Question 10

SANITARY SEWER OVERFLOW RESPONSE PLAN

WATER WORKS & SANITARY SEWER BOARD
of the
CITY OF MONTGOMERY, ALABAMA

File K:\Engineer\SSORP 09 27 10
Revision 0

TABLE OF CONTNENTS

SANITARY SEWER OVERLFOW RESPONSE PLAN

I. AUTHORITY

Pursuant to the authority granted by the Code of Alabama, Section 11, Chapter 50, as amended, the Water Works and Sanitary Sewer Board of the City of Montgomery (MWWSSB) operates four publically owned waste water pollution control plants (WPCPs) along with their associated conveyance systems (gravity collection and lift station/force main). The WPCPs serve the Catoma, Econchate, Towassa, and Rolling Hills Basins and are operated under existing NPDES permit numbers AL0027863, AL0022225, AL022241, and AL0059315 respectively. The intent of this Sanitary Sewer Overflow Response Plan (SSORP) is to formally document the standards and practices currently in place under the existing "Sanitary Sewer Overflow Response Procedure" as outlined in Appendix A.

II. GENERAL

The SSORP is designed to ensure that every report of a suspected sanitary sewer overflow is immediately investigated to confirm the overflow, identify its source, determine its probable cause, and to implement the appropriate actions required to contain/eliminate it. The purpose of the plan is to provide the guidance necessary to assist in reducing the detrimental effects an overflow has on public health, the environment, and property. The SSORP further includes the provisions to ensure the required notification pursuant to the direction as provided by the Federal Environmental Protection Agency (EPA) and the Alabama Department of Environmental Management (ADEM). The effective date of this SSORP will be 09/01/10 and will supplement the existing SSO standard of practice currently in place.

A. Objectives

The primary objectives of the SSORP are to:

- Protect public health and the environment.
- Satisfy the requirements of regulatory agencies and waste discharge permits which address procedures for managing sanitary sewer overflows.
- Provide appropriate customer service.

- Protect the wastewater treatment plants and collection systems including all related appurtenances and personnel.
- Protect property from overflows resulting from problems within a publicly owned sanitary sewage system.

B. Organization of Plan

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

Section I	Authority
Section II	General
Section III	Overflow Response Procedure
Section IV	Public Advisory Procedure
Section V	Regulatory Agency Notification Procedure
Section VI	Media Notification Procedure
Section VII	Distribution and Maintenance of SSORP

C. SSO Tracking

A procedure has been implemented to track all reports of SSOs. Data is collected and placed in a data base that allows the information to be analyzed (sorted) on a basin and sub basin level. The data allows the MWWSSB's Engineering and Maintenance Departments to better allocate the infrastructure rehabilitation budget and address chronic overflows locations (locations were a structural deficiency is the root cause of the overflow).

III. OVERFLOW RESPONSE PROCEDURE

Sanitary sewer overflows (SSOs) of various volumes can occur from time to time in spite of the best concerted prevention efforts. Natural disasters (i.e. flooding), vandalism, blocked sewers, pipe failures, or mechanical malfunctions can cause sanitary sewage overflows. This SSORP presents a strategy for the MWWSSB to mobilize labor, materials, tools and equipment required to correct/repair any failure of current infrastructure, which may cause or contribute to an un-permitted discharge. Being prepared to respond to system failures lessens the chances that an overflow will adversely impact surface waters, land, or buildings. For an outline overview of the SSORP please reference Appendix B "Sanitary Sewer Overflow Response Plant (SSORP) Flow Chart."

A. Receipt of Information Regarding a Potential SSO

System employees or the general public may detect an overflow at any time, day or night.

During regular working hours (8:00 a.m. to 4:00 p.m.), the Customer Service Department of the MWWSSB is primarily responsible for receiving phone calls from the public notifying the MWWSSB of possible overflows from the wastewater conveyance system. The Customer Service Department is then responsible for forwarding the caller to the Maintenance Department, where the possible overflow information is collected, work order is generated, preliminary data entered into the MWWSSB's SSO data base, and the investigation is initiated.

During non-regular working hours, calls received from the public between 4:00 p.m. and 12:00 a.m. are received by the Maintenance Department, and calls received on the weekends, Holidays or between 12:00 a.m. to 8:00 a.m. during the week are answered by the Perry Water Production facility personnel. In the event that a possible SSO is reported, the Maintenance Department's "Stand-By" crews are notified, and the investigation/corrective actions are initiated immediately. Pertinent information is collected and documentation (populating data base) is performed by Maintenance staff.

