

Emergency Response Plan (“CERP”). The CERP shall address both routine and catastrophic emergencies. Routine emergencies include such situations as overflowing manholes, line breaks, localized electrical failure and Pump Station outages. Catastrophic emergencies include floods, tornados, earthquakes or other natural events, serious chemical spills and widespread electrical failure. The CERP shall address areas of vulnerability and determine the effect of such a failure to operations, equipment and public safety and health based upon such factors as topography, weather, sewer system size, and other site-specific factors. The CERP shall include standard forms. The CERP shall have the following components:

(i). WWTP. The WWTP component of the CERP shall establish standard operating procedures for use in emergency situations, including changes in process controls.

(ii). WCTS. The WCTS component of the CERP shall include the SORP; the evaluation of, and acquisition plan for, additional Pump Station standby power and emergency equipment needs; and the written standard operating procedures for use in specific anticipated emergency activities, which include identification of the specific actions which staff should take and the instructions for operating equipment and systems. At a minimum, the standard operating procedures shall: identify criteria for initiating and ceasing the anticipated activities; identify the appropriate service/repair equipment and sources for that equipment; and describe the emergency planning for, and emergency use of, the following: stand-by power (e.g., generators or dual power feeds), portable pumps, maintenance equipment (e.g., vacuum truck, jet washing truck and/or combination truck), and each Pump Station.

(iii). Public Notification of Emergencies. In addition to the reporting

requirements set forth in Section IX (Reporting Requirements), Columbia shall establish, in coordination with DHEC:

(A) criteria to be used as the basis for immediately notifying the public and other impacted entities, such as users with a downstream water intake, of an emergency situation caused by an SSO, diversion, Bypass, or effluent limit violation;

(B) a list identifying, by name, phone number and pager number, all Columbia staff who are responsible for notifying the public;

(C) a list identifying, by name and phone number, all public contacts, including local media outlets, who must be contacted during an emergency situation;

(D) a list identifying Columbia staff who are authorized to make public statements during emergency situations; and

(E) pre-scripted news releases for various types of emergency situations.

(iv). Notification of Regulatory Authorities. In addition to the notification requirements set forth in the NPDES Permit, and the reporting requirements set forth in Section IX (Reporting Requirements), Columbia shall establish, in coordination with DHEC:

(A) criteria to be used as the basis for immediately notifying DHEC of any emergency situation caused by an SSO, diversion, Bypass, or effluent limit violation; (B) a list identifying, by name, phone number and pager number, all Columbia staff who are responsible for notifying DHEC;

(C) a list identifying, by name and phone number, all officials who must be contacted; and (D) standard reporting forms.

(v). An implementation schedule specifying dates and actions.

c. WCTS Training Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a WCTS Training Program. Columbia shall develop the Program by evaluating the personnel, tasks, equipment, and facilities associated with the operation and maintenance of Columbia's WCTS. The Program shall include, and Columbia shall implement:

(i). General Training. Columbia shall provide general training to address tasks undertaken by Columbia's wastewater personnel. General training would include, for example, employee orientations, training in the basic principles of wastewater collection and transmission, and training in the rules and regulations affecting Columbia's Wastewater Maintenance Division. The general training component of the Program shall provide the content of the initial training, and the frequency and content of the refresher training, to be required for all personnel responsible for management, operations, or maintenance of Columbia's WCTS.

(ii). Position Specific Training. Columbia shall provide training for tasks undertaken by Columbia's wastewater personnel to address the methods, processes, procedures, and techniques required to perform the duties and tasks necessary for the proper operation and maintenance of the collection and transmission system. Collection system training would include, as appropriate, training in equipment operation, pipe installation/replacement, pipe cleaning, pipe inspection, and reading as-built drawings. Transmission system training would include, as appropriate, training in equipment operation, pump/ejector inspection, pump/ejector maintenance, and pump/ejector repair. Columbia's collection system training and transmission system training program shall include:

(A) identification of the related tasks, equipment, and facilities;

(B) description of the technical knowledge necessary to properly conduct the individual tasks and properly operate the individual equipment and facilities;

(C) description of the underlying purposes and technical reasons for conducting the individual tasks or operating the individual equipment and facilities;

(D) standard procedures which personnel shall follow when conducting the individual tasks or operating the individual equipment and facilities;

(E) the content of the initial training, and the frequency and content of the refresher training, to be required for personnel conducting the individual tasks, or operating the individual equipment and facilities; and

(F) training designed to provide trainees with a thorough understanding of the individual procedures, underlying technical reasons, and underlying purposes associated with the individual tasks they may conduct, or the specific equipment and facilities they may operate, and to provide this in a consistent manner to all trainees.

(iii). Tracking. The Training Program shall include a description of the common data management system to be used for tracking personnel participation in, and completion of, the initial general training, collection system training, and/or transmission system training, and the corresponding refresher training.

(iv). Implementation Schedule. The Training Program shall include an

implementation schedule specifying dates and actions.

d. Information Management System Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval an Information Management System (IMS) Program. The IMS Program shall include, but may not be limited to the following: a description of what information is entered into the system, how it is entered and by what means it is recorded; types of work reports prepared and submitted, including examples; a description of the management reports generated from the input data (i.e. work reports), including examples; standard forms used by both field personnel and management for the program, where applicable; a detailed description of how the records are maintained; if computer software is utilized, a description of the software used with cited references for software training and procedures for utilizing the software; and a procedure for periodic quality assurance/quality control checks of the system. The Program shall include the following sub-programs:

(i). Management IMS. The IMS Program shall include a Management IMS to provide WCTS managers guidance and instruction to adequately evaluate operations, maintenance, customer service, and system rehabilitation activities so that overall system performance can be determined and WCTS planning can be conducted.

(ii). Operations IMS. The IMS Program shall include an Operations IMS to provide managers and field supervisors the guidance to adequately track scheduled operational activities and to enhance operational performance. The system shall utilize operating reports and standard operation forms used by field personnel and provide for field supervisor

review. While the Operations IMS need not be computer based, it shall be capable of feeding information into the Management IMS.

(iii). Maintenance IMS. The IMS Program shall include a Maintenance IMS to provide managers and field supervisors the guidance to adequately track scheduled maintenance activities and to enhance maintenance performance. The system shall utilize maintenance reports and standard maintenance forms used by field personnel and for field supervisor review. While the Maintenance IMS need not be computer based, it shall be capable of feeding information into the Management IMS.

(iv). Complaint Tracking IMS. The IMS Program shall include a Complaint Tracking IMS to provide managers the guidance to adequately assess and manage complaint information. The system shall utilize standard complaint forms used by personnel and provide for supervisor review. While the Complaint Tracking IMS need not be computer based, it shall be capable of feeding information into the Management Programs IMS.

(v). An implementation schedule specifying dates and actions.

e. Capacity Assurance Program. Within one hundred and eighty (180) Days after EPA approval of the Hydraulic Model Report, Columbia shall submit to EPA and DHEC for review, comment, and approval a Capacity Assurance Program (“CAP”). The CAP shall identify each Sewerbasin with insufficient capacity under peak wet weather, average conditions, or both. It shall also analyze all portions of the WCTS that have experienced SSOs either due to, or exacerbated by, an excessive hydraulic contribution. The CAP shall assess peak flow capacity of all major Sewer System components for existing and proposed flows. At minimum, the CAP

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of The City of Columbia's Sewer Overflow Response Plan (SORP) is to facilitate a prompt and appropriate response to any sanitary sewer overflow, release, or diversion of wastewater from the wastewater system. Such events may include, but are not limited to, conditions in the City owned collection system such as blockages and/or flow conditions that have the potential for wastewater backups into buildings, and/or discharges from the collection system designed to carry the wastes from the service area to the treatment plant. Discharges may involve manholes, pump stations, transmission lines, collection lines, or other appurtenances. Sewer back-ups can involve large volumes of wastewater and can pose a substantial threat to the receiving surface waters. Maintenance activities to repair sewer pipes can also create excessive sediment that can impact the storm sewer system. This Plan reflects the procedures established for responding to reports of potential SSOs and confirmed SSOs, and for minimizing the impacts that SSOs and their related activities have on the environment, local waterways and the storm sewer system. Copies of this document will be provided to all persons who are involved in meeting its objectives.

