrients that make it an attractive target for tree roots.

Movement of the lateral over the years due to earthquakes and shifting soil may have created openings in it that give tree roots lucrative targets and points of entry to the pipe itself.

Once roots find a moist spot caused by sewer lines, they'll grow right into the pipe itself. And, that means you may be in for expensive plumbing repairs.

Of course, it's best to avoid this unhappy circumstance by knowing what, where and how to plant trees with avoiding sewer problems in mind! You can help by following the sewer maintenance tips found elsewhere on this Website and by following some simple rules for planting above or near your sewer lateral.

Sewer Smart Planting Suggestions - Finding Your Lateral

The first step in observing Sewer Smart planting rules is to know, at least generally, where your lateral runs across your property and into the sewer main.

One of the best ways to find your lateral is to refer to the survey documents you likely received when you purchased your home. If you don't have these documents, your city planning or public works department can most likely provide copies for you to view. In some cities, they're even available online.

No need to despair if you don't have them, though. You can determine the general location of your sewer lateral - good enough for planting purposes -- by following these three steps:

STEP 1: Find the point where the lateral leaves the house by locating the clean out. For more information on cleanouts follow this link.

STEP 2: Find the point where the lateral leaves your property and crosses into the street by:

a. Locating an "S" or other similar mark in or on the curb.
b. Locating a second cleanout at the property edge, in the sidewalk or roadway. This cleanout may be under an access cover marked with an "S" or "Sewer."

STEP 3: Draw an imaginary line between the two above points - sewer laterals normally run in straight lines.

What to Plant, What Not to Plant

Once you've determined the general location of the lateral on your property, you should avoid planting - or maintaining - any plants, bushes or trees that are likely to grow into or otherwise foul your lateral. For more information on where-to-plant considerations, visit the International Society of Arboriculture (ISA)'s Webpage, Avoiding Tree & Utility Conflicts, at trees are good.

In addition to planting locations, the type of tree you plant is also important to preventing future sewer problems. Depending on the species of tree involved, the "safe" distance from your lateral varies. For example, roots of some Poplar trees have been known to reach into sewer lines nearly 100 feet away.

Planting appropriate types of trees is of critical importance. Tree roots tend to grow toward sources of water - including sewer pipes. If you're making additions to your home's landscaping, you can save yourself headaches and money by choosing trees with deeper root systems. In particular, avoid planting trees with shallow, spreading root systems near your lateral.

Tree roots, in many cases, mirror somewhat the tree's above-ground canopy, growing in a "pancake" several feet thick below the surface. But, some particularly ambitious trees can extend roots far beyond the drip line, or limits of their canopies, as they pursue water sources. There are a number of "problem" trees that should be avoided if sewer laterals and other underground utilities are a concern. These include poplars, willows, figs, rubber trees and large eucalyptus trees. Two of the more troublesome trees are the fruitless mulberry and the Modesto ash. For an extensive guide on tree selection, visit Cal Poly's site and select "low" for "Root Damage Potential" along with the other tree attributes you seek.

More Sewer Smart Planting Tips

After you select a tree, follow proper planting procedures. Be sure to dig a deep enough hole, but not too deep. If your hole is too shallow, the tree's roots will be more likely to spread horizontally making it more likely that they'll meet, and possibly penetrate, sewer pipes and other underground utilities.

However, if your hole is too deep, the tree's root crown will be buried and disease and decay may result. According to the ISA, "It's better to put a $100 tree in a $200 hole than to put a $200 tree in a $100 hole."

For more on tree planting, visit tree care.

Remember, there are other non-sewer reasons to plan before you plant. Trees in the wrong places can also wreak havoc with your homes foundation, driveways, sidewalks and other structures. A properly selected, and planted, tree will be a beautiful and healthy addition to your home's landscaping and won't cause headaches -- or backups -- in the years ahead.

More Sewer Smart Planting Information

Your local nursery may also be a good source of planting information. For a list of nurseries and garden centers in the San Francisco Bay Area that are participating in the Be Sewer Smart program, visit the

California Association of Nurseries and Garden Centers at: cangc

For more useful, local tree resources, visit the City of Oakland's Public Works Agency tree program at:

City of Oakland Website .

Still more tree information can be obtained from the University of California Cooperative Extension program at: http://ucanr.org/ce.cfm
.

For more specific information on desirable and undesirable plantings in your community, contact your city's public works department or your local sanitary district.

