

March 2016

# **SANITARY SEWER MANAGEMENT PLAN**

## **FILLMORE CITY**



# March 2016

## TABLE OF CONTENTS

Page No.

<b>CHAPTER 1 - SANITARY SEWER MANAGEMENT PLAN. ....</b>	<b>1-1</b>
Introduction .....	1-1
Definitions .....	1-1
General SSO Requirements .....	1-2
SSO Reporting Requirements .....	1-3
Sewer Use Ordinance .....	1-3
<b>CHAPTER 2 - SSMP – GENERAL INFORMATION.....</b>	<b>2-1</b>
Description of Roles and Responsibilities.....	2-1
Wastewater Supervisor .....	2-1
City Engineer .....	2-1
Wastewater Lead Worker .....	2-1
Pretreatment Program Coordinator .....	2-1
Organization Chart .....	
<b>CHAPTER 3 – OPERATIONS AND MAINTENANCE PROGRAM .....</b>	<b>3-1</b>
Staff Training .....	3-1
System Mapping.....	3-1
System Cleaning.....	3-2
System CCTV Inspection.....	3-2
Pump Station/Pressure Line Inspection.....	3-3
Manhole Inspection .....	3-3
Defect Reporting .....	3-3
Collection System Damage .....	3-4
Damage Identification. ....	3-4
Damage Response Actions.....	3-5
Equipment and Replacement Part Inventories. ....	3-5
<b>CHAPTER 4 – SEWER DESIGN STANDARDS.....</b>	<b>4-1</b>
<b>CHAPTERS 5 – SANITARY SEWER OVERFLOW ACTION PLAN.....</b>	<b>5-1</b>
Response Activities.....	5-2
General Notification Procedure.....	5-2
City Notification.....	5-2
Agency Notification Requirements.....	5-2
Public Notification. ....	5-2
Overflow Cleanup .....	5-3
Corrective Action .....	5-3

# **TABLE OF CONTENTS**

## **(Continued)**

**Page No.**

<b>CHAPTER 6 – GREASE, OIL, AND SAND MANAGEMENT PROGRAM.....</b>	<b>6-1</b>
Purpose.....	6-1
Regulatory Authority.....	6-1
Program Implementation.....	6-1
 <b>CHAPTER 7 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN....</b>	 <b>7-1</b>
 <b>CHAPTER 8 – SSMP MONITORING AND MEASUREMENT PLAN.....</b>	 <b>8-1</b>
Purpose.....	8-1
Records Maintenance .....	8-1
Operations Records .....	8-1
Performance Measurement (Internal Audit) .....	8-2
SSMP Updates .....	8-2
SSO Evaluation and Analysis .....	8-2
Public Communication and Outreach .....	8-2
 <b>CHAPTER 9 – SANITARY SEWER SYSTEM MAPPING .....</b>	 <b>9-1</b>
 <b>CHAPTER 10 – BASEMENT BACKUP PROGRAM.....</b>	 <b>10-1</b>
Basement Backup Response.....	10-1
Backup Prevention Design Standard.....	10-1
 <b>CHAPTER 11 – NO-FAULT SEWAGE BACKUP CLAIMS PROGRAM.....</b>	 <b>11-1</b>
Purpose.....	11-1

# **TABLE OF CONTENTS**

## **(Continued)**

### **LIST OF APPENDICES**

#### **APPENDIX A – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN (SECAP)**

#### **APPENDIX B – CITY FORMS AND STANDARD OPERATING PROCEDURES**

Oil & Grease Trap Inspection Form	Log of Contact with Other Agencies/People
List of Grease Traps	Sanitary Sewer Manhole Inspection Form
Grease Trap Check List ( <i>performed by Fillmore City</i> )	Trouble Sewer Checklist
Plug Sewer Procedure Checklist	Sanitary Sewer System Defect Report

# CHAPTER 1

## SANITARY SEWER MANAGEMENT PLAN

### INTRODUCTION

Fillmore City is a public entity established in Utah under the Utah State Code. The City became an incorporated town in 1851. It provides sewage collection to residents within the City boundaries as shown in Chapter 9, Figure 9-1. The total length of the sewer collection system is 33 miles of mainline pipe ranging between 8 to 12 inches in diameter. Fillmore city has a non-discharging lagoon treatment system comprised of seven large cells that make up a total area of 80 acres.

This Sanitary Sewer Management Plan (SSMP) manual has been established to provide a plan and schedule to properly manage, operate, and maintain all parts of the sewer collection and or treatment system to reduce and prevent SSOs, as well as minimize impacts of any SSOs that occur. The management for this entity recognizes the responsibility it has to operate the sewer system in an environmentally and fiscally responsible manner. As such, this manual will cover aspects of the collection system program necessary to provide such an operation. This manual may refer to other programs or ordinances and by reference may incorporate these programs into this manual.

### DEFINITIONS

The following definitions are to be used in conjunction with those found in Utah Administrative Code R317. The following terms have the meaning as set forth:

- (1) *"BMP" means "best management practice".*
- (2) *"CCTV" means "closed circuit television.*
- (3) *"CIP" means a "Capital Improvement Plan".*
- (4) *"DWQ" means "the Utah Division of Water Quality".*
- (5) *"FOG" means "fats, oils, and grease". This is also referred to as a Grease Oil and Sand Program (GOSI).*
- (6) *"I/I" means "infiltration and inflow".*
- (7) *"Permittee" means a federal or state agency, municipality, county, district, and other political subdivision of the state that owns or operates a sewer collection system or who is in direct responsible charge for operation and maintenance of the sewer collection system. When two separate federal or state agency, municipality, county, district, and other political subdivision of the state are interconnected, each shall be considered a separate Permittee.*
- (8) *"SECAP" means "System Evaluation and Capacity Assurance Plan".*
- (9) *"Sewer Collection System" means a system for the collection and conveyance of wastewaters or sewage from domestic, industrial and commercial sources. The Sewer Collection System does not include sewer laterals under the ownership and control of an owner of real property, private sewer systems owned and operated by an owner of real property, and systems that collect and convey storm water exclusively.*
- (10) *"SORP" means "Sewer Overflow Response Plan"*
- (11) *"SSMP" means "Sewer System Management Plan".*
- (12) *"SSO" means "sanitary sewer overflow", the escape of wastewater or pollutants from, or beyond the intended or designed containment of a sewer collection system.*

- (13) *"Class 1 SSO" (Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that:*
- (a) affects more than five private structures*
  - (b) affects one or more public, commercial or industrial structure(s);*
  - (c) may result in a public health risk to the general public;*
  - (d) has a spill volume that exceeds 5,000 gallons, excluding those in single private structures; or*
  - (e) discharges to Waters of the State of Utah.*
- (14) *"Class 2 SSO" (Non Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that does not meet the Class 1 SSO criteria.*
- (15) *"USMP" means the "Utah Sewer Management Program".*
- (16) *"Sewer lateral" is the pipe that connects indoor plumbing to the sewer main*

## **GENERAL SSO REQUIREMENTS**

The following general requirements for SSO's are stipulated in R317-801 and are included here as general information.