1.2 GENERAL BACKGROUND

The Wastewater Maintenance Division (herein referred to as WWM) and Metro Wastewater Treatment Plant (herein referred to as MWWTP), are responsible for reporting any SSOs that occur. Potential SSOs are defined as possible sanitary sewer overflows. Confirmed SSOs are defined as sanitary sewer overflows where the source has been identified.

The Wastewater Maintenance Division is responsible for reporting SSOs that occur within the sanitary sewer collection system (not including attendant pump stations).

The Metro Wastewater Treatment Plant Division is responsible for reporting SSOs that occur at the MWWTP and wastewater pumping stations.

The Utilities and Engineering Department may also receive SSO reports. The Department will be responsible for directing the SSO report to the appropriate division (WWM or MWWTP).

All SSOs, regardless of amount, will have a City of Columbia (COC) SSO Report Form (04/2013) completed and signed by the Director of Utilities and Engineering or his designee. This report will be signed and forwarded to the South Carolina Department of Health and Environmental Control (SCDHEC) and appropriate City Divisions within 5 calendar days.

Public notice will be made in accordance with Section 4.0 and Appendix H.

The City of Columbia also holds a stormwater NPDES permit issued by SCDHEC. This permit requires the City have controls in place to limit, detect and eliminate sanitary sewer and septage seepage into the MS4. Since the City owns the sewer collection system, SCDHEC also requires the implementation of a Sanitary Sewer Seepage and Infiltration Control Program and Illicit

Discharge Detection and Elimination Program. Specifics for both of these programs can be found in the Stormwater Standard Operating Procedure (SOP) for Element 7: Illicit Discharge Detection and Elimination.

1.3 OBJECTIVES

The procedures set forth herein are intended to be a standardized course of action, with good faith intent, and reflect the following objectives:

1. Protect public health and safety;
2. Maintain a high quality of customer service;
3. Protect private and public property adjacent to the collection and treatment facilities;
4. Protect wastewater treatment and collection system personnel;
5. Protect the collection system, wastewater pumping stations, wastewater treatment facilities, and all appurtenances;
6. Minimize adverse water quality, stormwater, and other environmental impacts;
7. Comply with all local, state, and federal rules and regulations;
8. Avoid NPDES permit violations; and,
9. Minimize liability.

1.4 DISTRIBUTION AND MAINTENANCE

1.4.1 SUBMITTAL AND AVAILABILTY

The Director of Utilities & Engineering or his/her designee will distribute copies of the Plan and any amendments here to the following:

1. City Manager
2. City Engineer
3. Superintendent of Water Plants
4. Wastewater Maintenance Superintendent
5. Wastewater Plant Superintendent
6. Director of Utilities and Engineering
7. Wastewater Engineer

It shall be the responsibility of the appropriate supervisor to ensure that any other personnel who may become involved in responding to a potential SSO have a copy of the Plan, have access, and are familiar with its contents. This includes foremen and crews doing the actual work in the field. An electronic copy of the Plan may be made available to others upon request.

1.4.2 REVIEW AND UPDATE OF PLAN

This Plan will be reviewed and amended as appropriate. The WWM Superintendent or MWWTP Superintendent or his/her designee shall conduct an annual review of the Plan and provide any recommended updates to the Director of Utilities and Engineering. The Director of Utilities and Engineering will update the Plan as necessary to reflect updates provided by the

WWM Superintendent or MWWTP Superintendent or his/her designee. The Director of Utilities and Engineering or his/her designee will provide an updated copy of the Plan to staff noted above in section 1.4.1.

1.4.3 TRAINING

The WWM Superintendent or MWWTP Superintendent or his/her designee will train appropriate personnel on the use of the Plan and any updates thereto. Continuing education training will be repeated at least annually, when new employees are hired, or whenever changes are made to the Plan. Training will also cover stormwater protection techniques and Best Management Practices (BMPs) use/ selection for each crew. This training may be combined with other staff training initiatives.

This Plan will be a living document and regularly updated to ensure a timely and appropriate response to all wastewater related sanitary sewer overflows. The Plan will be used as the training guide and the training will focus on:

1. SSO Emergency Response Plan Procedures;
2. SSO Emergency Response Plan Objectives;
3. Call Taking and Dispatch of Appropriate Crews;
4. Site Assessment, SSO Correction, Containment and Clean Up;
5. Public Advisory Procedures, Temporary Signage, and Media Notification;
6. Downstream Drinking Water Sources Notification;
7. Regulatory Agency Notification;
8. Safety Procedures; and
9. Documentation, Data Collection, Volume Calculations and Record Keeping.

This Plan is intended to be a short-term, proactive approach to managing potential or confirmed SSOs and their immediate effects. The Plan is an integral component of a broader watershed approach to controlling SSOs.

2.0 OVERFLOW FIRST RESPONDERS

2.1 WASTEWATER MAINTENANCE (WWM) DIVISION

The City currently owns, operates, and maintains, approximately 1,200 miles of sanitary sewer pipes that are the responsibility of its Wastewater Maintenance Division. (The City's wastewater pump stations and treatment plant fall under the responsibility of the MWWTP. Objectives of the Wastewater Maintenance Division include:

1. Quality service to customers;
2. Management of infrastructure assets, including sewage collection;
3. Utilization of sound business practices; and
4. Regulatory compliance.

The City will operate and maintain all components of the wastewater collection system in a fashion that will minimize the potential of SSOs. The City places emphasis on programs and

training of qualified personnel who are expected to be professional and proactive. Despite best efforts, and due to unforeseeable events such as vandalism and catastrophic weather conditions, all SSOs may not be eliminated. The procedures contained in this Section will be implemented by staff of the Wastewater Maintenance Division when SSOs occur.

2.2 METROPOLITAN WASTEWATER TREATMENT PLANT (WWTP) DIVISION

The City currently owns, operates, and maintains, a 60 MGD wastewater treatment plant and 67 sanitary sewer pump stations that are the responsibility of its MWWTP maintenance and lift station maintenance staff. The City's sanitary sewer collection system and piping do not fall under the responsibility of the MWWTP. Objectives of the MWWTP include:

1. Quality service to customers;
2. Management of infrastructure assets, including wastewater treatment and pump stations;
3. Utilization of sound business practices;
4. Minimize adverse water quality, stormwater, and other environmental impacts; and
5. Regulatory compliance.

The City will operate and maintain all components of the wastewater treatment plant and sanitary sewer pump stations in a fashion that will minimize the potential of SSOs. The City places emphasis on programs and training of qualified personnel who are expected to be professional and proactive. Despite best efforts, and due to unforeseeable events such as vandalism and catastrophic weather conditions, all SSOs may not be eliminated. The procedures contained in this Section will be implemented by staff of the MWWTP when SSOs occur.

Additionally, The City of Columbia also holds a stormwater NPDES permit issued by SCDHEC. This permit requires the City have controls in place to limit, detect and eliminate sanitary sewer and septage seepage into the MS4. Since the City owns the sewer collection system, SCDHEC also requires the implementation of a Sanitary Sewer Seepage and Infiltration Control Program and Illicit Discharge Detection and Elimination Program. Specifics for both of these programs can be found in the Stormwater Standard Operating Procedure (SOP) for Element 7: Illicit Discharge Detection and Elimination.

3.0 OVERFLOW EMERGENCY RESPONSE PLAN

3.1 DETECTION AND RECEIPT OF INFORMATION

Potential SSOs and/or Potential Building Backups are generally reported and treated in the same manner as outlined herein.

1. These may be reported and/or detected by the general public, and/or the SCDHEC by calling the Customer Care Center 803-545-3300. The Customer Care Center has personnel available to answer the phone at 803-545-3300, 24 hours per day, 7 days per week. The call taker will seek to get enough information from the caller to determine if a potential SSO involves the storm drain system, drinking water system or

wastewater system. Additionally, reports may be made to the WWM Division and MWWTP telephone numbers are available in the blue pages of the Columbia Area AT&T phone book under "Sewer Maintenance" and "Sewage Treatment Plant." Persons calling these Divisions can report a potential SSO 24 hours per day, 7 days a week.

2. WWM personnel are instructed to report all potential SSOs immediately to the WWM Superintendent or his/her designee by calling 803-600-5619.
3. MWWTP personnel are instructed to report all potential SSOs immediately to the MWWTP Superintendent or his/her designee by calling 803-413-8376.

