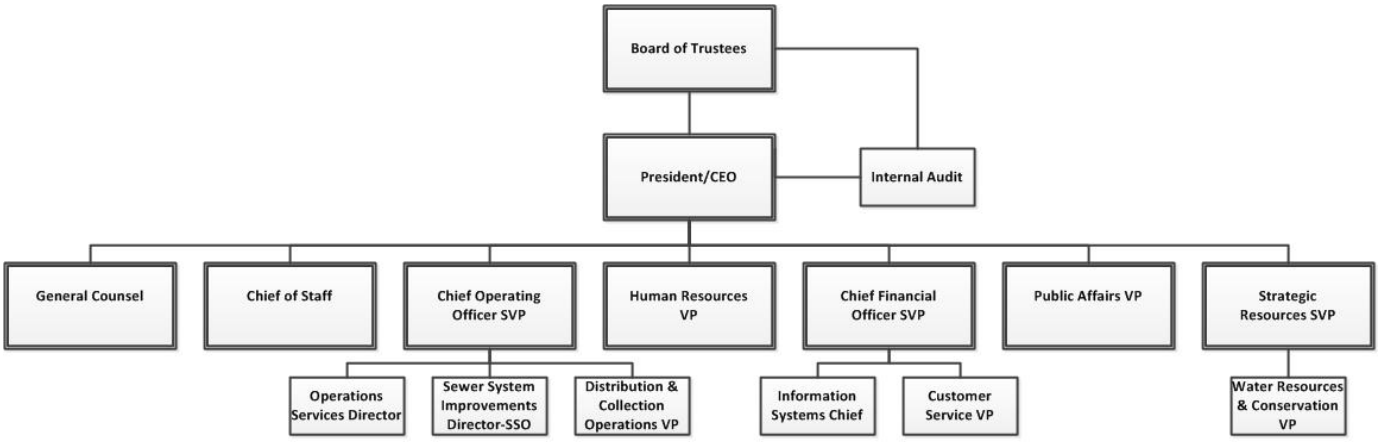
Appendix A

SAWS Organizational Chart



SAWS is governed by the SAWS Board of Trustees that includes the mayor of the City of San Antonio and six members appointed by the City Council.

- The President/CEO is responsible for overall management and leadership at SAWS. The President/CEO implements the policies set by the Board of Trustees to achieve SAWS' mission and goals. Also reporting to the Board of Trustees is the Chief of Internal Audit.
- The Chief of Staff supports Senior Vice Presidents and Vice Presidents (VPs) to make decisions and ensure that projects meet deadlines and groups are operating efficiently as well as responding to Board and CEO office matters.
- The Chief Operating Officer (COO) is responsible for operations related to the four core businesses at SAWS. The position oversees Operations, Operation Services, Distribution & Collection Operations and Production &Treatment Operations.
- The Human Resources VP is responsible for overseeing recruitment, benefits, staffing, employee relations, training and other human resources responsibilities at SAWS.
- The Chief Financial Officer (CFO) is responsible for the overall financial management of the System, which includes Accounting, Financial Planning, Finance and Treasury, Purchasing and Supply functions. The Chief Financial Officer also has responsibility for the Information Services and Customer Service functions. The Information Services function delivers a broad spectrum of applications and technology services and support to all areas of the System. Customer Service is responsible for providing the maintenance of customer accounts as well as accurate and timely billing of System customers.
- The Public Affairs VP is in charge of external and internal relations for SAWS, which includes intergovernmental affairs and communications.
- The General Counsel provides legal advice, researches legal issues, drafts legal memoranda for the Board and SAWS and represents SAWS in matters with customers, regulators and business partners. The General Counsel also oversees the Contracting, Claims and Risk Management Departments.
- The Strategic Resources VP is responsible for infrastructure master planning, water resources, and engineering. This position oversees Engineering and Construction (development of CIP program) and Water Resources (water supply projects) and Conservation departments.

Appendix B

Consent Decree SORP Requirements

13. <u>Sewer Overflow Response Plan ("SORP").</u> No later than 150 days from the Date of Lodging of the Consent Decree, SAWS shall develop, submit to EPA for review and comment, and implement a SORP that is designed to accomplish the following goals:

a. *Respond to and halt SSOs as rapidly as technically feasible consistent with safety and legal requirements;* **(See Sections 2.0 and 3.0)**

b. *Employ SSO mitigation measures whenever appropriate;* **(See Section 6.0)**

c. *Implement appropriate measures to prevent SSO recurrence;* **(See Section 11.0)**

d. *Incorporate in the SORP procedures for responding to SSOs and procedures to minimize the environmental impact and potential human health risk of SSOs. At a minimum, the SORP shall include the following:*

i. *A description of the actions SAWS will undertake to provide notice to the public (through the local news media or other means, including signs or barricades to restrict access) and to any applicable government authorities of the SSO from the WCTS when such notice is required by SAWS TPDES permits or applicable law;* **(See Section 8.0)**

ii. *A detailed description (including as appropriate the development of standard response procedures) to minimize the volume of untreated wastewater from the WCTS during an SSO event;* **(See Section 7.0)**

iii. *A detailed plan describing the standard operating procedures to be followed by SAWS personnel in responding to a Building/Private Property Backup, including:*

1. *A description of SAWS response practices and methods for communicating with customers about:* **(See Section 4.1)**

   a. *How to report Building/Private Property Backups; and*

   b. *How to obtain clean-up support from SAWS, as warranted;*

2. *The typical timeframe objectives for both initial response and completion of cleanup activities;* **(See Section 4.2)** *and*

3. *The types of measures that may be taken by SAWS to cleanup Building/Private Property Backups found to be caused by conditions in SAWS WCTS, including, as warranted by specific circumstances,*

procedures necessary to disinfect and/or remove items potentially contaminated by Building/Private Property Backups, wet vacuuming or other removal of spillage, wiping floors and walls with cleaning solution and disinfectant, flushing out and disinfecting plumbing fixtures, carpet cleaning and/or replacement or other appropriate measures to disinfect and/or remove items potentially contaminated by Building/Private Property Backups. **(See Section 4.3)**

iv. *A description of the process by which measures to correct or repair conditions in the WCTS causing or contributing to Building/Private Property Backups are selected;* **(See Section 4.4)**

v. *An inspection of each sewer pipe that experiences an SSO using CCTV, Pole Camera or other appropriate inspection methods as soon as practicable, but not later than forty-eight hours following the cessation of the SSO. In general, such inspection shall typically involve the first adjacent Pipe Segment upstream and downstream of the specific WCTS asset experiencing an SSO;* **(See Section 10.0)**

vi. *A description of how SAWS will complete cleanup activities of SSOs greater than 10,000 gallons, including:*

1. *Time frame for completion of SSO cleanup activities;* **(See Section 9.1)**
2. *Photographic evidence that SSO cleanup is complete;* **(See Section 9.2)** *and*
3. *Supervisor approval to confirm that the SSO cleanup is complete.* **(See Section 9.3)**

vii. *A description of standard response procedures for SSOs that occur at Lift Stations or Force Mains. In the event that a repair at a Lift Station or Force Main may cause or lengthen the time of an SSO, the SORP shall provide a procedure for determining when a wastewater pump-around will be provided.* **(See Section 5.0)**

Appendix C

Applicable Definitions

7. Terms used in this Consent Decree that are defined in the CWA, or in regulations promulgated pursuant to the CWA, shall have the meanings assigned to them in the CWA or such regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. *"Building/Private Property Backup" shall mean, for purposes of this Consent Decree, a wastewater backup into a building that is caused by blockages, malfunctions, or flow conditions in the WCTS. Building/Private Property Backup does not include wastewater backup into a building that is caused by a blockage or other malfunction of a Private Lateral or other piping or conveyance system that SAWS does not own or operate.*

b. *Term defined in the CD, but not used in the SORP*

c. *"Capacity Constraint" means those discrete components, or groups of components, of the WCTS that are determined by SAWS, consistent with the Capacity Program in Appendix D, to have verified capacity deficiency issues that have caused or significantly contributed to previous capacity-related SSOs due to wet weather events that are within design parameters; and/or, that are likely to cause or significantly contribute to future capacity-related SSOs due to wet weather events that are within design parameters. As described in Appendix D, potential Capacity Constraints include Priority 1 through 4 and may include Priority 5.*

d. *"CCTV" shall mean closed circuit television.*

e. *"City" shall mean the City of San Antonio, a Texas home rule city.*

f. *"Clean Water Act" or "CWA" shall mean the Clean Water Act, formally entitled*

the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251-1387.

g. *"Consent Decree" or "Decree" shall mean this Consent Decree and all Appendices attached hereto (listed in Section XXIII (Integration/Appendices)).*

h. *Term defined in the CD, but not used in the SORP.*

i. *"Date of Lodging" or "Lodging" shall mean the date on which this Consent Decree is filed for lodging with the Clerk of the United States District Court for the Western District of Texas.*

j. *"Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.*

k. *Term defined in the CD, but not used in the SORP.*

l. *"EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.*

m. *"FOG" shall mean fats, oils, and grease.*

n. *Term defined in the CD, but not used in the SORP.*

o. *Term defined in the CD, but not used in the SORP.*

p. *Term defined in the CD, but not used in the SORP.*

q. *"Force Main" shall mean any pipe that receives and conveys, under pressure, wastewater from the discharge side of a pump. A Force Main is intended to convey wastewater under pressure.*

r. *"Gravity Sewer Main" or "Gravity Sewer" shall mean a pipe that receives, contains and conveys wastewater not normally under pressure, but is*

intended to flow unassisted under the influence of gravity.