1. The individual logging the call at the Maintenance Department is tasked with obtaining all of the relevant information available regarding the possible overflow including (See Appendix C "General Information" section of the Sanitary Sewer overflow (SSO) Reporting Form):

    - Time and date call was received.
    - Specific location and/or address of possible overflow.
    - Description and source of problem.
    - Caller's name, address, and call back phone number.

2. Sanitary sewer lift stations are monitored via a supervisory control and data acquisition (SCADA) system. The SCADA system is operated by the MWWSSB and manned 24 hours/day, 7 days/week, 365 days/year from the Catoma Waste Water Pollution Control Plant (WWPCP). If an issue is detected with a lift station, the operator on duty contacts the Lift Station Maintenance supervisor (during regular work hours) or the "Stand-By" lift station mechanic to investigate the issues and address them prior to an SSO.

3. Sanitary sewer overflows (other than those associated with sanitary sewer lift stations) detected by any MWWSSB personnel in the course of their normal duties shall be reported to the MWWSSB Maintenance Department. Dispatched personnel should document any relevant overflow information and report the information to the MWWSSB supervisory/management staff.

4. It is the responsibility of the appropriate MWWSSB personnel to gather all spill response data and report this data back to the supervisory/management staff as soon as possible. Until verified, the report of a possible spill will be referred to as a "sewer inspection" (SI), not a "sanitary sewer overflow" (SSO).

B. Dispatch of Appropriate Crews to Site of SSO

Failure of any element within the MWWSSB operated wastewater conveyance system that threatens to cause or causes a SSO will immediately trigger a response to isolate, contain, and correct the problem. Crews and equipment shall be available to respond to any SI/SSO location 24 hours/day 365 days of the year.

1. Dispatching Crews:

   - Upon receipt of a call of a SI/SSO, dispatch shall immediately notify crews in the field to investigate. If the report is received after working hours, the "Stand-By" crew(s) will be mobilized to the SI/SSO site. Any delays or conflicts in assignments or prioritization regarding equipment and resources should be reported to the MWWSSB supervisory and management staff immediately for quick resolution.
   - Sanitary sewer lift station issues shall be dispatched by the operator on duty monitoring the SCADA system. The operator shall convey all relevant information regarding alarms to the Catoma WWPCP Maintenance (if after hours, the Lift Station "Stand-By" Mechanic will be contacted). Immediately upon notification, corrective action to restore proper operation of the facility shall be initiated.

2. Response Crew Instructions:

   - Upon arrival to the SI/SSO site, the response crew leader shall visually assess the situation and report his initial findings to the MWWSSB supervisory and management staff. The assessment should include the confirmation of the SSO (if on public or private system), a preliminary

damage assessment to the public system (if applicable), and a preliminary assessment, if the damage is assessable, to any private system involved.

- Should conditions warrant additional personnel, material, supplies, and/or equipment, the response crew will convey this information to the MWWSSB supervisory and management staff. If necessary, the MWWSSB management team will contact emergency contractors and contract out for additional equipment and labor resources to address the SSO.
- The response crews should use discretion in assisting private property owners/occupants who are affected by an SSO. Be aware that the MWWSSB could face increased liability for any further damages inflicted to private property during such assistance. Appropriate photographs and video footage, if possible, should be taken of the area of the SSO and impacted area, allowing for thorough documentation of the nature and extent of the impact. Photographs or video tape are to be forwarded to the MWWSSB for filing with the inspection/overflow report.

3. Coordination with Hazardous Material Response Team

- Upon the arrival at the scene of an SSO, should a suspicious substance (e.g., oil sheen, foamy residue) be found on the ground surface, or should a suspicious odor (e.g., gasoline) not common to the sewer system be detected, the response crew leader should evaluate the potential hazard and contact the MWWSSB management staff and safety officer for guidance before taking further action. Should the MWWSSB determine that conditions warrant the need to alert the fire department's Hazardous Materials Response Team, the response crew shall suspend response actions until the arrival of the Hazardous Materials Response Team (HMRT).
- Upon the arrival of the fire department's HMRT the MWWSSB response crew will release control of the site to the commanding officer of the fire department. After the HMRT has had an opportunity to evaluate the situation and determine that the site is safe, the MWWSSB response crew will proceed with addressing the SSO (contain the spill, clean up the site, perform corrective actions, etc.). ***Remember that vehicle engines, portable pumps, or open flames (e.g., cigarette lighters) can provide the ignition for an explosion or fire should flammable vapors or fluids be present at the site. Maintain a safe distance and observe caution until and after assistance arrives.***

