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Michael C. Patrick
Executive Director

September 15, 2025

Mr. John C. Goodwin
Clean Water Enforcement Branch
Water Protection Division
US EPA Region 4
61 Forsyth St., SW
Atlanta, GA 30303

Re: Revised submittal of the Sewer Overflow Response Plan (SORP) Consent Decree No. 1:23-cv-00225

Dear Mr. Goodwin:

Enclosed is the latest revision of the Sewer Overflow Response Plan (SORP). The WWTA received correspondence from the Environmental Protection Agency (EPA) dated June 27, 2025, indicating "Partial Approval" of the SORP and outlining specific deficiencies. In response, the WWTA has revised the SORP to address each of the identified deficiencies. A copy of the updated plan is enclosed for your consideration.

Please contact me if you have questions.

Sincerely,

Michael C. Patrick

Michael Patrick, P.E.
WWTA Executive Director

Enclosure

cc:

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Sewer Overflow Response Plan (SORP) Draft Resubmittal for Review by EPA and TDEC

Prepared for

The United States Environmental Protection Agency and Tennessee Department of Environment and Conservation

Case No. 1:23-cv-00225

Prepared by

Hamilton County
Water & Wastewater
Treatment Authority (WWTA)

Submitted by

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September 15, 2025

Table of Contents

Acronyms and Abbreviations

CCTV	Closed-Circuit Television
CFR	Code of Federal Regulations
CMOM	Capacity, Management, Operations, and Maintenance
DMR	Discharge Monitoring Report
EPA	United States Environmental Protection Agency
GIS	Geographic Information System
GPM	Gallons Per Minute
HAZMAT	Hazardous Material
I&I	Inflow and Infiltration
IMS	Information Management System
ISS	Interceptor Sewer System
MBEC	Moccasin Bend Environmental Campus
MGD	Million Gallons Per Day
MOR	Monthly Operating Report
NPDES	National Pollution Discharge Elimination System
O&M	Operation and Maintenance
SCADA	Supervisory Control and Data Acquisition System
SOP	Standard Operating Procedures
SORP	Sewer Overflow Response Protocol
SSO	Sanitary Sewer Overflow
SSS	Sanitary Sewer System
TDEC	Tennessee Department of Environment and Conservation
TWRA	Tennessee Wildlife Resources Agency
WWTA	Water and Wastewater Treatment Authority
WWTP	Wastewater Treatment Plant

1.0 Introduction

1.1 Purpose

The Hamilton County Water and Wastewater Treatment Authority (WWTA) prepared this Sewer Overflow Response Plan (SORP) as part of their Capacity, Management, Operations and Maintenance (CMOM) Program. This document was prepared to provide employees and regulatory agencies with a written framework for how responses to SSOs will be addressed.

The purpose of the SORP is to establish timely and effective means and methods of:

1. Mitigating the impacts of SSO's through the effective response to these events;
2. Providing information such as location, volume, cause and impact of confirmed SSOs;
3. Reporting SSO information to regulatory agencies;
4. Notifying the public about these events; and
5. Reducing the environmental impact and potential health hazards of these events.

This SORP has been prepared as a guidance document that provides standard operating procedures (SOPs) for the response and actions taken when SSOs are reported. This document was prepared in accordance with U.S. EPA Region IV CMOM guidance and information available from the American Public Works Association and Water Environment Federation.

1.2 Authority

Authority for this SORP is derived from the following:

1. Tennessee Code Annotated (TCA), § 68-221-601 and Resolution 493-27 that created and established the Hamilton County Water and Wastewater Treatment Authority on April 7, 1993.
2. Tennessee Department of Environment and Conservation State Operating Permit Number SOP-89044 issued on August 1, 2024.
3. National Pollution Discharge Elimination System (NPDES) Permit Number TN0021211 for the Signal Mountain Wastewater Treatment Plant issued on January 24, 2024.
4. Tennessee Water Quality Control Act TCA § 69-3-108(b) (1), (2), (3), (4), and (6)
5. Federal Clean Water Act 33 U.S.C. §1251 et seq. (1972)

2.0 General

This program is designed to assist the WWTA in immediately responding to and addressing SSOs and Prohibited Bypasses so that the effects of the SSOs and Prohibited Bypasses can be minimized and to ensure that any required notification or reporting is made to the appropriate local, state, and federal authorities.

2.1 Objectives

The primary objectives of the program are to:

1. Protect public health and the environment;

2. Provide appropriate customer service;

3. Protect the wastewater collection system personnel;

4. Comply with regulatory agencies and permit conditions that address procedures for managing confirmed SSOs and Prohibited Bypasses.

2.2 Key Elements of the SORP

The key elements of the SORP are addressed individually as follows:

Section 3.0 Overflow Response Procedure

Section 4.0 Regulatory Notification Procedure

Section 5.0 Public Advisory Procedure

Section 6.0 Distribution and Maintenance of the SORP

2.3 Definitions

Act: The Clean Water Act (33 U.S.C. 1251 et seq., as amended)

Building Backup: A building backup occurs when wastewater backs up into buildings due to blockages or flow conditions in the WWTA's collection system (other than a private service lateral). A wastewater backup into a building that is caused by a blockage or other malfunction in a private service lateral is not considered to be a Building Backup for the purposes of this document.

CCTV: Closed circuit television used to visually inspect the internal condition of pipes and subsurface structures.

Cleanout: A cleanout is a vertical pipe with a removable cap extending from a private service lateral to the surface of the ground. It is used for access to the private service lateral for inspection and maintenance.

Collection System: The network of pipes, manholes, and associated appurtenances that transports wastewater from homes and businesses to the treatment plant is referred to as the collection system.

Combination Cleaners: Combination cleaners are mechanical equipment with flushing and suction capabilities. This equipment is used to clear or collect wastewater and related debris from the collection system.

Dispatcher: A designated WWTA employee who contacts, notifies, and sends a First Responder to respond to possible SSO events.

Discharge: A discharge is any release of untreated wastewater (including that combined with storm waters) induced by infiltration and inflow (I&I) from a sanitary sewer system.

Dry Weather SSO: A discharge of untreated wastewater from a sanitary sewer system due to flow restrictions or system disruptions.

EPA: United States Environmental Protection Agency.

Excessive infiltration/inflow: The quantities of infiltration/inflow which can be economically eliminated from a sewer system as determined in a cost-effectiveness analysis that compares the costs for correcting the infiltration/inflow conditions to the total costs for transportation and treatment of the infiltration/inflow. (See §§ 35.2005(b) (28) and (29) and 35.2120.)

First Responder: Typically, a designated WWTA Sewer Maintenance employee or any qualified WWTA employee who assumes initial responsibility for responding to an SSO event.

Force Main: A pressurized pipeline that conveys wastewater from a pump station.

Geographic Information System (GIS): A mapping and location-based data management software and process created, owned, and funded by Hamilton County and other regional users. GIS maintains digital geographic and asset data for all of Hamilton County, Tennessee. The GIS Office manages some of the core mapping information, including topography and aerial photography, while respective WWTA, County, and other regional users maintain other map "layers," such as property, utility information, and address data.

Gravity Lines: Gravity or "main" pipelines represent the largest portion of the wastewater collection system. They use changes in elevation to transport wastewater between points (typically manholes or junction boxes).

Industrial user: Any nongovernmental, nonresidential user of a publicly owned treatment works which is identified in the Standard Industrial Classification Manual, 1972, Office of Management and Budget, as amended and supplemented, under one of the following divisions:

Division A. Agriculture, Forestry, and Fishing
Division B. Mining
Division D. Manufacturing
Division E. Transportation, Communications, Electric, Gas, and Sanitary Services
Division I. Services

I&I or **I/I**: Inflow and infiltration, or extraneous surface or ground water that enters the wastewater collection system.

Information Management System (IMS): Information management system is a system that enables utility management to adequately evaluate operation, maintenance, customer service (complaint response), and system rehabilitation activities so that overall system performance can be determined and utility planning can be conducted.

Interceptor Sewer System (ISS): The ISS is the entire sewer system for the City of Chattanooga which is the owner and operator of the regional treatment facility at Moccasin Bend Environmental Campus.

Impacted Areas: Impacted areas are sites or areas that have been affected as the result of a discharge of wastewater from the collection system.

Infiltration: As defined by 40 CFR § 35.2005(b)(20), Water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.

Inflow: As defined by 40 CFR § 35.2005(b)(21), Water other than wastewater that enters a sewer system (including sewer service connections) from sources such as, but not limited to, roof leaders, cellar drains, yard drains, area drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include, and is distinguished from, infiltration.

Interceptor sewer: A sewer which is designed for one or more of the following purposes:

(i) To intercept wastewater from a final point in a collector sewer and convey such wastes directly to a treatment facility or another interceptor.

(ii) To replace an existing wastewater treatment facility and transport the wastes to an adjoining collector sewer or interceptor sewer for conveyance to a treatment plant.

(iii) To transport wastewater from one or more municipal collector sewers to another municipality or to a regional plant for treatment.

(iv) To intercept an existing major discharge of raw or inadequately treated wastewater for transport directly to another interceptor or to a treatment plant.

Junction Box: A junction box provides a connection point for gravity lines, private service laterals, or force mains, as well as an access point for maintenance and repair activities. This is typically separate and distinctive from a manhole.

Manhole: is the top opening to an underground utility vault used to house an access point for making connections or performing maintenance on underground and buried public utility and other services including sewers, telephone, electricity, storm drains and gas.

Non-excessive infiltration: The quantity of flow which is less than 120 gallons per capita per day (domestic base flow and infiltration) or the quantity of infiltration which cannot be economically and effectively eliminated from a sewer system as determined in a cost-effectiveness analysis. (See 40 C.F.R. §§ 35.2005(b) 16) and 35.2120.)

Non-excessive inflow: The maximum total flow rate during storm events which does not result in chronic operational problems related to hydraulic overloading of the treatment works or which does not result in a total flow of more than 275 gallons per capita per day (domestic base flow plus infiltration plus inflow). Chronic operational problems may include surcharging, backups, bypasses, and overflows. (See 40 C.F.R. §§ 35.2005(b)(16) and 35.2120).

Operation and Maintenance (O&M): Activities required assuring the dependable and economical function of transport and treatment works.

(i) Maintenance: Preservation of functional integrity and efficiency of equipment and structures. This includes preventive maintenance, corrective maintenance and replacement of equipment as needed. (See 40 C.F.R. § 35.2005(b)(36))

(ii) Operation: Control of the unit processes and equipment which make up the treatment works. This includes financial and personnel management, records, laboratory control, process control, safety and emergency operation planning.

Private Service Lateral: Private Service Lateral shall mean that portion of a sanitary sewer pipe, not owned or operated by WWTA that extends from a structure to the point at which such pipe connects to the WWTA's portion of the collection system.

Priority water quality areas: For the purposes of 40 C.F.R. § 35.2015, specific stream segments or bodies of water, as determined by the State, where municipal discharges have resulted in the impairment of a designated use or significant public health risks, and where the reduction of pollution from such discharges will substantially restore surface or groundwater uses.

Prohibited Bypasses: An intentional diversion of waste streams from any portion of a treatment facility that is prohibited as set forth in 40 C.F.R. § 122.41(m).

Public System: Public system refers to the portion of the wastewater collection system, excluding private service laterals and connections with private systems.

Pump Station: A pump or lift station is a mechanical method of conveying wastewater to higher elevations.

Release: The discharge of wastewater from any portion of the wastewater collection or transmission system other than through permitted outfalls, that does not reach waters, which is defined in Section 3 of the State of Tennessee Operating Permit Number SOP-89044.

Sanitary Sewer: A conduit intended to carry liquid and water-carried wastes from residences, commercial buildings, industrial plants and institutions together with minor quantities of ground, storm and surface waters that are not admitted intentionally.

Sanitary Sewer Overflow (SSO): An SSO is any discharge of wastewater to waters of the United States or the State from the sanitary sewer from a point source not permitted in the NPDES permit, as well as any overflow, spill, or release of wastewater to public or private property from the sewer system that may have reached waters of the United States or the State, including building backups.

Sanitary Sewer System (SSS): A sanitary sewer system collects, conveys, and treats residential, commercial, and industrial wastewaters through a complex network of infrastructure.

Sewer Overflow Response Plan (SORP): A SORP provides structured guidance, including a range of field activities to choose from, for a uniform response to overflows.

Sewersheds: Sewersheds or basins are small portions of the sanitary sewer system and combined sewer system defined by boundaries of natural topography or system configuration.

Supervisory Control and Data Acquisition System (SCADA): SCADA is automated sensory control equipment that monitors the operation of the pump stations. The SCADA system will convey alarms when predetermined conditions occur. Monitoring parameters include, but are not limited to, power failures, high wet well levels, and pump failures that could potentially cause overflows.

TDEC: Tennessee Department of Environment and Conservation.

TWRA: Tennessee Wildlife Resources Agency.

Unpermitted Discharges: A discharge of pollutants from any location within the sanitary sewer system.

Wastewater Collection and Transmission System (WCTS): The WCTS is the wastewater collection, retention, and transmission systems, including all force mains, gravity sewer lines, pump stations, manholes, and other related appurtenances thereto owned or operated by an entity that are designed to collect and convey municipal sewage (domestic, commercial, and industrial) to a WWTP.

Waters of the State: Waters of the State (Tennessee) shall have the same meaning as "Waters" defined under TCA § 69-3-103 (33).

Wet Weather SSO: A discharge of untreated sewage from a sanitary sewer system due to excessive flows during rain events or elevated ground and surface water conditions causing inflow and infiltration of additional water into the WWTS.

WWTA: Hamilton County Water and Wastewater Treatment Authority.

WWTP: Wastewater Treatment Plant.