s. *Term defined in the CD, but not used in the SORP.*

t. *Term defined in the CD, but not used in the SORP.*

u. *"I/I" shall mean the total quantity of water from inflow, infiltration, and rainfall induced infiltration without distinguishing the source.*

v. *Term defined in the CD, but not used in the SORP.*

w. *Term defined in the CD, but not used in the SORP.*

x. *"Lift Station" shall mean facilities in the WCTS (not at the WWTPs) comprised of pumps which lift wastewater to a higher hydraulic elevation, including all related electrical, mechanical, and structural systems necessary to the operation of that lift station.*

y. *"Paragraph" shall mean a portion of this Consent Decree identified by Arabic numerals.*

z. *Term defined in the CD, but not used in the SORP*

aa. *"Pipe Segment" shall mean the reach of Gravity Sewer Main pipe extending from manhole to manhole.*

bb. *"Private Lateral" shall mean that portion of the collection system or sanitary sewer system, not owned by SAWS, used to convey wastewater from a building or buildings to that portion of the WCTS owned by SAWS.*

cc. *"Remedial Measures" shall mean spot repairs, trenchless sewer rehabilitation, sewer replacement, repair or reconstruction, and any other appropriate WCTS improvement techniques for resolving condition and/or capacity deficiencies in a particular system asset or group of assets within the WCTS*

that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs. Remedial Measures shall not include capital improvement projects implemented exclusively to provide sewer service for new development.

dd. *"SAWS" shall mean the San Antonio Water System, an agency of the City of San Antonio, Texas.*

ee. *"Sanitary Sewer Overflow" or "SSO" shall mean, for purposes of this Consent Decree: 1) unpermitted discharges from SAWS WCTS to State water or waters of the United States from SAWS WCTS; and 2) any release of wastewater from SAWS WCTS to public or private property that does not reach State water or waters of the United States, including Building/Private Property Backups.*

ff. *Term defined in the CD, but not used in the SORP.*

gg. *Term defined in the CD, but not used in the SORP.*

hh. *"State" shall mean the State of Texas.*

ii. *Term defined in the CD, but not used in the SORP.*

jj. *Term defined in the CD, but not used in the SORP.*

kk. *"TCEQ" shall mean the Texas Commission on Environmental Quality and any of its successor departments or agencies.*

ll. *Term defined in the CD, but not used in the SORP.*

mm. *"United States" shall mean the United States of America, acting on behalf of EPA.*

nn. *"Wastewater Collection and Transmission System" or "WCTS" shall mean the wastewater collection, retention and transmission system, including all Force*

Mains, Gravity Sewer Mains, Lift Stations, manholes and other appurtenances thereto which are owned by SAWS, including any new assets constructed under this Decree to resolve condition and/or capacity issues identified that have caused or significantly contributed to previous SSOs; and/or, that are likely to cause or significantly contribute to the future occurrence of SSOs.

oo. *"Wastewater Treatment Plant" or "WWTP" shall mean devices or systems used in the storage, treatment, recycling, and reclamation of municipal wastewater. For purposes of this Consent Decree, this definition shall refer to following treatment facilities: the Leon Creek WWTP, the Medio Creek WWTP, the Salado Creek WWTP and the Dos Rios WWTP, and all components of such sewage treatment plants.*

pp. *"Wet Weather-Related SSOs" shall mean historical SSOs identified by SAWS as capacity or I/I-related or that occurred during wet weather events.*

qq. *Term defined in the CD, but not used in the SORP.*

Definitions applicable to the SORP and not defined in the Consent Decree include:

- "Root Cause Analysis" shall mean investigation performed by SAWS soon after an SSO incident to assign the most likely immediate cause of each SSO.
- "Standard Operating Procedures (SOPs) or Procedures" shall mean guidelines for use by SAWS staff under typical operating conditions; SAWS staff may modify procedures as warranted based on actual conditions encountered and professional judgment.

Appendix D

Wastewater Spill Reporting Procedure

WASTEWATER SPILL REPORTING PROCEDURE

Requirements:	30 TAC 305.125(9); 30 TAC Chapter 319 Subchapter C; TCEQ Form No. TCEQ-0501: EA Chapter 713 Subchapter E
Effective Date:	03/19/04
Revision #:	3
Revision Date:	11/27/13

PURPOSE

The purpose of this Wastewater Spill Reporting Procedure is to:

- Identify technical information and requirements for reporting wastewater spills
- Provide guidance so that spills and releases are put in the proper category to facilitate reporting in conformance with the Emergency Management Operations Plan (EMOP). The SAWS Emergency Management Operations Plan (EMOP) is intended to serve as a capstone document for all emergency checklists and event specific contingency plans. Emergency checklists and contingency plans in Annex B of EMOP fulfill emergency response planning requirements under Title IV of the Public Health Security and Bioterrorism Preparedness and Response Act, Public Law 107-188. The EMOP consists of a "core plan" outlining assumptions, concepts and responsibilities for planning, preparedness and response. Annexes with checklists, event specific contingency plans, maps and additional information, prepared by specific Departments and Divisions are components of the core plan, but distributed under separate cover by the responsible Department
- Identify responsibilities for various SAWS organizations
- Identify communication for customers, Contractors, outside agencies, and SAWS
- Provide a training tool for response to wastewater spills

DEFINITIONS

Edwards Aquifer Recharge Zone (EARZ) - An area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of geologic formations in proximity to the Edwards Aquifer where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge from surface waters to groundwater into the Edwards Aquifer.

Spill/SSO – Occurs when wastewater from the wastewater collection system is inadvertently discharged into or adjacent to any water in the state at a location not permitted as an outfall.

Water in the state - Groundwater, lakes, bays, ponds, reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Gulf of Mexico, and all other bodies of surface water, natural or artificial, including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.

INITIAL REPORT AND INVESTIGTION PROCEDURES

Wastewater spill is reported to the Emergency Operations Center (EOC).

Emergency Operations Center (EOC)

The EOC is notified of a sewer related problem and will do the following as warranted:

1. Obtain the following information:
   - Name and phone number of caller
   - Address or closest address (intersection)
   - Location of manhole or sewer leak (street, alley, on the property, etc.)
   - Discharge route of spill (storm drain, creek, etc.)
2. Create a service request or work order.
3. Notify the appropriate Spill Investigation and Reporting Group (SIRG):
   - Distribution & Collection Operations
   - Production & Treatment Operations
   - Construction Inspections
   - Other
4. After the SIRG provides the EOC with an update, the EOC will notify on-call Resource Protection & Compliance (RPC) personnel and on-call SIRG Supervisor/Superintendent.
5. E-mail Situation Report to Water, Wastewater or Recycle Water Issues Group and Others as necessary.
6. Report the spill to the TCEQ Regional Office, 403-4050 within 24 hours after receiving the initial report of the release.

Spill Investigation and Reporting Group (SIRG)

The SIRG will assign an Investigator.
Personnel investigating will:

1. Perform field investigation to identify and document extent of wastewater spill:
   - Time
   - Location (street address, nearest cross street, Ferguson Map Grid #, and Block Map #)
   - Estimated volume
   - Containment or if the water has reached a waterway
   - Ability of crew to control the spill and status to correct the situation
   - Waterway in proximity (if known)
   - Fish kill in affected waterways
2. Report information to the EOC.
3. Determine whether to initiate one of the following:
   - **Normal Notification**, see Normal Notification
   - **Public Notice of Spills**, spill adversely effects a public or private source of drinking water, 50,000 gallons or greater over the Edwards Aquifer Recharge Zone (EARZ) or Contributing Zone of the EARZ, or 100,000 gallons or greater

REGULATORY AND COMMUNICATION NOTIFICATION PROCEDURES

Normal Notification:

SIRG (Will do the following as warranted):
1. Stop the SSO and restore flow if at all possible
2. Determine the start and stop times
3. Determine the probable cause of the SSO
4. Estimate the SSO volume
5. Identify the receiving area (street, storm drain, etc.)
6. SIRG Management signs the "5-day" TCEQ Water Quality Noncompliance Notification Form (No. TCEQ-0501) after Proactive Planning prepares the report

Resource Protection & Compliance Department

1. Notifies as warranted:
   - San Antonio River Authority (if the San Antonio River or its tributaries are impacted)
   - Texas Parks & Wildlife (if there is a fish kill)
   - Metro Health Department
   - EAA (reportable quantity is 500 gallons)
   - Others as necessary, SAFD, SAPD, COSA Public Works
   - SAWS Laboratory
2. Provides "closure letter" as warranted, including field and lab analytical results.