C. Overflow Correction, Containment, and Clean-Up

This section describes specific actions to be performed by response crews during an SSO. The objectives of these actions are to:

- Protect public health, the environment, and property, by minimizing SSO impacts as soon as possible.
- Contain the SSO to the maximum extent possible, including the prevention of discharge of sanitary sewage into surface waters. Contain extents of affected area by establishing perimeters with appropriate barricades, control zones with vehicles or natural topography (e.g., hills, berms).
- Determine the apparent cause of the overflow (whether the cause lies in the publicly owned sewer or a private lateral).
- Communicate preliminary overflow information and potential impacts as soon as practical to the regulatory agency.

1. Responsibilities of Response Crew Upon Arrival

   It is the responsibility of the first personnel who arrive at the site of a sanitary sewer overflow to protect the health and safety of the public by mitigating the impact of the overflow to the maximum extent possible. Should the overflow not be the responsibility of the MWWSSB, but there is imminent danger to public health, public or private property, or to the waters of the U. S., then prudent action should be taken until the responsible party assumes control and provides remedial actions. The initial response crew has the responsibility to perform the following:

   - Establish a controlled area around the spill site.
   - Assess the need for notification of Hazardous Materials Response Team.
   - Initiate actions to contain or eliminate SSO.
   - Identify and request, if necessary, the need for and additional resources (labor, materials, and/or equipment) to correct the overflow or to determine its cause.
   - Determine the cause of the sanitary sewer overflow.
   - Determine if private property is impacted.
   - Inform Environmental Services Department of location of confirmed SSO.

2. Additional Measures Under Potentially Prolonged Overflow Conditions.

   In the event of a prolonged sewer line blockage or a sewer line collapse, a determination should be made to set up a portable by-pass pumping operation around the obstruction.

   - Appropriate measures shall be taken to effectively handle the sewage flow.
   - Continuous or periodic monitoring shall be implemented as required.
   - Regulatory agency issues shall be addressed in conjunction with emergency repairs.

3. Emergency Contract Assistance

   Circumstances may arise when the MWWSSB could benefit from the support of private-sector construction assistance. In such cases the MWWSSB shall mobilize "Emergency Contracts" and obtain additional resources (men and equipment) from the private sector in order to properly address the SSO.

4. Cleanup

   - Sewer overflow sites are to be promptly cleaned to the highest degree possible after an overflow. No readily identifiable residue (e.g., sewage solids, papers, rags, plastics, rubber products, etc.) is to remain in the area of the SSO. The entire area impacted by the SSO shall be disinfected prior to response crews leaving the area.
   - Where practical, thoroughly flush the area and clean any sewage or was-down water. Solids and debris are to be flushed, swept, raked, picked-up, and transported for proper disposal.
   - The SSO site is to be secured to prevent access to the site by the public until the site has been thoroughly cleaned and the areas disinfected.
   - If the need arises, signs shall be posted at the perimeter of the spill area to warn public of potential exposure while clean up is ongoing. Signs shall remain in place until the completion and verification (any sampling) of cleanup activities is completed.
   - Where appropriate, the overflow site is to be disinfected, and ponds formed by the SSO will be pumped dry and the residue will be disposed of properly.
   - If necessary, the Environmental Services Department will collect samples of the site after cleanup has been completed to ensure the site has been properly cleaned and disinfected.

5. Post-Cleanup Activities

   The appropriate MWWSSB Departments (Environmental Services, Engineering, and/or Maintenance) will conduct a follow up visit the site of the overflow to ensure the provisions of the SSORP have been met.

D. Overflow Report

The response crew leader is responsible for initiating the SSO reporting function by entering relevant data into the MWWSSB database. Upon completion of the data entry the response crew leader shall promptly notify the Engineering Department and Environmental Services Department when the overflow is eliminated.

To properly complete an overflow report:

Within 24 hours of the occurrence of a confirmed SSO, the MWWSSB Environmental Services Department shall provide verbal notification to the ***ADEM SSO Hotline at (334) 274.4200.*** After verbal notification, a sewer inspection or sewer overflow report should be completed by the MWWSSB Environmental Services Department within 5 days of the responding crew's confirmation of an overflow. The Environmental Services Department is responsible for reviewing, updating, obtaining the General Manager's signature, and submitting the final sewer inspection or overflow report form to the proper agency, including but not limited to the EPA/ADEM.