- 1) The permittee shall take all feasible steps to eliminate SSOs to include:*
  - (a) Properly managing, operating, and maintaining all parts of the sewer collection system;*
  - (b) training system operators;*
  - (c) allocating adequate resources for the operation, maintenance, and repair of its sewer collection system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures in accordance with generally acceptable accounting practices; and,*
  - (d) providing adequate capacity to convey base flows and peak flows, including flows related to normal wet weather events. Capacity shall meet or exceed the design criteria of R317-3.*
- (2) SSOs shall be reported in accordance with the requirements below.*
- (3) When an SSO occurs, the permittee shall take all feasible steps to:*
  - (a) control, contain, or limit the volume of untreated or partially treated wastewater discharged;*
  - (b) terminate the discharge;*
  - (c) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water; and,*
  - (d) mitigate the impacts of the SSO.*

## **SSO REPORTING REQUIREMENTS**

R317-801 stipulates when and how SSO's are reported. Following are those reporting requirements as of April 5, 2016.

**SSO REPORTING.** *SSOs shall be reported as follows:*

- (1) A Class 1 SSO shall be reported orally within 24 hrs and with a written report submitted to the DWQ within five calendar days. Class 1 SSO's shall be included in the annual USMP report.*
- (2) Class 2 SSOs shall be reported on an annual basis in the USMP annual report.*

**ANNUAL REPORT.** *A permittee shall submit to DWQ a USMP annual operating report covering information for the previous calendar year by April 15 of the following year.*

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## **SEWER USE ORDINANCE**

The City has a sewer use ordinance found in the Fillmore City Municipal Code adopted by the governing body. This code contains the following items as stipulated by Utah State Code R317-801:

1. Prohibition on unauthorized discharges,
2. Requirement that sewers be constructed and maintained in accordance with R317-3,
3. Ensures access or easements for maintenance, inspections and repairs,
4. Has the ability to limit debris which obstruct or inhibit the flow in sewers such as foreign objects or grease and oil,
5. Requires compliance with pretreatment program,
6. Allows for the inspection of industrial users, and
7. Provides for enforcement of ordinance or rules violations.

The following elements are included in this SSMP:

- General Information
- Operations and Maintenance Program
- Sewer Design Standards
- Sanitary Sewer Overflow Response Plan
- Grease, Oil and Sand Interceptor Management Program
- System Evaluation and Capacity Assurance Plan
- SSMP Monitoring and Measurement Plan
- Sewer System Mapping Program
- Basement Backup Program
- No Fault Sewage Backup Claims Program

This program is intended to be a guidance document and is not intended to be part of a regulatory requirement. As such, failure to strictly comply with documentation requirements is, in and of themselves, not a failure of the program's effectiveness.

Documentation failures are intended to be identified during system self-audits and will be addressed as training opportunities. Significant system failures will be followed up with corrective action plans. This corrective action process will be implemented by all individuals involved in the SSMP program. Not all City employees will necessarily be involved in the collection system operations. As such, not all employees will receive program training. Finally, although not a part of this SSMP program, the City is an active participant in the Blue Stakes of Utah Utility Notification system. This system, regulated under title 54-8A of the Utah State Code, stipulates utility notification of all underground operators when excavation takes place. The intent of this regulation is to minimize damage to underground facilities. The City has a responsibility to mark their underground sewer facilities when notified an excavation is going to take place. Participation in the Blue Stakes program further enhances the protection of the collection system and reduces SSOs.

**CHAPTER 2**  
**SSMP – GENERAL INFORMATION**

This Sanitary Sewer Management Plan was adopted by the City Council on \_\_\_\_\_.  
The responsible representatives, position and phone number for Fillmore City with regard to this SSMP are:

John Mitchell, Public Works Supervisor----- (435-253-0703)  
Matt Haupt, Wastewater Operator -----(435-253-0701)  
Robert Worley, Sunrise Engineering----- (435-743-6151)  
Kevin Orton, City Recorder----- (435-743-5233)

**DESCRIPTION OF ROLES AND RESPONSIBILITIES**

The following positions have the described responsibility for implementation and management of the specific measures as described in the SSMP.

**Public Works Supervisor (PWS)**

This individual is responsible for overall management of the sanitary sewer collection system. Responsibilities include day to day operations, he is the department head directly responsible to the Mayor and City Council. He works with the City Recorder in determining budgets, and general overview of operations.

**Wastewater Operator**

This individual is responsible for daily implementation of the SSMP. This includes maintenance activities, compliance with SORP requirements, and monitoring and measurement reporting requirements.

**Sunrise Engineering**

This engineering firm is responsible for the development and maintenance of collection system design standards, maintenance of collection system mapping and maintenance of the SECAP program. Many of these day to day responsibilities are delegated to a Sunrise Engineering official.

**City Recorder**

This individual working with governance to assure sufficient budget is allocated to implement the SSMP, maintenance of the SSMP documentation, development of a capital improvement program and general supervision of all staff.