All call takers will record all relevant information known by the caller regarding the potential SSO, including:

1. Time and date the call was received and the person who received the call;
2. Specific location of the potential SSO;
3. Time the potential SSO was noticed by the caller;
4. Caller's name and phone number(s), and how best to contact for follow up;
5. Information concerning specifics supplied by the caller (i.e., odor, duration, in street, back or front of property);
6. Whether or not a potential SSO has reached or is flowing towards a creek, stream or river, a park, playground, school yard, or other public use location; and
7. Other relevant information that will enable the responding investigator and crews, to quickly locate, assess and alleviate the potential SSO.

3.2 DISPATCH OF APPROPRIATE CREWS

The purpose of immediate response to a potential SSO is to identify and correct any problems that could cause or has caused an SSO. If more than one potential SSO occurs at or near the same time period, different crews will be sent to address the different potential SSOs, when possible. If this is not possible, the potential SSOs will be prioritized by an appropriate Division Superintendent or his/her designee in order of greatest threat to public health, surface waters and property. Water quality monitoring for overflows will be conducted as directed by SCDHEC. In such case, SCDHEC will determine the parameters to sample for and at what locations.

Depending on the nature of the spill, the City may take samples concurrently with SCDHEC. Phone calls or other correspondence related to potential SSOs are generally directed to one of the Wastewater Divisions. During normal business hours, the Office Assistant who acts as Dispatcher may receive calls as outlined hereinabove and in Appendix A. Calls are also received at the MWWTP. Operators there are trained to relay potential SSOs to the appropriate crews (WWM or MWWTP personnel).

A City representative or an automated response system will dispatch calls that are received after normal business hours, holidays and weekends as outlined hereinabove and in Appendix A. The on-duty Foreman has a complete list of on-call personnel, including WWM or MWWTP personnel, and their contact phone numbers.

On-call personnel for both WWM and MWWTP rotate weekly (WWM) and every twelve hour shift (MWWTP). A City issued cell phone rotates with the person who is on-call. Calls are routed as follows for investigation:

1. Potential SSOs that are based in the collection system are routed to the WWM Superintendent or his/her designee.
2. Potential SSOs that are based in Wastewater pump stations and/or the treatment plant are routed to the MWWTP Superintendent or his/her designee.

During wet weather events, an appropriate Division Superintendent will have personnel inspect locations that are known to be recurring overflow locations. A list/map of these locations is maintained and updated on GIS. A copy of this map is located in a central area so personnel know where to respond during a rain event.

During pump station failures, an appropriate Superintendent will have personnel inspect the locations prone to overflow during these failures. A list/map of these locations will be developed as part of the Contingency and Emergency Response Plan (CERP). Once developed, the list/map will be maintained and updated on GIS. A copy of this map will also be located in a central area so personnel will know where to respond during a pump station failure.

3.3 OVERFLOW MITIGATION

The City will reduce the negative impact on the environment and hazards to public health by employing all reasonable containment activities during discharge events. Under most circumstances, both Wastewater Divisions have personnel and equipment that will be able to correct, contain, and clean up wastewater related SSOs. A list of equipment is updated by and maintained within the City's Accounting Department.

A situation may arise that will require the support of an outside contractor. The list of emergency contractors is maintained and updated within the Engineering Division of the Utilities and Engineering Department. Examples may include, repair to sewer pipe in remote areas, creek crossings, or large diameter pipe buried deeply where extensive shoring may be required to resolve the SSO. The City solicits bids on an emergency basis in the event that a contractor is needed. In these cases, interim measures are taken to contain the SSO and prevent any additional harm to the environment, private property, public health, etc. Contractors are responsible for the same level of environmental stewardship as City crews, and requirements for appropriate BMPs (such as inlet protection, debris cleanup, etc.) will be provided to contractors before any work begins.

3.3.1 SITE ASSESSMENT

All Wastewater personnel responding to a potential SSO will adhere to the following guidelines:

1. It is the responsibility of the first responder who arrives at the site of a potential SSO to protect the health and safety of the public.
2. If the first responder is unable to address the problem, then the appropriate supervisor will be notified immediately. The supervisor will employ appropriate measures (i.e. CCTV, smoke testing, etc.) to determine cause of SSO.
3. The health and safety of the public and City personnel are of primary concern. Responding crew members will contact their supervisor whenever a suspicious substance (i.e., oil sheen, foamy residue) is found on the ground surface, within surface waters or ponded areas, or upon detection of a suspicious odor (i.e., gasoline, chemical), not common to the sewer system. City staff (WWM, MWWTP, U&E) follow Job Hazard Assessment, are trained in safe handling of sanitary sewer overflows, and follow universal precautions for raw sewage and blood borne pathogens.
4. The proper regulatory agency will be notified if the first responder notices any overflows (i.e. non-rainwater discharges) entering a body of water or a storm drain.
5. Estimate the overflow in accordance with the guidelines in Section 5, Appendix E herein. Notify Wastewater Compliance immediately for public notification guidance when:
 - a. Calculations determine the overflow to be 5000 gallons or more, or when;
 - b. Overflow directly enters a body of water and calculation shows greater than 1000 gallons.
6. Due to the emergency nature of most wastewater activities, the Stormwater Section staff understands that stopping or unstopping the flow is the major concern of the Wastewater department. As early as is feasibly possible (but always before any digging activity), a member of the Wastewater crew will deploy inlet protection devices for the immediate area and out through a 50 foot radius. Any storm drains, conveyance channels, or sensitive areas (wetlands, adjacent waters, etc.) will be protected, when feasible, with sandbags, gravel bags, sediment tubes, or a combination of the three BMPs. All applicable crews will have this equipment. These inlet protection measures should stay in place until the maintenance activity has been completed, thus reducing the sediment and pollutant impact. In some cases, the bags or tubes can be rinsed out over a vegetated area and reused.
7. The Fire Department Hazardous Material Response Team (HAZ-MAT) will be notified if hazardous material is suspected.
8. Associated personnel will assist, as necessary, to insure that all potential SSOs are addressed in a timely manner. On-call personnel, Foremen and MWWTP/WWM personnel will communicate and coordinate activities and transfer pertinent information

to the next shift at shift change, including and details of the problem and observations described by the person who reported the problem.

3.3.2 OVERFLOW CORRECTION AND CONTAINMENT

Containing spills is the concept of establishing a physical barrier to control the further dispersal of sewage, thus reducing the impact on downstream areas such as private property and streams. Containment procedures will vary on a case-by-case situation. Such measures are specifically designed to ensure that the proposed plan of action will meet the goals of the SORP.

Upon arrival at a potential SSO, (i.e., sewer line blockage, sewer line break, pump station malfunction) the responding personnel will:

1. Request assistance as needed to determine the cause and contain the SSO;
2. Immediately determine where the SSO has occurred and determine the immediate destination of the SSO (i.e., storm drain, surface water, ground surface, and so on);
3. Immediately secure the work area and request personnel, materials, and equipment as required to expedite containment of the SSO;
 - For pump station-specific emergency procedures refer to the CERP.
4. Determine Whether Flow Diversion Techniques Are Practicable.
 When possible, flow diversion techniques provide an effective means of conveying the overflow back into the sewer system. This procedure reduces additional potential impact on the immediate area and the possible impact downstream. The flow diversion techniques employed by the City when practicable include, but are not limited to, the following:
 - **By-passing measures**
 Portable by-pass pumps can be used in certain situations to collect overflowed sewage from the environment and convey it back into the sanitary sewer system beyond the disruption of service. This method is most effective in bypassing a single identified problem area when the overflow can be directed to the next downstream manhole. It is not appropriate in wet weather overflows. This type of equipment can be used in conjunction with other containment measures or may be used independently. Additionally, the City maintains a list of qualified contractors capable of providing emergency by-pass pumping as may be required.
 - **Vactor/Combination cleaner/flusher procedures**
 Combination cleaner/flusher equipment provides an additional resource for collecting overflowed sewage and conveying it back into the sanitary sewer system beyond the disruption of service. This equipment can be used in certain situations in conjunction with other containment measures or may be used independently. Like portable by-pass pumps, this equipment may not be effective in wet weather situations.

5. Mitigation/Remediation Solutions.

The timely use of flow restrictions is the most effective instrument to reduce additional negative impact on the environment. Also, this phase of field activities may enable restoration of service to City wastewater customers.