Information regarding the sewer overflow includes the following:

- Indication that the sewage overflow reached surface waters (if applicable), i.e., all overflows where sewage was observed running to surface waters, or there was obvious indication (e.g. sewage residue) that sewage flowed to the surface waters.
- Indication that the sewage overflow did not reach surface waters (if applicable). Guidance in characterizing these overflows include:

  a. Sewage overflows to storm water system where personnel verify, by inspection, that the entire volume was contained in a sump or impoundment and where complete clean-up leaves no residue.
  b. Preplanned or emergency maintenance jobs involving bypass pumping, and subsequent complete clean-up occurs leaving no residue (any preplanned bypass under these circumstances will not be considered an overflow).

c. Overflows where observation or on-site evidence clearly indicates all sanitary sewage was retained on land and did not reach surface water, and where cleanup occurs leaving no residue.
d. Any other pertinent information relating to each individual SSO.

- Determination of the start time of the sewer overflow by one of the following methods:

  a. Information reported to the MWWSSB and later substantiated by a sewer investigator or response crew.
  b. Visual observation.
  c. Lift station flow charts and other recorded data.

- Use one of the following criteria to estimate the end date/time of the SSO:

  a. When the blockage is cleared and normal function of system is restored.
  b. The arrival time of the sewer investigator or response crew, if the overflow stopped between the time it was reported and the time of arrival.

- Estimate the flow rate of the SSO in gallons per minute (GPM) by one of the following methods (See Appendix G):

  a. Direct observations of the overflow.
  b. Estimated measurement of actual overflow.

- Determination of the volume of the sewer overflow:
  a. When the rate of overflow is known, multiply the duration of the overflow by the overflow rate.
  b. When the rate of overflow is not known, investigate the surrounding area for evidence of ponding or other indications of overflow volume.

- Photograph the event (if practical).

- Assessment of any damage to the exterior areas of public/private property. MWWSSB should not enter private property for the purposes of estimating damage to structures, floors and wall coverings, and personal property.

E. Customer Satisfaction

The supervisor, sewer investigator, or response crew confirming the SSO will follow up in person or by telephone with the citizen reporting the overflow. The cause of the overflow and its resolution will be disclosed.

IV. PUBLIC ADVISORY PROCEDURE

This section describes the actions the MWWSSB takes, in cooperation with the EPA/ADEM, to limit public access to areas potentially impacted by unpermitted discharges of pollutants to surface water bodies from the wastewater collection system.

A. Temporary Signage

The MWWSSB has primary responsibility for determining when to post notices of polluted surface water bodies or ground surfaces that result from uncontrolled wastewater discharges from its facilities. The postings do not necessarily prohibit use of recreational areas, unless posted otherwise, but provide a warning of potential public health risks due to sewage contamination. The MWWSSB's Environmental Services Department shall determine if posting is necessary and will contact the local governmental entities (i.e. County Health Departments) of postings.

B. Other Public Notification

Should the posting of surface water bodies or ground surfaces subjected to a sewer overflow be deemed necessary by MWWSSB's Environmental Services Department, the MWWSSB General Manager, or his designee, shall determine the need for further public notification through notices made available to the printed or electronic news media for immediate publication or airing, or by other means (i.e. door hangers).

V. REGULATORY AGENCY NOTIFICATION PLAN

The Regulatory Agency Notification Plan establishes procedures that the MWWSSB shall follow to provide formal notice to the EPA/ADEM as necessary in the event of SSOs. The following reporting criterion explains to whom various forms of notification should be forwarded to, and lists agencies/individuals to be contacted.

A. Initial Notification Procedure:

The Environmental Services Department of the MWWSSB shall provide the initial notification to ADEM of any reportable SSO in order to keep the regulatory agency abreast of response actions and any corrective actions taken. Notification will be by

telephone or by fax no later than twenty-four (24) hours, or the next working day after an overflow is confirmed.