Proactive Planning

1. Prepares a "5-day" TCEQ Water Quality Noncompliance Notification Form (No. TCEQ-0501) and submits within five (5) days of receiving the initial report of the release. Then the following is done:
   - Fax signed report to TCEQ at 545-4329
   - E-mail signed report to designated SAWS staff
   - Original to Proactive Planning file

Public Notice of Spills Notification:

SIRG

1. Designates an "Incident Commander" who may provide information to SAW Executives or Public Relations Department as warranted.
2. Refer to SIRG Normal Notification Steps 1 – 5.
3. Determine course of action based on input from the RPC Department.
4. SIRG Management signs the "5-day" TCEQ Water Quality Noncompliance Notification Form (No. TCEQ-0501).

Sewer System Improvements or Maintenance Planning

1. Notifies:
   - Chief Operating Officer (COO) Senior Vice-President
   - Texas Commission on Environmental Quality immediately but no later than 24 hours
   - Others as necessary, SAFD, SAPD, COSA Public Works, EAA
2. Prepares the Notice of Spill From a Wastewater Facility (30 TAC Chapter 319, Appendix D).
3. Transmits the Notice of Spill From a Wastewater Facility by fax or e-mail to the SIRG and COO for review and/or revision.

4. Transmits the Notice of Spill From a Wastewater Facility by e-mail, fax, or hand delivery to the Public Relations Department.
5. Transmits the Notice of Spill From a Wastewater Facility to TCEQ as soon as possible, or in no case later than 24 hours after receiving the initial report of the release.
6. Coordinates a Lessons Learned to critique the Public Notice event.

Resource Protection & Compliance Department

1. Notifies as warranted:
   - San Antonio River Authority (if the San Antonio River or its tributaries are impacted)
   - Texas Parks & Wildlife (if there is a fish kill)
   - Metro Health Department
   - EAA (reportable quantity is 500 gallons)
   - Others as necessary, SAFD, SAPD, COSA Public Works
   - SAWS Laboratory
2. Provides "closure letter" for Public Notice events, including field and lab analytical results.

Public Relations Department

1. Transmits the Notice of Spill From a Wastewater Facility to "appropriate local government officials and local media" (Note: no later than 24 hours after notification of spill).
2. Develops and distributes additional media release(s) as necessary.
3. Reports media notifications to the EOC for the Incident Log and relaying to the field.

Proactive Planning

1. Prepares a "5-day" TCEQ Water Quality Noncompliance Notification Form (No. TCEQ-0501) and submits within five (5) days of receiving the initial report of the release. Then the following is done:
   - Fax signed report to TCEQ at 545-4329
   - E-mail signed report to designated SAWS staff
   - Original to Proactive Planning file

Appendix E

Sanitary Sewer Overflow Response Procedure

SANITARY SEWER OVERFLOW (SSO) RESPONSE PROCEDURE

Effective Date: 03/15/09
Revision #: 2
Revision Date: 11/26/13

Purpose

The purpose of this SSO Response Procedure is to:

- Provide guidelines to SAWS staff responding to an SSO
- Report protocol to notify identified SAWS departments
- Implement best action for SSO volume minimization
- Provide guidelines on volume estimation and cleanup efforts

EOC notifies SAWS staff of SSO for Site Assessment:

1. Arrive at SSO location and visually make an initial assessment of the estimated spill rate, volume and impact area and determine whether the spill is continuing to travel downstream.
2. If the impact area is contained or you have already requested Service Center assistance, proceed with attempting to open the line. Identify the impact area (e.g. alley, creek bed, drainage culvert, easement, ground, storm drain, street).
3. Relay initial information to the Emergency Operations Center (EOC). EOC will contact others as needed or requested, such as a Superintendent, a Service Center crew and Resource Protection & Compliance (RPC) personnel. If the spill continues to flow downstream, a Service Center crew may be needed to build an earthen dam. For smaller SSOs, if you are able to open the line, stop the SSO and restore normal flow, proceed with clean-up and disinfection as is typical or per RPC's guidance (if applicable).
4. For larger SSOs, if you are able to open the line, stop the SSO and restore normal flow and contact your Superintendent, or a Service Center to mobilize pumping equipment. Then, proceed with clean-up and disinfection as is typical or per RPC's guidance (if applicable).
5. If you are unable to open the line or restore normal flow, contact your Superintendent (if on duty), a Service Center Lead Foreman (after daytime hours), or the EOC to make contact with others to arrange for a Service Center to set up by-pass pumping and possibly dig up the blockage and/or collapsed pipe.
6. Upon completion of clean-up or establishing containment, report the SSO volume to the EOC based one of the following 3 estimation methods:
   - Method 1: Visual Estimate
   - Method 2: Measured Volume
   - Method 3: Duration of Flow Rate
7. The methods of volume estimation used and the estimated volume should be discussed with your Superintendent if he/she are on duty prior to reporting to the EOC. If not on duty, report the estimated volume to the EOC and email your Superintendent the methods and volumes for follow-up on the following day.
8. Document response in Hansen CMMS (e.g. location, extent of SSO, resources employed)

SEWER LATERAL STOPAGE OR BACKUP PROCEDURE

Effective Date: 03/15/09
Revision #: 2
Revision Date: 11/26/13

Purpose

The purpose of this Sewer Lateral Stoppage or Backup Procedure is to:

- Provide guidelines to SAWS staff responding to a customer complaint for a sewer lateral stoppage or backup into the residence
- Provide guidelines to SAWS staff on procedure of assessing the complaint and providing literature to the customer about SAWS process for lateral reimbursement

EOC notifies SAWS staff of SSO for investigation:

1. Upon determining that the blockage is not in the main, present the customer with a copy of the Claim Form/Letter.
2. The customer hires a plumber to attempt to relieve the blockage and televise the lateral.
3. If, despite SAWS' initial investigation and determination, the blockage is found to be in SAWS' sewer pipe, SAWS will reimburse the customer for their plumber's fees.

Appendix F

Water Quality Sampling:
Standard Operating Procedures for On Call Response

SAN ANTONIO IS WATER'S MOST RESOURCEFUL CITY

San Antonio Water System

STANDARD OPERATING PROCEDURES FOR ON-CALL RESPONSE

PROCEDURE NUMBER: 1 **REVISION NUMBER:** 5

EFFECTIVE DATE: March 1, 2005 **REVISION DATE:** September 26, 2011

ORIGINATOR: Martin Miller, Industrial Compliance Supervisor

REVISED: Martin Miller, Industrial Compliance Supervisor

SUBJECT: OPERATIONAL INSTRUCTIONS FOR ON-CALL DUTY

APPLICATION: RESOURCE PROTECTION & COMPLIANCE DEPARTMENT

All procedures should be reviewed at least annually.

1. The Resource Protection & Compliance Department (RPC) is responsible for the implementation of a comprehensive Storm Water Management Program to achieve the goal of controlling the quality of storm water; which is discharged from the Municipal Separate Storm Sewer System (MS4) into the surface waters in the State. The quality of the water discharged into the surface waters in the State from the MS4 can be adversely affected by the introduction of potentially hazardous materials caused by either an accidental spill or an illegal dumping situation. As part of the Storm Water Management Plan SAWS responsibilities include the implementation of several programs that are covered by these procedures. Specifically the Illicit Discharge and Improper Disposal Program include responsibilities to investigate non-storm water discharges. The On-Call duty is a task assigned by the On-call Supervisor to the Environmental Protection Specialist (EPS) position. The program is in place to investigate and assess the impact of any potentially hazardous materials on the quality of the waters of the State.

RESPONSIBILITY:

One of the five RPC Supervisors within the RPC Department is assigned on a rotating basis, to cover a weekly shift to respond to calls from the Emergency Operation Center (EOC) after 5 pm and before 7 am. In addition an EPS is to be available to respond to situations or emergencies. On-Call duty duration is scheduled to last one week (7days), from Monday (7:00 AM). until the next Monday morning (7:00 AM). The EPS will serve On-Call duty based on a prearranged schedule. The direct supervisor and the on-call supervisor must approve all changes to the schedule. Situations or emergencies that arise during the normal work hours will be assigned to an EPS based on the location and nature of the incident by the Industrial Compliance Supervisor.

Exempt/Non-Exempt employees who are On-Call are required to be available to respond to situations or emergencies while they are off duty. Employees who are On-Call must answer the call-in notification (telephone call) within thirty minutes of receiving the message from the Supervisor or EOC. Employees must arrive at the on call situation or emergency within one hour. Employees who are On-Call are subject to corrective action for failing to be available or failing to respond to an On Call situation or emergency within designated response times. See Employee Handbook for all details.

All nonsupervisory employees placed On-Call for a week (7 days) will receive 8 hours pay for the work week which will be considered non-productive time. Employees placed On-Call for less than a week are entitled to 1 hour On-Call pay for each day during the week and 1.5 hours for weekends.

To be eligible for On-Call pay, an employee should have been at work for his/her entire regularly scheduled shift. Incremental time-off taken during the week is at the discretion of management. Employees who are placed On-Call on an official SAWS Holiday will receive pay as outlined in the Employee Handbook. This will be considered non-productive time and will not be used in calculating overtime pay.

In addition to the compensation received as a result of being On-Call, employees responding to a situation or emergency, or who are required to work, will be compensated a minimum of two (2) hours, for the time required to be at work or to handle the situation. Hours worked, while On-Call, start from the time an employee answers the call in notification and stops when the assignment is completed. An assignment is considered complete when the employee contacts his/her supervisor, swipes out if a time clock is available, notifies the dispatcher or uses any other method deemed workable by the department.