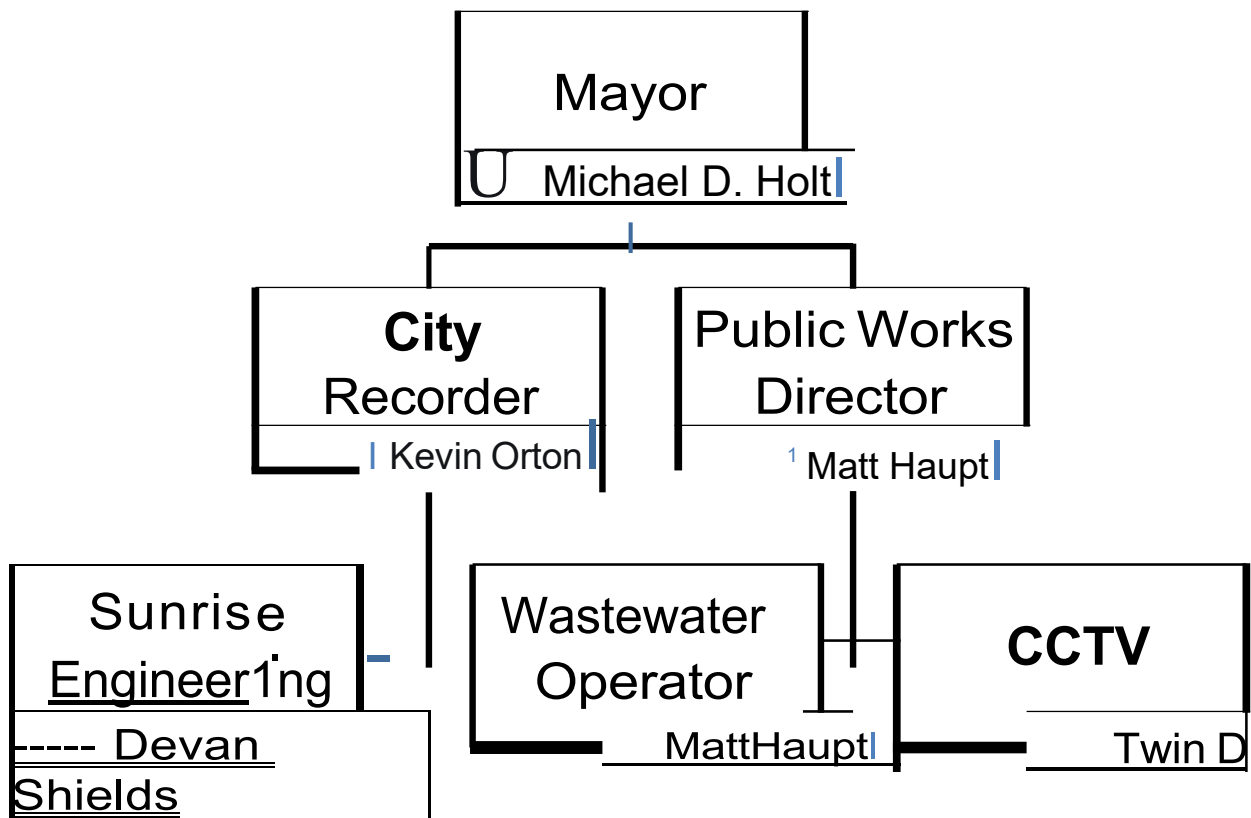
**Pretreatment Program Coordinator**

Waste Water Operator is responsible for implementation of the pretreatment program including the fats, oil and grease program in Fillmore City.

**ORGANIZATION CHART**

Below is the organization chart associated with the SSMP.





## **CHAPTER 3**

### **OPERATIONS AND MAINTENANCE PROGRAM**

The City has established this sanitary sewer system operations and maintenance program to ensure proper system operations, to minimize any basement backups or SSOs, and to provide for replacement, refurbishment, or repair of damaged or deteriorated piping systems. The combined maintenance program should insure that the environment and health of the public are protected at a reasonable cost for the end users. To this end, the following areas are described and included in this maintenance program:

- Staff Training
- System Mapping
- System Cleaning
- System CCTV Inspection
- Manhole Inspection
- Defect Reporting
- Damage Assessment

Note: Copies of City inspection forms, trouble sewer checklists, etc. are included in Appendix B – City Forms.

### **STAFF TRAINING**

The Wastewater Operator is responsible for the training of the City wastewater operation and maintenance staff. Full time employees are required to obtain a Wastewater Lagoon Certificate. Training is provided to the staff on a weekly basis covering topics of safety, system cleaning, inspection, and other operation and maintenance procedures.

### **SYSTEM MAPPING**

An up to date map is essential for effective system operations. Sunrise Engineering has been assigned the mapping responsibility and will prepare and maintain current mapping for the entire sanitary sewer system. Mapping is maintained on AutoCAD and a graphical information system (GIS). Current mapping is available at the following location:

Sunrise Engineering,

**Address:** 25 E 500 N St, Fillmore, UT 84631

**Phone:**(435) 743-6151

Should any employee identify an error in the mapping, they should document the error on a Defect Report and give it to Sunrise Engineering.

### **SYSTEM CLEANING**

Sanitary sewer system cleaning is accomplished through various means and methods. The City cleans the entire system every six years. This means approximately 33 miles of sewer pipe is cleaned every year. Based on experience over the past 10 years, this frequency significantly reduces the number of basement backups, controls grease problems and flushes any bellies in the system. In addition, the City has a listing of identified trouble spots, which are maintained at a higher frequency. The City uses a Trouble Sewer Cleaning List (located in Appendix B) for sewer lines needing cleaning. Systems, which may have roots, are mechanically cut out and areas where restaurants are close together are hydraulically flushed with a high-pressure jet truck. The following methods are employed to provide typical system cleaning:

- Fillmore City Hydraulic Cleaning
- Contractor Hydraulic Cleaning – Clean entire system every ten years
- Root Control – As needed

Cleaning records are maintained at the City office and Operations yard. Contractors are required to provide cleaning records associated with their work. The Vac Truck Cleaning Log is included in Appendix B. Cleaning history may also be entered into the GIS; however, this is not

always necessary. Should the cleaning process identify a serious defect, the problem should be reported on a Defect Report Form. The PWS should be given the defect reports for further action. The defect report should be specific as to location and type of problem. A copy of the Defect Report Form is included in Appendix B. A summary of cleaning activities shall be prepared annually by the Wastewater Operator or designee. This summary will normally be presented to the Public Works Supervisor.

## **SYSTEM CCTV INSPECTION**

Closed Circuit TV inspections of the sanitary sewer system are used to assess pipe condition and identify problems or possible future failures, which need current attention. The CCTV process also identifies the piping condition to allow for replacement prior to failure. The City conducts CCTV inspection with Twin D for any new lines and or as a ten year rotation. In addition to the cleaning by the City staff, the City hires a contractor to clean the entire collection system every ten years for redundancy. Inspections of the system will occur every 6 years with the pipe cleaning. The City staff or hired contractor documenting the condition of sewer pipe follows the Pipeline Assessment and Certification Program (PACP) standards. This provides a consistent pipe condition ranking system between inspections. The inspection frequency is based on the pipe aging process. As such, once the system has been inspected completely, change usually occurs gradually. CCTV will also be employed when a systems operation or capacity is questioned or when an SSO occurs. Any defects identified during the CCTV process should be reported on a Defect Report Form and the form should be given to the PWS for possible repairs.

Documentation of CCTV activities will be maintained in the City shop files. When contractors are employed to inspect the sanitary sewer system, they will be required to submit records for their work. The Wastewater Operator will prepare an annual summary of CCTV completed for that calendar year.

## **MANHOLE INSPECTION**

The City schedules inspection of the sanitary sewer manholes (M/H) once every six years. The M/H inspection involves the identification of foreign objects and surcharging that may be present. Crews inspecting the manholes will be given maps by the Wastewater Operator who will monitor the progress and completeness of the inspection process. When a potential defect is identified, the manhole should be flagged. Flagged manholes should be checked by an operator within several days to determine further action. If, during the inspection process, the inspection crew believes a problem is imminent, they should immediately cease inspecting and inform the Wastewater Operator of the problem. A cleaning crew should be dispatched immediately to ensure correct system operations. All inspection records should be retained for documentation of work performed. The Manhole Inspection form is found in Appendix B.

## **DEFECT REPORTING**

Defect Reports generated through the cleaning, CCTV inspection, pump station inspection or manhole inspection programs will be prioritized for correction by the PWS. Any defects, which have the potential for catastrophic failure and thus create a sanitary sewer overflow should be evaluated immediately and discussed with the Wastewater Operator for repair. Repair methods may include:

- Spot Excavation Repairs
- Spot Band Repairs
- Segment Excavation Replacements
- Segment Lining
- Manhole Rehabilitation

When a defect is not flagged for immediate repair, it should be considered for placement on the “trouble sewer” list. This will allow for vigilant maintenance to ensure failure and a subsequent sanitary sewer overflow do not take place. Defect reports should be used in the Budget process

to determine what financial allocation should be made in the next Budget year. The Wastewater Operator should include outstanding defects in the annual report. The Sanitary System Defect Report Form and Trouble Sewer Check List are found in Appendix B.