B. Written Notification Procedure:

The MWWSSB shall provide a written notification to ADEM of any reportable SSO within five (5) days of the time the MWWSSB becomes aware of the SSO. The report will be prepared by the Environmental Services Department of the MWWSSB and faxed, e-mailed, and/or mailed by registered letter (as required by the regulatory agency). Written notification shall be on the standardized reporting form (Appendix D). A copy of all notifications shall be kept on file at the MWWSSB offices for audit purposes. Written notifications shall be sent to:

ADEM
Water Division
Municipal Permit Section
1400 Coliseum Boulevard
Montgomery, AL 36130 - 1463

VI. MEDIA NOTIFICATION

When an overflow has been confirmed and identified as a threat to public health necessitating the notification of local media, only the MWWSSB General Manager, or his designee, shall be authorized to communicate with the media.

VII. DISTRIBUTION AND MAINTENANCE OF SSORP

Annual updates to the SSORP should be made to reflect all changes in policies and procedures as may be required to achieve its objectives.

A. Submittal and Availability of SSORP

Copies of the SSORP and any amendments shall be distributed to the following departments and functional positions at the MWWSSB:

- Administrative/Management Personnel.
- Maintenance Department.
- Environmental Services Department.
- Engineering Department.
- Lift Station Maintenance Personnel.
- Available to all Departments and Personnel by Posting on MWWSSB's Internet Site.

All other personnel who may become incidentally involved in responding to overflows should be familiar with the SSORP.

B. Review and Update of SSORP

The SSORP should be reviewed and amended as appropriate. The MWWSSB should:

- Update the SSORP with the issuance of a revised or new NPDES permit or state waste discharge permit.
- Review and update, as needed the various contact person lists included in the SSORP.

C. Training

Annual review of the SSORP shall be conducted by all Departments involved in its implementation. Record of review (date, time, attendees, etc.) shall be kept on file for a period of five years.

APPENDIX A

SANITARY SEWER OVERFLOW RESPONSE PROCEDURE

Sanitary Sewer Overflow Response Procedure

1. All sewer stop ups are investigated as soon as possible after complaint received.
2. If no problem is observed with MWWSSB asset, inform complainant (if known) to investigate private line.
3. If MWWSSB asset is holding back flow, flush/vacuum the main to alleviate problem.
4. If MWWSSB asset is causing an overflow,
   - Notify appropriate management
   - Flush/vacuum to alleviate problem
   - Clean up overflow
   - Disinfect
5. If flushing/vacuuming does not resolve problem, notify appropriate management.
   - Set up bypass pump
6. Submit completed work orders for all sewer investigations to sewer foreman.
7. Environmental Services calls in SSO event to ADEM call line within 24 hours of event.
8. Maintenance or Environmental Services electronically files locations and investigative results to SSO database.
9. If an asset overflowed, Maintenance or Environmental Services submits details electronically to Engineering via SSO Database (see attached SSO reporting form).
10. Maintenance assists Engineering with line video, field surveys, and other actions as requested.
11. Environmental Services sends applicable reporting form to ADEM on all SSO events (see attached raw sewage bypass and overflow event reporting form) within 72 hours of the event.
12. Engineering completes review of overflow and determines cause and any corrective action to be taken (rehab main, routine flushing, etc.), if required.
13. Engineering completes applicable section in SSO database (see attached SSO reporting form) and submits form to General Manager.
14. Environmental Services completes applicable section in SSO database (see attached SSO reporting form) and submits form to General Manager.

APPENDIX B

SANITARY SEWER OVERFLOW RESPONSE PLAN (SSORP) FLOW CHART

Sanitary Sewer Overflow Response Plan (SSORP) Flow Chart

Call is received and data is collected.

Utility crew (standby crew if call is received after hours) is immediately mobilized to site.

Is SSO caused by Public Infrastructure?

Yes

Access to the site is restricted and the flow is contained.

Maintenance determines the cause of the SSO and begins corrective action.

The infrastructure is restored to working condition.

Maintenance personnel notify all applicable senior management of the SSO.

No

Maintenance provides remedial action to contain the SSO until the responsible party claims control of the site.

Require customer to repair problem that caused SSO.

Use enforcement action on customer if problem is not resolved in a timely manner.

Maintenance limits access to the area, and cleans and disinfects the site.

If Maintenance cannot restore the infrastructure, Engineering is contacted and an emergency contractor is hired to assist in immediately addressing the repair.

Maintenance notifies Environmental Services of the SSO.

Environmental Services mobilizes to site and notifies General Manager.

Maintenance completes their portion of the data input into the SSO database form and submits the information to Engineering.

Engineering reviews maps, including the SS main grade elevations, in the vicinity of the SSO event.

Main is placed on a routine flushing schedule and/or scheduled for rehabilitation (if applicable).

Construction of recommended repair/replacement/rehab, if applicable, is completed.