Payment for hours worked while On-Call will be subject to the regular overtime rules. A non-exempt employee, who is called in to work, will be paid one and one-half (1-1/2) times their regular hourly wage for any time worked over forty

(40) productive hours per week. *See Overtime Pay in the appropriate section of the Employee Handbook for more detail*. An exempt employee, who is called in to work, will earn "Earned Time Off" (ETO) and must track the information in a spreadsheet. Using ETO requires attachment of time earned details for payroll purposes.

PROCEDURES

The Supervisor will receive notification from the SAWS EOC to respond to a situation. After receiving the notification the Supervisor may notify the EPS for assistance or follow up.

Equipment needed to respond should include:

- Laptop
- Hach Field Test Kit
- Chemetrics Ammonia test kit
- Shovel, pick, sledge hammer, measuring wheel, hand tools (hammer, crescent wrench, fire hydrant wrench, screwdrivers, and meter box key).
- Sample bottles – as required in both quantity and type for the situation (at least twelve 1 liters glass bottles and 6 fecal sample containers).
- Extension pole (with hook and/or bottle holder)
- Spill Response equipment such as oil booms (in various sizes), pillows or pads and other absorbent material.
- SAWS Chain of Custody lab forms
- Camera (with charged batteries and sufficient storage space or film)
- D.O. Meter and pH meter both calibrated and fully operational (with any necessary spare batteries, membranes, calibration standards, and other necessary parts).
    - Meters must be properly calibrated at the beginning of shift, and as needed.
- PPE and safety equipment such as hardhat, safety glasses, earplugs, safety vest, Nitrile gloves, flashlight, cones, etc.

Upon arriving on site park the SAWS vehicle in an appropriate location so that you are not in a "hot zone" and so that you can get out of the site (e.g. It is difficult to get a fire truck or police car to move out of your way once they park). Staff should wear the proper safety equipment (at a minimum the PPE should include: a safety vest, safety shoes and a hard hat). Proper eye and ear protection and gloves for sampling should be readily available for use.

Make sure and identify yourself to the SAWS Supervisor or Incident Commander and state the purpose of your being on site. Wear your SAWS identification and present proper SAWS credentials if asked (take business cards with you). You should identify and note any pertinent contacts (including phone numbers) and

when possible, the responsible parties involved. For example taking photos of truck door logos and license plates or getting business cards will assist with identification later when doing reports. Safety should always a priority issue while at the site.

Interaction with the contacts or responsible parties should be friendly and professional. If needed, a brief explanation of the local requirements and ordinances should be made up front (you should get contact information to send information such as a copy of any applicable ordinances). During the investigation, carry out all of the questioning and other activities as politely as possible. Be inquisitive without being rude; if you see something that is improper; be tactful in finding out more information. The company representative may be concerned with "Human health and safety" first and the environment may be secondary. The EPS should make notes of the site, including the location of any equipment involved and nearby drainage channels that may be impacted by the situation and provide photo documentation of them. The EPS can gather information by interviewing the responsible party or on site contacts. Information on containment should be shared with the Incident Commander or his representative. Be sure and investigate the location that the discharge will end up at. For example if spill enters a storm drain inlet then you need to find the outfall location at the Storm Sewer.

SSO INCIDENT:

When responding to an internal sanitary sewer spill, there are additional responsibilities that RPC needs to perform. A flow chart attached that can be used to provide direction on the incident. It is also located at: "I:\Resource Compliance\SW Complaints\Picture file\spill response procedures"

RPC Supervisor will be contacted by the EOC to respond to the situation. RPC primary duties include assessing the situation with the D&C management to determine the extent of the spill and to develop a plan of action. If the discharge is to a flowing body of water there are sampling requirements outlined on the flow chart that should be followed. Discharge quantity must also be determined. This should be done in conjunction with D&C to report a realistic number based on facts not speculation. Document method used to determine this quantity. Refer to the Wastewater Spill Reporting Procedures to see notes concerning the different reporting requirements for large spills and those on the EARZ. Staff should assist with measurement of spill or make a determination by sampling using Ammonia test kits to determine the extent of SSO. RPC should also document the spill and clean up using photos, field measurements and notes. A summary power point should be made for large spills to document all of the information for future reference or enforcement. Copy should be stored on I drive file under "SW Complaints".

Site cleanup verification is also within RPC responsibility. Staff should revisit the

site to document the cleanup. Site should not have any solids, sewer should be removed and the site should not smell of sewer. D&C crews often use HTH during the cleanup unless the area is directly adjacent to a waterbody. The use of HTH should be minimal to do the job. HTH is an oxidizer as well as a disinfectant and can have a detrimental impact on biological life. It can also significantly reduce Dissolved Oxygen levels in a stream or pond.

The EPS should complete an investigation form; which should include all contact and responsible party information. An entry in the appropriate database (SW Complaint) should also be made, as well as photo documentation stored in the appropriate folder on the "I" Drive. The completed investigation form will be forwarded to the appropriate Supervisor. If samples were taken on site, include the chain of custody and the lab results with the photos on the "I" Drive.

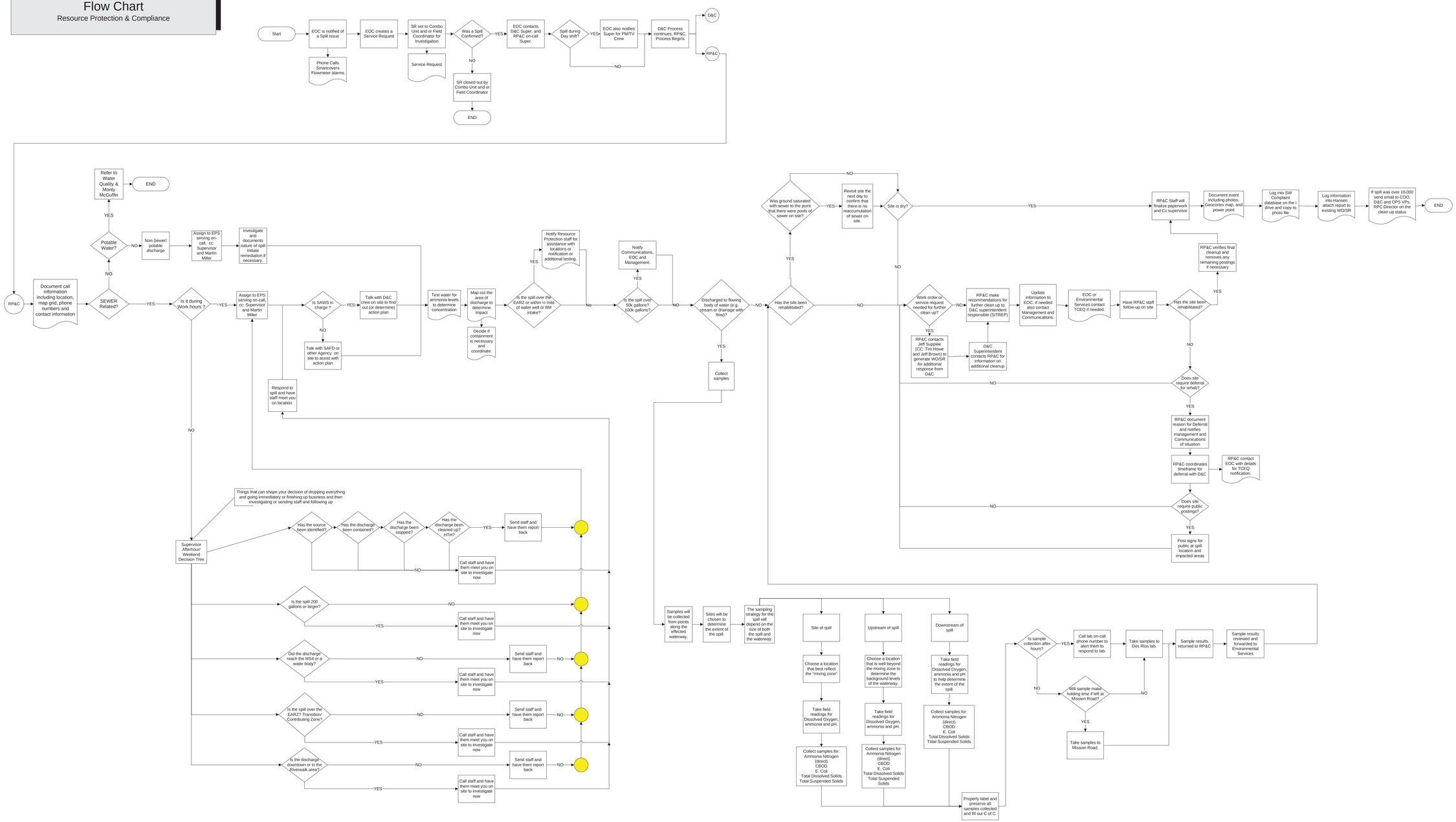
Based on the situation (see flow chart), the Supervisor will determine if the site will require continuous monitoring and if samples are taken. If the need arises and samples are taken the lab needs to be contacted. The properly labeled samples will then be taken to the SAWS lab at Dos Rios or Mission Road (use flow chart for decision on locations and where to take the samples when complete).