2.4 Types of SSOs

SSO is a broad term used to describe the discharge of wastewater from a sanitary sewer system (SSS) anywhere except from a permitted discharge point. All suspected SSOs that are reported to the WWTA will be investigated to verify, identify and correct the problem. A wastewater release is defined as the discharge of wastewater from any portion of the collection or transmission system owned by the permittee other than through permitted outfalls, that does not reach Waters.

2.4.1 Wet Weather SSOs

Wet weather SSOs result from excessive flows during significant rain events and/or elevated ground and surface water conditions causing inflow and infiltration of unwanted additional water into the SSS.

2.4.2 Dry Weather SSOs

Dry weather SSOs are sanitary sewer overflows that are not directly related to a rainfall event. SSOs during dry weather are most often caused by flow restrictions or system disruptions.

2.4.3 Prohibited Bypasses

A Prohibited Bypass is defined in Section V of the Consent Decree as an intentional diversion of waste streams from any portion of the treatment facility that is prohibited as set forth at 40 C.F.R. §122.41(m).

2.5 General Categories of SSOs

SSOs may occur in any part of the SSS, however, where they occur generally dictate the type of response needed to identify, isolate, control, correct, and remediate the SSO location. SSOs can be separated into three (3) primary categories, which are the following:

- Collection System;
- Pump Station or WWTP; and
- Building Backups.

2.5.1 Collection System

SSOs related to the collection system portion of the SSS may occur in wet weather and/or dry weather. Typical causes associated with SSOs in this category are the following:

- Grease;

- Roots;
- Debris;
- Pipe collapses; and
- Capacity issues.

2.5.2 Pump Stations or WWTP

SSOs or Prohibited Bypasses related to pump stations or the WWTP portion of the SSS may occur in wet weather and/or dry weather. Typical causes associated with SSOs or Prohibited Bypasses in this category are the following:

- Loss of electrical power;
- Electrical and mechanical failures;
- Malfunctions of WWTP unit processes;
- Blockage in wet well piping, valves, and force mains; and
- Capacity limitations.

2.5.3 Building Backups

SSOs related to building backups may occur in wet weather and/or dry weather. Typical causes associated with SSOs in this category are similar to that for the collections system and include the following:

- Grease;
- Roots;
- Debris;
- Pipe collapses; and
- Capacity issues.

2.6 Description of Collection System

The wastewater collection and transport system for East Ridge, Soddy Daisy, Red Bank, Signal Mountain, Lookout Mountain, Lakesite, Ridgeside, and the unincorporated areas of Hamilton County is operated and maintained by the Hamilton County Water & Wastewater Treatment Authority (WWTA). The system is comprised of approximately 500 miles (2,640,000 LF) of gravity sewers ranging in size from 6-inch to 42-inch in diameter, 11,737 manholes, 64 pump stations with 71 miles of force main, 900 grinder pumps with 49 miles of low pressure force

main, and one wastewater treatment plant (WWTP) serving the Signal Mountain wastewater collection system. The majority of the WWTA collection system flows into the collection system owned and operated by the City of Chattanooga's Wastewater Department Interceptor Sewer System (ISS), where it is treated at the Moccasin Bend Environmental Campus (MBEC) before being discharged into the Tennessee River. The collection system is operated under Permit No. SOP-89044.

The majority of the collection system was designed and installed between 1957 and 2007, with additional commercial, institutional and residential developments added over the last 17 years. WWTA serves approximately 33,000 customer accounts. The service area is approximately 249,926 acres, of which 11% (28,159 acres) is currently served with sewers.

2.7 Organization of WWTA

The WWTA was created on April 7, 1993, by the Hamilton County Board of Commissioners pursuant to the provisions of Tennessee Code Annotated (TCA), Section 68-221-601 and was approved under Resolution 493-27. The governing board has twelve members. Five members are appointed by the Hamilton County Mayor and confirmed by the Hamilton County Commission. Each of these five members serve staggered five-year terms. The remaining seven members are appointed by each of the participating entities. The Executive Director is the senior manager of the WWTA and reports directly to the WWTA Board of Commissioners. The WWTA management structure consists of three (3) functional areas reporting to the Executive Director. These functional areas are Administration & Public Relations, Rehabilitation & Maintenance, and New Construction. WWTA has a total of forty-one (41) employees among the three functional areas shown in the organization chart for WWTA provided in Appendix A.

3.0 SSO Response Procedures

The SSO response procedure provides the WWTA with a strategy for mobilizing labor, materials, tools, and equipment to correct or repair a condition that may cause or contribute to an SSO or Prohibited Bypass. The procedures described herein consider a range of potential failures that could lead to an SSO or Prohibited Bypass to surface waters, land, or buildings.

3.1 Receipt of Information Regarding an SSO or Prohibited Bypass

3.1.1 SSO Report Sources

Reports of a possible SSO may be received by the WWTA from one or more of the following:

- A telephone call, e-mail, text or other social media contact, or written communication from a customer or citizen;
- A telephone call, email, text, or other social media contact from a WWTA or Hamilton County employee;
- The remote telemetry system for the WWTA's pump stations;
- An outside party such as a regulatory agency, customer, or other interested party; or
- WWTA employee(s) checking "hot spot" locations where SSOs had previously occurred during wet weather events.

The WWTA's administrative staff is generally responsible for receiving calls from the public regarding possible SSOs.

3.1.2 SSO Report Information

When a telephone call is received concerning a possible SSO, a Wastewater Clerk from the Administrative Staff records pertinent information regarding the potential SSO in an email which is sent to the appropriate Technician. The following information is captured:

- Time and date the call was received;
- Specific location and description of the problem;
- Caller's name and phone number;

In the event that an SSO call is received by WWTA personnel from sources other than an Administrative Staff representative, the WWTA personnel taking the call or report will, if possible, collect the same information noted above.

3.1.3 SSO Reporting for Collection System and Building Backups

During normal business hours, (normal business hours are from 8:00 AM to 4:00 PM, Monday through Friday), customer complaints or SSO reports are received by Administrative Staff located at the Development Resource Center at 1250 Market Street, Suite 3050, via calls to the WWTA main telephone number (423-209-7842) or via email to wwta@hamiltontn.gov. When the Administrative Staff receives a customer complaint regarding a possible SSO, the Administrative Staff then contacts the Wastewater Technician responsible for the service area where the SSO was reported by cell phone or email. The Wastewater Technician), or "First Responder", investigates the complaint to determine if an SSO has occurred or is occurring. The First Responder then coordinates with the Wastewater Manager to call in other maintenance personnel and equipment as needed to address the SSO. Outside of normal business hours, reports of SSOs can be made via e-mail to WWTA@hamiltontn.gov and/or to the emergency number (423) 209-6408 listed on the website located at http://www.hamiltontn.gov/wwta/index.html. Voicemails received on the emergency line are automatically emailed out to the Wastewater Manager and information from the call is logged by dispatchers into the Voicemail Log (See Appendix B-1). The Wastewater Manager sends the complaint to the WWTA on-call maintenance personnel (See Appendix A-1). On-call maintenance personnel will follow the same procedure investigating the complaint to determine if an SSO is occurring or has occurred. The on-call maintenance personnel will then call the Wastewater Manager for additional manpower and equipment necessary to respond to the SSO. The workflow for complaints after and during work hours can be seen below in Figure 3.1.3 below.

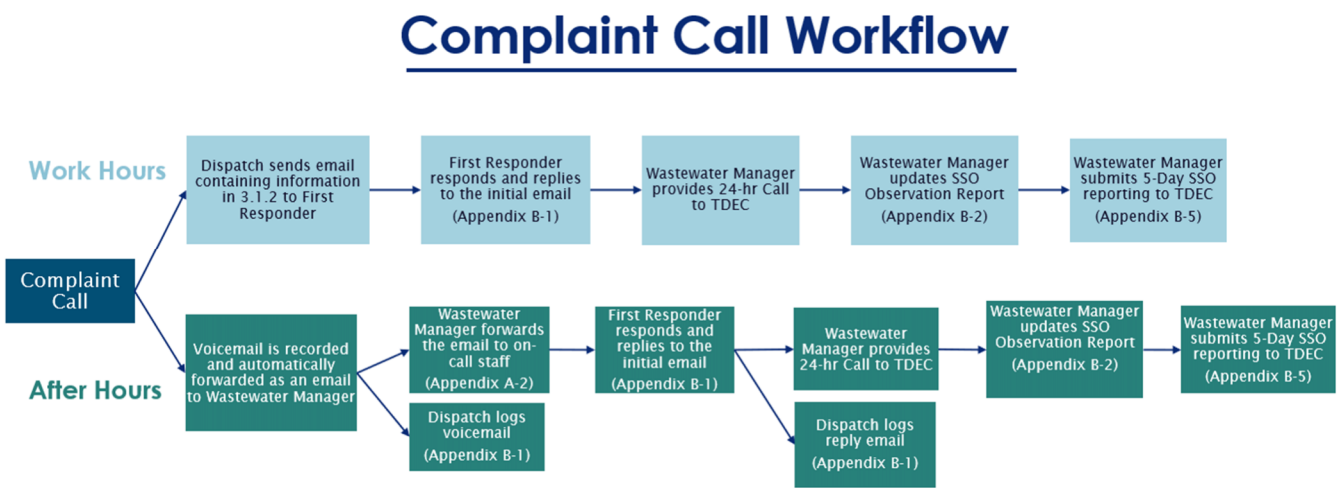


Figure 3.1.3 Complaint Call Workflow Diagram

3.1.4 SSO Reporting for Pump Stations and Other Mechanical Assets

Each pump station in the WWTA collection system has a remote telemetry system installed with an autodialer connected to a land line telephone or a cellular modem. When a fault at the station occurs, the autodialer is programmed to alert the respective Wastewater Technician responsible for maintaining the station in ascending order until the alarm or fault has been acknowledged. Specific faults or alarms that are monitored at each station include, but are not limited to:

- Power failures, phase failure;
- Mechanical failures;
- Wetwell levels; and
- Pump failures

When an alarm is received the Wastewater Technician, or his designee, acknowledges the alarm and investigates the cause. If an SSO has occurred or is occurring, the appropriate personnel and equipment necessary to respond to the SSO are called in. The SSO is then communicated to the Wastewater Manager who reports and logs it as appropriate (See Appendix B). As part of the routine maintenance of each station, alarms and defaults are tested bi-monthly to ensure that the remote telemetry system is operating as required.

3.2 Dispatch of WWTA Crews to Location of SSO

Crews are dispatched to any location of a reported/suspected SSO immediately. Additional WWTA maintenance personnel are "on call" should extra personnel or crews be needed (See Appendix A-2).

3.2.1 General

A Wastewater Technician and Wastewater Manager will receive notification of SSOs as outlined in Section 3.1 of the SORP. The Wastewater Technician will serve as the First Responder and investigate and determine the appropriate crews and resources needed. Records of who was sent to respond to complaints as well as work performed is tracked as a part of the Complaint Voicemail Log or through emails depending on when the call came in (See Appendix B and Figure 3.1.3).

3.2.2 Dispatching Crews

WWTA employees being dispatched to the site of an SSO should proceed immediately to the location of the suspected SSO, typically within one (1) hour after notification. Any delays or conflicts in assignments should be immediately reported to the immediate supervisor and/or Assistant Wastewater Manager and/or Wastewater Manager and/or Chief Engineer and/or WWTA Director for resolution.

3.3 SOPs for Responding to SSOs

3.3.1 General

SSOs of different types and in different categories will require responses from various crews and equipment. The general categories are as follows:

- Collection System;
- Pump Stations or WWTP; and
- Building Backups.

3.3.2 Responses in the Collection System

A. General – SOP for Collection System Response

1. SSOs can occur anywhere in the collection system, including along creeks and within the public right-of-way or dedicated public easements. The WWTA First Responders should understand that each event may require a unique plan of action.

2. The WWTA First Responders provide the initial response to SSOs or other unscheduled wastewater issues in the collection system. They are typically the first WWTA representatives to arrive at a suspected SSO and will initiate the field response per this SORP.

3. The First Responders may request additional support as needed based on the SSO event. Additional support crews will generally have additional capabilities such as hydraulic cleaning equipment to mitigate blockages and CCTV equipment to perform follow-up inspections.

   The WWTA owns and maintains the following equipment to use for cleanup of SSO events. A list of the typical equipment is available below:

   - 2 CCTV Trucks
   - 1 Mini-Excavator
   - 1 Single-axle Combination Vacuum/Sewer Line Cleaner Truck
   - 1 Double-axle Combination Vacuum/Sewer Line Cleaner Truck
   - 1 Single-axle Sewer Line Cleaner Truck
   - 1 Pumper Truck (2,000-gallon capacity)
   - 1 Dump Truck
   - 1 Flatbed Truck
   - 1 Equipment Trailer

- 3 Push Cameras
- 1 Pole Camera
- 1 Rodding Machine
- 1 Sewer Easement Cleaning Reel
- 2 Utility Crane Trucks
- 7 Mobile Bypass Pumps (ranging in capacity from 950 gpm to 1,750 gpm)
- 4 Mobile Generators (ranging in capacity from 80 KW to 265 KW)

The WWTA will procure other equipment as necessary to facilitate effective SSO cleanup.

B. Procedure Steps for Collection System Response ("SOP")

Once at the location of the suspected SSO the First Responder will:

1. Identify and isolate the cause of the SSO or (See Section 3.4.1 – Responsibilities upon Arrival for detail); usually, the causes can be identified as one of the following:
   - Pipe blockages due to grease, roots or debris;
   - Pipe breaks;
   - Capacity issues; or
   - Pump Station failures or issues.
2. Attempt to correct the problem by taking the following steps:
   - Removing the blockage;
   - Initiating point repairs to the pipe;
   - Utilizing bypass pumping, if appropriate;
   - Contacting the Assistant Wastewater Manager to evaluate shutting off an upstream pump station if the SSO involves a force main;
   - Coordinating with the Wastewater Manager; or
   - Requesting additional sewer maintenance resources as required.
3. Determine the infrastructure configuration and the necessary investigation points to be evaluated, such as upstream and downstream manholes, and other potential problem areas using GIS maps of the collection system.