Maintenance completes CCTV inspections and other investigative work as required and sends the information to the Engineering Department for review.

Engineering reviews CCTV inspections.

Engineering makes recommendation for correction action and completes their portion of the SSO database form.

The SSO form with the maintenance and engineering information is submitted to the General Manager.

General Manager maintains all SSO forms submitted from the respective departments.

Environmental Services notifies ADEM within 24 hours of the SSO.

Information is collected on the SSO.

If warranted, a sample of the water is collected.

Sample is sent to lab for testing.

If test is positive for Fecal Coliform, then additional remediation activities are performed.

Environmental Services completes the reporting form.

Environmental Services submits the reporting form to the General Manager.

Environmental Services completes their portion of the SSO database form and submits it to General Manager.

General Manager signs and submits the reporting form to ADEM within 5 days of the SSO event.

ADEM

Legend

- Maintenance
- Engineering
- Environmental Services
- Senior Management
- Regulatory Agency

Rev 8.27.10

APPENDIX C

SANITARY SEWER OVERFLOW (SSO) REPORTING FORM
(DATA BASE INPUT FORM)

MWWSSB Work Order No: 199

SANITARY SEWER OVERFLOW (SSO) REPORTING FORM

GENERAL INFORMATION

SEND EMAIL

DATE/TIME INITIAL REPORTING OF SSO:

BASIN IMPACTED:

NAME OF PERSON REPORTING SSO:

SUB BASIN:

ADDRESS OF PERSON REPORTING SSO:

PHONE NUMBER OF PERSON REPORTING SSO:

LOCATION OF SSO

MAINTENANCE

DATE/TIME MWWSSB ON SITE

UPSTREAM MH

DOWNSTREAM MH

SOURCE OF DISCHARGE ☐ MANHOLE ☐ LIFT STATION ☐ BROKEN LINE ☐ INSIDE PLUMBING

☐ CLEAN OUT ☐ TREATMENT PLANT ☐ OTHER SPECIFY

SUSPECT CAUSE OF EVENT

CORRECTIVE ACTION TAKEN:

DATE/TIME SSO STOPPED:

ESTIMATED DURATION OF SSO:

DATA TRANSMITTED TO ENGINEERING ☐

DATE/TIME CLEANUP COMPLETE:

ENGINEERING

AFTER INCIDENT INVESTIGATION ☐ LINE VIDEO ☐ PLAT SHEET REVIEWED ☐ FIELD SURVEY

☐ OTHER SPECIF

RECOMMENDATION:

CURRENT STATUS

ENVIRONMENTAL SERVICES

ULTIMATE DESTINATION OF FLOW ☐ STORM DRAIN* ☐ DRAINAGE DITCH* ☐ CAPTURED/CONTAINED ON SITE

DESTINATION ☐ GROUND ABSORBED ☐ CREEK OR RIVER* ☐ OTHER

ESTIMATED VOLUME OF DISCHARGE (GALLONS):

MONITORING OF RECEIVING WATER ☐ COMPLETE ☐ ON GOING

TYPE OF MONITORING

AGENCY NOTIFIED: ☐ COUNTY HEALTH DEPT. ☐ ADEM ☐ CITY OF MONTGOMERY

☐ OTHER ☐ NOTICE NOT REQUIRED

IMPACT ON THE ENVIRONMENT: ☐ NO OBSERVED EVIDENCE OF ENVIRONMENTAL IMPACT ☐ MINIMAL OBSERVED EVIDENCE OF ENVIRONMENTAL IMPACT ☐ EVIDENCE OF ADVERSE HEALTH/ENVIRONMENTAL IMPACT

WERE ANY PUBLIC WATER SUPPLY INTAKE LOCATIONS IMPACTED?:

EFFORT TO NOTIFY PUBLIC ☐ PRESS RELEASE ☐ PLACEMENT OF SIGNS ☐ OTHER ☐ NOTICE NOT REQUIRED

SSO NOTIFIABLE ? ☐ **Yes** ☐ **No**

APPENDIX D

RAW SEWAGE BYPASS AND OVERFLOW EVENT REPORTING FORM

"MWWSSB'S STANDARDIZED REPORTING FORM"

SANITARY SEWER OVERFLOW EVENT REPORTING FORM

NOTE: This form is to be used to document written notification of a sanitary sewer overflow event or sewage release within five days of becoming aware of the event.