The type of mitigation and remediation will vary depending on the cause of the SSO. Wet weather SSOs are usually caused by inflow and infiltration (I/I), not by blockages or other problems in the system. Mitigation of wet weather overflows may not be possible until the overflow subsides, but when it does, The City will implement all necessary steps to clean up and disinfect the overflow site.

Dry weather events may be addressed using several methods. The field professionals should identify the most effective method or combination of methods to return service to the system. Field crews should use television inspection to determine the most effective way to resolve any service disruption. CCTV inspection will identify the cause and location of the blockage and the necessary techniques needed to eliminate it.

6. Deploy inlet protection for the immediate area and out through a 50 foot radius. Any storm drains, conveyance channels or sensitive areas (wetlands, adjacent waters, etc.) will be protected with sandbags, gravel bags, sediment tubes, or a combination of the three BMPs;
7. Control pedestrian and vehicular traffic, as needed, using flagmen, barricades, warning tape, fencing, signage, etc.; and
8. Universal precautions shall be used during corrective and containment activities.

The primary objective of the first responder(s) is to correct the immediate cause of all SSOs. Personnel on the scene will also determine if the SSO is going into "Waters of the United States" (See Section 5.2 APPENDIX B Number 4). If private property is involved, the responding personnel will use discretion in providing assistance to a private property owner/occupant who may have sustained property damage. Generally, a responding crew should not enter private property for the purpose of assessing damage unless directed otherwise by a Foreman or Supervisor. If the SSO has entered "Waters of the State", the first responder will notify the proper regulatory agency.

An appropriate Division Superintendent or his/her designee will assist the first responder and visit the site of the SSO as needed to ensure that all of the provisions of this Plan and other directives are met. Should the cause of the SSO not be related to infrastructure owned by the City (i.e., an overflowing private sanitary sewer), but there is imminent danger to public health, public or private property or to "Waters of the United States", then prudent emergency action shall be taken until the responsible party assumes responsibility.

An appropriate Division Superintendent or his/her designee will notify SCDHEC of all identified SSOs not related to infrastructure owned by the City.

SSOs from private laterals, into basements, etc. which are alleged to be the result of problems in the wastewater collection system will be addressed by WWM Inflow & Infiltration (I & I) personnel on a case by case basis.

SSOs are tracked by the Stormwater Section on a GIS layer to identify potential long-term water quality impacts.

3.3.3 OVERFLOW CLEAN UP

For all SSOs, the clean-up methods used will strive to meet the criteria established in Section 1.3 – Objectives. General guidelines for clean-up include:

1. The SSO area will be secured to prevent contact by the public during the cleaning process. Signage and notice requirements, as deemed necessary to prevent such contact, will be implemented as provided in Section 3.5 below;
2. All storm drains or storm sewer conveyance structures within a 50 ft. radius will be bermed off using sand or gravel bags, sediment tubes, or a combination of the three items. These BMPs are put into place to prevent sediment and other solids from entering the storm sewer system;
3. Removal of all readily identifiable residues (i.e., fecal matter, sludge, rags, papers, or plastics);
4. Cleanup activities will utilize universal precautions;
5. Where practical in locations where flush water will not flow to "Waters of the United States", the SSO area will be flushed with wash down water. If possible, the wash down water will be contained and properly disposed of;
6. If the SSO is to dry land only and flushing causes the SSO and/or flush water to reach "Waters of the United States" the incident will be reported as a SSO to "Waters of the United States";
7. Solids and other debris will be flushed, swept, raked, picked up and transported to proper disposal sites;
8. Standing water that has collected as a result of the SSO will be pumped and returned to the sewage system, if possible. Solids and associated wastewater debris remaining after the area has been pumped will be flushed, raked, picked up, and removed from the site and properly disposed of;

9. Contaminated soil will be treated with lime in accordance with SCDHEC regulations, product label and Material Safety Data Sheet;
10. Any sediment or soil that remains on an impervious surface (street, parking lot, etc.) must be removed to the maximum extent practical. Crews should use backhoes (for large amounts) and shovels and brooms to remove excess sediment that could wash into storm drains;
11. After all digging and cleanup activities have finished, the inlet protection BMPs may be removed. If planning to re-use the bags or sediment tubes, they should be rinsed out over a pervious surface or vegetated area. Never rinse them out over a storm drain, water body or ditch, or impervious surface (like the street). If bags or tubes have been saturated with sanitary debris or solids, they should be disposed of properly to the sanitary landfill;
12. When activities are complete, inspect the flow path of the discharge. Identify any areas that may have experienced soil erosion and need repair. Use erosion control blankets, mulch or geo-fabric with hay matting (which can include seeds) to stabilize soil erosion. Always make every attempt to re-establish vegetation on the impacted area, and if necessary continue inspections until the area has stabilized. Contact the Stormwater Section (803-545-3304) with any questions or help with ongoing inspections or stabilization issues; and
13. Do not hose down the area to remove sediment (unless it is necessary for traffic safety).
14. Wastewater staff will respond to Building Backups to determine the cause of the backup. If the backup is determined to be caused by the City's sewer system, the customer will be referred to the insurance claims adjuster. The City has open purchase orders with approved private cleanup companies that can begin to clean up the facility/home immediately while the claim is being processed.

3.4 REGULATORY REPORTING

3.4.1 DATA COLLECTION

If a potential SSO is confirmed to be an SSO:

1. The individual responding to the SSO will report findings to an appropriate Division Superintendent or his/her designee.
2. An appropriate Division Superintendent or his/her designee will insure the procedures within Section 5 are completed.
3. An appropriate Division Superintendent or his/her designee will document immediate actions taken to mitigate the SSO and the steps taken to prevent recurrence. These

notes will become a part of the final 5 Day Written Report filed for the record and used for notification purposes.

4. The Department of Utilities and Engineering will provide the Stormwater Section with an annual report that tracks relevant activities including but not limited to: volume of wastewater captured, amount of solids recovered, miles of pipe cleaned, number of spills, employee training, etc.

If a potential SSO is reported and no SSO is confirmed, an appropriate Division Superintendent or his/her designee will document and have a report on file of the incident.

3.4.2 24-HOUR REPORT

An appropriate Division Superintendent or his/her designee will contact SCDHEC Region 3 – Columbia EQC Office within 24 hours of confirming an SSO. This contact will be by telephone at 803-896-0620 during normal business hours and after-hours reporting shall be made to SCDHEC's 24-hour Emergency Response number at 803-253-6488.

The 24 Hour Report will include, at a minimum, the following information:

1. Identification of the utility name, person reporting the SSO, and a contact number;
2. Date and start time of the SSO;
3. Location of the SSO by street address or other appropriate method; and
4. Whether the confirmed SSO is reaching "Waters of the United States."

3.4.3 5-DAY WRITTEN REPORT

In addition to the 24 Hour Report, an appropriate Division Assistant Superintendent or his/her designee will prepare and submit a written report of the SSO to the Wastewater Compliance Section for processing and submittal, in accordance with procedures outlined in Section 3.4.4, to SCDHEC. This report will be submitted to SCDHEC within five (5) days of the confirmation of the SSO (5 Day Written Report). COC SSO Report Form (01/2013) is used for the 5 Day Written Report and will include, at minimum, the following information:

1. Duration and volume (estimate if unknown) of the SSO;
2. Location of the SSO by street address or other appropriate method;
3. Cause of the SSO;
4. Description of the source, e.g., manhole cover, pump station;
5. Exact dates and times of the SSO event, i.e., start and stop dates and times;
6. The ultimate destination of the flow; e.g., surface water body, land use location via municipal separate storm sewer system to a surface water body (include the name of the receiving stream);
7. Corrective actions or plans to eliminate future discharges;
8. Identification of the person providing the 5 Day Written Report concerning the SSO; and

9. Reason why the required 24 Hour Report was not provided in a timely manner, if applicable.

The 5-Day Written Report will be provided to SCDHEC and shall include the appropriate signature and/or certification, in accordance with the signatory requirements of the City's NPDES Permit for the Metro Wastewater Treatment Plant (Permit).

If the SSO is still ongoing at the time the 5 Day Written Report is submitted, the Director of Utilities and Engineering or his/her designee will mark the Report "PRELIMINARY." If the SSO has ceased at the time of the 5 Day Written Report, the Director of Utilities and Engineering or his/her designee will mark the Report "FINAL."