SAFETY

On-Call Duty investigations are often carried out in hazardous areas. While working within the area, always observe safety rules and regulations. Wear hardhats, safety glasses and protective clothing as required. A beacon is required on all TXDOT project sites. Hard hats and safety vests are required on all SAWS and City of San Antonio construction project sites. Entry into a "HOT ZONE" is prohibited. Entry into a "Confined Space" should not be made without following SAWS policies and procedures for confined space entry.

Spill / On-call Decision Flow Chart

Resource Protection & Compliance



San Antonio Water System

WASTEWATER SPILL
Sample Management Plan

MATRIX:

Surface water

All samples under this sample management plan will be storm water or surface water contaminated with domestic sewage flow from a failure in a municipal collection system. Additionally, there may be one or more samples collected that represent storm water or surface water that has not been impaired or influenced by domestic sewage flow.

SAMPLE SITE:

Samples will be collected from monitoring points located along an affected waterway. Sites will be chosen with an objective of determining the extent of the impairment relative to the storm water or surface water that has not been influenced by the spill. At minimum, sample sites will be chosen in an area located upstream from the influence of domestic sewage and immediately downstream of the impairment. Additionally, other sample sites may be selected where other fresh water flow enters the impaired stream to evaluate the impact of this confluence. Resource Protection & Compliance staff responding to the incident will determine the extent of sample sites. The sampling strategy for the wastewater spill will depend upon the size of the spill and the time for repair.

PARAMETERS, METHODS, SAMPLE CONTAINERS, PRESERVATIVES and HOLDING TIMES:

Parameter	Test Code	Method	Sample Container	Preservative	Maximum Holding Time
Ammonia Nitrogen (Direct) (mg/l)	**1. ADIR**	EPA 350.1	250ml HDPE	Cool 4°C, H_2SO_4 to pH < 2	28 days
Carbonaceous Biochemical Oxygen Demand (mg/l)	**2. CBOD5**	SM 18 5210B	1000ml HDPE	Cool 4°C	48 hours
Dissolved Oxygen	**3. fDO**	EPA 360.1	100ml HDPE	None	Immediately
Fecal Coliform	**4. FCOL**	SM 18 9222D	100ml HDPE (Sterile)	Cool 4°C	8 hours
E. Coli	**5. ECOL**	SM 9223 B	100ml HDPE	Cool 4°C	8 hours

			(Sterile)		
pH (S.U.)	**6. fpH**	EPA 150.1	100ml HDPE	None	Immediately
Total Dissolved Solids (mg/l)	**7. TDS**	EPA 160.1	100ml HDPE	Cool 4°C	7 days
Total Suspended Solids (mg/l)	**8. TSS**	EPA 2540 D	500ml HDPE	Cool 4°C	7 days
Turbidity	**9. TRB**	EPA 180.1	100ml HDPE	Cool 4°C	48 hours

SAMPLING TECHNIQUE:

Analysis and collection of samples shall be done in accordance with the methods specified in 40 CFR Part 136. Where an approved Part 136 method does not exist or the method requires techniques that cannot be achieved, any available method may be used unless a particular method or criteria for method selection (such as sensitivity) has been specified.

All parameters will be analyzed from sample aliquots collected using grab technique.

SAMPLING EQUIPMENT:

PRIMARY EQUIPMENT

Orion 210A pH meter or equivalent (w/ all necessary calibration solutions)
Thermometer
Portable Dissolved Oxygen meter either an Orion 810A+ or equivalent.

MISCELLANEOUS EQUIPMENT

Sample Containers
Sample labels
Chain-Of-Custody Forms
Ice Chest w/ ice to preserve samples
Preservatives (as needed)
Permanent markers

All field analytical equipment to be field calibrated unless noted.

PERSONAL PROTECTIVE EQUIPMENT:

- NOTE: Additional PPE may be required dependent on sample site assessment. **It is the responsibility of the sampling personnel to determine the safety requirements of each site. Sampling personnel are obligated to discontinue sampling at any time their safety cannot be assured.**

Safety boots (per SAWS specs.)
Safety glasses (per SAWS specs.)
Drinking water
(optional)
Nitrile Gloves (powder free, 8ml)
Safety Vest (per SAWS specs.)
Sunscreen / Bug Spray (optional)*
Leather gloves
Hand sanitizing gel
Hat & Rain gear

* To be applied away from sampling equipment, area, and bottles.

SAMPLING SCENARIO:

Begin paperwork for sampling event – chain of custody form, etc.
Collect grab samples
Prepare labels for the sample containers
Fill sample containers using proper technique for laboratory testing
Calibrate Field Equipment
Collect field readings on DO and pH
Place label on sample bottles
Add preservatives as required
Place all samples for laboratory analysis into ice chest for cooling to 4 °C
Enter sampling data onto the Chain-of-Custody Form including all field analysis results
Assist with site demobilization (packing up the equipment)

SAMPLE QUALITY ASSURANCE/QUALITY CONTROL:

All QA/QC samples will be collected and analyzed in accordance with methods specified in 40 CFR 136. Quality Control (QC) is used when collecting samples for laboratory analysis. The following QC samples are required.

Reagent Blanks

These types of QC samples are used to determine that chemical preservatives added to the samples are free of contamination. Reagent blanks are collected and analyzed at a frequency of one per lot number.

Rinseate Blanks

These types of QC samples are used only when auto-samplers or other devices are used to collect samples. Rinseate blanks are collected and analyzed for the parameters included in the "Parameters" section of this plan.

Field Duplicate Samples

This type of QC sample provides a check of sampling equipment and the technique used.

Split Samples

- This type of QC sample is used to check the analytical procedures used by a laboratory, **and generally only when requested by the operator of the MS4.**

The laboratory will run duplicates and spikes as recommended by laboratory protocol.

CHAIN OF CUSTODY/ANALYTICAL REPORTS:

The chain of custody (COC) will indicate the individual(s) that will receive final analytical reports. All field analysis shall be recorded on the COC and shall be entered into a database maintained at the direction of laboratory staff.

SAMPLING PERSONNEL: Resource Protection & Compliance Staff

SAMPLE PLAN ACCEPTANCE:

_____	_____
Supervisor, Construction Stormwater	Date
_____	_____
Martin Miller – Supervisor, Industry Compliance	Date
_____	_____
Lee Sarate– Supervisor, Environmental Compliance	Date
_____	_____
Mike Barr – Supervisor, Aquifer Protection & Evaluation	Date
_____	_____
Monty McGuffin – Supervisor, Groundwater Resource Protection	Date
_____	_____
Anna Ramos-Polanco – Laboratory Manager	Date

Appendix G

Letter to Customer

Dear Customer:

We have received a service call for a sewer lateral stoppage or backup at this address. To help serve you better, we are providing you this outline of San Antonio Water System's policies and procedures to assist you in achieving a faster repair.

Our crew has inspected the sewer main line in the street/alley/easement and should have notified you of the results. If the main line had a stoppage, we will clear the main line and make any necessary repairs.

If we found the sewer main line clear, then the problem is probably in the lateral yard piping leading from your home. We recommend that you hire a licensed plumber to locate the problem with electronic locating equipment and clear the line. If the lateral yard piping requires repair, then we recommend that you obtain price estimates from a licensed plumber for the repair work. If the plumber identifies the location of the problem to be in your lateral yard piping leading from your building/home to the property line, SAWS cannot reimburse you for the plumber's work to clear or repair your line. If you have encountered a sewage spill in your home, then you should immediately review your homeowners' insurance policy and contact your agent.

If despite SAWS inspection, the plumber determines that the problem is located beyond the property line, in the public right-of-way, street or alley, then the plumber must electronically locate the lateral, mark the location of the obstruction with green paint and contact our Emergency Services Section at 704-SAWS (704-7297). If we determine that it is in fact SAWS' responsibility, then we will place a high priority on making the repair. The repair will require that other utilities such as electric, gas, telephone, etc. mark the location of their lines prior to our digging. Within 4-6 weeks you will be reimbursed for the plumber's normal and customary charges for the work. SAWS will only reimburse for work performed by a licensed plumber. Please mail your receipts to:

San Antonio Water System
Attn: Sewer Lateral Reimbursement Program/Tommy Melzow
3930 E. Houston
San Antonio, TX 78220

We are working hard to insure your satisfaction. If you have any questions or wish to make any comments please contact our Emergency Services Section at 704-SAWS (704-7297) and they will have a SAWS representative contact you as soon as possible.

Sincerely,

Jeff Brown, Director
Distribution and Collection Department

NOTICE TO PLUMBERS

Before you start any work, please provide an estimate to the customer. In order for the customer to be reimbursed, the break must be in the public right-of-way/street or alley. SAWS will only reimburse the customer for a plumber's normal and customary charges related to electronically pinpointing the location of the problem. Reimbursements will not be approved for improvements to the property such as new cleanouts, etc. If we excavate and cannot find the break, we will contact you at that time. Plumbers that fail to respond or properly locate the break are subject to a time and materials charge.

Estimado cliente:

Se nos ha notificado que la cloaca lateral de esta dirección está obstruida o desbordándose. Con el fin de brindarle mejor atención, le estamos proporcionando este resumen de las normas y procedimientos del San Antonio Water System que lo ayudarán a obtener una reparación más rápida.