A Public Service Announcement

from your Department of Public Works

Did you know……?

…that dumping oil and grease down your sinks/drains is not just bad practice, but a violation of the municipal code? *Section 14.24.030 identifies specific items that are prohibited from being put into the sewer system.* ***Why is this important?*** Prohibited items can upset the balance of wastes treated at the City's Wastewater Treatment Plant, chemicals may have reactions within the sewer system, and blockages may occur due to build-up, which could lead to sewer back-ups and overflows that affect you and adjacent residents/businesses. ***Things you can do instead:*** As a resident – Pour the grease/oils in a can or jar and dispose of in the trash can. As a business – Install grease traps and contact the City regarding our FOG Program (Fats, Oils and Grease).

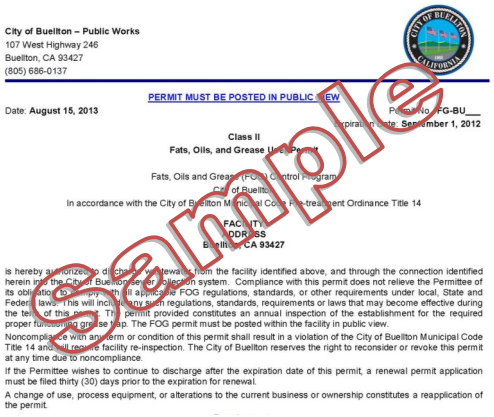
…that you should not turn off your water at the meter valve; not even by your contractor? *Section 13.32.070 recommends that the customer should provide a valve on the private side of the service installation to control the flow and the customer shall not use the meter valve to turn water on/off for their convenience.* ***Why is this important?*** Unauthorized tampering of the valves has caused damage to the meters and creates leaks in the system. It costs approximately **$2500** in labor and materials to repair each broken valve, not to mention disruption in your (and your neighborhood's) service in order for the repairs to be made. With the increase in costs and the frequency of these occurrences, the property owner **will be** made responsible for the charges incurred to make these repairs. ***Things you can do instead:*** Call the City's Public Works Department at *805-686-0137* and the Water Division will send staff to shut off and open the valves for you or your contractor.

…that the City's Street Sweeping Schedule will be changed back to Mondays? Notices have been placed in the Santa Ynez Valley News as well as on the City's Web page and Facebook page. As of October 2012, the service will be every 2nd and 4th Mondays of the Month. ***Things you can do:*** To ensure the best service possible, all vehicles should be parked off the street during these days between 6 am–2 pm. ***Schedule for the rest of 2012:*** October 8, October 22, November 12, November 26, December 10, December 24.

Cease the Grease!

Protect your sanitary sewer system and prevent sewer system overflows, properly collect and dispose of Fats, Oils, and Greases generated at your facility.

Required Permitting: All Food Service Establishments are required to be permitted to discharge into the public sanitary sewer system.



City of Buellton – Public Works
107 West Highway 246
Buellton, CA 93427
(805) 686-0137

PERMIT MUST BE POSTED IN PUBLIC VIEW

Date: August 15, 2013 Permit No. FG-BU___

Expiration Date: September 1, 2012

Class II
Fats, Oils, and Grease Use Permit

Fats, Oils and Greases (FOG) Control Program
City of Buellton

In accordance with the City of Buellton Municipal Code Pre-treatment Ordinance Title 14

FACILITY
ADDRESS
Buellton, CA 93427

is hereby authorized to discharge wastewater from the facility identified above, and through the connection identified herein into the City of Buellton sewer collection system. Compliance with this permit does not relieve the Permittee of its obligation to comply with all applicable FOG regulations, standards, or other requirements under local, State and Federal laws. This will include any such regulations, standards, requirements or laws that may become effective during the term of this permit. The permit provided constitutes an annual inspection of the establishment for the required proper functioning grease trap. The FOG permit must be posted within the facility in public view.

Noncompliance with any term or condition of this permit shall result in a violation of the City of Buellton Municipal Code Title 14 and will require facility re-inspection. The City of Buellton reserves the right to reconsider or revoke this permit at any time due to noncompliance.

If the Permittee wishes to continue to discharge after the expiration date of this permit, a renewal permit application must be filed thirty (30) days prior to the expiration for renewal.

A change of use, process equipment, or alterations to the current business or ownership constitutes a reapplication of the permit.

Sample

Contact the City of Buellton Public Works Department or the Environmental Compliance Inspectors if you have any questions regarding the program or how to obtain a permit.