3.4.4 PROCESSING ALL SANITARY SEWER OVERFLOW REPORTS

The Wastewater Compliance Section will indicate on the report form whether the location has overflowed within the last 12 months. All overflow locations will be loaded on the City's GIS. The Director of Utilities and Engineering or his/her designee will enter the information on the COC SSO Report Form (01/2013) (5 Day Written Report) into the "Sewer Report" Engineering Applications Program and assign a tracking number to it. This number will be written on the top right hand corner of the Report. The hard copy report form will be scanned and saved as the number assigned in an electronic file.

After the scanned Report is saved, the Director of Utilities and Engineering or his/her designee will email the Report within 5 days of the overflow to the SCDHEC and appropriate City Divisions. A listing of recent SSOs may be accessed at http://www.scdhec.gov/environment/water/sso-psf_display.aspx

The original hard copy Report will be forwarded to the MWWTP Superintendent or his/her designee for DMR Reporting.

A copy of the electronic Report will be saved in the department's file folder and maintained for at least 3 years. Complaints from customers or others regarding SSOs will be maintained within the City's Work Order Management Program for at least 3 years.

3.4.5 FECAL COLIFORM SAMPLING

City staff will perform fecal coliform sampling during and/or following a sanitary sewer overflow event as directed by the SCDHEC in accordance with the following procedure:

1. Determine where the sanitary sewer overflow impacted the waterway.
2. Where available, utilize GIS mapping to determine if the site can be sampled above impacted area to determine waterway background levels.
3. Where possible, determine sampling location above impacted area, at impacted site, and downstream of impacted area.
4. Create map sketch showing locations or describe them in writing.

5. Ice down cooler, prep sampling equipment and sample bottles utilizing proper chain of custody techniques.
6. When entering potentially hazardous areas utilize the buddy system.
7. Use proper PPE and safe collection practices.
8. Collect sample at each location and make field notes as needed. Record: date, time, exact location of sample sites, sampler personnel information, project name. Samples will be recorded as Project name: COC-SSO location.
9. Deliver samples to lab for analysis.
10. Repeat sampling as directed by SCDHEC, MULTIPLE DAYS MAY BE NECESSARY. INFORM SCDHEC OF RESULTS AS SOON AS THEY ARE AVAILABLE so a determination can be made as quickly as possible regarding the need for additional samples.

3.5 PUBLIC NOTIFICATION PROCEDURE

An appropriate Division Superintendent or his/her designee is responsible for advising the public of confirmed SSOs which potentially impact the health and safety of the public. Posting and notification will differ depending upon the location and severity of the SSO.

3.5.1 TEMPORARY SIGNAGE

An appropriate Division Superintendent or his/her designee is responsible for posting signs advising the public of a confirmed SSO as determined to be necessary pursuant to the guidelines set forth in Section 5, Appendix G herein. The placement of signage is to be determined according to the following criteria related to the location and nature of the confirmed SSO:

1. Signs should be posted at the location of a confirmed SSO which is believed to have entered "Waters of the United States", at any public access areas downstream of the SSO which may be potentially impacted by a confirmed SSO, and at the location of a confirmed SSO where cleanup and sanitizing of the site has not been completed;
2. Signs should be posted in the vicinity of a confirmed SSO where people are known to be present near a confirmed SSO or where it is obvious that people frequently visit the area (i.e., paths, trails, walkways, and so on) to alert the public to avoid the site and avoid contact with water in the general area; and
3. Temporary signage (i.e., door hangers, yard signs, and so on) may be used where posting at the location of the confirmed SSO is difficult or thought to be ineffective.

3.5.2 MEDIA NOTIFICATION

The Director of Utilities and Engineering or his/her designee will be responsible for notifying the media of an SSO in accordance with the guidelines and procedures outlined in Section 4.1 (Option 1) and Section 5, Appendix H herein.

3.5.3 DOWNSTREAM DRINKING WATER INTAKES

An appropriate Division Superintendent or his/her designee will immediately notify downstream drinking water sources within 20 miles of any SSO of at least 5,000 gallons, or SSOs of any size that have the potential of flowing, being washed into, or otherwise having the potential of entering downstream water sources. If a potential SSO is not subsequently confirmed, yet the SSO is in close proximity to a drinking water intake, the downstream sources will still be notified. The 24 Hour Report as described in Section 5, Appendix B will include the location of the SSO, including the watershed potentially affected by the SSO. The SSO location and watershed information indicated in the 24 Hour Report will generally be used to identify the drinking water sources that will be notified.

4.0 WASTEWATER COMPLIANCE SECTION EMERGENCY RESPONSE PROCEDURES

4.1 PUBLIC NOTICE FOR SSOs OF AT LEAST 5,000 GALLONS

Public Notice Options for SSO's of at least 5,000 gallons or as deemed necessary by SCDHEC to protect public health. Field supervisors will be responsible for notifying the appropriate personnel to enact the best option on a situational basis.

1. The Director of Utilities and Engineering or his/her designee will draft a press release in accordance with Appendix H. The press release will be distributed to SCDHEC, appropriate City Departments and Divisions, local news media outlets, local MS4 permit holders, and local stakeholders. This list of press release recipients is maintained and updated within the Wastewater Compliance Section.

OR

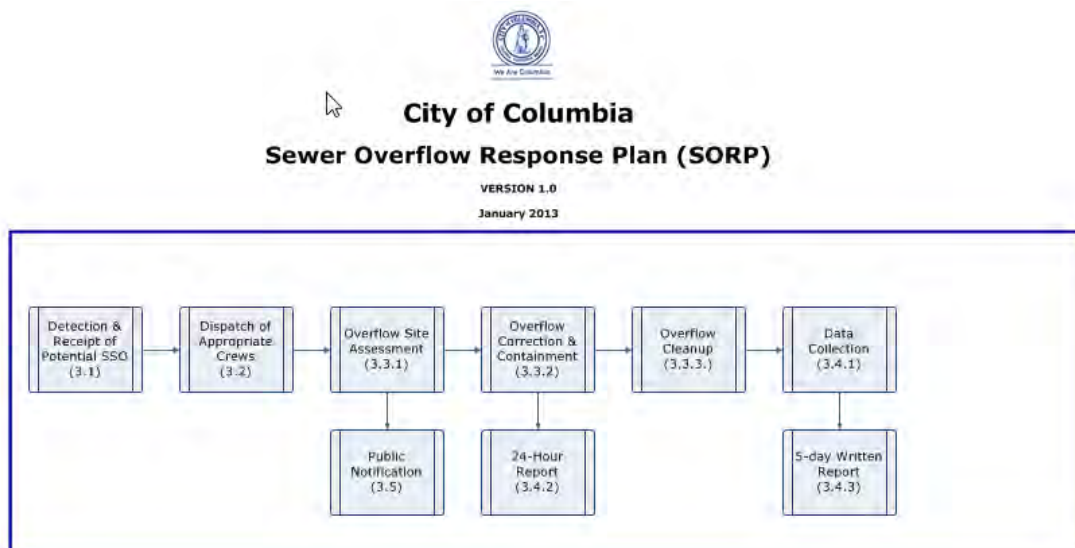
2. The WWM Superintendent or MWWTP Superintendent or his/her designee will be responsible for postings temporary signs where a confirmed SSO has occurred and where it entered "Waters of the United States", in public access areas downstream of the SSO, where cleanup and sanitizing of the impacted site has not been completed, and in areas where people frequently visit (paths, trails, walkways, etc.). Signs should be posted as soon as possible in order to alert the public, allowing the public to avoid the site and avoid contact with impacted waterways.

OR

3. The WWM Superintendent or MWWTP Superintendent or his/her designee will be responsible for utilizing temporary signage (door hangers or yard signs) where posting signs is difficult or thought to be ineffective. This method will also be utilized for overflows that are localized and isolated as deemed appropriate in heavily populated areas.