Nuestro equipo de inspectores ya habrán revisado la cloaca maestra en la calle, callejón, o servidumbre de paso, y ya le habrán notificado de los resultados. Si está obstruida, quitaremos la obstrucción y haremos las reparaciones necesarias.

Si determinamos que la cloaca maestra no está obstruida, entonces es probable que el problema está en la cloaca lateral que sale de su casa y conecta con la maestra. Le recomendamos que contrate a un plomero autorizado para que emplee equipos electrónicos para localizar el problema y desatascar la cloaca. Si hace falta reparar la cloaca lateral, entonces le recomendamos que obtenga presupuestos de plomeros autorizados para la reparación. Si el plomero determina que el problema se encuentra en el tramo de cloaca lateral entre su casa o edificio y donde termina su propiedad, SAWS no podrá rembolsarle los gastos ni de desatascar ni de reparar la cloaca. Si ha advertido un derrame de aguas cloacales en su casa, deberá revisar de inmediato su póliza de seguro residencial y comunicarse con su agente de seguros.

A pesar de la inspección hecha por SAWS, si el plomero determina que el problema se encuentra más allá de su propiedad, ya sea en los derechos de la propiedad pública, en una servidumbre de paso, calle, o callejón, deberá localizar la cloaca lateral electrónicamente, marcar con pintura verde la ubicación de la brecha, y comunicarse con la Sección de Servicios de SAWS. El número de teléfono de la Sección de Servicios es 704-7297. Después que se comunique, si determinamos que la reparación es la responsabilidad de SAWS, entonces le asignaremos la más alta prioridad a la reparación, lo que requerirá que otras compañías de servicio público, como electricidad, gas, teléfono, etc., marquen la ubicación de sus cables y tuberías antes de poder nosotros excavar. Le reembolsaremos los gastos normales y usuales de un plomero autorizado para el trabajo. Por favor, envíe sus recibos a:

San Antonio Water System
Attn: Lateral Reimbursement Program/Tommy Melzow
3930 E. Houston
San Antonio, TX 78220

Nos estamos esmerando por asegurarnos de su satisfacción. Si tiene alguna duda o comentario, por favor que se comunique con nuestra Sección de Servicios de Emergencia al 704-SAWS (704-7297), quienes harán que un representante de SAWS se comunique con usted lo más pronto posible.

Muy atentamente,

Ing. Jeff Brown, Director
Departamento de Distribución y Colección

AVISO A LOS PLOMEROS:

Antes de empezar cualquier trabajo, por favor entregue un estimado del costo al cliente. Para que podamos reembolsar al cliente, la brecha deberá estar en los derechos de la propiedad pública, en la servidumbre de paso, calle, o callejón. Por lo regular, la cloaca lateral entre la cloaca maestra y la propiedad del cliente pertenece a SAWS. SAWS reembolsará al cliente únicamente los costos normales y usuales de plomero por localizar electrónicamente la ubicación exacta del problema. No se reembolsarán obras de renovación o rectificación, como nuevas bocas de limpieza, etc. Si excavamos sin poder encontrar la brecha, lo llamaremos. A los plomeros que no respondan o no localicen las brechas debidamente se les cobrará la mano de obra y los materiales.

Appendix H

Claims Letter/Form

SAN ANTONIO WATER SYSTEM

Dear Customer:

In the event you feel you have incurred an injury and/or property damages due to work performed/or failed to have performed by the San Antonio Water System, you will need to file your written notice of claim within 90 days as per the City of San Antonio Charter. Please complete the attached form in its entirety and return to:

San Antonio Water System
Claims Administration
P.O. Box 2449
San Antonio, Texas 78298

Please attach any documentation you wish the San Antonio Water System to consider in order to support your claim for damages (i.e. estimates, pictures, diagrams, bills, receipts, etc.).

The San Antonio Water System cannot initiate its investigation until we have written notice of your claim.

The San Antonio Water System recommends that if you have insurance coverage for your damaged property, you should also notify your insurance company when you send your notice of damages to the San Antonio Water System. Your insurance company may be an immediate source of assistance to you for your loss. Do not wait for someone to look at the damages, it is important that cleanup efforts are started as soon as safely possible. This will prevent additional damages.

San Antonio Water System must complete its investigation to determine legal liability to base its settlement for damages or denial of the such.

Should you have any additional questions, please call Claims Administration at (210) 233-3376 Monday - Friday during business hours – 8:00am – 5:00pm.

FN076-5 (rev 07/03)

NOTICE OF CLAIM AGAINST SAN ANTONIO WATER SYSTEM

PERSONAL INJURY-PROPERTY DAMAGE

FILE THIS CLAIM FOR AN INJURY OR PROPERTY DAMAGE WITH:

San Antonio Water System
Claims Administration
P.O. Box 2449
San Antonio, Texas 78298
Fax: (210) 233-4152

(Please Print or Type)

Claimant Name: _____ Telephone No: Home _____ Work _____

Mailing Address: _____ _____ _____ _____
City State Zip

If known, the TOTAL amount of your claim against SAWS is: $ _____

Describe in your own words **WHERE, WHEN, and HOW** the damage or injury occurred. Attach additional pages if necessary. Give names and addresses of others involved and/or witnesses, if known.

LOCATION (Please be specific):

DATE OF LOSS: _____ **APROXÍMATE TIME:** _____ (A.M) (P.M.)

POLICE CASE # (if known): _____

DESCRIPTION OF HOW DAMAGE OR INJURY OCCURRED:

DESCRIPTION OF INJURY OR PROPERTY DAMAGE:
(Attach good copies of all medical reports, medical bills and/or estimates of damages regarding this loss):

The foregoing is true and correct to the best of my knowledge. _____ _____
Claimant's Signature Date

Section 150 – Liability of the City and Limitations Thereon:

"Before the City (SAWS) shall be liable for damages for the death or personal injuries of any person or for damage to or destruction of property of any kind, the person injured, if living, or his representatives, if dead, or the owner of the property injured or destroyed, shall give the City Manager or the City Clerk notice in writing of such death, injury, or destruction within ninety (90) days after same has been sustained, stating in such written notice when, where, and how the death, injury or destruction occurred, and the apparent extent of such injury, and the amount of damages sustained, provided, however, that in no event shall the City (SAWS) be liable in damages to anyone on account of any defect in, obstruction, on or anything else in connection with any sidewalk in the City (SAWS), and provided further, that in order to hold the City (SAWS) liable in damages to anyone on account of any injury caused by any defect in, obstruction on, or anything else in connection with any street, alley, or plaza, bridge, riverbank, water course, or any public way, it must be shown that the City Manager, a member of the Council or some person having superintendence or control of the work for the City (SAWS), had actual knowledge or actual notice of such defect, obstruction or other thing for a sufficient length of time before such injury was received, to have remedied or guarded against such condition of the street, alley or plaza before the injury was received."

NOTE: Once your claim is received, it will be investigated by Claims Administration. Should you have any questions regarding your claim, please contact:

Claims Administration
SAWS
P.O. Box 2449
San Antonio, TX 78298
(210) 233-3376

Appendix I

Lift Station and Force Main SSO Response Plans

SANITARY SEWER OVERFLOW (SSO) RESPONSE PLAN FOR LIFT STATIONS

Effective Date: 11/26/13
Revision #: 0
Revision Date: N/A

Sewer Overflow Response Plan for Lift Stations

Purpose: To standardize a general response plan for sewer overflows at Lift Stations.

Scope: This procedure applies to all personnel involved in the operation and maintenance of sanitary sewer Lift Stations, as well as personnel in the Distribution and Collection, Construction Inspections Departments who are involved in the response to sewer overflows in Lift Stations.

Keywords: Lift Station SORP

Instructions:

I. Procedure Description

1. Upon notification of sewer overflow at a Lift Station:

   1.1. Emergency Operating Center will contact the Lift Station manager to identify the Lift Station in question.

   1.2. Emergency Operations Center will automatically dispatch a Distribution & Collection combo unit to assess the situation.