## **COLLECTION SYSTEM DAMAGE**

Collection damage may occur because of multiple factors, some identified because of inspection activities, and some identified because of damage by third parties such as contractors.

### **Damage Identification**

The identification of system damage, which may result in an SSO or basement backup, is important to prevent environmental, public health, or economic harm. Identification of damage may be from either internal activities or external activities.

Internal activities, which may result in the identification of damage includes the following:

1. Collections Maintenance Activities
2. CCTV Inspection Activities
3. Manhole Inspection Activities

These three activities are discussed in this Maintenance Program and the identification of damage will result in the generation of a Defect Report. Generally, damage identification is an iterative and continuous process.

External activities, which identify damages include:

1. Contractor Notification of Damage
2. Directional Drilling Notification of Damage
3. Public Damage Complaints

All three of these notifications generally require immediate response. Staff should respond and evaluate the seriousness of the damage and the effect on the environment. Damages, which include a release to the environment, should be handled in accordance with the SORP.

Damages, which cause a basement backup, should trigger the Basement Backup program.

Damages which remain in the trench should be at a minimum and do not require more action than the repair of the damage.

Whatever the cause of collection system damage, the response should be expeditious to prevent environmental or economic harm. City staff should consider all damages an emergency until it is shown by inspection to be a lower priority.

### **Damage Response Actions**

When damages occur in the collection system, the following actions help define the path staff should take. These action plans are not inclusive of all options available but are indicative of the types of response that may be taken.

**Stable Damage.** Inspection activities may show a system damage which has been there for an extended period. Such damage may not require immediate action, but may be postponed for a period. When stable damage is identified and not acted upon immediately, a defect report should be prepared. If such a defect is identified and repaired immediately, a defect report is not needed. An example of stable damage could be a major crack in a pipeline or a severely misaligned lateral connection where infiltration is occurring.

**Unstable Damage.** Unstable damage is damage, which has a high likelihood that failure will occur in the near future. Such damage may be a broken pipe with exposed soil or a line, which has complete crown corrosion. In these cases, action should be taken as soon as there is a time, a contractor, materials, and other necessary resources available. When such unstable damage is identified, if possible, consideration should be given to trenchless repairs, which may be able to be completed quicker than standard excavation. Immediately after identification, the City Recorder should be contacted to review and take care of budget considerations.

**Immediate Damage.** When a contractor or others damage a collection line such that the line is no longer capable of functioning as a sewer, this immediate damage must be handled expeditiously. Such damage allows untreated wastewater to pool in the excavation site, spill into the environment or possibly backup into a basement. Under such conditions, priority should be given to an immediate repair. Since excavation damage may be a result of contractor negligence or it could be a failure of the City to adequately protect the line by appropriately following the Damages to Underground Utilities Statute 54-8A, priority should be given to effecting a repair and not to determining the eventual responsible party. As can be determined from the above action plans, priority should always be preventing SSO's and attendant environmental damage, to prevent basement backups and financial impacts, and to prevent public health issues.

## **EQUIPMENT AND REPLACEMENT PART INVENTORIES**

On occasion, repairs to the sewer collection system require immediate attention. During these emergencies, the City will need to acquire materials and have access to equipment to perform repairs to the sewer system immediately. In some situations, it may be necessary to hire a contractor to perform the work.

## **CHAPTER 4**

### **SEWER DESIGN STANDARDS**

The Fillmore City sanitary sewer design standards are made available to ensure sewers and connections are properly designed and constructed. The standards are found at the Fillmore City office. These standards are intended to be used in conjunction with Utah Administrative Code R317-3. Where a conflict exists between these two standards, the Administrative Code shall prevail.

## **CHAPTER 5**

### **SANITARY SEWER OVERFLOW ACTION PLAN**

Whenever sanitary sewage leaves the confines of the piping system, immediate action is necessary to prevent environmental, public health or financial damage from occurring. In addition, quick action is normally needed to mitigate damage which may have already occurred. For the purpose of this section, the following are part of the emergency action plan.

1. Basement backups
2. Sanitary sewer overflows
3. Sanitary sewer breaks which remain in the trench
4. Sewer lateral backups

All of the above conditions are likely to cause some damage. Each should be treated as an emergency, and corrective actions taken in accordance with the City directions. Items 1 & 2 above should be reported immediately based on whether they constitute a Class 1 or Class 2 SSO. As stated in the definition section of the SSMP Introduction, a Class 1 SSO is an overflow which affects more than five private structures; affects a public, commercial or industrial structure; results in a significant public health risk; has a spill volume more than 5,000 gallons; or has reached Waters of the State.

All other overflows are Class 2 SSOs. All Class 1 SSO's should be reported immediately. Class 2 SSOs should be documented and reported in the annual SSMP report and included in the Municipal Wastewater Planning Program submitted to the State. Item 3 may be reported to the local health department if, in the opinion of the responsible staff member there is potential for a public health issue.

A public health issue may be present, for example, when an excavator breaks both a sewer and a water line in the same trench. In such cases, the local health department representatives should be contacted and the situation explained. If the health representative requests further action on the part of the City, staff should try to comply. If, in the opinion of the responsible staff

member, the health department request is unreasonable, the PWS and or Wastewater Operator should be immediately notified. Care should always be taken to error on the side of protecting public health over financial considerations. When a basement backup occurs, the staff member responding should follow the Basement Backup Program procedures. **Lateral backups, while the responsibility of the property owner, should also be treated as serious problems.** Care should be taken to provide advice to the property owner in such cases, however the city is ultimately the decision maker about what actions should be taken. If the backup is determined to be the fault of the property owner, the property owner is responsible for any incurred costs.

## **RESPONSE ACTIVITIES**

There are specific steps that should be followed once a notification is received that an overflow may be occurring. The following figure outlines actions that could be taken when the City receives notice that a possible overflow has or is occurring.

### **General Notification Procedure**

When a Class 1 SSO occurs, specific notification requirements are needed. In such cases, the following notification procedure should be followed and documented. Failure to comply with notification requirements is a violation of R317-801.

## **CITY NOTIFICATION**

The City Recorder and or Mayor should be notified by the PWS or Wastewater Operator as soon as possible following a flooding event into a private residence.

## **AGENCY NOTIFICATION REQUIREMENTS**

Both the State of Utah Division of Water Quality and the local health department should be immediately notified when an overflow is occurring. Others that may require notification include local water suppliers, affected property owners and notification may be required to Utah Division of Emergency Response and Remediation if hazardous materials are involved. The initial notification must be given within 24 hours. However, attempts should be made to notify them as soon as possible so they can observe the problem and the extent of the issue while the problem is happening.