5.0 APPENDICES

5.1 APPENDIX A: DISPATCHER PLAN PROTOCOL



5.2 APPENDIX B: 24 HOUR REPORT CHECKLIST

The 24-hour report left on voice mail will include, at a minimum, the following information:

1. Identification of the utility name, person reporting the SSO, and a contact number;
2. Date and start time of the SSO failure;
3. Location of the SSO by street address or other appropriate method; and
4. Whether the SSO is reaching "Waters of the United States." According to the United States Environmental Protection Agency 40 CFR 230.3, Waters of the United States are defined as:
 - a. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
 - b. All interstate waters including interstate wetlands;
 - c. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

- (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;
 - d. All impoundments of waters otherwise defined as waters of the United States under this definition;
 - e. Tributaries of waters identified in paragraphs (s) (1) through (4) of this section;
 - f. The territorial sea;
 - g. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s) (1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.
5. Potential water intakes that could be affected by a SSO:
(Located within 20 miles of Columbia, South Carolina)
- a. **City of Columbia Lake Murray Water Treatment Plant**
Contact the Control Room at 803-781-2181
 - b. **City of Columbia Canal Water Treatment Plant**
Contact the Control Room at 803-733-8336
 - c. **City of West Columbia Lake Murray Filtering Plant**
Contact the Control Room at 803- 957-4596
 - d. **City of West Columbia Filtering Plant**
Contact the Control Room at 803-794-7696
 - e. **The City of Cayce Water Treatment Plant**
Contact the Control Room at 803-739-5367

5.3 APPENDIX C: 5 DAY WRITTEN REPORT
CITY OF COLUMBIA SANITARY SEWER OVERFLOW REPORT FORM (04/2013)



SSO No.: _____

City of Columbia Sewer System Overflow Report Form

Permit: City of Columbia Permit No: SC0020940 Effected County: _____
(Richland or Lexington)

Date SSO Failure: _____ Time: _____ Response Person: _____
(Military Format) (City Personnel)

Date SCDHEC Notified: _____ Time: _____ Person Contacted: _____
(Military Format) (SCDHEC Personnel)

Description of Source (manhole, pump station, etc.): _____ Pump Station No.: _____
Location of SSO/Failure: _____ Basin: _____
(Street address) (City, State, Zip)

City Limits: _____ Contributing Area: _____
(Inside or Outside) (Apartment, Residential, Commercial, Plant Related)

Cause of SSO/Failure: _____
(Grease, Roots, Collapsed Line, Broken Line or if other-please explain)

Control Action Taken to Minimize Flow: _____

Corrective Action Taken to respond to and clean up: _____

Estimate volume of wastewater released: _____
(In Gallons)

Has an overflow occurred at this location within the past 12 months? Yes ___ No ___: If Yes, When? _____

Did wastewater enter a stream or body of water? Yes ___ No ___: Was sample taken? Yes ___ No ___
(If discharge reaches any water already present in a conveyance ditch, etc., it is considered to have reached waters of the State)

If Yes, Where? _____
(Name of water body)

Were down stream water-in-takes notified? Yes ___ No ___ If Yes, who? _____

Was public notification issued? Yes ___ No ___ If Yes, what type? _____
(Door-hanger, Signage, Press Release)

Date Corrective Action Completed: _____ Time: _____ Work Order No.: _____
(Military Format)

Date Cleanup Action Taken: _____ Time: _____
(Military Format)

Describe actual cleanup process: _____

Phone: _____
(Name/Signature of Person Initiating Action)

Date: _____

(Signature/Sewer System Other Responsible Individual)
COC SSO Report Form (06/2013)

Date: _____

5.4 APPENDIX D: DISCHARGE MONITORING REPORT REQUIREMENTS

SUMMARY REPORT SUBMITTED WITH THE SCHEDULED DMR FORM

In addition to the 24 hour report and 5 day report, the NPDES permit also requires The City of Columbia to submit, along with the scheduled Discharge Monitoring Report (DMR) Form, the following information for each SSO at each source (this means all SSOs, including those that do not reach waters of the US and those that are less than 500 gallons in volume) that occurs during the reporting period covered by the DMR Form:

1. Duration and volume (estimate if unknown) of the SSO;
2. Location of the SSO by street address or other appropriate method;
3. Cause of the SSO;
4. Description of the source, (e.g., manhole cover, pump station);
5. Exact dates and times of the SSO event, (i.e., start and stop dates and times);
6. The ultimate destination of the flow; (e.g., surface water body), and name of receiving water;
7. Corrective actions or plans to eliminate future discharges; and
8. Identification of the person providing the written report concerning the SSO.

(NOTE: The NPDES permit includes a requirement that The City of Columbia identify whether the collection system is combined or separate. The Water Programs Enforcement Branch (WPEB) is aware that the collection systems of the South Carolina NPDES permittees of interest are separate and this requirement has intentionally been omitted from this SORP.)

The summary report submitted with the DMR shall contain all overflow volumes and a copy of each of the "FINAL" COC SSO reporting forms from the DMR reporting period.

5.5 APPENDIX E: OVERFLOW CALCULATING

A variety of approaches exist for the estimation of the volume of a sanitary sewer overflow. The following methods are most commonly employed. Other methods are also possible. Every effort shall be made to estimate the overflow volume as accurately as possible:

1. Historic pump run times;
2. Historic flow data;
3. Assessment of pooled SSO including dimensions of affected area (see example 1 below); and
4. Calculations of estimated overflow from manhole (see example 2 below).

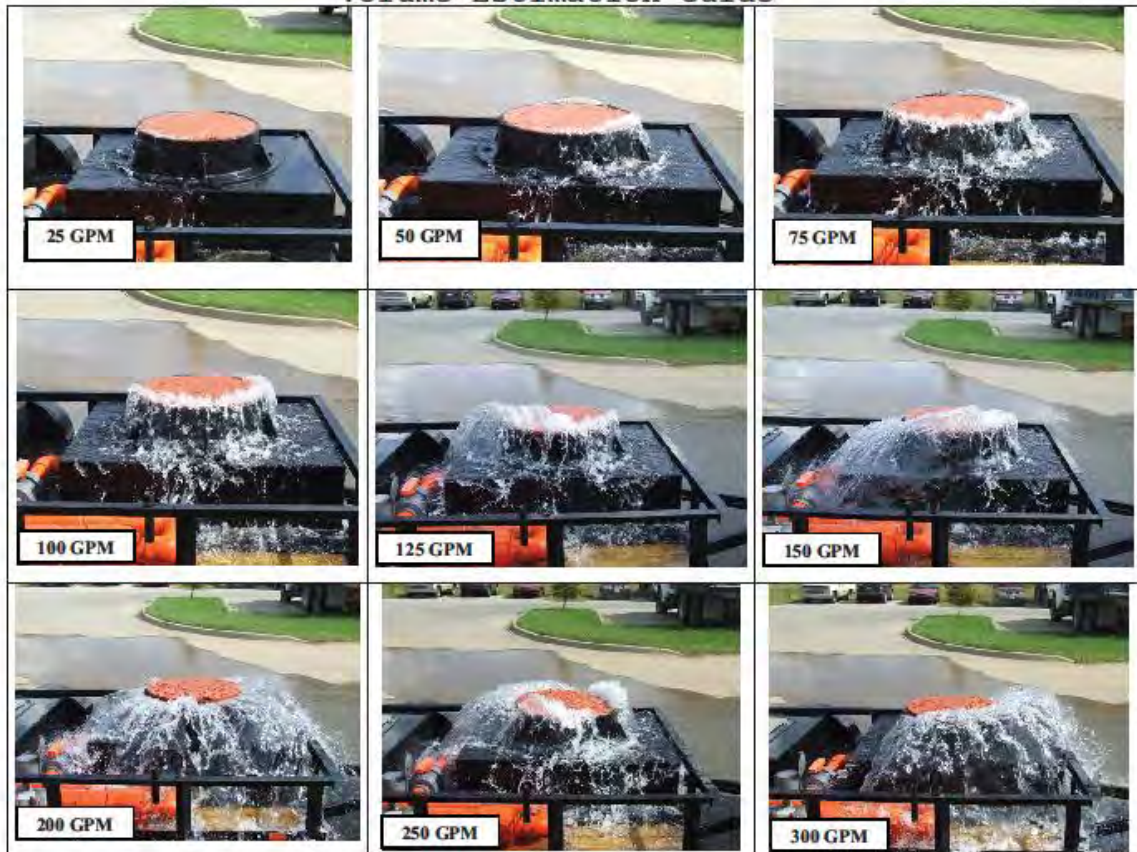
Rectangular Area Calculation Sheet for SSO Reporting
(Volumes from Chart are shown in Gallons per Inch Depth)