City of Buellton
Public Works Department

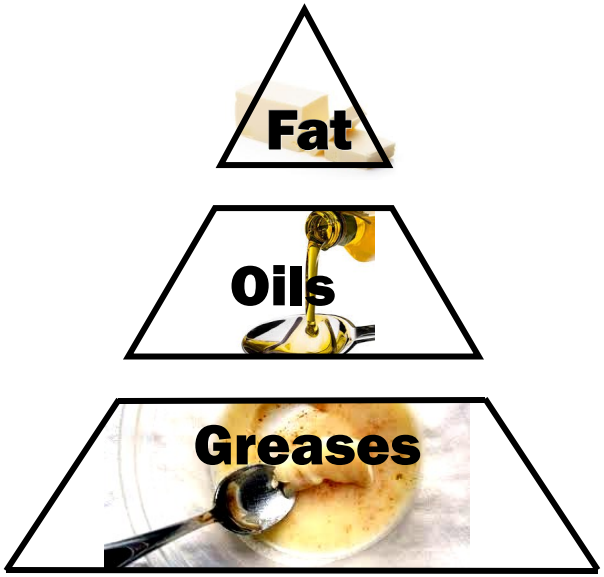
107 West Highway 246
Buellton, CA 93427
(805) 688-5177

WALLACE GROUP®

Environmental Compliance
Inspectors

Phone: 805-544-4011
Fax: 805-544-4294

Fats, Oils, and Grease Program



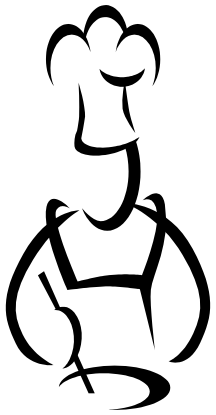
It doesn't stop at the kitchen sink.

Tel: 805 688 5177

Regulation: Effective July 1, 2007

Since July 1, 2007 the City of Buellton is required by the California State Water Resources Control Board, Waste Discharge Requirement Order2006-0003 to establish and implement a **Fats, Oils and Grease** Control (**FOG**) Program. The purpose of the program is to reduce the number of sewer pipe blockages affecting the sanitary sewer system, and to provide educational outreach to **Food Service Establishments (FSE)** relating to the proper disposal of fats, oils and greases generated on a daily basis.

Where Does FOG Come From?



- Meat fats
- Lard
- Food Scraps
- Dressing and Sauces
- Baking Goods
- Butter and Margarine
- Shortening
- Dairy Products

What Can FSEs Do?

In order to prevent sewer system overflows, you can follow a few inexpensive "Best Management Practices."

1. Maintain your grease trap and/or interceptor properly.
2. Keep all servicing records for cleaning/pumping for three years.

3. Scrape grease and food scraps into the trash prior to washing.
4. Do not put grease down the garbage disposal. Allow the grease to harden and dispose of it into the trash or dump the liquid grease into an approved grease barrel.
5. Be cautious of chemicals and additives (including soaps and detergents) that claim to dissolve grease.
6. Contact us with any questions or concerns, we're here to help!

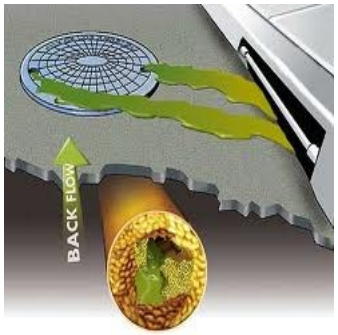
Why is this important?

Everyday commercial kitchens produce large amounts of FOG. These by-products of cooking are not good for the health of your sanitary sewer system. Over time the fats, oils, and grease begin to adhere to the sides of sewer lines that connect to your establishment or the public sewer itself.

- Public health hazards
- May result in the closure of the your establishment.

Sewer System backups can cause:

- Public property damage
- Jeopardize public health.
- Expensive fines that may result in higher sewer bills.



In order to prevent this , the City of Buellton has established a No Fee permitting and educational program to help you meet the new requirements and prevent blockages from impacting your business.

We need everyone's help...

Many household cleaning products are labeled and marketed as disposable; many baby hygiene products are labeled both disposable and flushable. And while these products may be marketed as a convenience item in this way, the truth is that these household wipes and cleaning towelettes have the ability to clog and stop up not only the sewer line on your property, but also can cause blockage and service problems in the public sewer system and pump stations. Unlike toilet paper, these products don't break down once they are flushed. They can cause blockages in your private service lateral, especially older pipelines that may have grease, roots, or other obstructions already existing.