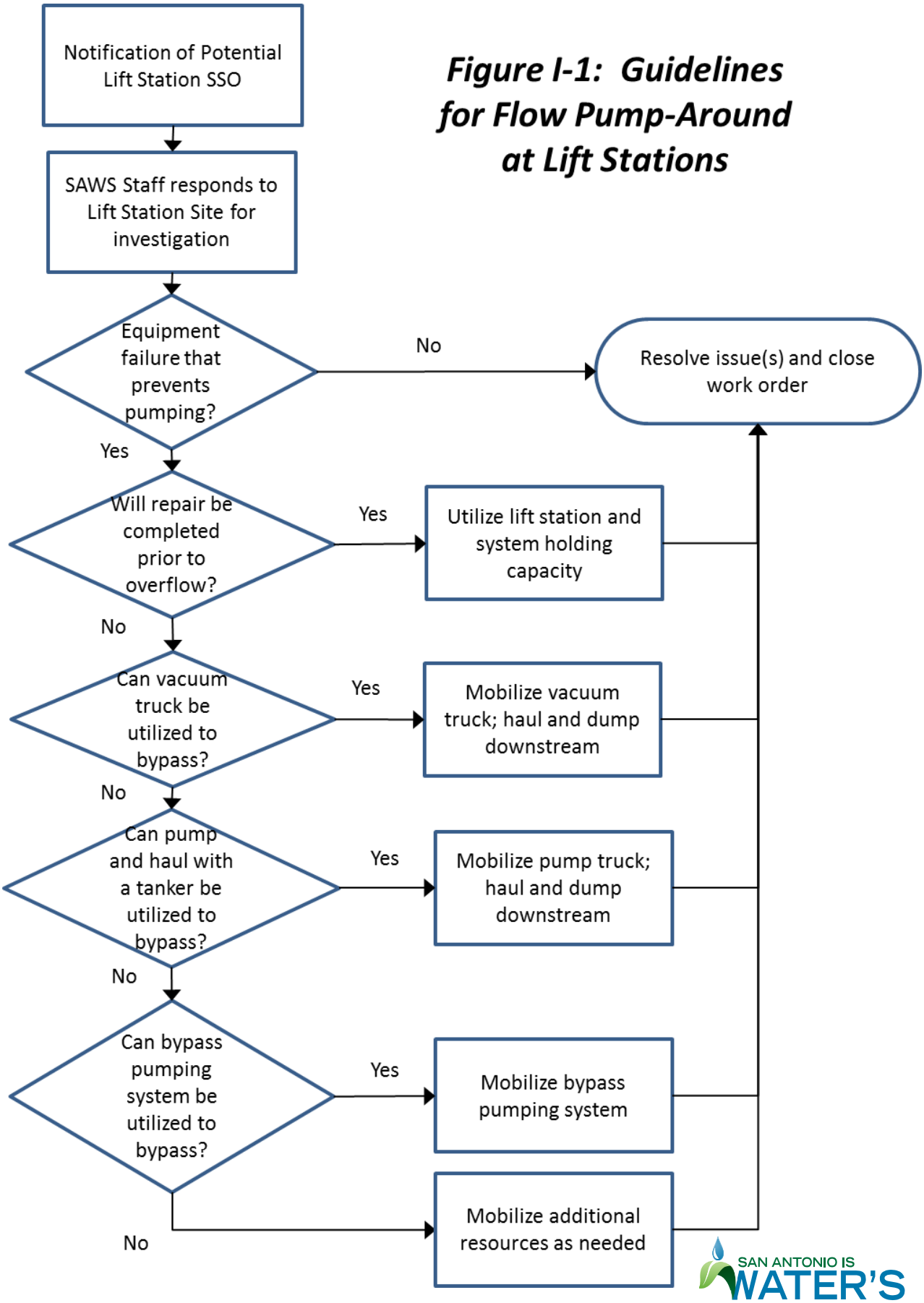
   1.3. Emergency Operations Center will automatically dispatch one mechanic and one electrician from the Lift Stations Group to determine the problem.

2. Upon arrival of Lift Station Maintenance personnel to the Lift Station:

   2.1. Lift Station Group will determine problem.

   2.2. Lift Station Group will utilize process outlined below as a guideline for determining the appropriate method to restore flows in the system and/or to move flows downstream through the system.

Figure I-1: Guidelines for Flow Pump-Around at Lift Stations



SAN ANTONIO IS WATER'S MOST RESOURCEFUL CITY

2.3. Lift Station personnel will implement appropriate SSO mitigation measures based upon the guidelines for flow pump-around at Lift Station.

2.4. Lift Station personnel will walk perimeter of the contaminated area as directed by the Supervisor or Manager.

2.5. Lift Station personnel will estimate the overflow volume as directed by the Lift Station Supervisor or Manager.

2.5.1. Lift Station Manager will report date and time of assessment.

3. Lift Station personnel will determine the reason for the spill and take further actions:

3.1. Lift Station personnel will determine if the spill appears to be due to wet weather flows.

3.2. Lift Station personnel will determine if the spill was due to equipment failure.

3.3. Lift Station personnel will determine the components needed to correct the problem at the Lift Station.

3.4. Lift Station personnel will determine the estimated time to bring the Lift Station back into service.

4. Dispatching the necessary equipment and crews:

4.1. Lift Station personnel will determine if a portable generator or portable pump is needed.

4.2. Distribution & Collection will dispatch additional equipment and personnel.

4.3. Distribution & Collection will set up backhoe excavators to dam and capture the spill.

4.4. Distribution & Collection will set up auxiliary trash pumps to transfer the spill back into the collection system.

5. Cleanup activity:

5.1. Flush potable water to clean the affected areas.

5.1.1. Using combo trucks from Distribution & Collection.

5.1.2. Using a fire hydrant opened by Distribution & Collection.

5.2. Distribution & Collection will capture and transfer contaminated water back into collection system.

5.2.1. Using tanker trucks, combo trucks, or auxiliary trash pumps provided by Distribution & Collection.

5.3. Regulatory Compliance will test for ammonia residuals on various points of area affected by the spill.

5.4. Distribution & Collection will apply disinfectant in all area affected by spill.

6. Reporting:

   6.1. Distribution & Collection will determine the date and time the spill started and ended.

   6.2. Distribution & Collection and RPC will determine the volume of spill.

   6.3. RPC will determine if any potable wells are near the spill area.

   6.4. Regulatory Compliance will determine if any known sensitive features exist in the spill area.

SANITARY SEWER OVERFLOW (SSO) RESPONSE PLAN FOR FORCE MAINS

Effective Date: 11/26/13
Revision #: 0
Revision Date: N/A

Sewer Overflow Response Plan for Force Mains

Purpose: To standardize a general response plan for sewer overflows due to broken force mains.

Scope: This procedure applies to all personnel involved in the operation and maintenance of sanitary sewer Lift Stations, as well as personnel in the Distribution and Collection, Construction and Inspections Departments who are involved in the response to sewer overflows and repair of broken force mains.

Keywords: Force Main SORP

Instructions:

II. Procedure Description

1. Upon notification of sewer overflow due to a force main break:

   1.1. Emergency Operating Center will contact the Lift Station manager to identify the Lift Station and force main in question.

   1.2. Emergency Operating Center will automatically dispatch a Distribution and Collection combo truck to start capturing the spill.

   1.3. Emergency Operating Center will automatically dispatch a Distribution and Collection repair crew to repair broken force main.

   1.4. Emergency Operating Center will automatically dispatch one Mechanic and one Electrician to shut down the Lift Station and force main in question.

2. Upon arrival of Lift Station Maintenance personnel at the Lift Station:

   2.1. Lift Station personnel will shut down the Lift Station.

   2.2. For Lift Stations with single force main:

      2.2.1. Lift Station personnel will drain broken force main into wet well.

      2.2.2. Lift Station personnel will setup pump and haul operation at the Lift Station.

   2.3. For Lift Stations with dual force mains:

2.3.1. Lift Station personnel will drain broken force main into wet well.

2.3.2. Lift Station personnel will isolate broken force main.

2.3.3. Lift Station personnel will turn Lift Station back into operation using the remaining force main.

3. Upon response personnel arrival to broken force main area:

3.1. Distribution and Collection repair crew will dig and expose broken force main.

3.2. Distribution and Collection repair crew will perform the force main repair, depending on the failure type:

3.2.1. Distribution and Collection repair crew will replace broken pipe section with new pipe.

3.2.2. Distribution and Collection repair crew will repair with a clamp when applicable.

3.3. Distribution and Collection repair crew will set up backhoe excavators to dam and contain the spill.

3.4. Distribution and Collection repair crew will set up auxiliary trash pumps to return the spill back into the collection system.

3.5. Distribution and Collection repair crew will walk perimeter of contaminated area as directed by a Supervisor or Manager.

3.6. Distribution and Collection repair crew will estimate the spill volume as directed by a Distribution and Collection Supervisor or Manager.

3.6.1. Distribution and Collection repair crew will report date and time of the spill assessment.

4. Once force main repair has being completed:

4.1. Distribution and Collection repair crew will place the repaired force main back in service.

4.2. Distribution and Collection repair crew will ensure the repair is leak free.

4.3. Distribution and Collection repair crew will backfill the excavation.

5. Cleanup activity:

5.1. Flush potable water through affected area and capture in manmade containment area.

5.1.1. Distribution and Collection repair crew will flush using combo trucks.

5.1.2. Distribution and Collection repair crew will flush using fire hydrants.

5.2. Distribution and Collection repair crew will capture contaminated water and pump back into collection system.

5.2.1. Using tanker trucks, combo trucks, or auxiliary trash pumps set up by Distribution and Collection.

5.2 RPC will test for ammonia residuals at various points of the affected area.

5.3 Distribution and Collection will apply disinfectant in all areas affected by spill.

6. Reporting:

6.1. Distribution and Collection will determine the date and time the spill started and ended.

6.2. Distribution and Collection and RPC will determine the volume of spill.

6.3. RPC will determine if any potable wells are near the spill area.

6.4. RPC will determine if any known sensitive features exist in the spill area.

III. Contact information of Key Personnel

Name	Department	Title	E-Mail	Phone	Role
Mark Villareal	Lift Station Maint. & Ops.	Prod. & Treat. Ops. Manager	Mark.Villareal@saws.org	233-3097	Lift Station Manager
Gilberto Camacho	Lift Station Maint. & Ops.	Prod. Treat. Ops. Supervisor	Gilberto.Camacho@saws.org	233-3060	Lift Station Supervisor, South Side
Erasmo Mendiola	Lift Station Maint. & Ops.	Prod. Treat. Ops. Supervisor	Erasmo.Mendiola@saws.org	233-3608	Lift Station Supervisor, North Side

Appendix J

Spill/SSO Volume Calculation Guidance

Reference Sheet for Estimating Sewer Spills

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SPILL/SSO VOLUME CALCULATION PROCEDURES

Effective Date: 03/15/09
Revision #: 1
Revision Date: 11/26/13

The Spill/SSO Volume Calculation Guidance

A variety of approaches exist for estimating the volume of a SSO. This appendix documents the three methods that are most often employed. The person preparing the estimate should use the method most appropriate to the sewer overflow in question and use the best information available.