4. Determine the total impacted area and assess the necessary remediation techniques or practices needed by taking the following actions:

   • Determining what environmental impacts and potential hazards to public health are present;

   • Evaluating the following factors, at a minimum:

   Streams and creeks, stormwater infrastructure, private property, or public health, safety, and accessibility; and

   • Coordinating with the Wastewater Manager and Chief Engineer.

5. Establish a control zone around the impacted area by taking the following steps:

   • Using appropriate signs and barricading practices around the perimeter of the impacted area to limit public access and warning public of potential health hazards;

   • Coordinating with Wastewater Manager; and

   • Requesting additional sewer maintenance resources as necessary.

6. Evaluate, determine, and coordinate with the immediate supervisor about additional sewer maintenance resources needed to correct, contain, and remediate the SSO location.

7. Request guidance and development of action plans from Wastewater Manager, Assistant Wastewater Manager, and Chief Engineer as needed for unusual situations to help meet the goals of the SORP to isolate, confirm, correct, contain, and remediate the SSO.

8. Assist with site clean-up and remediation as needed.

9. Prepare or assist in preparation of SSO reports and GIS maps (See Appendix B) including any photos and/or videos of the event and ensure that the SSO Report will be provided within the specified time to appropriate agencies.

10. Assist, as required, the immediate supervisor with the final inspection of the SSO location to determine that the SSO has been adequately addressed as set forth in this SORP.

C. Cleanup and Remediation Resources – SOP for Collection System Response

1. WWTA will follow the response procedures outlined above and use its available resources to correct, contain, and cleanup SSOs. WWTA will make available the additional

personnel, material, supplies, and equipment necessary at the site of an SSO (See Section 3.4.4 - SSO Site Cleanup or Remediation Practices for detail).

The following resources will be available as needed:

- Trained personnel;
- Excavation equipment, excavators, etc.;
- Combination cleaner/flushing equipment;
- Closed circuit television equipment;
- By-pass pumping equipment;
- Other materials, such as sandbags, silt fences, lime, signs, hand tools etc.; and
- External specialty contractors.

3.3.3 Responses at Pump Stations and Other Assets

A. General - SOP for Pump Stations or WWTP Response

1. WWTA maintenance personnel are responsible for operation and maintenance of the pump stations and any WWTP located in their service areas.

2. Each pump station and WWTP is equipped with remote telemetry systems that monitor the operation of the stations and/or WWTP. The remote telemetry system will convey alarms when predetermined conditions are present at the pump station or WWTP.

3. In addition to the continuous monitoring by remote telemetry system, each pump station, and WWTP is inspected on a weekly basis. WWTA Maintenance personnel perform service checks on the instrumentation devices and if necessary, coordinate with third party vendors for calibration and repair of any instrumentation, such as flow meters, level sensors, alarms, and telemetry equipment on a periodic basis.

4. Pump Station maintenance personnel serve as the First Responders for pump station, or WWTP service calls. For any incident that involves an SSO, pump station maintenance personnel in conjunction with an immediate supervisor will coordinate and implement the requirements of the SORP and take the appropriate action to mitigate the SSO. WWTA will dedicate additional resources to the SSO response as needed to satisfy the requirements of this SORP.

B. Procedure Steps - SOP for Pump Stations or WWTP Response

Once on the site of the pump station or WWTP SSO, the First Responder will:

1. Identify and isolate the cause of the disruption to the pump station or WWTP (See Section 3.4.1 - Responsibilities upon Arrival for detail); usually, these causes can be identified as the loss of power or the failure of a critical mechanical or electrical component.

2. Attempt to correct the problem by taking the following actions, as needed:

   • Restoring power;

   • Using a redundant power supply;

   • Placing a standby pump in service;

   • Using portable pumping equipment;

   • Coordinating with the Immediate Supervisor or Plant Operations Supervisor; or

   • Requesting additional Maintenance resources as required.

3. Determine the infrastructure configuration and the necessary investigation points to be evaluated, such as upstream and downstream manholes or upstream and downstream WWTP unit processes, and other potential problem areas using GIS maps as needed.

4. Determine the total impacted area and assess the necessary remediation techniques or practices needed by taking the following actions:

   • Determining what environmental impacts and potential hazards to public health and the environment are present;

   • Evaluating the following factors, at a minimum:

   Streams and creeks; stormwater infrastructure, private property; and public health, safety, and accessibility; and

   • Coordinating with plant operations personnel or immediate supervisor

5. Establish a control zone around the impacted area (See Section 3.4.2, SSO Containment for detail) by taking the following actions:

   • Using appropriate signs and barricading practices around the perimeter of the impacted area to limit public access and warning public of potential health hazards;

   • Coordinating with immediate supervisor; and

- Requesting additional sewer maintenance resources as required.

6. Evaluate and determine additional plant maintenance and/or sewer maintenance resources needed.

7. Request guidance and development of action plans from Wastewater Manager, Assistant Wastewater Manager, and Chief Engineer as needed for unusual situations to ensure goals of SORP are addressed.

8. Assist with site clean-up and remediation as needed.

9. Prepare or assist in the preparation of SSO reports, activity sheets, GIS maps, and work orders related to SSOs including before, during, and after photos and/or videos of the event and ensure that the information required to report the SSO will be provided within the specified time to appropriate agencies.

10. Assists, as required, the immediate supervisor with inspection of site to ensure that provision of SORP and other directives are met.

C. Cleanup and Remediation Resources - SOP for Pump Stations or WWTP Response

1. WWTA will follow response procedures outlined above and use its available resources to correct, contain, and clean up SSOs. The following resources will be made available as needed:

   - Trained personnel;
   - Excavation equipment, backhoes, etc.;
   - Combination cleaner/flushing equipment;
   - Closed circuit television equipment;
   - By-pass pumping equipment;
   - Other materials, such as sandbags, silt fences, lime, signs, hand tools etc.;
   - Portable generators; and
   - External specialty contractors.

3.3.4 Responses at Building Backups

A. General - SOP for Building Backup Responses

1. Building backups occur when wastewater backs up into buildings as the result of blockages or flow conditions in the collection system. A wastewater backup into a building that is caused by a blockage or other malfunction in a private service lateral is not classified as a building backup and the building owner will be responsible for any cleanup. Repairs to the private service lateral may be covered under the WWTA's Private Service Lateral Program (PSLP) if performed by a pre-qualified plumbing contractor.

2. The First Responder for SSOs in the collection system will initiate the field response per this SORP.

3. The response crews should use discretion in assisting the property owner/occupant. Be aware that the WWTA could face increased liability for any further damages inflicted to the private property during such assistance.

B. Procedure Steps - SOP for Building Backup Responses

Once on site of the building backup related SSO, the First Responder will:

1. Identify and isolate the cause of the building backup-related SSO (See Section 3.4.1 - Responsibilities upon Arrival for detail); usually, the causes can be identified as the following:

   • Pipe blockages from grease, roots or debris;

   • Pipe breaks; or

   • Capacity issues.

2. Attempt to correct the problem by taking the following actions:

   • Inspecting flow in WWTA owned portion of the sewer pipeline in the street or right-of way upstream and downstream of private lateral connection for free flowing condition;

   • Examining the cleanout on the customer's private lateral, if available, to inspect flow in private service lateral;

   • Removing any blockages in the WWTA sewer pipeline in the street or right-of-way by hydraulic cleaning;

   • Inspecting WWTA sewer pipeline in street or right-of-way and private lateral connection with CCTV;

   • Coordinating with the immediate supervisor; or

- Requesting additional sewer maintenance resources as required.

3. Confirm that the building backup is not a result of private lateral blockage or malfunction. Conditions that may indicate a private service lateral issue include, but are not limited to the following:

   - Free-flowing conditions upstream and downstream of customer's private lateral connection before hydraulic line cleaning in WWTA sewer pipeline;
   - Stagnant with little or no flow conditions observed in private lateral after the clean out cap is removed for inspection after WWTA sewer pipeline cleaning;
   - CCTV inspection of WWTA sewer pipeline indicates no damaged pipe or blockages; and
   - CCTV inspection of customer's private service lateral connection indicates no flow or damaged condition.

4. If the SSO is determined to be caused by the private party, take the following steps:

   - Notify immediate supervisor of findings.
   - Notify customer that the problem is in the customer's plumbing or private lateral service line. If the service lateral has not previously been repaired under the PSLP program, the customer is responsible for all cleanup costs associated with the blockage.
   - If the customer disputes that the backup is caused by a blockage or other malfunction of a private lateral, see section 3.3.4.D for dispute resolution steps.
   - Assist, as required, the immediate supervisor with the final inspection of the site to ensure that provisions of this SORP and other directives are met.

5. If the SSO is confirmed to be a building backup, caused by the main sewer system, take the following steps:

   - Notify the immediate supervisor of findings.
   - The Wastewater Technician notifies the immediate supervisor and the Wastewater Manager of findings and initiates a call to the Independent Claim Adjuster. The Claim Adjuster evaluates the damage with the respective property owner for possible building cleanup. Building cleanup is further specified in section 3.3.4.C.

6. If any public property is involved, take the following steps:

- Request guidance and development of action plans from the immediate supervisor, Wastewater Manager, Assistant Wastewater Manager, Chief Engineer, and Executive Director as needed to ensure goals of SORP are addressed;
- Assist with site clean-up and remediation as needed;
- Prepare or assist in the preparation of SSO reports, activity sheets, GIS maps, and work orders including before and after pictures of the event; and
- Assist, as required, the immediate supervisor with the final inspection of the site to ensure that provisions of this SORP and other directives are met.

C. Cleanup and Remediation Resources - SOP for Building Backup Responses

1. The WWTA will follow the response procedures outlined above and use its available resources to correct, contain, and clean up SSOs. For building backups, independent cleaning and restoration contractors are used to assist in cleaning, sanitizing and repairing damages caused by the building backup. The Independent Claim Adjuster will manage the building backup claim. If it is determined to be appropriate, the Independent Claim Adjuster will ensure that damaged areas of private or public property are properly sanitized and repaired, including the removal and replacement of contaminated materials, such as carpeting, drywall and other property as needed. The WWTA will make available any additional personnel, material, supplies, equipment or crews needed for cleaning the outside of the building backup (See 3.4.5 SSO Site Cleanup or Remediation Practices for details).

The WWTA also:

- Will either reimburse the property owner or pay for the cost for cleaning, disinfecting, and any necessary structural repairs after an SSO event, via the Independent Claim Adjuster on a case-by-case basis;
- Works very closely with the Independent Claim Adjuster concerning each customer to address losses and damage on a case by-case basis;
- Provide an Independent Claim Adjuster to coordinate work tasks between WWTA work crews and the independent contractors while keeping the customer informed of progress.

2. The following resources are available as needed to clean up public property:

- Trained personnel;

- Excavation equipment, track hoes. backhoes, etc.;
- Combination cleaner/flushing equipment;
- Closed circuit television equipment;
- By-pass pumping equipment;
- Other materials, such as sandbags, silt fences, lime, signs, etc.; and
- External specialty contractors.

D. Dispute Resolution for Private Lateral Backups

Consistent with the WWTA Rules and Regulations, policies, and procedures, the customer owns the service line from the WWTA sewer main to the structure served. The customer is responsible for all cleanup costs associated with the blockage. The gravity portion of the service lateral may be repaired or replaced under the PSLP program by a pre-qualified plumbing contractor. If a customer disputes the determination that the backup is caused by a private sewer lateral blockage or malfunction, the following process will be followed to resolve the dispute:

1. The Wastewater Manager and Assistant Wastewater Manager will be notified of the dispute, and all materials resulting in the determination of a private lateral issue, including photographs, CCTV video, inspection reports and/or dye testing results, will be provided to the Wastewater Manager, Assistant Wastewater Manager and Chief Engineer for review.

2. The Wastewater Manager, Assistant Wastewater Manager, and Chief Engineer will review the materials, and will determine if the results of the site investigations are accurate. Using professional experience, the Wastewater Manager and Assistant Wastewater Manager will determine if the customer's private lateral or the WWTA's portion of the collection system is the source of the backup and confirm with the Chief Engineer.

3. If the Wastewater Manager, Assistant Wastewater Manager, and Chief Engineer confirms that the backup is the customer's responsibility, the results of the investigation will be provided to the customer. At this point the customer will be advised that they are responsible for all cleanup costs and that their service lateral may be repaired or replaced under the PSLP program.

4. If the customer further disputes the determination by the WWTA that a building backup is due to a private lateral blockage or malfunction, then the customer may appeal to the

Executive Director of WWTA, who will bring the appeal before the Variance Committee of the Board of Commissioners for the WWTA.

3.3.5 Responses to Hazardous Substance

A. General - SOP for Hazardous Substance Response

1. Although infrequent, it is possible to have SSOs involving a hazardous substance which would tend to occur in the industrialized or commercial areas of the collection system. They may also result from an illicit discharge or spills. These are typically identified when there is a foamy or oily sheen or uncommon odor in the collection system.

2. The First Responders for SSOs will initiate the field response per this SORP.

B. Response for Hazardous Waste Events- SOP for Hazardous Substance Response

Once on the site of SSO, the First Responder will take the following actions:

1. Note the appearance and odors of the wastewater on the ground or being discharged from the SSO. If suspicious or uncommon to the collection, they will immediately contact the immediate supervisor, Wastewater Manager, Assistant Wastewater Manager, and/or Chief Engineer.

2. Until the immediate supervisor, Wastewater Manager, Assistant Wastewater Manager, or Chief Engineer arrives to investigate they will take no further action. They will assist the immediate supervisor, Wastewater Manager, Assistant Wastewater Manager, or Chief Engineer with site investigations to determine if a call to the municipal fire department or Hazardous Materials Response Unit (HAZMAT) is warranted.