Permittee Name:_____ Permit Number:_____

Facility Name: _____ County:_____

Date/Time SSO Began: _____ Date/Time SSO Stopped:_____

Estimated Volume Discharged: _____gallons **(Mandatory)**

Estimated Volume is: ( ) <1,000gal ( ) >1,000gal ( ) >10,000gal ( ) >100,000gal ( ) >1,000,000gal

Was Department verbally notified within 24 hours? ( ) Yes ( ) No Date/Time of Notification:_____

Person that verbally notified Department: _____ Phone Number: _____

Did you contact the SSO hotline? ( ) Yes ( ) No

Indicate source of discharge event: ( ) manhole ( ) lift station ( ) broken line
( ) cleanout ( ) treatment plant ( ) other (describe):_____

Location of discharge (street address, etc.):_____

Date of last SSO at this location: _____ Known or suspected cause of the discharge:_____

_____

_____

Ultimate destination of discharge: ( ) ground absorbed ( ) creek or river (provide name):_____
( ) storm drain ( ) drainage ditch ( ) other (describe):_____

Monitoring of the receiving water is: ( ) complete ( ) ongoing

Describe corrective actions taken, estimate of impact to public health and to water quality, actions or plans to mitigate impacts to the environment and/or public health, and steps taken to reduce, eliminate and prevent reoccurrence of SSO (attach additional sheets if necessary):_____

_____

_____

_____

_____

Indicate efforts to notify public (check all that apply and attach copy of notifications):
( ) press release ( ) other (describe):_____
( ) placement of signs ( ) notice not required, because:_____

Indicate other officials notified (check all that apply):
( ) county health department ( ) other (describe):_____
( ) notice not required, because:_____

Were any public water supply intake locations effected? ( ) No ( ) Yes If yes, who was notified?_____

_____ _____ _____

Name/Title of Facility Representative Signature of Responsible Official (If >10,000 gal) Date

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

ONE COPY OF A USGS QUAD SHEET OR OTHER GEOGRAPHICALLY REFERENCED MAP MUST BE ATTACHED SHOWING THE EXACT LOCATION OF ALL DISCHARGES GREATER THAN 10,000 GALLONS.

Revision 09/17/10

APPENDIX E

GLOSSARY

GLOSSARY

Best Management Practice – An approach that takes advantage of the best practical measures available to guard against environmental impacts.

Best Professional Judgment- The duty or care used by a regulatory authority in establishing requirements in a permit or enforcement action on a case-by-case basis in the absence of uniform national standards.

Chronic Overflows – Avoidable overflows that occur in excess of a frequency as specified by the regulatory authority at the same location; or avoidable overflows that occur on a system-wide basis in a manner that suggests poor operation and maintenance.

Containment – purposeful limiting of sewer overflow volume to prevent increase in the area impacted by a spill.

Discharge – Any wastewater flow treated or untreated, that reaches waters of the United States.

Disinfection – The selective destruction of pathogens, or disease-causing microorganisms in humans using chemicals (e.g., chlorine, lime) or other processes (e.g. ultraviolet radiation, heat). All organisms are not necessarily destroyed.

Good-Faith Effort – Responsible actions of a sewer system owner or operator to minimize the impact of sewer overflows to public health and surface water quality by selecting the best management practices available for the control of overflows that are economically practicable.

Overflow – A location in a sewer collection system prior to the headworks of the wastewater plant where wastewater is released into the environment. Points of overflow include discharges to water of the United States as well as releases that do not result in a discharge to a water of the United States.

Posting – Process of advising the public of potential health risks associated with sewer overflows at a particular site by erecting signs.

Sanitary Sewer Overflow (SSO) – The intentional or unintentional diversion of flow from a sanitary sewer collection system which occurs before the headworks of a sewage treatment plant. Sanitary sewer overflows include discharges to water of the United States as well as diversions to public or private property and the environment that do not reach water of the United States, such as basement flooding.

Surcharged – An undesirable hydraulic condition in a pipe designed to flow by gravity whereby for a given wastewater flow rate it flows deeper and slower that the intended design. This can result from a downstream obstruction which backs the wastewater up in a pond behind it. Under extreme conditions it can completely fill the pipe causing an overflow at a manhole instead of discharging to a proper terminus.

Surface Waters – All "Water of the United States" as defined in 40 CFR 122.2 such as navigable waters, rivers, streams (including ephemeral streams), lakes, playa lakes, natural ponds, bays, oceans, lagoons, estuaries, manmade canals, ditches, dry arroyos, mudflats, wet meadows, wetlands, swamps, marshes, sloughs, and water courses. (Note: SSOs to storm drains shall be reported as discharges to surface waters.)