A repair of the private service lateral can leave the homeowner with a nasty repair bill. On a larger scale when these products make their way into the public sewer system they collect together and cause clogs in the sewer main lines and get tangled in pump stations requiring repair or replacement of equipment.

The following items should never be flushed into the sewer system:

- Disinfecting wipes, Baby wipes.
- Q-tips.
- Toilet cleaning pads.
- Mop or "Swiffer" type refills.
- Paper towels.
- Moist towelettes.
- Any consumer item that is not toilet paper.

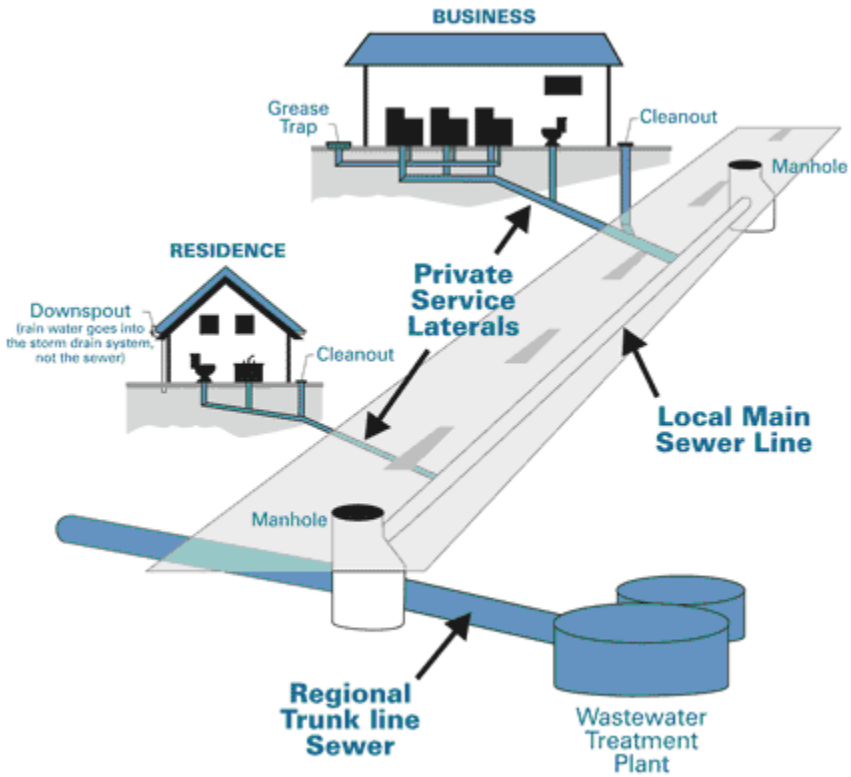


Diagram of a sanitary sewer system

City of Buellton
Public Works Department
(805 688-5177

Buellton Buzz

April 2018

Happy Spring Neighbors!

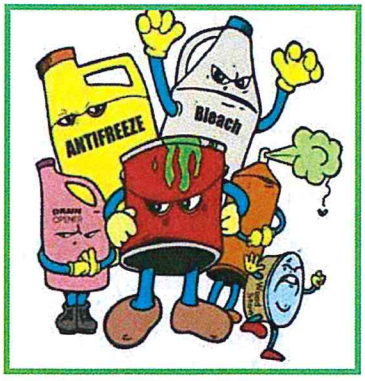
We live in such a special place. It's a lot of fun to visit different places, but there's no place like home. You can't go anywhere without running into someone, drivers are more courteous, shoppers are more pleasant and our town looks beautiful. Thanks to all those residents who are sprucing up their yards - they look great!

Our Easter Eggstravaganza is coming to River View Park on March 31st at 10 a.m. This is my favorite city event that is co-sponsored by the City of Solvang. I love watching the kids in their Easter best (or not) heading out from the marked areas based on ages. Imagine a three or four year old grabbing as many eggs as they can find and the shrieks of delight coming from hundreds of children. The eggs disappear quickly so you can't be late. They've even added an adult's area. The Easter Bunny is there and there are non-profits with other booths. Come on down!

City Council recently approved the Avenue of Flags Specific Plan - this is the conclusion of many years of work and planning done by residents of our town. If you're interested in what will come to Avenue of Flags stop by our Planning Department and our staff will be happy to show you the results of all your work!