3. If considered to be a serious problem, the immediate supervisor, Wastewater Manager, Assistant Wastewater Manager, or the Chief Engineer will contact the Fire Department (FD) of the local municipality to dispatch its HAZMAT team.

4. Standby until arrival of local HAZMAT team.

5. Upon arrival of the HAZMAT response team, the First Responder or crew will take direction from the Incident Commander of that team.

6. Provide support to HAZMAT team as required.

7. Once the HAZMAT Incident Commander determines the site is safe and appropriate for the First Responder and crew to proceed, proceed with response procedure outlined in Section 3.3.2 Response at Collection System.

3.3.6 Responses for Fish Kill

A. General - SOP for Fish Kill Response

1. Although infrequent, it is possible for an SSO to cause a fish kill. SSOs involving these events will generally occur in areas of the collection system along streams, ponds, or sloughs. The fish kills normally are the result of oxygen depletion in these areas. They may occur as the result of SSOs in the collection system or from pump stations.

2. The First Responders for SSOs will initiate the field response per this SORP.

B. Response to Fish Kill Events - SOP for Fish Kill Response

Once on site of the SSO, the First Responder will

1. Identify nearby potential waterways or water bodies adjacent to the SSO location and immediately contact the immediate supervisor, who will contact TDEC at **(423) 634-5700**. If it appears that sanitary sewer may have entered a storm water conveyance, the Hamilton County Storm Water Department should also be contacted at **(423) 209-7888**.

2. Note the appearance of water surfaces. If floating dead fish and wastewater debris from the collection system are apparent, immediately contact the immediate supervisor, Wastewater Manager, Assistant Wastewater Manager, and/or Chief Engineer for site investigation and further guidance. The Wastewater Manager will contact the Tennessee Wildlife Resources Agency (TWRA) at **(931) 456-3083** (Region 3 Dispatcher) to inform them of the fish kill. TDEC will also be contacted at the same time.

3. Take no further action and assist the immediate supervisor, Wastewater Manager, Assistant Wastewater Manager, and Chief Engineer with site investigation and determination to call or contact TDEC or the Tennessee Wildlife Resources Agency (TWRA).

4. Identify and isolate the cause of the SSO, usually one of the following:

   • Pipe blockages due to grease, roots or debris;

   • Pipe breaks;

   • Capacity issues;

   • Loss of power; or

   • Failure of a critical mechanical or electrical component.

5. Attempt to correct the problem by

   • Removing the blockage;

   • Performing point repairs to the pipe;

   • Utilizing bypass pumping as appropriate

   • Contacting other immediate supervisor to evaluate shutting off an upstream pump station if the SSO involves a force main;

   • Restoring power;

   • Applying a redundant power supply;

   • Placing a standby pump in service; or

   • Utilizing portable pumping equipment.

6. Assist the immediate supervisor with a determination of the cause of the fish kill and the extent of the fish kill (number, species, etc.).

7. Assist, as required, with coordination of TDEC and TWRA on site until their investigation is complete.

8. Once TDEC and TWRA determines it is appropriate for the First Responder and crew to proceed, then proceed with response procedure outlined in Section 3.3.2 Response for Collection System and Section 3.3.3 Response for Pump Station, CSOTF or WWTP.

3.3.7 Wet Weather Procedures

A. General - SOP for Wet Weather Procedures

1. SSOs may occur during significant rainfall events and from flooding of creeks and streams within the collection system area. Generally, these SSOs are the result of excessive I/I. These SSOs are generally the responsibility of the Wastewater Technician assigned to that area and generally appear on the “Hot Spot” list of sites to be checked during rainfall events. An example “Hot Spot” list can be found in Appendix E-1 which includes the Manhole Facility ID along with the frequency of SSOs occurring at that manhole.

2. During Wet Weather SSOs, the volume of the discharge can exceed the ability of the field crews to successfully contain. For example, containment might not be practical during an intense rain event with a high volume of discharge.

3. The First Responders for SSOs will initiate the field response per this SORP.

B. Response for Wet Weather Events - SOP for Wet Weather Procedures

Once on site of the SSO, the First Responder will:

1. Identify and isolate the cause of the SSO (See Section 3.4.1 - Responsibilities on Arrival for detail), usually one of the following:

   • Pipe blockages from grease, roots or debris;

   • Pipe breaks; or

   • Capacity issues.

2. Attempt to correct the problem by requesting additional sewer maintenance resources for:

   • Removing of the blockage,

   • Initiating point repairs to the pipe,

   • Utilizing of bypass pumping,

   • Contacting the immediate supervisor to evaluate shutting off an upstream pump station if the SSO involves a force main,

   • Coordinating with the immediate supervisor, and

   • Requesting additional sewer maintenance resources as required.

3. Determine the infrastructure configuration and the necessary investigation points to be evaluated, such as upstream and downstream manholes and other potential problem areas using GIS maps of the collection system.

4. Determine the total impacted area and assess the necessary remediation techniques or practices needed by taking the following actions:

   • Determining what environmental impacts and potential hazards to public health are present;

   • Evaluating the following factors, at a minimum:

     Streams and creeks;

     Stormwater infrastructure;

     Private property; and

Public health, safety, and accessibility; and

- Coordinating with the immediate supervisor.

5. Establish a control zone around the impacted area (See Section 3.4.2, SSO Containment for detail) by taking the following actions:

   - Using appropriate signs and barricading practices around the perimeter of the impacted area to limit public access and warning public of potential health hazard;
   - Coordinating with the immediate supervisor; and
   - Requesting additional sewer maintenance resources as required.

6. Evaluate, determine, and coordinate with the immediate supervisor about additional sewer maintenance resources needed to correct, contain, and remediate SSO location.

7. Request guidance and development of action plans from the immediate supervisor, Wastewater Manager, Assistant Wastewater Manager or Chief Engineer as needed to meet the goals of the SORP.

8. Assist with site clean-up and remediation as needed.

9. Prepare or assist in the preparation of SSO reports, activity sheets, GIS maps and work orders including before, during, and after photos and/or videos of the event and the information necessary to complete the SSO Report and provide it to the appropriate agencies in a timely manner.

10. Assists, as required, the immediate supervisor with the final inspection of the SSO location to meet the goals of the SORP.

C. Cleanup and Remediation Resources - SOP for Wet Weather Procedures

1. The WWTA will follow the response procedures outlined above and use its available resources to correct, contain, and clean up SSOs. The WWTA will make available necessary additional personnel, material, supplies, equipment and crews working at the site of an SSO (See 3.4.4 SSO Site Cleanup or Remediation Practices for detail).

The following resources are available as needed:

- Trained personnel;
- Excavation equipment, track hoes, backhoes, etc.;
- Combination cleaner/flushing equipment;

- Closed circuit television equipment;
- Bypass pumping equipment;
- Other materials, such as sandbags, silt fences, lime, signs, hand tools etc.; and
- External specialty contractors.

3.4 SSO Correction, Containment and Cleanup

3.4.1 General

When responding to SSOs, temporary actions should be taken to divert flows, to repair the collection system, and to restore it to normal operation without leading to negative effects elsewhere in the system. For example, repairing a force main could require the temporary shutdown of a pump station and diversion of the flow at an upstream location. If not handled properly, backups upstream of the pump station may create other SSOs. Under most circumstances, the WWTA will handle response actions with its own maintenance forces. WWTA personnel have the experience and skills necessary to respond rapidly and in the most appropriate manner. Circumstance may arise, however, when internal field crews will benefit from the support of private sector construction assistance, and the WWTA will use private sector assistance under these circumstances. The WWTA may also choose to use private contractors for open excavation operations that may exceed one (1) day to complete.

3.4.2 Responsibilities Upon Arrival

The goal of the First Responder that arrives at the site of an SSO is to protect the health and safety of the public by mitigating the impact of the SSO to the greatest extent possible.

Upon arrival at a SSO location, WWTA personnel should take the following actions:

1. Determine the cause of the SSO (e.g., sewer line blockage, pump station mechanical or electrical failure, sewer line break, etc.);
2. Identify and request assistance (if necessary) or additional resources, personnel, materials, supplies or equipment that will expedite and minimize the impact of the SSO, correct the SSO and assist in the determination of the cause;
3. Determine if private property is impacted; and
4. Take immediate steps to stop the SSO (e.g., relieve pipeline blockage, manually operate pump station controls, repair pipe, etc.); and

5. Initiate the generation of SSO reports by contacting the Wastewater Manager who will add it to the SSO Observation Report and submit a 5-Day TDEC SSO Report (See Appendix B-2 and B-7).

3.4.3 SSO Assessment

Upon arrival at an SSO location, WWTA personnel should, where possible, initiate measures to contain the overflowing wastewater and recover wastewater which has already been discharged, to minimize the impact to public health or the environment, including the following:

1. Determine the immediate destination of the SSO (storm drain, street curb gutter, body of water, creek bed, etc.);

2. Identify and request the necessary materials and equipment to contain or isolate the SSO, if not readily available; and

3. When the First Responder identifies the area impacted by the SSO, the next step of the initial overflow response stage is to develop and implement a control zone around the contaminated area.

4. Using appropriate signs and barricading practices to establish the control zone will help prevent public access to the contaminated area, the purpose of the control zone is to warn those who may enter the areas of potential health hazards associated with contact with SSOs.

3.4.4 Additional Measures under Prolonged SSO Conditions

Where possible, flow diversion techniques provide an effective means of conveying an SSO discharge back into the collection system. This procedure reduces additional potential impact on the immediate area and possible impact downstream. The flow diversion techniques employed by the WWTA shall, when practicable include, but not be limited to, the following:

Bypassing measures - Portable bypass pumps can be used in certain situations to collect wastewater from the environment and convey it back into the collection system beyond the disruption of service point. This method is most effective in bypassing a single identified problem area when the discharge can be directed to the next downstream manhole. Bypassing may not be appropriate in wet weather overflows. This type of equipment can be used in conjunction with other containment measures or may be used independently.

Combination cleaner/flusher measures - Combination cleaner/flusher equipment provides an additional resource for collecting discharged wastewater and conveying it back into the collection system beyond the disruption of service point. This equipment can be used in certain

situations in conjunction with other containment measures or may be used independently. Like portable bypass pumps, this equipment may not be effective in wet weather situations.

In the event of a prolonged sewer line blockage or a sewer line collapse, a determination should be made to set up a portable bypass pumping operation around the obstruction, which may include the following:

- Appropriate measures will be taken to determine the proper size and number of pumps required to effectively handle the wastewater flow;
- Continuous or periodic monitoring of the bypass pumping operation will be implemented, as required; and
- Notification of and consultation with the appropriate regulatory agency in conjunction with emergency repairs.

3.4.5 SSO Site Cleanup or Remediation Practices

A. General – SOP for SSO Site Cleanup or Remediation Practices

1. SSO locations should be thoroughly cleaned and remediated after an SSO event. The goal of the cleanup practices is to restore the site to pre-event conditions. One or more of the practices may be required, depending on the size and duration of the SSO and the area affected. No readily visible residue (sewage solids, papers, rags, plastics, , etc.) is to remain.

2. WWTA management and any impacted property owner should be kept informed on the status of the cleanup and remediation.

3. After securing the site of the SSO from public contact, the following cleanup practices will be considered and implemented:

B. Manual Practices – SOP for SSO Site Cleanup or Remediation Practices

1. Manual cleanup techniques may include the use of hand tools or flushing of the area with water to remove residue. The following should be considered for manual practices:

   - Hand tools, such as rakes, shovels, brooms, etc., are used to sweep, rake, collect, and remove all visible residue (sewage solids, papers, plastics, etc.) originating from the sewer system and properly dispose of it.
   - Unless the wash down water can be safely isolated, collected, vacuumed up, and removed, flushing with water is not advised if the SSO site is anywhere near a stream or ditch with flowing water. Any water used in cleanup should be held to a minimum.

- When warranted, it may be necessary to remediate the disturbed area by allowing the area to dry, followed by the application of grass seed, fertilizer, and straw.

C. Mechanical Practices – SOP for SSO Site Cleanup or Remediation Practices

1. Mechanical cleanup techniques may include the use of mechanical equipment to remove all impacted substances and properly dispose of them. The following should be considered for mechanical practices:

- The Wastewater Manager, Assistant Wastewater Manager and Chief Engineer or other designated individuals will direct these practices.
- Track hoes, backhoes, dump trucks, and other specialized excavating equipment can be used to remove, dispose of, and replace contaminated soil from the SSO location.
- Combination cleaner/flushers trucks can be used to flush, collect, remove, and dispose of liquid residues from the SSO location.
- Portable aerators and bypass pumps may be used where complete recovery of wastewater is not practical and where severe oxygen depletion in existing surface water such as ponds and sloughs could be expected. This action should also include the monitoring of dissolved oxygen levels in the surface water until acceptable levels are obtained. This action will be coordinated, if possible, with TDEC.
- Bypass pumps may be used to pump around collapsed lines and point repairs in the collection system and disabled pump stations while repairs are being made. Bypass pumps may be used to pump large areas of ponded wastewater resulting from the event back into the sewer system.
- When warranted, it may be necessary to remediate the disturbed area by allowing the area to dry, followed by the application of topsoil, grass seed, fertilizer, and straw.

D. Disinfection Practices – SOP for SSO Site Cleanup or Remediation Practices

1. Disinfection techniques may include the application of lime or other disinfection and deodorization agents. The following should be considered for disinfection practices:

- The Wastewater Technician, Wastewater Manager, Assistant Wastewater Manager and Chief Engineer, or other designated individuals will direct these practices.
- Lime and/or disinfectants will be applied as necessary without excess and will not be applied if the site is anywhere near a stream or ditch with flowing or ponded water.