A notification form (Log of Contact with other Agencies/People) is included in Appendix B to document notification activities. After an SSO has taken place and the cleanup has been done, a written report of the event should be submitted to the State DEQ within five days (unless waived). This report should be specific and should be inclusive of all work completed. If possible, the report should also include a description of follow-up actions such as modeling or problem corrections that has or will take place.

## **PUBLIC NOTIFICATION**

When an SSO occurs and the extent of the overflow is significant and the damage cannot be contained, the public may be notified through proper communication channels. Normally the local health department will coordinate such notification. Should the City need to provide notification, it could include press releases to the local news agencies, publication in an area paper, and leaflets delivered to homeowners or citizens in the area of the SSO. Notification should be sufficient to insure that the public health is protected. When and if Federal laws are passed concerning notification requirements, these legal requirements are incorporated by reference in this document. In general, notification requirements should increase as the extent of the overflow increases.

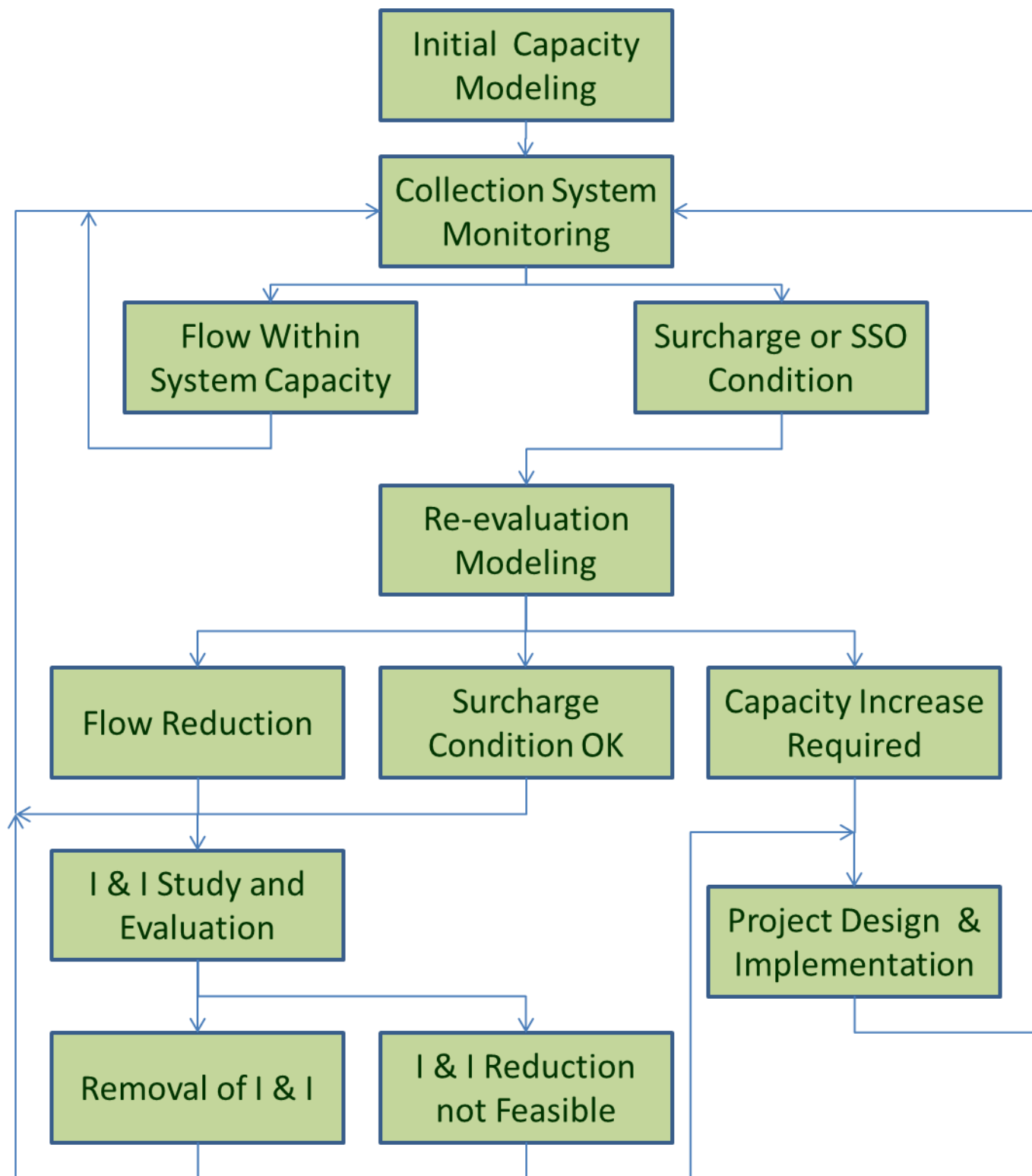
## **OVERFLOW CLEANUP**

When an overflow happens, care should be taken to clean up the environment to the extent feasible based on technology, good science, and financial capabilities. Cleanup could include removal of contaminated water and soil saturated with wastewater and toilet paper, disinfection of standing water with environmentally adequate chemicals or partitioning of the affected area from the public until natural soil microbes reduce the hazard. Cleanup is usually specific to the affected area and may differ from season to season. As such, this guide does not include specific details about cleanup. The responsible staff member in conjunction with the State DEQ, the local health department and the owner of real property should direct activities in such a manner that they are all satisfied with the overall outcomes. If, during the cleaning process, the responsible staff member believes the State or the County is requesting excessive actions, the Wastewater Operator should be contacted.

## **CORRECTIVE ACTION**

All SSOs should be followed up with an analysis as to cause and possible corrective actions. An SSO, which is the result of grease or root plug, may be placed on the preventative maintenance list for more frequent cleaning. Serious or repetitive plugging problems may require the reconstruction of the sewer lines. An overflow that results from inadequate capacity should be followed by additional system modeling and either flow reduction or capacity increase. If a significant or unusual weather condition caused flooding which was introduced to the sanitary sewer system incorrectly, the corrective action may include working with other agencies to try and rectify the cross connection from the storm sewer to the sanitary sewer or from home drainage systems and sump pumps. Finally, should a problem be such that it is not anticipated to reoccur, no further action may be needed.

Note: The City Plug Sewer Procedure Check List is included in Appendix B - City Forms and Standard Operating Procedures



## CHAPTER 6

### GREASE, OIL AND SAND MANAGEMENT PROGRAM

#### PURPOSE

The purpose of this program is to provide for the control and management of grease, oil, and sand discharges to the Fillmore City collection systems. This program will provide a means to reduce interference with the collection system operation and pass through at the sewer lagoons.



## **REGULATORY AUTHORITY**

Regulatory authority to implement this program is found in the Code of Federal Regulations in 40 CFR 403, General Pretreatment Regulations. State authority for the program is given in the Utah Administrative Code R317-8-8, Pretreatment. Local Authority is found in the Fillmore City Wastewater Ordinance.