Again, I'd like to hear from you. Mayor's hours are Wednesdays from 2-4 in the City Planning Department conference room (next to City Hall) or by appointment. I can be reached at hollys@cityofbuellton.com or at (805)252-2618 and leave a message. Our City Council meets the second and fourth Thursday of the month at Council Chambers next to the Library at 6:00. The meetings are recorded (check the city's website) - so stay tuned in!

Holly Sierra, Buellton Mayor



Did you know? Local household hazardous waste collection events are *FREE* for residents. Bring your unwanted chemicals to Buellton's Quarterly Household Hazardous Waste Round-up's (May 5th, August 4th, November 3rd) held at the Wastewater Treatment Plant (79 Industrial Way). Visit your City's Solid Waste webpage www.cityofbuellton.com or the Less is More's Hazardous Waste webpage www.lessismore.org for more details.

COMING SOON TO PAWS PARK

A big thank you to Sam Burke from the Buellton Senior Center for painting the 2nd free "Little Library" box.

The Santa Barbara County Sheriff's Office wants to remind people that one of the easiest ways to prevent being the victim of a crime is to secure your property and belongings. This includes locking your cars when they are unattended, and making sure that the windows are rolled up. Also, avoid leaving valuables in sight. Even an empty backpack is enticing to many thieves and could result in damage to your vehicle. If you must keep valuables in your car, secure them in the trunk or glovebox. As always, if you see suspicious people in your neighborhood, do not hesitate to call our dispatch center at **805-692-5743** to report the activity.

Spring Break Camp

buellton REC CENTER

April 2-6

7:30am-6pm

6-12 year olds

Mon , April 2-Movies @ Parks Plaza
Tue April 3-Lompoc Aquatic Center
Wed April 4-Charles Paddock Zoo(Atascadero)
Thurs. April 5- Solvang Scavenger Hunt
Fri. April 6- Park Hopper & Ice Cream

$45/1 Day
$135/3Days
$180/5Days

Not Too Early to Sign Up

SUMMER DAY CAMP

June 11-August 10

9 Weeks

Wk 1, Jun 11-15: Rancho Bowl
Wk 2, Jun18-22: Charles Paddock Zoo
Wk 3, Jun 25-29: Casitas Water Adventure
Wk 4, July 2,3,5&6: Happy Independence Day
Wk 5, July 9-13: Cloud 10 Trampoline Club
Wk 6, Jul 16-20: MOXI Museum
Wk 7, Jul 23-27: Casitas Water Adventure
Wk 8, Jul 30, Aug 3: Santa Barbara Zoo

Monday
Parks Plaza Movie
Tuesday
HS Pool
Wednesday
Field Trip
Thursday
Paul Nelson Pool, SM
Friday
Local Beach

Teen Camp

3 Weeks
June 11-June 28
Ages 12 -14
$180/4 Days, $45/1 Day

Surf Camp

3 Weeks of Fun
July 2,3,5
July9-12
July 20-23
Ages 11-16
$200/4 Days, $110/2 Days, $65/1Day

Sports Camp

2 Weeks
7/30-8/2- Mountain Bike Wk
8/6-8/9 Outdoor Sports Wk
Ages 12 -14
$180/4 Days, $45/1 Day

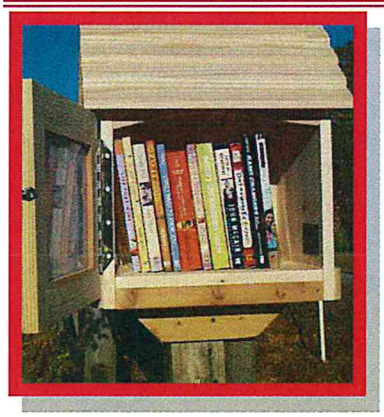
Find Everything @ buelltonrec.com

buellton REC CENTER

City of Buellton
805-686-0137 City Hall
805-688-7474 Planning Dept.
805-686-7423 Code Violations
805-688-1086 Buellton Rec.
Website: www.cityofbuellton.com

Buellton Buzz

February 2018



Mayor's Notes

Our county has certainly been through some incredible tragedies in the last few months. I'm proud that our residents and businesses have stepped up to help victims of both fire and floods.