- When warranted, it will be necessary to remediate the disturbed area by allowing the area to dry before disinfection, followed by the application of grass seed, fertilizer, and straw.

E. Contracting Practices – SOP for SSO Site Cleanup or Remediation Practices

1. Contracting practices are used to support and supplement WWTA staff during cleanup and remediation of SSO or CSO events. The following should be considered for contracting practices:

- The Wastewater Technician, Wastewater Manager, Assistant Wastewater Manager, and Chief Engineer, or other designated individuals will direct these practices.
- Contractors that specialize in building cleaning are under contract with WWTA to clean, disinfect, and/or replace damaged carpet or flooring; to replace and paint damaged drywall and insulation; to clean, disinfect, and/or repair/replace and disinfect damaged plumbing fixtures; and to repair/replace damaged electrical fixtures.
- Contractors that specialize in landscaping and lawn remediation are available for contracting with the WWTA to repair/replace damaged shrubs, flowers, specialty lawns.
- Contractors that specialize in hazardous waste cleanup and remediation are available to the WWTA to collect, remove, and dispose of any hazardous or industrial wastes; and to collect, remove, and dispose of any dead fish, floating substances, or debris that might be discharged to surface waters during an SSO event.
- Contractors that have excavating equipment are under contract with the WWTA to support the cleanup and remediation of large areas impacted by the SSO event.

3.5 SSO Related Reports

There are five (5) reports and logs that are used to collect information that may be relevant to SSOs events and are provided in Appendix B. These include the following:

- B-1 Complaint Voicemail Log
- B-2 Complaint Call Emails (Examples)
- B-3 Sanitary Sewer Overflow Observation Report (Example)
- B-4 Spill Volume Estimating
- B-5 Possible SSO Locations Due to Pump Station Failure
- B-6 SSO Locations Occurring Multiple Times Within 12 Months (Example)

- B-7 5-Day SSO Report to TDEC

3.5.1 SSO Report

Using information provided by the First Responder, a 5-Day SSO Report (See Appendix B-7) will be completed and added to the SSO Observation Report (See Appendix B-3) by the Wastewater Manager, Assistant Wastewater Manager, or Chief Engineer. WWTA Administrative Staff will record relevant SSO information and dispatch a First Responder and additional response crews, as needed. A First Responder will confirm the SSO. Until verified, the report of a possible spill should not be referred to as a "SSO".

The Wastewater Manager will document the details of each SSO in the SSO Observation Report soon after the event has ended. The Wastewater Manager will transmit the details of the SSO to MyTDEC Forms within a 5-Day period. The MyTDEC Form requires the following information:

A. Type of Event
B. Date Event Began
C. Duration (hours)
D. Location Coordinates
E. State
F. City
G. Street Address
H. Structure/Component ID
I. Structure/Component
J. Next Downstream Pump Station
K. Type of Event
L. Estimated Volume (Gallons)
M. Receiving Waterbody
N. Primary Cause of Event
O. Primary Corrective Action Taken
P. Comments/Notes

The WWTA will include the following information in the comment section of the MyTDEC Form for each reported SSO or Prohibited Bypass:

Q. Subject to available information, an estimate of the SSO's or Prohibited Bypass's impact on public health and to water quality in the receiving water body
R. Date of the last SSO or Prohibited Bypass at the same point
S. A list of all notifications that WWTA has provided to the public and other agencies or departments

T. The steps taken or to be taken to clean up any surfaces that have been in contact with and/or contaminated by the SSO or Prohibited Bypass

3.5.2 Work Orders

WWTA tracks its work orders through a Voicemail Complaint Log as well as an Overflow Report Log (See Appendix B-1 and B-3). WWTA is working towards implementing a new Information Management System (IMS) as outlined in the CD, which will streamline the work order system and improve tracking abilities. With the current process dispatchers document necessary information from calls in an email, which they send to the appropriate resource. Once the Responder has addressed the complaint, they send a response email containing work performed along with any other comments. This email filed and information is recorded in the SSO Observation Report and TDEC 5-Day Written Report (See Appendix B-3 and B-7). This process is outlined in Section 3.1.3.

Information including customer name (if given), location, specific problem, and any additional comments that would help in the swift response to the request is recorded (See Appendix B-1). Field communication with the customer is performed as appropriate.

The Administrative Staff will distribute work orders at the request of First Responders or the Wastewater Manager, Assistant Wastewater Manager to support the correction, containment and cleanup of any SSO event. Information regarding the completed work order is emailed out and used to assist in addressing the information requirements of the SSO Reports (See Appendix B-2 and B-7).

3.6 SSO Tracking

The frequency and location of SSOs are tracked by the WWTA as part of its CMOM Program. In addition, a database with appropriate GIS mapping is maintained as part of the CMOM Program. Data from the completed SSO Reports (See Appendix B-3 and B-7) is entered into to the SSO database by the WWTA GIS Technician under the supervision of the Wastewater Manager, Assistant Wastewater Manager, and Chief Engineer. See Appendix B-3 for an example of an SSO Observation Report and subsequent GIS map.

3.6.1 SSOs Due to Pump Station Failure

Locations where an overflow is likely to occur as a result of pump station failure have been tracked and listed for each pump station in WWTA's WCTS and can be found in Appendix B-5. Attention should be paid to these locations in the event of pump station failure.

3.6.2 Frequently Occurring SSOs

A list of SSOs which have occurred at the same location more than once within a 12-month period will be kept and updated, an example of such a list can be found in Appendix B-6. The

SSO database maintained by the WWTA GIS Technician will contain up to date information regarding recurring SSOs and can be found at the URL below.

4.0 Regulatory Agency Notification

The WWTA will provide the following notifications to TDEC in the event of an SSO. The section explains to whom and when various forms of notification should be made and lists individuals to be contacted. Agency notifications will be performed in parallel with other internal notifications.

4.1 24-hour or Immediate Notification

The WWTA Executive Director or his/her designee will record the SSO or Prohibited Bypass in spreadsheet format (See Appendix B-3). The WWTA Executive Director or his/her designee will notify TDEC with an initial SSO Report within 24 hours of an SSO or Prohibited Bypass via email or oral means. This report shall include the location of the SSO or Prohibited Bypass by street address or other method as well as any additional information that was gathered. The WWTA Executive Director or his/her designee is responsible for meeting the 24-hour notification requirement. WWTA will also be available to reply to any requests for additional information by TDEC.

- TDEC Contact Person: Environmental Specialist, Chattanooga Assistance Center
- TDEC Telephone: (423) 634-5745
- TDEC Fax number: (423) 634-6389.
- TDEC Email Address: Angela.Oberschmidt@tn.gov
- TDEC Address:

Tennessee Department of Environment & Conservation
Division of Water Resources
Chattanooga Field Office
1301 Riverfront Parkway
Suite 206
Chattanooga, TN 37402

4.2 TDEC 5-Day Written Report

The WWTA Executive Director or his/her designee will prepare the 5-Day Written Report to TDEC for all SSOs and Prohibited Bypasses. This report is submitted through the MyTDEC Forms Portal on the NPDES Sewer Overflow/Release/ByPass/Upset Event Report Form (See Appendix B-7). Information for this report is tracked on WWTA's SSO Observation Report which is submitted as a part of the CD required Quarterly Reports (See Appendix B-3). This 5-Day

Written Report should also be made available to those desiring additional information or written confirmation.

4.3 Discharge Monitoring Report (DMR) & Monthly Operating Report (MOR)

The WWTA is required by its NPDES permit to submit to TDEC a Discharge Monitoring Report (DMR) and Monthly Operating Report (MOR) for the Signal Mountain WWTP. These reports are submitted through the MyTDEC portal and submitted to the following email addresses:

- DWRWW.Report@tn.gov;
- TDEC.Chattanooga.EFO@tn.gov;
- angela.oberschmidt@tn.gov

4.4 Other Agency Contact Information

When it has been determined that the SSO or Prohibited Bypass will potentially affect or require assistance from the agencies listed below, the WWTA Executive Director or his/her designee will contact these agencies, as necessary:

• Hamilton County Emergency Management Services (423) 209-6900

• Tennessee Emergency Management Agency (800) 262-3300

• TWRA Toll Free 1 (833) 402-4698

• Fire, Police, Ambulance (Emergency) 911

5.0 Public Advisory Notification

This section describes the actions the WWTA will take, in cooperation with TDEC, to limit public access to areas potentially impacted by SSOs or Prohibited Bypasses.

5.1 Temporary Signage

The WWTA, in conjunction with TDEC, has primary responsibility for determining when to post notices of polluted surface water bodies or ground surfaces that result from SSOs. The postings do not necessarily prohibit use of recreational areas, unless posted otherwise, but provide a warning of potential public health risks due to wastewater contamination. Posting should be considered for the following:

- Chronic SSO sites (greater than five (5) per 12-month period);
- Capacity related SSOs greater than three (3) days; and
- Public areas (paths, trails, walkways, etc.) where cleanup and sanitization from a SSO is not yet complete.

Examples of signs to be posted on barricades at an affected SSO location when necessary to inform the public concerning SSOs at that site are available in Appendix C.

5.2 Other Public Notification

Should the posting of surface water bodies or ground surfaces impacted by an SSO be deemed necessary by the Executive Director or his/her designee, the need for further public notification will also be determined at that time. Notifications shall normally be by the use of notices given news media for immediate publication or airing, or by direct measures such as front door hangers to potentially impacted customers. (See Appendix D-1)

5.3 Media Notification

All phone calls from the media received by the WWTA personnel, concerning SSOs shall be transferred to the Executive Director of WWTA or his/her designee. Only the Executive Director of WWTA or his/her designee is authorized to be interviewed by the news media. The Executive Director of WWTA or his/her designee will be considered the designated spokesperson for the WWTA in cases of SSO reporting. A sample Press Release, found in Appendix D, may be used when necessary to release statements to the public concerning SSO events.

6.0 Distribution and Maintenance of SORP

6.1 SORP Submittal and Availability

Controlled copies of the SORP and amendments will be distributed to the following WWTA sections and/or functional positions:

- Executive Director
- Chief Engineer
- Wastewater Manager
- Assistant Wastewater Manager
- Deputy Director of Administration
- Senior Wastewater Technicians
- Wastewater Technicians

Other personnel who may become incidentally involved in responding to overflows should also become familiar with the SORP.

6.2 SORP Review and Update

The SORP will be reviewed annually and amended as appropriate in January of each calendar year. The WWTA will:

- Update the SORP with the issuance of a revised or new NPDES permit;
- Conduct annual training sessions with appropriate personnel; and
- Review and update, as needed, the various contact person lists included in the SORP.

Those involved with the annual review will include:

- Executive Director
- Chief Engineer
- Wastewater Manager
- Deputy Director of Administration
- Assistant Wastewater Manager

- Senior Wastewater Technicians
- Wastewater Technicians

6.3 Training

The WWTA management staff will conduct training for the appropriate Administrative Staff, First Responders, Wastewater Managers, Assistant Wastewater Managers, Technicians, and WWTA support staff to ensure their compliance with this SORP. These training sessions will be organized based on the latest version of the SORP, as well as other pertinent reference materials, and will review the proper procedures for investigating and responding to SSOs, including proper cleanup and remediation techniques. Training sessions will consist of classroom style learning and be supplemented with a practical hands-on field component as appropriate so that all response personnel are prepared for responding to SSOs. SSO volume estimation practices will also be reviewed using the materials and examples in Appendix B-4, as well as photographs and scenarios from recent local events. Each method of SSO volume estimation described in Appendix B-4 will be reviewed and examples given to ensure that first responders know when to apply each method. WWTA supervision will conduct refresher sessions annually or when any revisions are made to the SORP.

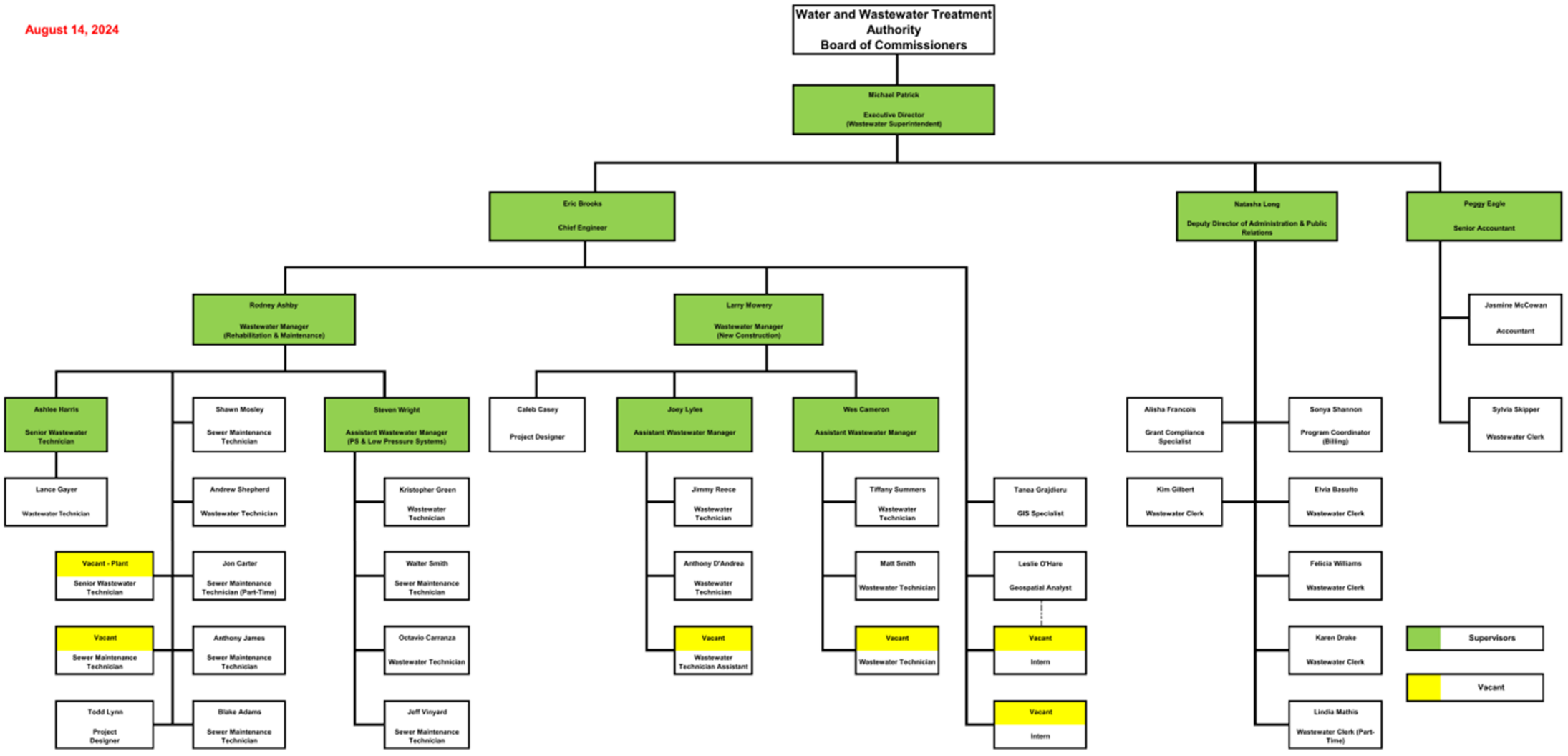
The Chief Engineer, Wastewater Manager, Assistant Wastewater Manager, and Senior Wastewater Technicians oversee the SORP implementation and field operations to ensure that the established procedures are being followed.