		Length										
		5	10	20	30	40	50	60	70	80	90	100
Width	5	16	31	62	94	125	156	187	218	249	281	312
	10	31	62	125	187	249	312	374	436	499	561	623
	15	47	94	187	281	374	468	561	655	748	842	936
	20	62	125	249	374	499	623	748	873	997	1122	1247
	25	78	156	312	468	623	779	935	1091	1247	1403	1558
	30	94	187	374	561	748	935	1122	1309	1496	1683	1870
	35	109	218	436	655	873	1091	1309	1527	1745	1964	2182
	40	125	249	499	748	997	1247	1496	1745	1995	2244	2493
	45	140	281	561	842	1122	1403	1683	1964	2244	2525	2805
	50	156	312	623	935	1247	1558	1870	2182	2493	2805	3117
	55	171	343	686	1029	1371	1714	2057	2400	2743	3086	3428
	60	187	374	748	1122	1496	1870	2244	2618	2992	3366	3740
	65	203	405	810	1216	1621	2026	2431	2836	3241	3647	4052
	70	218	436	873	1309	1745	2182	2618	3054	3491	3927	4363
	75	234	468	935	1403	1870	2338	2805	3273	3740	4208	4675
	80	249	499	997	1496	1995	2493	2992	3491	3989	4488	4987
	85	265	530	1060	1590	2119	2649	3179	3709	4239	4769	5298
	90	281	561	1122	1683	2244	2805	3366	3927	4488	5049	5610
	95	296	592	1184	1777	2369	2961	3553	4145	4737	5330	5922
	100	312	623	1247	1870	2493	3117	3740	4363	4987	5610	6233
	105	327	655	1309	1964	2618	3273	3927	4582	5236	5891	6545
	110	343	686	1371	2057	2743	3428	4114	4800	5485	6171	6857
	115	358	717	1434	2151	2867	3584	4301	5018	5735	6452	7168
	120	374	748	1496	2244	2992	3740	4488	5236	5984	6732	7480
	125	390	779	1558	2338	3117	3896	4675	5454	6233	7013	7792
130	405	810	1621	2431	3241	4052	4862	5672	6483	7293	8103	
135	421	842	1683	2525	3366	4208	5049	5891	6732	7574	8415	
140	436	873	1745	2618	3491	4383	5236	6109	6981	7854	8727	
145	452	904	1808	2712	3615	4519	5423	6327	7231	8135	9038	
150	468	935	1870	2805	3740	4675	5610	6545	7480	8415	9350	
155	483	966	1932	2899	3865	4831	5797	6763	7729	8696	9662	
160	499	997	1995	2992	3989	4987	5984	6981	7979	8976	9973	
165	514	1029	2057	3086	4114	5143	6171	7200	8228	9257	10285	
170	530	1060	2119	3179	4239	5298	6358	7418	8477	9537	10597	
175	545	1091	2182	3273	4363	5454	6545	7636	8727	9818	10908	
180	561	1122	2244	3366	4488	5610	6732	7854	8976	10098	11220	
185	577	1153	2306	3460	4613	5766	6919	8072	9225	10379	11532	
190	592	1184	2369	3553	4737	5922	7106	8290	9475	10659	11843	
195	608	1216	2431	3647	4862	6078	7293	8509	9724	10940	12155	
200	623	1247	2493	3740	4987	6233	7480	8727	9973	11220	12467	
205	639	1278	2556	3834	5111	6389	7667	8945	10223	11501	12778	
210	655	1309	2618	3927	5236	6545	7854	9183	10472	11781	13090	
215	670	1340	2680	4021	5361	6701	8041	9381	10721	12062	13402	
220	686	1371	2743	4114	5485	6857	8228	9599	10971	12342	13713	
225	701	1403	2805	4208	5610	7013	8415	9818	11220	12623	14025	
230	717	1434	2867	4301	5735	7168	8602	10036	11469	12903	14337	
235	732	1465	2930	4395	5859	7324	8789	10254	11719	13184	14648	
240	748	1496	2992	4488	5984	7480	8976	10472	11968	13464	14960	
245	764	1527	3054	4582	6109	7636	9163	10690	12217	13745	15272	
250	779	1558	3117	4675	6233	7792	9350	10908	12467	14025	15583	

$$\text{Total Spill Volume} = \frac{\text{Value from Chart}}{\text{Depth in Inches}} \times \text{Depth in Inches} = \text{Volume in Gallons}$$

Example 1

Volume Estimation Guide



August 2008

Example 2

5.6 APPENDIX F: DISINFECTANT HANDLING AND RESPONSIBILITIES

Lime is used in an attempt to kill potential pathogens.

Soil – In some cases (e.g., pipe replaced and backfilled with dirt) it may be acceptable to cover the affected area with clean relatively dry dirt. This will allow “natural” remediation of any organic residues of the SSO similar to the way a septic tank leach field system works, and will let the public immediately access the affected areas.

Lime – Lime or calcium oxide can be applied to ground surfaces where a SSO has occurred. Lime is chemically very basic. Lime can cause burns to human skin and injure eyes due to its basic characteristics. The SCDHEC recommendations, product label, and material safety data sheet should always be followed when applying lime. After application of lime, the soil affected by the SSO and lime application may need to be removed and disposed of properly. The area may have to remain posted until the soil is removed. In some cases the area may have to be raked and lime reapplied.

5.7 APPENDIX G: PUBLIC NOTIFICATION SIGNAGE

The responsibility for determining whether signage is necessary for areas affected by wastewater flows in part is determined by the Division that will be responsible for assessing, containing, correcting, and clean-up of the SSO. SSOs that originate in pumping stations and the collection system may involve personnel in more than one division and the appropriate division should relay the information of the action being taken to the proper foreman, supervisors, and managers. Two main factors in determining when and where to post signs are the degree of public access and the effectiveness of the clean-up of the affected area. The posting of signage will not necessarily prohibit use or access to the area unless posted otherwise, but will provide a temporary warning of potential public health risks associated with the recent SSO (e.g., heavy flushing of an area making it impractical to recover all of the wash down water commingled with wastewater). For most SSOs in the collection system, the first responders in consultation with the Wastewater Maintenance Foreman, Assistant Superintendent and or I & I personnel will make the decision regarding posting. The Department Head and his/her designee should be involved, when appropriate, in the decision making process.

If the decision to post has been made regarding SSOs to surface waters, ground surfaces, or structures and there is concern if the notification is sufficient, then the Director of Utilities & Engineering should be involved and additional public notifications may be necessary. Examples of signage and door hangers are included below.

Circumstances under which further public notification may be considered include, but are not limited to, the following:

1. When permanent repairs to resolve a SSO will take a period of time (e.g., estimated 24-48 hours) and the reduction in the usage of water in homes or business would assist in managing the operation of the locally affected pipeline, pumping station, or wastewater plant.

2. When a more permanent repair or replacement is needed to prevent recurrence and the actions will take a period of time (e.g., estimated 24 – 48 hours) and citizens need to be advised of repair schedules and possible traffic detours in the vicinity of the repairs (e.g., pumping station and pump-around operation, pipeline crossing road way, and so on).

Signage Example:

<p>CAUTION: SANITARY SEWER OVERFLOW SITE</p> <p>The City of Columbia has experienced a sewer overflow in this area.</p> <p>AVOID CONTACT, KEEP CHILDREN AND PETS AWAY.</p> <p>For information regarding this overflow, call the City of Columbia Wastewater Maintenance Division at 803-545-3300.</p>	<p>CUIDADO: DERRAMAMIENTO DE DRENAJE SANITARIO</p> <p>La Ciudad de Columbia ha experimentado un overflow en esta área.</p> <p>EVITE CUALQUIER CONTACTO, MANTENGA A LOS NIÑOS Y ESTE LUGAR.</p> <p>Para información acerca de este derramamiento, llame a la División de Mantenimiento de Aguas Residuales al 803-545-3300.</p>
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Door Hanger Example:
(English Version)

NOTICE

SANITARY SEWER OVERFLOW

The City of Columbia has experienced an overflow in your area.

A sewer backup has occurred on _____,
(date)

in this neighborhood at _____.
(location)

This means that water containing sewage may have entered your yard or _____.
(receiving water body)

Check your yard and stream/ditch and call **(803) 545-3300** if you find sewage in your yard. Do not try to clean it up yourself. Call the City of Columbia Wastewater Maintenance Division for assistance and instructions at the number above. Please avoid contact with standing water, drainage ditches or nearby streams, as it may contain sewage and stormwater runoff contaminant's that could make you sick.