I'd like to let you know of a few events going on in the next couple months. The City has approved locations for Little Free Library boxes. These are those wonderful lending libraries where you take and leave books for friends and neighbors. Bob Bott helped create two boxes (ok- so he did most of the work) and two Jonata students, Giszelle and Charley, along with Rosemary Hrehor and the Senior Center, each painted the boxes. They will be placed at PAWS dog park and on Second Street between Jonata and Oak Valley school. Keep your eyes open and look for them! Get busy and create a box for your front yard - for ideas go to LittleFreeLibrary.org.

I also wanted to let you know we are part of the formation of Special Olympics in the Santa Ynez Valley. We're starting with basketball for athletes ages 8 and up. The first practice will be at the Buellton Rec Center courts on Feb. 19 from 5:30-7:00. If you're interested in helping or know a player contact Tim Ballaret at: tballaret@SOSC.org to sign up as a player or volunteer - no basketball experience needed. I plan on being there as a cheerleader!

May our spring come quietly and peacefully. I can be reached at hollys@cityofbuellton.com or (805)252-2618. Of course, we'd love to see you at our council meetings the second and fourth Thursday of each month at 6:00 p.m.

Holly Sierra , Mayor

The City of Buellton is committed to detecting and eliminating illicit discharges and connections to the storm drain system in accordance with the State municipal storm water general permit. An illicit discharge is the release of any substance other than rain water into the storm drain system.

The following are common pollution sources:

Residential

- Yard waste and trash
- Laundry wastewater
- Sewer wastewater
- Home improvement waste (concrete, mortar, and paint)
- Vehicle by-products
- Pet waste

Creekside

- Trash
- RV sewer dumping
- Greenwaste disposal
- Human waste

Yard waste obstructing a storm drain

Construction

- Sediment from soil erosion
- Construction waste (paint, solvents, and drywall)
- Overspray from water tenders for dust control
- Sidewalk and street washdown water

Illicit discharge of sediment to storm drain system

Commercial/Industrial

- Hoses, PVC pipes, or connections discharging directly into a catch basin, storm drain, channel, or culvert
- Accumulated trash and debris
- Improperly stored products (waste oil, paint)
- Leaky vehicles or equipment
- Exposed trash storage/disposal

Abandoned 55-gallon drums containing unknown wastes exposed to rainwater

Restaurant

- Restaurant food waste
- Cooking fats, oils, and grease
- Mop wash water
- Leaking dumpsters

REPORT ILLLICIT DISCHARGE: As a member of the public, it is your responsibility to report any illicit discharges or connections you may encounter. To report storm water pollution or illicit discharges, call the City Public Works Department at 805.688.5177.

Celebrating 10 YEARS

FREE Weight Room Classes

February 5-16

Take a class or more on us

Yoga Cycle Weight Training

Go to buelltonrec.com for a full class and weight room schedule

buelltonREC CENTER

February 10, 1-3pm
Anniversary Party

buelltonREC CENTER

Find us on:buelltonrec.com

Going Places

Christmas on the Danube-Presentation,Feb 14, 3pm

Feb 24-Camarillo Chinese New Year Celebration

Discover Panama: Travel Presentation - March 8 3pm

March 14-Gardens of the World

San Juan Capistrano-March 23-25

April 8-10-Death Valley

Huntington Library, High Tea- May 16

Let's Save Together
waterWise
IN SANTA BARBARA COUNTY

Even with these recent rains, the City is still in a Stage 2 Drought Condition and asks its residents and businesses to continue conserving water.

Did you know that during the rainy season you can conserve water by turning off your irrigation sprinklers and hand water your plants as needed. You can also adjust your irrigation schedule by adjusting your sprinkler timer to the County of Santa Barbara Water Wise recommended "% Watering Adjust Value" found on their website www.waterwisesb.org or you can learn how to adjust your sprinkler time by watching an informational video on their website.

Don't forget to check out the City's Public Works webpage for informational brochures such as Landscape Maintenance Best Management Practices that are available in English and Spanish to help minimize the discharge of pesticides, herbicides and fertilizers into the storm drain system.

Buellton Green Scene

For information on:

- Resource Conservation
- Water
- Power & Gas
- Sustainable Landscaping

Visit the Buellton Green Scene website at:
www.buelltongreenscene.com

Go to buelltonrec.com to see the full program schedule for fitness classes, weight room, open gym, room rentals, sports programs, trips, summer camp and much, much more!