## **PROGRAM IMPLEMENTATION**

This program shall be implemented in such a manner as to minimize the impact on businesses which may be affected by this program. In all cases [public entity] will maintain a uniform decision making process. The City shall allow for appeals of program requirements in accordance with the appeal process approved by Fillmore City.

The following steps detail the procedure that city personnel shall follow in implementing this program. Evaluation: Fillmore City staff will evaluate an industrial user (IU) discharge to determine if grease, oil or sand management is required at the following events:

1. Issuance of a construction or remodeling building permit.
2. When the collection line in front of the business is CCTV inspected as part of the sanitary sewer system preventative maintenance program.
3. When a downstream sanitary sewer pipeline plugs due to oil, grease or sand.

No further action will be taken if it is determined that no potential exists for significant enrichment of the wastewater with grease, oil or sand. Enrichment is defined as a discharge with greater volume or concentration of grease, oil or sand than that discharged from a typical residential connection. For oil and grease, the typical residential discharge has less than 100 mg/L of oil and grease for any sample taken. Greater concentrations would be enrichment. Also, a significant buildup of oil and grease in the lateral would indicate enrichment. Sand and dirt is not typically discharged from a residential connection. Any potential for sand or dirt discharge would be enrichment.

### **Implementation:**

IU's which are determined to enrich or have the potential to enrich the wastewater with grease, oil, or sand will be required to develop a management plan in accordance with the following tracks.

### **TRACK 1**

This track is available for IU's which exist at the time of program implementation. However, not all existing IU's may be permitted to use it. Determination will be made on a case by case basis. IU's on this track will be permitted to either pay a contractor or the Fillmore City to clean the main sewer line from their place of business to the nearest trunk line. A trunk line is any sewer line which has an inside diameter of eight inches or larger or has been classified as a main line by the city. Cleaning frequency will be determined by inspections performed by the PWS.

### **TRACK 2**

This track requires the IU to install and maintain a grease, oil and/or sand trap on their premises. Quarterly cleaning reports may be required at the discretion of the city. Fillmore City shall inspect and test the grease trap on a periodic basis. The following fees shall apply:

Inspection Fee	\$35.00
Testing Fee	\$65.00 or actual cost

Should the testing reveal grease and oil in excess of 100 mg/L, a fine of \$1.00 (*subject to change without notification*) for each pound of oil and grease discharged for the past reporting period shall be assessed. The pounds of grease and oil shall be determined by using the following equation:  
$$(\text{Total Reporting Period water use in MG})(\text{mg/L O\&G} - 100)(8.34)$$

The IU will also be ordered to return to compliance immediately. Retesting will be done within thirty days if the trap has not been cleaned and a cleaning report submitted. Another inspection and testing fee will be assessed. Should the test results still not comply with the 100 mg/L oil and grease limit, enforcement will be escalated in accordance with the Fillmore City's Enforcement Response Plan. In addition, an entity which is frequently violating the 100 mg/L limit may be issued a pretreatment permit in order to further regulate the IU

Should the testing reveal TSS in excess of 250 mg/L, a fine of \$2.50 (*subject to change without notification*) for each pound of TSS discharged for the past reporting period shall be assessed. The pounds of TSS shall be determined by using the following equation:

$$(\text{Total Reporting Period water use in MG})(\text{mg/L TSS} - 250)(8.34)$$

The IU will also be ordered to return to compliance immediately. Retesting will be done within thirty days if the trap has not been cleaned and a cleaning report submitted. Another inspection and testing fee will be assessed. Should the test results still not comply with the 250 mg/L TSS surcharge limit, the IU will be placed on a continuous inspection, testing and the surcharge schedule for TSS.

By following the steps discussed above, Fillmore City hopes to maintain a collection system free from excessive backups and a treatment plant in compliance with UPDES discharge conditions.

#### List of Acceptable Entities That Recycle Oil and Grease

The following list of grease and oil recyclers should be given to all IU's who operate a grease trap. This list may not be all inclusive. Other recyclers may be used if it can be shown that they discharge of the waste appropriately.

Dearden Motors  
185 S Main St.  
Fillmore, UT 84631  
435-743-6612

## **CHAPTER 7**

### **FILLMORE CITY SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN**

Fillmore City believes that one of the keys to preventing sanitary sewer overflows is to evaluate system capacity and to monitor flows throughout the system in order to ensure that capacities are not exceeded. The City System Evaluation and Capacity Assurance Plan (SECAP) is still in development and will be added upon city council approval at a later date.

## **CHAPTER 8**

### **SSMP MONITORING AND MEASUREMENT PLAN**

#### **PURPOSE**

The purpose of this plan is to provide appropriate monitoring and measurement of the effectiveness of the SSMP in its entirety.

#### **RECORDS MAINTENANCE**

The City intends to maintain appropriate records on operations and maintenance of the sanitary sewer system to validate compliance with this SSMP. However, failure to meet standards set by State DWQ or other regulatory agency during an inspection does not constitute a violation of the SSMP. Rather, deficiencies identified during inspections should be viewed as an opportunity for improvement.

#### **OPERATIONS RECORDS**

Operations records that should be maintained include the following:

- Daily cleaning records
- CCTV inspections records
- Manhole inspection records
- Hot spot maintenance list
- Spot repairs
- Major repairs
- System capacity information
- SSO or basement backup records including notification documents to appropriate agencies (call logs, etc.)
- Capital Improvement Plan

Records will be maintained by the Wastewater Operator at the city yard and or city offices. Records may be maintained either on an electronic record or as a paper record. The extent of the record should be sufficient to demonstrate the activity recorded was completed appropriately.

#### **PERFORMANCE MEASUREMENT (INTERNAL AUDIT)**

Periodically, the City should assess and audit the effectiveness of the elements of this SSMP. All elements should be reviewed for effectiveness as well as all records should be reviewed for completeness. An internal audit report should be prepared preferably annually but not less than once every five years which comments on the following:

- Success of the operations and maintenance program
- Success of other SSMP elements
- Adequacy of the SECAP evaluations
- Discussion of SSOs and the effectiveness of the response to the event including corrective action
- Review of Defect reports and adequacy of response to eliminate such defects
- Opportunities for improvement in the SSMP or in SSO response and remediation

The annual audit report need not be extensive or long. It should, however be sufficient to document compliance with the standards set in the SSMP. The audit reports should be maintained in accordance with the City's records retention schedule.

#### **SSMP UPDATES**

When a plan deficiency is identified through audit, inspection, or plan review, and the deficiency requires an SSMP update, the plan may be updated at the discretion of the Wastewater Operator. SSMP updates should be recorded in a revision index maintained by the City Recorder.

## **SSO EVALUATION AND ANALYSIS**

At least annually in the internal audit and more frequently as needed, the City will evaluate SSO trends based on frequency, location, and volume. Trend evaluation will be empirical unless a large number occur sufficient to make a statistical analysis viable. If a trend is identified, a corrective action may be appropriate.