The WWTA management staff will maintain a list of all training conducted, including a signed list of attendees for each training event and maintain a training file for each employee assigned to them.

APPENDIX A

A-1 – WWTA Organization Chart

August 14, 2024



A-2 – On-call Schedule (Example)

Dates	Name/emerg.	Name/Jet Truck	Name/Grinder	Pump Stations
8-21-24 to 8-27-24	Andrew Shepherd	Jeff Vinyard	Blake Adams	Octavio Carranza
8-28-24 to 9-3-24	Matt Smith	Anthony D'Andrea	Anthony James	Jimmy Reece
9-4-24 to 9-10-24	Tiffany Summers	Walter Smith	Shawn Mosley	Kris Green
9-11-24 to 9-17-24	Andrew Shepherd	Jeff Vinyard	Blake Adams	Octavio Carranza
9-18-24 to 9-24-24	Matt Smith	Anthony D'Andrea	Anthony James	Jimmy Reece
9-25-24 to 10-1-24	Tiffany Summers	Walter Smith	Shawn Mosley	Kris Green
10-2-24 to 10-8-24	Andrew Shepherd	Jeff Vinyard	Blake Adams	Octavio Carranza
10-9-24 to 10-15-24	Matt Smith	Anthony D'Andrea	Anthony James	Jimmy Reece
10-16-24 to 10-22-24	Tiffany Summers	Walter Smith	Shawn Mosley	Kris Green
10-23-24 to 10-29-24	Andrew Shepherd	Jeff Vinyard	Blake Adams	Octavio Carranza
10-30-24 to 11-5-24	Matt Smith	Anthony D'Andrea	Anthony James	Jimmy Reece
11-6-24 to 11-12-24	Tiffany Summers	Walter Smith	Shawn Mosley	Kris Green
11-13-24 to 11-19-24	Andrew Shepherd	Jeff Vinyard	Blake Adams	Octavio Carranza

Red Text --Holiday

APPENDIX B

B-1 – Complaint Voicemail Log

Date/Time	Caller's Name	Phone #	Address	Nature of Call	Follow-UP
Thu 6/1/2023 6:27 AM	Mr. Micus	719-289-0282	7 Ridgeside Road	Alarm for grinder pump is going off again	Rodney sent message Shawn Thu 6/1/2023 8:02 AM - Shawn response Thu 6/1/2023 8:11 AM 7 Ridgeside Road Chattanooga, TN Alarm light not flashing / Tank water in normal level / Water level was enough to have blue float turned up upside down / Pulled blue o off float / Replaced with new blue on & off float and was able to run straight to control panel / Pulled high level float and Replaced with high level float able to run wire straight to control panel / Turned power back on and flip to auto / Everything appear to be running fine
Fri 6/2/2023 6:01 PM	Ismael Brenton	615-939-4724	8205 Rambling Rose Ooltewah	Alarm light is going off	Rodney sent message to Shawn Fri 6/2/2023 6:03 PM - Shawn response Fri 6/2/2023 8:11 PM 8205 Rambling Rose Ooltewah, TN Alarm light flashing / Tank in high level Wire wasn't connected to black compositor / Place wire on black compositor / Flip switch to hand / Pump didn't kick on / Press reset bu Flip switch to hand / Lowered tank water level Replaced Contactor and overload / Replaced Black compositor / Replaced silver compositor / Blue on & off float was still good / Filled t with water 3 different times / Everything appear to be running fine
Sun 6/4/2023 4:14 PM	Heather Wamack	423-718-7828	7884 Georgio Circle	Leakage from sewer	Rodney sent message Shawn Sun 6/4/2023 4:19 PM - Shawn response Sun 6/4/2023 8:18 PM 7884 Giorgio Circle Ooltewah, TN Main Breaker tripped inside house for grinder system / Flip main breaker back to on / Alarm light now flashing / Contactor was locked / Replaced Contactor and overload / Pulled old diaphragm switch / Replaced with blue on & off float / Replaced black compositor / Flip s to auto / Tank water lowered / While gathering tools to leave / Pump kicked on 3 cycles within 2 mins apart / Pipes are old inside tank a causing the water left in discharge line to drain back inside tank which is wearing and tearing the pump and Contactor / Notified Rodne about situation
Sun 6/4/2023 9:30 PM	Mr. Wilson	423-637-5892	131 Ridgeside Road	Sewer Alarm has gone off, please check.	Rodney sent message to Shawn Sun 6/4/2023 9:31 PM - Shawn response Mon 6/5/2023 7:44 AM 131 Ridgeside Road Chattanooga, TN Alarm light flashing / Tank in high level Flip switch to hand / Lowered tank water level Pulled old diaphragm switch / Replaced with blue on & off float / Everything appears to be running fine
Tue 6/6/2023 5:59 PM	Tommy Roe	423-633-6087	3463 Bennett ER	Commode will not flush	Rodney sent message to Kris Tue 6/6/2023 6:01 PM -
Tue 6/6/2023 8:57 PM	Razua Lovic	423-635-6800		Sewer-Septic?? Clogged.	Rodney sent message to Shawn Tue 6/6/2023 8:59 PM - sent to Kris Tue 6/6/2023 9:05 PM - Shawn response Wed 6/7/203 8:44 AM 20 McBrien Road East Ridge, TN WWTA doesn't maintain this location.
Wed 6/7/2023 3:24 PM	Tom Hardin	931-644-9863		Hydromatic going off	Rodney sent message to Octavio Wed 6/7/2023 3:38 PM -
Wed 6/7/2023 6:49 PM	Adam Campbell	813-468-4063		Grinder Panel flashing	Rodney sent message to Blake Wed 6/7/2023 6:50 PM - Blake response Thu 6/8/2023 7:44 AM Pulled pump removed wash cloth Used fishing net to clean out remaining debris. When confronted the home owner didn't seem like they cared or were going to change their ways. We're going to have to watch this h Re-Hung Float Running fine at 10
Wed 6/7/2023 6:53 PM	Christy Hixson	423-364-7396	3719 Way Hixson TN	Control Panl Alarm	Rodney sent message Blake Wed 6/7/2023 7:16 PM - Blake response Thu 6/8/2023 8:04 AM Replaced switch with float. Running fine at 11 amps. -
Wed 6/7/2023 7:32 PM	Michael Housley - FT. O.GA	423-421-5046	Stateline Road	Overflow of Road at manhole	Rodney sent message to Trent Wed 6/7/2023 7:34 PM - Trent response Wed 6/7/203 7:41 PM I have called back and they state that a manhole is overflowing at the intersection of Bennett Rd and State Line Rd. I contacted Jackie to have him that way with the jet truck. I take pictures and document what I find. - Trent response Wed 6/7/2023 11:01 PM Contacted Jackie to bring the jet truck to MH #1923 was surcharged. We went downstream to MH 428 to clear. At 10:15 the manhole was clear and fully flowing with no obstruction. -
Fri 6/9/2023 1:31 PM	Michael Hopkins	423-490-5905	202 Pine Hurst Ln	Float switch stuck	Cisco Unity Connection Messaging System
Fri 6/9/2023 10:08 AM	Larry Allen	423-580-0116	1766 ?? Way	Grinder pump running all the time	Rodney sent message to Blake Fri 6/9/2023 10:17 AM - Blake response Fri 6/9/2023 8:00 pm Replaced faulty switch with Float. Cleaned out tank. Tested and running fine at 10Amps.
Fri 6/9/2023 1:31 PM	Michael Hopkins	423-490-5905	202 Pinehurst Lane Signal Mtn.	Pump will not shut off	Rodney sent message to Blake Fri 6/9/2023 1:35 PM
Sat 6/10/2023 7:41 AM	Ham Cty 911 Amanda	423-602-8029 or 423-622-0022	9209 Windstone	Possible water main break or sewer	Rodney sent message to Trent Fri 6/9/2023 6:23 PM - Rodney response Sat 6/10/2023 7:46 AM This is not us please let her know if it is sewer it's a private line. Trent response Sat 6/10/2023 8:09 AM I have called back to inform. -
Sat 6/10/2023 8:49 PM	Meehan Kayvon	865-765-8984	2881 Reflection Lane Ooltewah	Pump light is going off	Rodney sent message to Blake Sat 6/10/2023 8:50 PM - Blake response Sun 6/11/2023 8:17 AM Pulled / cleaned out locked pump. Replaced switch with float. Running fine at 8 Amps.

B-2 –Complaint Call Emails (Examples)

Re: Sewer Odor 7900 Giorgio Circle

AB Adams, Blakelan <BlakelanA@HamiltonTN.gov>
To Wright, Steven A; Ashby, Rodney; Patrick, Michael

This mainline break has been repaired.

On Nov 9, 2023, at 11:04 AM, Adams, Blakelan <BlakelanA@hamiltontn.gov> wrote:

This is the box we just put in I'm heading to check it out now.
Sent from my iPhone

Begin forwarded message:

From: "Gilbert, Kimberly" <KGilbert@hamiltontn.gov>
Date: November 9, 2023 at 11:02:20 AM EST
To: "Adams, Blakelan" <BlakelanA@hamiltontn.gov>, "Mosley, Shawn Q" <ShawnM@hamiltontn.gov>, "Gilbert, Kimberly" <KGilbert@hamiltontn.gov>
Cc: "Mowery, Larry" <LarryMow@hamiltontn.gov>, "Ashby, Rodney" <RodneyA@hamiltontn.gov>
Subject: Sewer Odor 7900 Giorgio Circle

Ms. Carmen George, 7914 Giorgio Circle, called reporting sewer odor coming from next door at 7900 Giorgio Circle. Carmen's phone number is (423) 255-3136 She states at 7900 Giorgio Circle they have done installation this week.

Daniel LaTour pulled Permit 7191 10/26/2023 for a grinder pump at 7900 Giorgia Circle.

Please investigate.

Kimberly Gilbert
Hamilton County Water & Wastewater Treatment Authority
Development Resource Center
1250 Market Street, Suite 3050
Chattanooga, TN 37402
Tel. (423) 209-7842
Fax (423) 209-7809

Re: Message from KITCHENS RONALD (4233151569)

SA Shepherd, Andrew <AndrewS@HamiltonTN.gov>
To Ashby, Rodney

Manhole 3503 overflowing at 10GPM at 1215pm, stopped about 1pm

- Andrew S.

On Oct 9, 2023, at 9:44 AM, Ashby, Rodney <RodneyA@hamiltontn.gov> wrote:

Need manhole number, time you seen it, flow rate and stop time. Please

---

From: Shepherd, Andrew
Sent: Sunday, October 8, 2023 9:32 PM
To: Ashby, Rodney
Cc: Mathis, Lindia; Drake, Karen; Williams, Felicia; Patrick, Michael
Subject: Re: Message from KITCHENS RONALD (4233151569)

Found manhole that was overflowing and it eventually lead to Camp Jordan station that had a fuse issue. Got it fixed then made sure station pumped down and manholes went down.

- Andrew S.