City of Buellton

805-686-0137 City Hall
805-688-7474 Planning Dept.
805-686-7423 Code Violations
805-688-1086 Buellton Rec.
Website: www.cityofbuellton.com

CITY OF BUELLTON WATER AND WASTEWATER RATES

Why are water and wastewater (sewer) rates increasing?

The City's water and wastewater funds have been deficient for many years. Operating and capital improvement costs have relied on past reserves to fund costs. In addition, the last detailed rate analysis was completed in 1996 and a nominal per meter increase from 2012-2014 are not sufficient to fund the necessary expenditures to operate the city's water and wastewater systems.

How are the water rates changing?

Both the monthly meter charge (flat rate based on water meter size) and the monthly consumption charge (volumetric rate based on water use) will increase. The table below shows the increases by year of proposed implementation:

Meter Size	Current Rate - Fixed Monthly	Proposed Fixed Monthly – starting 11/01/2016	Proposed Fixed Monthly – starting 07/01/2017	Proposed Fixed Monthly – starting 07/01/2018
5/8" and 3/4"	$24.20	$33.23	$33.34	$35.51
1"	$26.65	$86.26	$89.66	$96.89
1 ½"	$31.48	$171.02	$177.47	$191.90
2"	$41.21	$271.77	$280.00	$301.60
3"	$60.60	$580.58	$604.20	$646.19
4"	$78.80	$1,052.43	$1,085.82	$1,176.31
6"	$109.11	$2,222.07	$2,318.68	$2,511.90
8"	$145.51	$2,992.60	$3,105.95	$3,364.78
Consumption Charge (per HCF)	$1.97	$2.68	$2.76	$2.98
Additional Dwelling Unit Charge	$13.00	$23.26	$23.34	$24.86

Is there a difference in water rates between residential and commercial?

The rate structure for residential and commercial are the same and based on water meter size and amount of water used. Typically, residential water meters are 5/8" or ¾".

How are the sewer rates changing?

The monthly and volumetric charge for sewer is increasing based on the following table of customer classifications.

	Current		Proposed Starting 11/01/2016		Proposed Starting 07/01/2017		Proposed Starting 07/01/2018	
Customer Class	**Monthly Charge**	**Charge for Excess Water Use (use over 900 cf)**	**Monthly Charge**	**Charge for Excess Water Use (use over 1400 cf)**	**Monthly Charge**	**Charge for Excess Water Use (use over 1400 cf)**	**Monthly Charge**	**Charge for Excess Water Use (use over 1400 cf)**
Single Family Dwelling	$25		$25.96 (plus $18.17 for each add. Unit)		$28.12		$30.45	
Multiple Dwelling	n/a		$25.96 (plus $18.17 for each add. Unit)		$28.12 (plus $19.68 for each add. Unit)		$30.45 (plus $21.31 for each add. Unit)	
Multi Family-Townhouses & Condos	$25 (plus $23.08 for each add. Unit)		$25.96 (plus $18.17 for each add. Unit)		$28.12 (plus $19.68 for each add. Unit)		$30.45 (plus $21.31 for each add. Unit)	
Multi Family-Apts	$25 (plus $17.38 for each add. Unit)		$25.96 (plus $18.17 for each add. Unit)		$28.12 (plus $19.68 for each add. Unit)		$30.45 (plus $21.31 for each add. Unit)	
Mobile Home Parks	$25 (plus $18.17 for each add. Space)		$25.96 (plus $12.98 for each add. Space)		$26.46 (plus $14.06 for each add. space)		$30.45 (plus $15.22 for each add. Unit)	
Motels	$30.84	$1.74/hcf	$51.77	5.15/ hcf	$56.08	5.58/hcf	$60.72	6.05/hcf
Restaurant	$30.84	$1.74/hcf	$51.77	5.15/hcf	$56.08	5.58/hcf	$60.72	6.05/hcf
Fast Food/Bar	$30.84	$1.74/hcf	$51.77	5.15/hcf	$56.08	5.58/hcf	$60.72	6.05/hcf
Theaters/Banquet	$30.84	$1.74/hcf	$51.77	5.15/hcf	$56.08	5.58/hcf	$60.72	6.05/hcf
Camper/Trailer Parks (unmetered)	$30.84	$1.74/hcf	$51.77 plus $14.06 for each add. Space		$56.08		$60.72 (plus $15.22 for each add. Space)	
Camper/Trailer Parks (metered)	$30.84	$1.74/hcf	$51.77 for first space	5.15/hcf	$56.08	5.58/hcf	60.72 for first space	6.05/hcf
Schools	$30.84	$1.74/hcf for 85% use over 900 cf	$25.56	0.47/hcf	$27.69	0.51/hcf	$29.98	0.56/hcf
Churches (w/o school)	$30.84		$25.56	0.47/hcf	$27.69	0.51/hcf	$29.98	0.56/hcf
Other Commercial	$30.84	$1.74/hcf for 85% use over 900 cf	$58.35	5.15/hcf	$63.21	5.58/hcf	$68.44	6.05/hcf
Industrial Accounts	Determined by Public Works Dir.							