## **PUBLIC COMMUNICATION AND OUTREACH**

The City will reach out to the public about the development, implementation, and performance of the SSMP. This communication will be accomplished by posting information on the City's website and or by local paper or newsletter. The City will accept comments, either written or verbal and will review such comments for applicability.

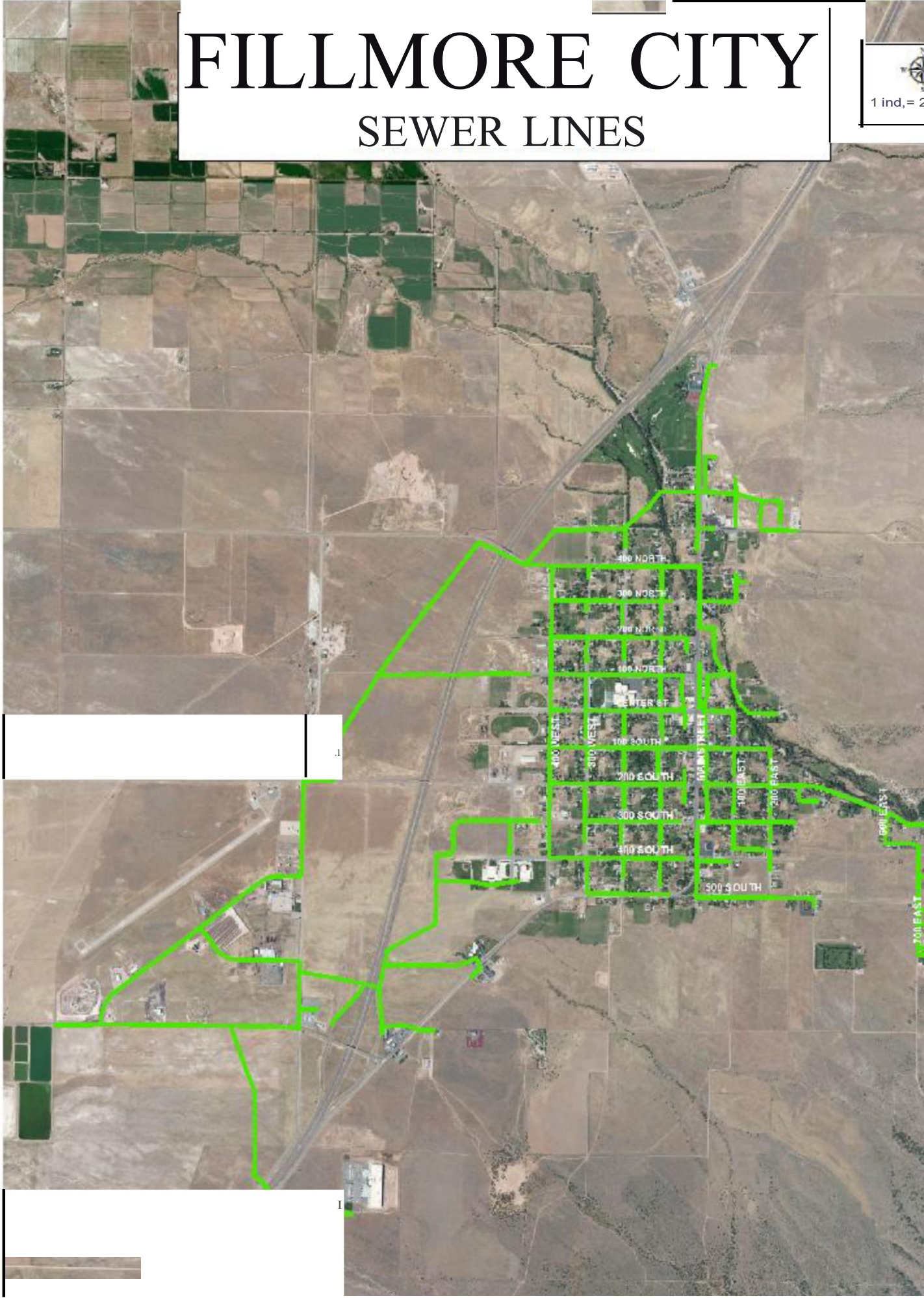
## **CHAPTER 9 SANITARY SEWER SYSTEM MAPPING**

The City maintains records on the location of sewer lines with a Geographic Information System (GIS) and AutoCAD. Figure 9-1 is a current map the City sewer collection system as of 2014. The Sunrise Engineering updates information in GIS and AutoCAD as records are provided from inspection, cleaning, and new construction.

### **9-1 Sewer Collections GIS Map** (Refer to Map on next page)

# FILLMORE CITY

## SEWER LINES



## CHAPTER 10

### BASEMENT BACKUP PROGRAM

Basement backups are a serious impact on a home or business owner. As such, all reasonable efforts should be taken to prevent such backups from occurring. Sewer system backups are the result of several system problems. Such problems include any one or a combination of the following:

1. **Laterals, serving real properties are owned by the property owner and lateral maintenance is the property owner's responsibility. Roots, low points, structural failure, and grease are primary problems lateral owners face.**
2. Backups caused by main line plugs are usually caused by roots, grease, low points, foreign objects, and contractor negligence.
3. Piping system structural damage may cause basement backups. Such structural problems include age or deterioration damage, installation damage, excavation damage and trenchless technology damage.
4. Excess flow problems may surcharge a piping system and cause backups into homes. Excess flows usually occur when major storm waters inflow into sanitary sewers. Sanitary sewers are not designed for such flow. In addition, some homeowners may illegally connect foundation drains and sump pumps to the sanitary sewer system.

### BASEMENT BACKUP RESPONSE

The PWS and City Recorder should be contacted as soon as possible if a SSO occurs in a private residence. When the City is notified about a basement backup, staff will log the complaint in a complaint log. The person receiving the call may log the backup complaint or may ask administrative staff to document the complaint.

All backup complaints shall be investigated by staff. If the investigation determines that the case of the backup is only in the **lateral, staff may offer technical information but should not take responsibility for cleanup or subsequent restoration.**

When it is determined that the basement backup is the result of a mainline problem, the City will follow the policy approved by its governing authority. ***It should be noted that all action the City takes are on a no-fault basis. The City does not accept liability nor does it waive its governmental immunity.***

### BACKUP PREVENTION DESIGN STANDARD

The City promotes system designs, which minimize backups and insure proper operations. To this end, City has a design standard for all system construction. In addition, the City complies with state design standards contained in R317-3.

#### Policy on the Installation of Backflow Valves

Reference Regulatory Documents:

The following regulations are referenced in the establishment of this policy:

- Utah Code Title 15A-2-103(c). This code section adopts the 2009 edition of the International Plumbing Code.
- The 2009 International Plumbing Code, section 715 Sewage Backflow.
- Fillmore City Policy
- The State of Utah has adopted the International Plumbing Code(IPC) as its plumbing building standard;
- Fillmore uses the IPC as their statute for plumbing construction and installation;
- And the IPC requires the installation of a sewage backwater valve "where the overflow rim of the lowest plumbing fixtures are below the next upstream manhole in the public sewer."