Unavoidable Overflows – Overflows from a wastewater collection system that may be demonstrated to the regulatory authority as unavoidable if they meet predetermined criteria.

APPENDIX F

COMMON CONTACT NUMBERS

COMMON CONTACT NUMBERS

MWWSSB	CUSTOMER SERVICE	334.206.1600
MWWSSB	MAINTENANCE DEPARTMENT MAINTENANCE STAND-BY	334.206.1754
MWWSSB	ENGINEERING DEPARTMENT	334.206.1627
MWWSSB	ENVIRONMENTAL SERVICES DEPARTMENT	334.206.1723
MWWSSB	VEHICLE MAINTENANCE	334.206.1716
MWWSSB	CATOMA WASTEWATER POLLUTION CONTROL PLANT	334.206.1700
MWWSSB	SAFETY	334.206.3479
ADEM	GENERAL INFORMATION	334.271.7700
ADEM	SSO HOTLINE	334.274.4200
COUNTY	MONTGOMERY COUNTY HEALTH DEPARTMENT	334.293.6400
COUNTY	ENGINEERING	334.832.1310
COUNTY	EMERGENCY MANAGEMENT	205.280.2200
CITY	MONTGOMERY POLICE DEPARTMENT	911
CITY	MONTGOMERY FIRE DEPARTMENT	911
CITY	MONTGOMERY ENGINEERING	334.241.2690
CITY	MONTGOMERY TRAFFIC	334.241.2910

APPENDIX G

SEWER SPILL ESTIMATING

SEWER SPILL ESTIMATING

A variety of approaches exist for the estimation of the volume of sanitary sewer overflows. This appendix documents the three methods that are most often employed in the wastewater industry. The person preparing the estimate should use the method most appropriate to the sewer overflow in question using the best information available. Every effort should be made to make a good faith estimate of volume.

Method 1 "Eyeball Approximation"

The volume of small spills can be made using "eyeball approximation". To use this method imagine the amount of water that would spill from a bucket or barrel. A bucket contains 5 gallons and barrels contain 50 gallons, try to break the standing water into barrels and/or buckets and multiply by 50 gallons and/or 5 gallons respectively. This method can be useful for spills up to 200 gallons or so.

Method 2 "Measured Volume"

The volume of most contained small spills can be estimated using this method. The shape, dimension, and depth of the spilled wastewater are needed. The shape and dimension are used to calculate the area of the spill and the depth is used to calculate the volume.

Step 1 Sketch the shape of the contained sewage
Step 2 Measure or pace of the dimensions.
Step 3 Measure the depth at several locations
Step 4 Convert the dimensions, including the depth, into feet.
Step 5 Calculate the area using the following formulas:

Rectangle:	Area = length x width
Circle:	Area = 0.785 x D2 (where D is diameter of Pipe)
Triangle:	Area = base x height x 0.5

Step 6 Multiply area times the depth
Step 7 Multiply the volume calculated above by 7.5 to convert to gallons

Method 3 "Duration and Flow Rate"

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

Duration:

In the absence of any information, the duration shall be reported as the time elapsed from the moment the spill was reported to the time the spill was stopped. If however, observations (at the site or elsewhere) indicate a longer duration; the calculation of the volume of the corresponding spill will reflect the best "estimate" of duration. Additional information/observations that may impact estimate of duration include:

- SCADA information indicating pump run times and volume (i.e. SCADA magmeter).

- Conditions at the spill site change with time. Initially there will be limited deposits of grease and toilet paper. After a few days to a week, the grease forms a light colored residue. After a few weeks to a month the grease turns dark. In both cases the quantity of toilet paper and other materials of sewage origin increase in amount. These observations along with other indicators at the site can be used to approximate a reasonable start time.

Flow Rate:

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

- The San Diego Manhole Flow Rate Chart: This chart shows sewage flowing from a manhole cover for a variety of flow rates. The observation of the field crew and first responders can be used to select the approximate flow rate from the chart.

- Flow Meter: Recorded discharge rates from existing SCADA system can be used to estimate flow rate during the spill.

- Estimates based on up-stream connections: once the location of the spill is known, the number of upstream connections can be determined from the plat books. Multiply the number of connection by 250 gallons per/day (this assumes a complete blockage of the main).

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

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