Combinations	Determined by Public Works Dir.

Is there any benefit we are receiving with these new rates?

Yes! The rates provide equity in cost sharing among the different types of users. That means each classification of user, a Single Family Resident – Condominium – Commercial – Restaurant - Winery, etc, are each paying their fair share of the costs. The new rates also provide a higher water allowance as part of the base cost. The current allotment is 900 cf, the recommendation is 1400 cf. In addition, these rates will allow the city to continue to provide, manage, repair and treat water and wastewater for its community. The ability to fund the maintenance and repair of our infrastructure is critical to providing water to the community as well as treating the waste.

Did you change the rate structure?

The proposed rates are consistent with the current rate structure, so there is no change there. We wanted to ensure that the rates are understandable to the ratepayers. In addition, it provides a financial incentive for continued water conservation. You pay for the water you use.

How were the rate increases determined?

The City contracted with Water Consultancy to perform a detailed analysis and review of the City's water and wastewater rates. As part of the review, Water Consultancy compiled historical and current financial information and worked with City staff on realistic projections on customer growth. Operating and capital costs were reviewed from both historic and future projections. Then they conducted a cost of service analysis to assure that each customer class is allocated the appropriate proportion of the City's projected revenue requirements. Cost allocations are based on establishing functional cost categories such as water demand characteristics as well as customer growth projections. Based on this, the rate structure for each customer class is reviewed and updated as necessary.

When will this take effect?

The first set of rate increases would occur on November 1, 2016. The second set of rate increases would occur on July 1, 2017 and the third set would occur on July 1, 2018.

Can I change out my meter to reduce my monthly meter cost? If so, how do I do it and what does it cost?

You can elect to have your meter replaced with a smaller meter. We advise that you seek the assistance of an engineer to appropriately determine your actual water needs and appropriate meter size. You will be responsible for the cost of the plumbing changes on site for the water line reduction (everything from the end of the water meter to your home) and you must obtain your own licensed plumber to complete the work. You will be responsible for the cost of the meter replacement, which the City will perform. Once you have the meter size established, you would contact the City to pay the appropriate deposit (actual cost will be time and materials) and submit a request for the work. The City will schedule the water crew to perform our portion of the work *after* your on-site plumbing work is completed. We do not have a set cost for this type of work and would be site specific based on field conditions. The cost of a new meter itself is as follows:

How do I protest the rate increase?

Any **record owner** of a parcel upon which the fees are proposed, may submit a written protest to the proposed rate increases to the City's water and wastewater service fees; provided, however only one protest will be counted per identified parcel. Each protest must: 1) be in writing; 2) state whether the protest is submitted in opposition to the rate increases to the water or wastewater service fees; 3) provide the location of the identified parcel (by assessor's parcel number and service address); and 4) include the name and signature of the person submitting the written protest. Written protests may be submitted by mail to City Clerk, City of Buellton at PO Box 1819, Buellton, CA 93427. Written protests may also be submitted in person at City Hall or at the Public Hearing on September 22, 2016 (time and location as noted above). All written protests must be received prior to the conclusion of the public input portion of the Public Hearing. Any protests submitted via e-mail or other electronic means will not be accepted as a formal written protest. Please identify on the front of the envelope for any protest, whether mailed or submitted in person, that the enclosed letter is for the Public Hearing on the Proposed Rate Changes.

The City Council will consider all written protests timely submitted and hear and consider all public comments made at the public hearing. Oral comments at the public hearing will not

qualify as formal protests unless accompanied by a written protest with the required information as listed above. At the conclusion of the public hearing, the City Council will determine whether to adopt the proposed rates. If, after the close of the public hearing, written protests against the proposed rate increases are not presented by a majority of the record owners of the identified parcels upon which they are proposed to be imposed, the City Council will be authorized to impose the rate increases.