Therefore, for new construction, Fillmore requires the installation of backwater valves as stipulated by the IPC already propagated for all new construction.

## **CHAPTER 11**

### **NO-FAULT SEWAGE BACKUP CLAIMS PROGRAM**

Fillmore City does not have a formal Sewage Backup Claims Program. Other Cities and service providers may have a program wherein they assist in the cleanup of real and personal property, and/or compensate persons for the loss of real or personal property, destroyed or damaged as the result of a backup of facilities, regardless of fault.

When it is determined that the backup is the result of a mainline problem, Fillmore City will follow the policy approved by its governing authority. **The staff may offer technical information but should not take responsibility for cleanup or subsequent restoration.** If the owner feels that they need to make a claim against the City, they could file their claim through the City's Legal Department. Notwithstanding any other provisions of this Policy, no application shall be accepted from the United States or any of its agencies, the State of Utah or any political subdivision.



## **APPENDIX A**

### **SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN (SECAP)**

This is not yet required and will be added by (Date)

## **APPENDIX B**

### **CITY FORMS AND STANDARD OPERATING PROCEDURES**

Oil & Grease Trap Inspection Form

List Grease Traps

Grease Trap Check List *(performed by Fillmore City)*

Trouble Sewer Checklist

Sanitary Sewer Manhole Inspection Form

Plug Sewer Procedure Checklist

Sanitary Sewer System Defect Report

Log of Contact with Other Agencies/People

Pipe Cleaning Log *(Submitted by Cleaning Company)*



# Oil and Grease Trap Inspection Form

Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Name of employee completing form \_\_\_\_\_

Name of Business \_\_\_\_\_

Address of Business \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip code \_\_\_\_\_

Reason for inspection: New Business \_\_\_\_\_ Routine \_\_\_\_\_ follow-up \_\_\_\_\_

Is a follow up inspection required \_\_\_\_\_ Yes \_\_\_\_\_ No

Reason for a follow up inspection \_\_\_\_\_

\_\_\_\_\_

## Inspection Information

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is the Business equipped with a Grease Trap \_\_\_\_\_ Yes \_\_\_\_\_ No

Is the Grease Trap required to be cleaned at this time \_\_\_\_\_ Yes \_\_\_\_\_ No

Has contact been made with the Business \_\_\_\_\_ Yes \_\_\_\_\_ No

## Type of Grease Trap at this location

\_\_\_\_\_

Underground \_\_\_\_\_ Under sink \_\_\_\_\_ other \_\_\_\_\_

Size of Grease trap (in gallons) \_\_\_\_\_

Depth of Grease trap (in inches) \_\_\_\_\_

Thickness of Grease layer in the Grease trap (in inches) \_\_\_\_\_

## Pumping Company

\_\_\_\_\_

Name of the pumping company hired by the Business \_\_\_\_\_

Date the Grease trap was cleaned \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Comments

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Grease Traps

List of grease traps(to be updated annually)


Grease trap check list

Fillmore City inspection

(Condition of grease trap)

(Address)	Date _____	Good _____	Notified the owner to clean the grease trap _____
_____	Date _____	Good _____	Notified the owner to clean the grease trap _____
_____	Date _____	Good _____	Notified the owner to clean the grease trap _____
_____	Date _____	Good _____	Notified the owner to clean the grease trap _____

## Plug Sewer Procedure Checklist

1. Immediate action.
  - A. Assess the occurrence
  - B. Remove the blockage
  - C. Contact the Wastewater Operator (unless the PWS has already been notified)
  - D. Repeatedly clean the sewer main until it is thoroughly cleaned.
2. Exchange information with the Resident / Business (collect the following information)
  - A. Exact address of the occurrence
  - B. Name of the resident / business
  - C. Contact numbers of the resident / business
  - D. Time the occurrence was first detected
  - E. Actions the homeowners took prior to contacting the Public Works Department
  - F. Any and all additional information that may be important to this occurrence
  - G. Provide the resident / business with the proper paperwork
3. Utah Disaster Cleanup 621-3571
4. Complete all paperwork (paperwork must be in duplicate)
  - A. Fill out sewer back up report
  - B. Immediately provide the paper work to the PWS
  - C. In the case the PWS is not available, the copy must be hand delivered to the City Recorder within the first 48 hours of the occurrence.
  - D. If the occurrence occurs on the weekend and the PWS is not available, the Waste Water Operator must be contacted immediately.

# Sanitary Sewer Manhole Inspection Form

Work order# \_\_\_\_\_

Date \_\_\_\_\_ I \_\_\_\_\_ I \_\_\_\_\_ Address \_\_\_\_\_

Employees Name \_\_\_\_\_

Manhole# \_\_\_\_\_

Depth \_\_\_\_\_

## Location of Manhole

1. Roadway

2. Gutter

3. Easement

4. Cul"de-sac

5. Intersection

6. Other / explain I \_\_\_\_\_

## Condition of Manhole

1. Good

2. Damaged

3. Needs replaced

4. Needs raised

5. Needs lowered

6. Displaced / **explain** I \_\_\_\_\_

## Condition of Collar

1. Good

2. Loose

3. Broken

4. Needs replaced •

5. Needs raising •

6. Needs lowered

Material of collar \_\_\_\_\_

## Material of Manhole

1. Brick

2. Concrete

## Manhole cover size

1. 24"

2. 30"

3. Other / Explain I \_\_\_\_\_

## Manhole size

1. 4'

2. 5'

Comments \_\_\_\_\_

\_\_\_\_\_

**FILLMORE CITY**  
**SANITARY SEWER SYSTEM DEFECT REPORT**

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

**Location of Defect:** \_\_\_\_\_

**Identified by:** \_\_\_\_\_

**Description of Defect:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Urgency of Needed Corrective Action:**

Immediate Action Required:	<input type="checkbox"/>
Repair or Correct Soon:	<input type="checkbox"/>
Problem Stable:	<input type="checkbox"/>
No Immediate Action Needed:	<input type="checkbox"/>

**Recommended Remedial Action:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# FILLMORE CITY

## Log of Contact with Other Agencies/People

**Location of SSO:** \_\_\_\_\_  
\_\_\_\_\_

**Date of SSO:**

Agency	Phone Number	Contact Made Yes/No	Time	Remarks
Utah DWQ	801-536-4300 or 801-231-1769			
Local Health Department	435-623-0696			
Utah DERR	801-536-4123			
Local Police Department	435-743-5302			
Local Fire Agency	435-743-5302			
Applicable Water Agency	435-743-5233			
US EPA Region VIII	Consult with DWQ			

**Other Contacts:**[illegible]

# Trouble Sewer Check List

Name of employee completing check \_\_\_\_\_

Date \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## Manhole Address

Time

### Condition of MH

[illegible]