Method 1: Visual Estimate

The volume of small SSOs 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 SSO 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 SSOs up to approximately 200 gallons.

Method 2: Measured Volume

The volume of most small SSOs that have been contained can be estimated using this method. The shape, dimensions, and the depth of the contained wastewater are needed. The shape and dimensions are used to calculate the area of the SSO and the depth is used to calculate the volume.

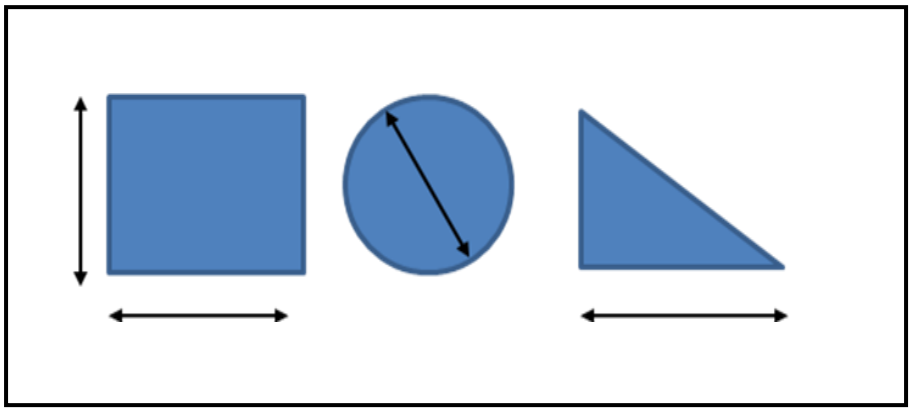
Method 3: Duration and Flow rate

Calculating the volume of larger SSOs, where it is difficult or impossible to measure the area and depth, requires a different approach. In this method, separate estimates are made of the duration of the SSO and the flow rate. The methods of estimating duration and flow rate are:

Duration

The duration is the elapsed time from the time the SSO started to the time that the flow was restored.

Common Shapes and Dimensions



Step 1 Sketch the shape of the contained sewage (see figure above).
Step 2 Measure or pace off the dimensions.
Step 3 Measure the depth at several locations and select an average.
Step 4 Convert the dimensions, including depth, to feet.
Step 5 Calculate the area in square feet using the following formulas:
Rectangle: Area = length (feet) x width (feet)
Circle: Area = diameter (feet) x diameter (feet) x 0.785
Triangle: Area = base (feet) x height (feet) x 0.5
Step 6 Multiply area (square feet) times depth (in feet) to obtain volume in cubic feet.
Step 7 Multiply the volume in cubic feet by 7.5 to convert it to gallons.

Start Time: The 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. SSOs that occur in rights-of-way are usually observed and reported promptly. SSOs that occur out of the public view can go on longer before being reported. 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 flow meter 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 during the SSO event with flow data from prior days. This method will likely only be effective with consistent weather.
3. Conditions at the SSO site change over time and can be used to establish the start time. Initially there will be limited deposits of toilet paper and other sewage solids. After a few days to a week, the sewage solids form a light-colored residue. After a few weeks to a month, the sewage solids turn dark. The quantity of toilet paper and other materials of sewage origin increase over time. These observations can be used to estimate the start time in the absence of other information. Taking photographs to document the observations can be helpful if questions arise later in the process. This method is valid for SSOs that have been occurring for a long time and may be used in conjunction with either of the above methods.

4. It is important to remember that SSOs may not be continuous. Blockages are not usually complete (some flow continues). In this case the SSO would occur during the peak flow periods (typically 10:00 to 12:00 and 13:00 to 16:00 each day). SSOs that occur due to peak flows in excess of capacity will occur only during, and for a short period after, heavy rainfall.

End Time: The 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 flow meters.

Flow Rate

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

1. The San Diego Manhole Flow rate Chart: This chart, included at the end of this appendix, shows water flowing from manhole covers at a variety of flow rates. The observations of the field crew can be used to select the appropriate flow rate from the chart. If possible, photographs are useful in documenting basis for the flow rate estimate.
2. Flow meter: Changes in flows in downstream flow meters can be used to estimate the flow rate during the SSO.
3. Counting Connections: Once the location of the SSO is known, the number of upstream connections can be determined from the sewer maps. Multiply the number of connections by 204 gallons per day per connection, or 8.5 gallons per hour per connection. For example:

   22 upstream connections * 8.5 gallons per hour per connection
   = 187 gallons per hour/60 minutes per hour
   = 3.11 gallons per minute

Spill Volume

Once duration and flow rate have been estimated, the volume of the SSO is the product of duration (hours or days) and the flow rate (gallons per hour or gallons per day). For example:

Spill start time = 11:00
Spill end time = 14:00
Spill duration = 3 hours
3.11 gallons per minute x 3 hours x 60 minutes per hour
= 560 gallons

City of San Diego
Metropolitan Wastewater Department

Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)

Wastewater Collection Division
(619) 654-4160

5 gpm

25 gpm

50 gpm

100 gpm

150 gpm

200 gpm

225 gpm

250 gpm

275 gpm

All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

rev. 4/99

Appendix K

Notice of Spill from a Wastewater Facility Form

NOTICE OF SPILL FROM A WASTEWATER FACILITY

A spill from a wastewater treatment or collection facility has occurred.

INFORMATION ABOUT THE SPILL

Facility Name:_____

Contact for further information:_____

Location of the spill:_____

Estimated time and date of spill:_____

Estimated volume of the spill (number of gallons): _____

Type of spill: (domestic) (industrial) (other) Explain other:_____

Area potentially affected:_____

Suspected cause of spill:_____

THE FOLLOWING ACTIONS HAVE BEEN TAKEN:

- ❑ Appropriate local governmental officials have been notified.
- ❑ TCEQ regional office has been notified.
- ❑ The spill has been contained.
- ❑ Increased monitoring of water supply systems has been initiated.
- ❑ The cause of the spill has been corrected.
- ❑ Clean-up activities are underway/completed.
- ❑ Other:_____.

PERSONS MAY WISH TO TAKE THE FOLLOWING PERSONAL PRECAUTIONS

- ☐ Use only water that has been distilled or boiled at a rolling boil for at least one minute for all personal uses including drinking, cooking, bathing and tooth brushing.
- ☐ Don't swim in affected area streams, ponds or lakes.
- ☐ Always wash hands thoroughly before preparing or eating food.
- ☐ Always wash hands thoroughly after any contact with animals, soil or diapers.
- ☐ Private well owners may wish to treat their well water, have their well water tested and inspect their wells for proper siting, construction and maintenance.

Appendix L

Sample of Warning Signs

Stay Away!
Raw sewage on ground.
Serious health risk.
Cleanup in progress.
San Antonio Water System
210-704-7297

¡Manténgase Alejado!
Aguas residuales en la superficie.
Alto riesgo para la salud.
Limpieza en marcha.
San Antonio Water System
210-704-7297

Appendix M

"5-Day" TCEQ Water Quality Non Compliance Notification Form

Water Quality Noncompliance Notification

_____ Unauthorized Discharge of Wastewater _____ Reportable Effluent Violation _____ Other

General Information

Entity Name: _____ Telephone _____

_____ Permitte _____ Subscriber

TCEQ Region: _____ County: _____ Permit Number: _____

Noncompliance Summary

Description of Noncompliance (include location, discharge route, and estimated volume if an unauthorized discharge): _____

_____ (Date) (Time) _____ (Date) (Time)

Or expected to be Corrected _____ (Date)

Potential Dangers to Human Health and Safety or the Environment: _____

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

_____ yes _____ no Field Measurements

_____ yes _____ no Laboratory Samples

_____ yes _____ no Fish Kill, If yes, estimated number killed: _____

Actions Taken to Mitigate Adverse Effects: _____

Actions Taken to Correct the Problem and Prevent Recurrence: _____

Verification Information

Information Reported By: _____ / _____

(Name) (Title)

Date Reported: _____ Signature: _____

TCEQ 0501 (November 5, 2002) *If the noncompliance is an unauthorized discharge from a wastewater collection system, use the permit number of the treatment plant to which the collection system is tied.

TCEQ Region 13 Phone: 490-3096 TCEQ Region 13 Fax: 545-4329

SAN ANTONIO IS WATER'S MOST RESOURCEFUL CITY