KEEP CHILDREN AND PETS AWAY!

• Para la version en español de la vuelta a la página •

Department of Utilities & Engineering
1136 Washington Street
Columbia, SC 29201

Door Hanger Example:
(Spanish Version)

AVISO

DERRAMAMIENTO DE DRENAJE SANITARIO

La Ciudad de Columbia ha experimentado un derramamiento en su área.

Ha ocurrido una obstrucción en el drenaje el _____,
(fecha)
en este vecindario en _____.
(lugar)

Esto significa que aguas residuales pudieron haber entrado en su patio o _____.
(recibidor de agua)

Revise su patio y corrientes de agua/canales/zanjas u llame al (803) 545-3300 si encuentra aguas residuales en su patio. No trate de limpiarlo por usted mismo.

Llame a la División de Mantenimiento de Aguas Residuales de la Ciudad de Columbia al número antes mencionado para asistencia e instrucciones. Por favor envite contacto con aguas estancadas, canales de drenaje o ríos cercanos ya que pueden contener aguas residuales y contaminantes de escorrentía pluvial (residuos de agua de lluvia) que podrían hacer que usted se enferme.

**¡MANTENGA A LOS NIÑOS Y MASCOTAS
ALEJADOS!**

- Flip the page over for the English version •

Departamento de Utilidades y Ingeniería
1136 Washington Street
Columbia, SC 29201

5.8 APPENDIX H: PRESS RELEASE EXAMPLES

Example 1

Press Release Language- SSO Still Occurring

City of Columbia Issues a
Sanitary Sewer System Overflow Notification
To
The Customers of
(Interstate 20 / Monticello Road Area)

December 16, 2008

The City of Columbia has experienced an overflow of sanitary sewer in the area behind the 5900 Block of Monticello Road located in Richland County.

The City of Columbia's Wastewater Maintenance Division was notified approximately at 3:30 pm on 12/15/08 of a sanitary sewer overflow. The City experienced flooding due to heavy rainfall in the collection system line at the above location. As a result, sanitary sewer was introduced into Crane Creek.

The City of Columbia's Wastewater Maintenance Division, 545-3300, may answer other inquiries concerning this Notification.

Example 2

Press Release Language- SSO Under Control

City of Columbia Issues a
Sanitary Sewer System Overflow Notification
To
The Customers of
(Northwood Hills Subdivision)

October 16, 2008

The City of Columbia has experienced an overflow of sanitary sewer in the area at 620 Glenthorne Road located in Richland County

The City of Columbia's Wastewater Maintenance Division was notified approximately at 10:00am on 10/16/08 of a sanitary sewer overflow that lasted until 12:30pm on 10/16/08, the City experienced vandalism to the collection system line, at 620 Glenthorne Road. As a result,

sanitary sewer was introduced into Crane Creek. The City has cleaned the sewer line and washed the storm drain including the creek.

The City of Columbia Wastewater Maintenance Division, 545-3300, may answer other inquiries concerning this Notification.

5.9 Appendix I: Stormwater Best Management Practices (BMPs) for WWM and MWWTP

1. Stop the discharge as quickly as possible.
2. Do not pump sewage back-ups, disinfectant or disinfected sewage into streets, storm drains, ditches or surface waters.
3. <u>Before</u> any digging begins, all inlets within a vicinity of 50 feet must be protected with sand bags, gravel bags, sediment tubes, or a combination of the three. Also protect any sensitive areas nearby including wetlands, adjacent waters, or other conveyance structures.
4. When a backup occurs and when disinfecting the contaminated area, take every effort to ensure that sewage, disinfectant and disinfected sewage is not accidentally discharged into a storm drain or ditch. Methods may include: <ul style="list-style-type: none"> (a) Blocking storm drain inlets and catch basins with gravel bags, sand bags, sediment tubes, or a combination of these items. (b) Containing and diverting sewage, sediment and disinfectant away from open channels and other storm drain fixtures. (c) Removing the solid material with vacuum equipment.
5. Do not clean tools or equipment in or near surface waters or over storm drains or ditches. If rinsing a sand bag or sediment tube for reuse, rinse over a vegetated area so the runoff can infiltrate.
6. When activities are complete, inspect the flow path of the discharge. Identify any areas that may have experienced soil erosion and need repair. Use erosion control blankets, mulch or geo-fabric with hay matting (which can include seeds) to stabilize soil erosion. Always make every attempt to re-establish vegetation on the impacted area, and if necessary continue inspections until the area has stabilized. Contact the Stormwater Section (545-3304) with any questions or help with ongoing inspections or stabilization issues.
7. With backhoes, shovels or brooms, remove any dirt or sediment on impervious surfaces. If necessary, contact Solid Waste for use of a street sweeper.
8. Do not hose down the area to remove sediment (unless it is necessary for traffic safety).

REQUIRED STRUCTURES AND EQUIPMENT

The Wastewater Department will procure the following BMPs and equipment to accomplish the procedures listed above. Equipment may be stockpiled offsite, and needed quantities will be stored in the crews' response vehicles.

- # 57 stone
- Sand
- Geotextile fabric bags (can be used with stone and sand)
- Sediment tubes
- Silt fence
- Backhoe (for sediment removal)
- Brooms and shovels

6.0 Appendix J: Contact Information

Agency	Office Phone	Cell Phone	Other/Comments (After – Hours)
Columbia Police	545-3500 (Non-emergency)		911 (Emergency)
Columbia Fire	545-3700 (Non-emergency)		911 (Emergency)
Columbia Metro WWTP	733-8566 733-8575		413-8376 (After-Hours)
Columbia Stormwater	545-3304		
Columbia Lake Murray WTP	781-2181		
Columbia Canal WTP	733-8336		
Columbia Wastewater Maintenance	545-3300		600-5619 (After-Hours)
Columbia Public Works	545-3780		
Emergency Medical Services	911		911
West Columbia Lake Murray WTP	957-4596		

Agency	Office Phone	Cell Phone	Other/Comments (After – Hours)
West Columbia Filtering Plant	794-7696		
Cayce WTP	739-5367		
Richland County Sheriff's Dept.	576-3000 (<i>Non-emergency</i>)		911 (<i>Emergency</i>)
SCDHEC Region 3 – EQC Office	896-0620		253-6488 (<i>After-Hours</i>)

7.0 Appendix K: Equipment List

Sewer Blockage, Broken or Collapsed Line

Minimum Emergency Equipment	Specialized Equipment
Jet flushing unit	Television camera unit
Rodding machine & associated cleaning/cutting attachments	Truck with hoist
Standard disinfectants	Vactor unit
Safety Equipment	Power saw (circular)
Air blower with hose	Power vacuum
Portable pumps	Pipe cutter (hydraulic)
Portable generators	Caution tape
Safety cones/barricades	Assorted hand tools (i.e., screwdrivers, wrenches, hammers, brooms)
Air Detector – for oxygen deficient, explosive or toxic gases	Swap loader trucks, septic tank skids, dewatering boxes, debris boxes
Confined space entry tripod and associated equipment	ROW clearing equipment, Shin cutter, skid steer mulchers, Mini-excavators, skid steer bucket
Personal Protective Equipment (PPE)	Lowboy tractor & trailer (transport equipment)
Safety harness and lifeline if applicable	Rubber tire/ Track excavators, dump trucks

Pump Station Failure

Minimum Emergency Equipment	Specialized Equipment
Vactor Unit	Aluminum ladder
Truck with hoist	Power vacuum
Standard disinfectants	Pipe cutter (hydraulic)
Safety Equipment	Caution tape

Minimum Emergency Equipment	Specialized Equipment
Air blower with hose	Bypass pumping equipment
Safety harness and lifeline if applicable	Assorted hand mirrors
Portable pumps	Bucket with rope
Portable generators	Aluminum ladder
Safety cones/barricades	Trash pumps may be required
Air Detector – for oxygen deficient, explosive or toxic gases	Assorted hand tools (i.e., screwdrivers, wrenches, hammers, brooms)
Confined space entry tripod and associated equipment	
Flashlight	
Personal Protective Equipment (PPE)	