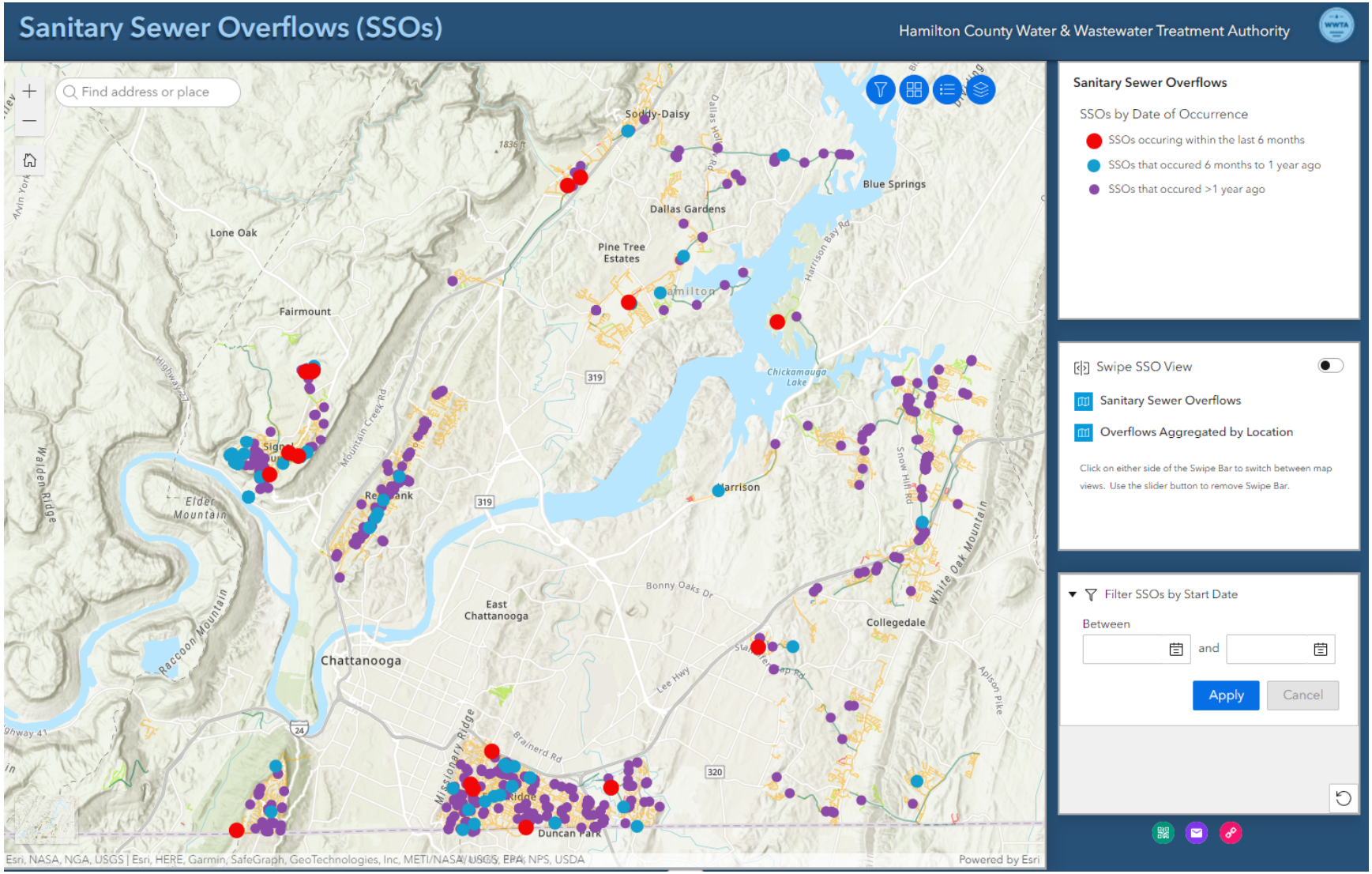
On Oct 8, 2023, at 11:29 AM, Ashby, Rodney <RodneyA@hamiltontn.gov> wrote:

Sent from my iPhone

Begin forwarded message:

From: Cisco Unity Connection Messaging System <unityconnection@its-cuc01.hamiltontn.gov>
Date: October 8, 2023 at 11:28:11 AM EDT
To: sewer_emergency@its-cuc01.hamiltontn.gov
Subject: Message from KITCHENS RONALD (4233151569)

B-3 – Sanitary Sewer Overflow Observation Report (Example)


Sanitary Sewer Overflows (SSOs)
Hamilton County Water & Wastewater Treatment Authority
Find address or place
Soddy-Daisy
Blue Springs
Dallas Gardens
Lone Oak
Pine Tree Estates
Fairmount
Harrison Bay Rd
Chickamauga Lake
Harrison
Mountain Creek Rd
Elder Mountain
Walden Ridge
Raccoon Mountain
East Chattanooga
Chattanooga
Bonny Oaks Dr
Collegedale
White Oak Mountain
Snow Hill Rd
Lee Hwy
Brainerd Rd
Missionary Ridge
Duncan Park
Apison Pike
319
320
24
Sanitary Sewer Overflows
SSOs by Date of Occurrence
SSOs occuring within the last 6 months
SSOs that occured 6 months to 1 year ago
SSOs that occured >1 year ago
Swipe SSO View
Sanitary Sewer Overflows
Overflows Aggregated by Location
Click on either side of the Swipe Bar to switch between map views. Use the slider button to remove Swipe Bar.
Filter SSOs by Start Date
Between
and
Apply
Cancel
Esri, NASA, NGA, USGS | Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA
Powered by Esri

B-4 - Spill Volume Estimating

A variety of approaches exist for the estimation of the volume of a sanitary sewer overflow. This appendix documents the three methods that are most often employed by the City of San Diego. The person preparing the estimate should use the method most appropriate to the sewer overflow in question using the best information available. Every effort should be made to make the best possible estimate of the volume. Assistance from the WWC Engineering Section should be sought for larger sewer overflows.

Method 1 – Visual Eyeball Estimate

The volume of very small spills can be estimated using a visual estimate." To use this method imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 gallons. This method is useful for contained spills up to 100 gallons.

Method 2 - Duration and Flow Rate

In this method a separate estimate is made of the duration of the spill and the flow rate. The methods of estimating duration and flow rate are:

Duration: The duration is the elapsed time from the start time to the time the spill stopped.

Start time is sometimes difficult to establish. Here are some approaches:

1) Local residents can be used to establish start time. Inquire as to their observations. Spills that occur in rights-of-way are usually observed and reported in short order. Spills that occur out of the public view can go on longer. Sometimes observations like odors or sounds (e.g. water running in a normally dry creek bed) can be used to estimate the start time.

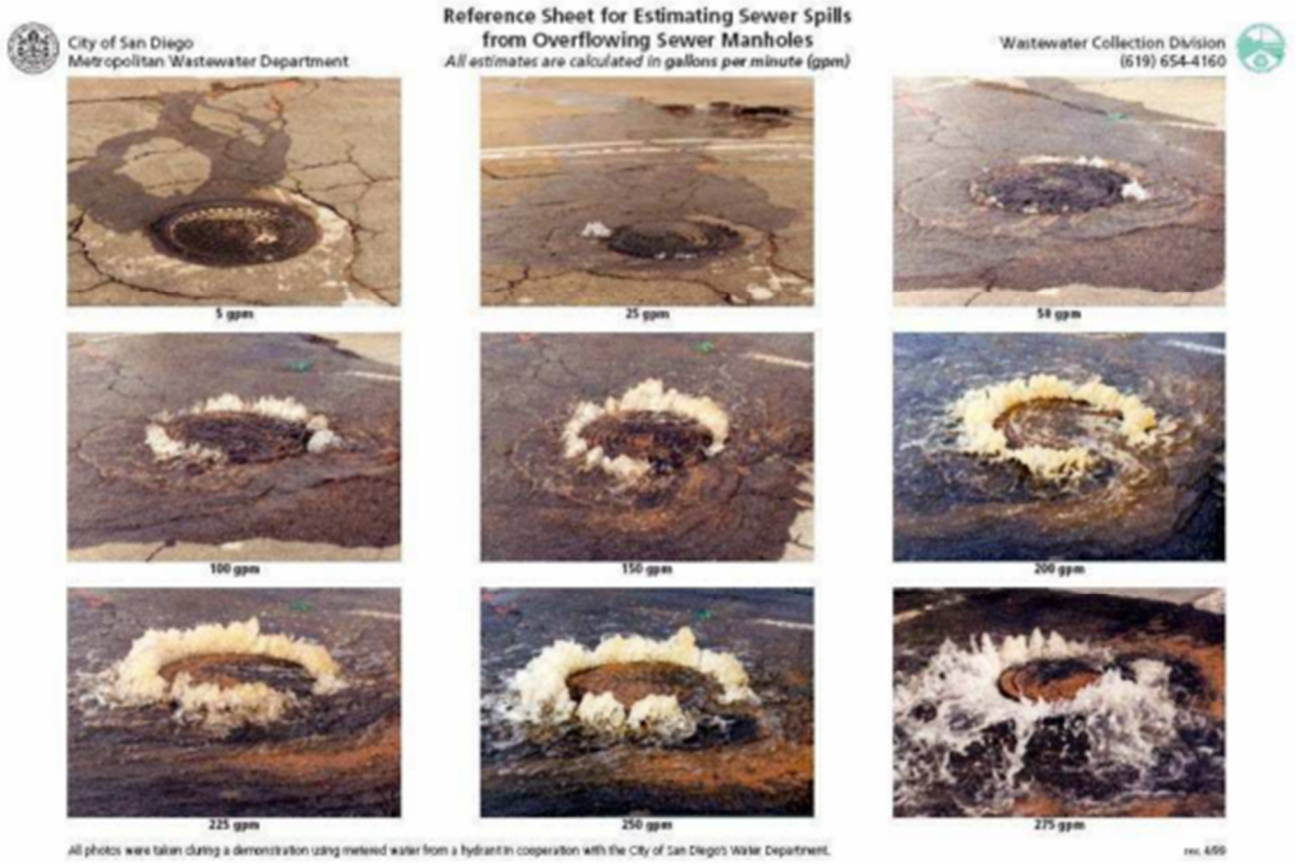
2) Changes in flow on a downstream flowmeter can be used to establish the start time. Typically the daily flow peaks are "cut off" or flattened by the loss of flow. This can be identified by comparing hourly flow data, when available.

3) Conditions at the spill site 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 both cases the quantity of toilet paper and other materials of sewage origin increase in amount. These changes with time can be used to estimate the start time in the absence of other information.

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 “blow down” can also be observed in downstream flowmeters.

Flow Rate: The flow rate is the average flow that left the sewer system during the time of the spill. There are three ways to estimate the flow rate:

1) San Diego Manhole Flow Rate Chart: This chart shows the sewage flowing from a manhole cover for a variety of flow rates. The observations of the field crew are used to select the approximate flow rate from the chart.



2) Flowmeter: Changes in flows in the downstream flowmeters can be used to estimate the flow rate during the spill.

3) Estimate based on up-stream connections: Once the location of the spill is known, the number of upstream connections can be determined from the field books. Multiply the

number of connections by 200 to 250 gallons per day per connection or 8-10 gallons per hour per connection.

Once duration and flow rate have been estimated, the volume of the spill is the product of the duration in minutes or days times the flow rate in gallons per minute or gallons per day.

B-5 – Possible SSO Locations Due to Pump Station Failure

PUMP STATION	ADDRESS	FACILITY ID #	
Amos Road	9115 Amos Rd.	MH12331-01	
Amos Road East	9200 Amos Road	MH13329-01	
Blue Bird Circle	503 Bluebird Circle	3466	
Brock Pointe	8020 Burgundy Cir	06310-01	
Camp Columbus	1809 Albermarle Dr.	93307-C01	
Camp Jordan PS # 1	325 Camp Jordan Rd	3503	
Card Road	326 Maple St	97323-01	
Cedar Glen	311 Camp Jordan Parkway	40	wetwell
Country Oaks (Yogi Lane)	9043 Dallas Hollow Rd	05337-A1	
Dallas Hollow	9575 OldDallasHollowRd.	05313-01	
Dayton Pike	11801 Dayton Pike	05308-01	
Durham Street	Durham & Dayton	94312-02	
East Boy Scout	1605 East Boy Scout Road	92307-26	
East Ridge Main PS	1018 Yale Street	15	
Fort Stephenson Lower	1215 Ft Stphnsn Oval	49575190	wetwell
Fort Stephenson Upper	1215 Ft Stphnsn Oval	49575190	wetwell
Frawley PS # 1	533 Frawley Rd.	3123	
Georgetown Bay	8370 Gracie Mac Ln	05319-99	
Germantown Road	594 Bonnie Lassie Av	02303-02	
Green Gap Road	7526 Ool-Gtwn Rd.	06312-A1	
Hampton Creek Town Homes	8215 Double Eagle Ct.	04303-01	
Harrison Bay	8321 Harrison By Rd.	04356-02	
Harrison Ooltewah (Hwy 58)	6377 Harrison Ooltewah Rd	98306-1	
Holland Johnson	1060 H Johnson Rd	97310-01	
Hurricane Creek	1425 Ooltewah Ringgold Ro	93308-01	
Igou Ferry	230 Igou Ferry Rd	95311-1	
Integra Hills	5227 Little Debbie Pkwy	MH11314-01	
Kings Valley	7602 Prince Dr.	99309-FM-01	
Lake Carolyn	9015 Lake Carolyn Ln	94314-01	
Lakes of Standifer	8410 Standifer Gap Rd	06326-01	
Lakeside Circle	8250 W Lakeside Cir	95308-26	wetwell
Laurel Cove	7260 Autumn Lake Tr	96307-01	
Lee Highway	8912 Old Lee Hwy.	02302-001A	
Nature Trail	611 Hatch Tr	05310-01	
Nolan Elemenatary School	2521 Sam Powell Tr	06316-02	
Oak Brook	9832 E. Brainerd Rd.	MH08320-02	
Posey Hollow	12101 Posey Hollos Road	794	wetwell
Pottery Lane	146A Pottery Ln	GM05320-03	
Prarie Pass	10924 E. Brainerd Rd	MH07336-01A	
Rhinehart Valley	10211 London Ln	MH07342-01	
Ridgeside	300 Shepard Ave		wetwell
Rogers Branch	8510 Rancho Dr.	8697	
Roy Lane	8210 Roy Lane	05319-02	
Sequoyah Access	1915 Sequoyah Access Rd	38	wetwell
Sequoyah Training Center	2600 Igou Ferry	37	wetwell
Short Tail Springs	7634 Shorttail Sps Rd.	94301-02	
Signal Mountain Road	245 Signal Mt. Road	4068	wetwell
Snow Hill Road	7600 Snow Hill Rd.	04307-01	
Soddy Industrial Park	220 Industrial Park Dr	96322-EM03	
Summit Springs (Fed-ex)	5054 Summit Springs Way	MH16314-03	
Sunset Ridge	8330 Ool-Gtwn Rd.	435413621	
Sylar Road (Retreats at White Oa	7276 Sylar Road	07301-016A	
Textile Lane	2731 Cummings Hwy	23	wetwell
Timber Ridge	8830 E Ridge Tr Rd.	04324-40	wetwell
TVA Nuclear Plant	2600 Igou Ferry	88309-EMH-03	
West Brow	701 1/2 W. Brow Rd	LM903	
West Brow Oval	225 W Brow Oval	45	wetwell

= Known location

B-6 –SSO Locations Occurring Multiple Times Within 12 Months (Example)

Asset Type	FACILITYID	Start Date	End Date	Total Gallons	LOCATION
MH	71301-18	12/10/2023	12/11/2023	145,125	837 Ravine Rd
MH	71301-18	12/25/2023	12/27/2023	459,000	837 Ravine Rd
MH	71301-18	1/9/2024	1/11/2024	991,425	837 Ravine Rd
MH	71301-18	1/25/2024	1/30/2024	2,032,625	837 Ravine Rd
LS	71301-18	3/6/2024	3/8/2024	996,700	837 Ravine Rd
MH	71301-18	3/9/2024	3/10/2024	110,250	837 Ravine Rd
MH	71301-18	3/15/2024	3/18/2024	1,388,575	837 Ravine Rd
MH	71301-18	3/26/2024	3/28/2024	1,015,025	837 Ravine Rd
MH	71301-18	4/3/2024	4/4/2024	43,125	Signal Mountain Swr Proj # 2
MH	71301-18	4/11/2024	4/11/2024	25,875	Signal Mountain Swr Proj # 2
MH	71301-18	4/17/2024	4/17/2024	60,575	Signal Mountain Swr Proj # 2
MH	71301-18	5/9/2024	5/10/2024	938,200	Signal Mountain Swr Proj # 2
MH	71301-18	5/27/2024	5/28/2024	78,975	Signal Mountain Swr Proj # 2
MH	70301-96	12/10/2023	12/11/2023	45,000	101 Riverpoint Rd
MH	70301-96	12/28/2023	12/31/2023	140,050	101 Riverpoint Rd
MH	70301-96	1/9/2024	1/11/2024	383,825	101 Riverpoint Rd
MH	70301-96	1/28/2024	2/2/2024	726,125	101 Riverpoint Rd
MH	70301-96	3/6/2024	3/8/2024	387,700	101 Riverpoint Rd
MH	70301-96	3/15/2024	3/16/2024	112,525	101 Riverpoint Rd
MH	70301-96	3/26/2024	3/28/2024	209,100	101 Riverpoint Rd
MH	70301-96	5/9/2024	5/9/2024	155,600	Signal Mountain Sewer Project # 1
MH	71301-19	12/26/2023	12/28/2023	65,625	300 Green Gorge Rd
MH	71301-19	1/9/2024	1/10/2024	48,750	300 Green Gorge Rd
MH	71301-19	1/26/2024	1/27/2024	14,700	300 Green Gorge Rd
MH	71301-19	1/27/2024	1/28/2024	29,325	300 Green Gorge Rd
MH	71301-19	3/6/2024	3/7/2024	36,750	300 Green Gorge Rd
MH	71301-19	3/15/2024	3/16/2024	37,500	300 Green Gorge Rd
MH	71301-19	3/26/2024	3/27/2024	41,250	300 Green Gorge Rd
MH	71301-19	5/9/2024	5/9/2024	31,500	Signal Mountain Swr Proj # 2
MH	70301-02	12/27/2023	12/28/2023	179,850	1701 Suck Creek Rd
MH	70301-02	1/9/2024	1/10/2024	464,175	1701 Suck Creek Rd
MH	70301-02	1/27/2024	1/27/2024	135,050	1701 Suck Creek Rd
MH	70301-02	3/6/2024	3/7/2024	260,275	1701 Suck Creek Rd
MH	70301-02	3/15/2024	3/15/2024	26,975	1701 Suck Creek Rd
MH	70301-02	3/26/2024	3/27/2024	372,625	1701 Suck Creek Rd
MH	70301-02	5/9/2024	5/10/2024	389,250	Signal Mountain Sewer Project # 1
MH	70301-118	1/9/2024	1/10/2024	195,675	112 Signal Point Trl
MH	70301-118	1/27/2024	1/27/2024	81,700	112 Signal Point Trl
MH	70301-118	1/31/2024	2/1/2024	45,900	112 Signal Point Trl

MH	70301-118	3/6/2024	3/7/2024	112,600	112 Signal Point Trl
MH	70301-118	3/15/2024	3/16/2024	46,875	112 Signal Point Trl
MH	70301-118	3/26/2024	3/27/2024	101,075	112 Signal Point Trl
MH	70301-118	5/9/2024	5/9/2024	155,600	Signal Mountain Sewer Project # 1
MH	70301-91	12/10/2023	12/13/2023	349,125	104 Riverpoint Rd
MH	70301-91	12/30/2023	1/4/2024	705,625	104 Riverpoint Rd
MH	70301-91	1/9/2024	1/15/2024	663,850	104 Riverpoint Rd
MH	70301-91	1/25/2024	2/2/2024	1,476,600	104 Riverpoint Rd
MH	70301-91	3/6/2024	3/19/2024	2,381,450	104 Riverpoint Rd
MH	70301-91	3/26/2024	3/28/2024	145,075	104 Riverpoint Rd
MH	70301-91	5/9/2024	5/9/2024	155,600	Signal Mountain Sewer Project # 1
MH	71301-24A	1/9/2024	1/10/2024	39,000	320 Green Gorge Rd
MH	71301-24A	1/25/2024	1/26/2024	36,750	320 Green Gorge Rd
MH	71301-24A	1/27/2024	1/28/2024	26,625	320 Green Gorge Rd
MH	71301-24A	3/6/2024	3/7/2024	14,700	320 Green Gorge Rd
MH	71301-24A	3/15/2024	3/16/2024	15,000	320 Green Gorge Rd
MH	71301-24A	3/26/2024	3/22/2024	13,200	320 Green Gorge Rd
MH	71301-24A	5/9/2024	5/9/2024	12,600	Signal Mountain Swr Proj # 2
MH	05320-02	1/9/2024	1/9/2024		200 Blk. Pottery Ln.
LS	05320-02	1/9/2024	1/9/2024	131,398	Pottery Lane Sewer Ext to Apt Complex
MH	05320-02	1/25/2024	1/26/2024	86,723	200 Blk. Pottery Ln.
MH	05320-02	1/27/2024	1/27/2024	64,149	200 Blk. Pottery Ln.
MH	05320-02	3/26/2024	3/26/2024	24,609	200 Blk. Pottery Ln.
PM	63403704	4/30/2024	4/30/2024		
PM	63403704	4/30/2024	5/1/2024		
Manhole	1264A	1/9/2024	1/9/2024	70,476	4233 Belvior Dr.
MH	1264A	5/9/2024	5/9/2024	16,875	4233 Belvior Dr
Manhole	360A	1/9/2024	1/9/2024	14,625	Scott Street
MH	360A	5/9/2024	5/9/2024	11,250	5734 Scott Street
MH	70301-119	3/6/2024	3/7/2024	14,700	1 Signal Point Circle
MH	70301-119	3/26/2024	3/27/2024	13,200	1 Signal Point Circle
MH	70301-95	12/29/2023	12/31/2023	26,350	101 Riverpoint Rd
MH	70301-95	1/29/2024	1/30/2024	14,700	101 Riverpoint Rd
LS	98325-1	12/25/2023	12/25/2023	3,150	12101 Posey Hollow Road (loc on)
PS	98325-1	4/3/2024	4/3/2024	100	12101 Posey Hollow Road (loc on)

B-7 –5-Day SSO Report to TDEC

NPDES Sewer Overflow/Release/ByPass/Upset Event Report

Facility Name Hamilton County Water & Wastewater Treatment Authority **Submission** HPZ-5Y3C-2QA40 **Revision** 1 **Form Version** 1.12

Sewer Overflow Event

1

Sewer Overflow Event

CLEAR

DUPLICATE

Date Event Began

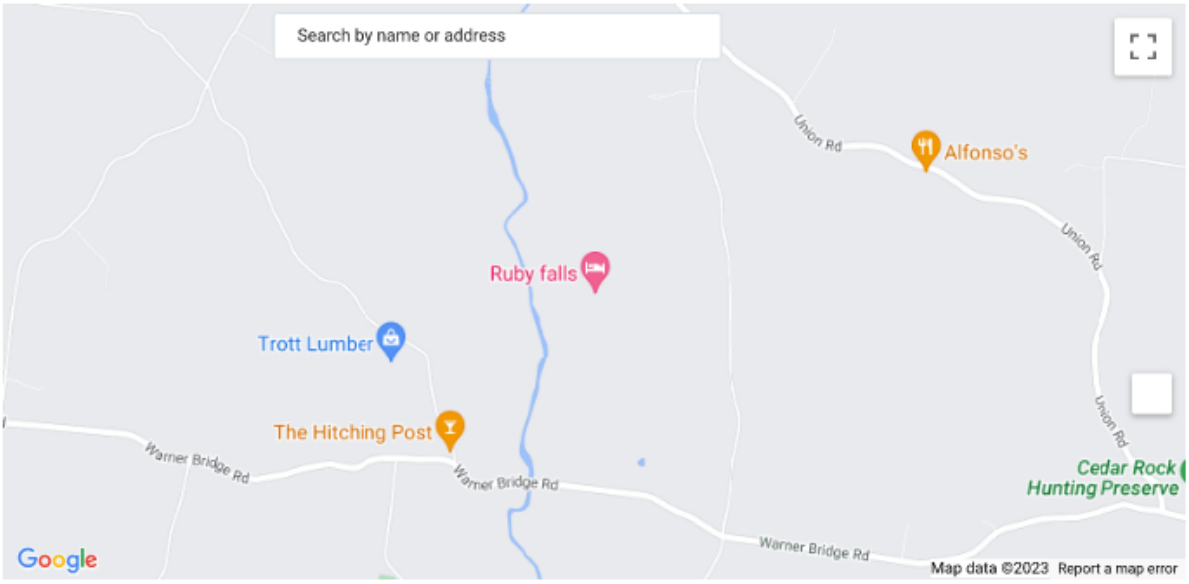
*

Duration (Hours)

*

https://forms.tdec.tn.gov/app/#/submissionwizard/6a0167fc-4ebd-442a-a767-755950bf414f/1 1/4

Location



LOCATION COORDINATES

* *Latitude*

Longitude *

State

TN

City

Street Address

Structure/Component ID

Structure/Component

* *Select...*

Next Down Stream Pump Station

*

Type of Event

* Select...

Est. Volume (Gallons)

*

PLEASE LOOKUP WATERBODY USING MAPPING TOOL

If you need help identifying receiving waterbodies, please access the following mapping application to locate the waterbody. You can copy the Source_FeatureID value (ex: TN05130107006_2000) and paste it in the Receiving Water Name below.

DWR Waterbodies Spatial Tool

Primary Cause of Event

* Select...

Primary Corrective Action Taken

* Select...

Photos

Attach associated photos of this Event.

Please be aware that files exceeding 500 MB in size are not recommended.

Drop files here to upload

OR

CHOOSE FILE

Comment


Notes
DUPLICATE SEWER OVERFLOW EVENT
ADD NEW SEWER OVERFLOW EVENT

APPENDIX C

C-1 – SSO Temporary Signage Templates

Untreated Municipal/Sanitary Wastewater

Hamilton County Water & Wastewater Treatement Authority WWTA

423-209-7842

SOP Permit No. SOP-89044

Tennessee Division of

Water Pollution Control

1-888-891-8322

Environmental Field Office - Chattanooga

Untreated Municipal/Sanitary Wastewater

Hamilton County Water & Wastewater Treatement Authority WWTA

423-209-7842

NPDES Permit No. TN0021211

Tennessee Division of

Water Pollution Control

1-888-891-8322

Environmental Field Office - Chattanooga

APPENDIX D

D-1 – Press Release (Example)

Press Release

Hamilton County Water and Wastewater Treatment Authority

(Insert Date)

The sanitary sewer system owned, operated and maintained by the Hamilton County Water and Wastewater Authority (WWTA) has recently experienced an overflow. This overflow occurred at (Insert Approximate Location) . The WWTA strives to prevent overflows from occurring and this overflow has been stopped.

Investigative efforts have begun in order to determine the cause of the overflow. If you would like more information regarding this overflow, please visit the Public Document Repository in the WWTA website here: https://wwta.hamiltontn.gov/178/Public-Document-Repository.

APPENDIX E

E-1 – Hot Spot List (Example)

FACILITY ID	FREQUENCY (SSO per year)	Asset Type	LOCATION	LATITUDE	LONGITUDE
71301-18	13	MH	837 Ravine Rd	287387.5037	2166696.827
70301-96	8	MH	101 Riverpoint Rd	286730.3045	2158323.349
71301-19	8	MH	300 Green Gorge Rd	287326.348	2167000.113
70301-02	7	MH	1701 Suck Creek Rd	281928.5993	2160103.937
70301-118	7	MH	112 Signal Point Trl	287442.9307	2157663.59
70301-91	7	MH	104 Riverpoint Rd	286363.2486	2158659.513
71301-24A	7	MH	320 Green Gorge Rd	287909.0922	2167827.811
05320-02	5	MH	200 Blk. Pottery Ln.	330748.6123	2210177.609
63403704	2	PM	(N/A)	295636.939	2170110.251
1264A	2	Manhole	4233 Belvior Dr.	243837.6296	2195472.398
360A	2	Manhole	Scott Street	239037.505	2201230.92
70301-119	2	MH	1 Signal Point Circle	287594.162	2157901.905
70301-95	2	MH	101 Riverpoint Rd	286577.4354	2158214.92
98325-1	2	LS	12101 Posey Hollow Road (loc on)	355236.4219	2223116.76