



**MSD**

*Louisville and Jefferson County Metropolitan Sewer District  
700 West Liberty Street  
Louisville Kentucky 40203-1911  
502-540-6000  
www.msdlouky.org*

January 30, 2008

Jeff Cummins, Acting Director  
Division of Enforcement  
Department of Environmental Protection  
14 Reilly Road  
Frankfort, KY 40601

Subject: Quarterly Report Number 9  
December 31, 2007  
DOJ Case No. 90-5-1-1-08254

Attention Director:

Please find attached our Quarterly Report, prepared in accordance with Paragraph 25 of our Consent Decree. This report is for the period October 1, 2007 through December 31, 2007.

This report is organized to deliver the requirements as defined in Paragraph 25 of the Consent Decree and provides an overview of significant program elements, issues, and accomplishments pertaining to Consent Decree compliance activities. Included are sections on: significant accomplishments, current activities review, performance overview, and planned activities.

We certify under penalty of law that this document and all attachments were prepared under our 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 such 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.

If you have questions or need additional information, please contact me at (502) 649-3850.

Sincerely,

W. Brian Bingham  
Regulatory Services Director

Q9 Certification KDEP 1-30-08

cc: H. J. Schardein, Jr.

Paula Purifoy

Laurence J. Zielke



*Beneficial Use of Louisville's Biosolids  
www.louisvillegreen.com*



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January 30, 2008

Chief, Water Programs Enforcement Branch  
Water Management Program  
US EPA Region 4  
Atlanta Federal Center  
61 Forsyth Street SW  
Atlanta, GA 30303

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January 30, 2008

Chief, Environmental Enforcement Section  
Environmental and Natural Resources Division  
U.S. Department of Justice  
Post Office Box 7611  
Washington DC 20044-7611

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# Louisville and Jefferson County Wet Weather Consent Decree Quarterly Report #9



**Reporting Period:**

October 1, 2007 through December 31, 2007

**Submitted To:**

Kentucky Department of Environmental Protection  
United States Environmental Protection Agency  
United States Department of Justice

**Submitted By:**

Louisville and Jefferson County Metropolitan Sewer District  
700 W. Liberty Street  
Louisville, Kentucky 40203-1911

**Submittal Date:**

January 30, 2008

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## **INTRODUCTION**

MSD has entered into a Consent Decree with the Kentucky Department of Environmental Protection (KDEP) and the United States Environmental Protection Agency (EPA). The Consent Decree was signed by United States District Judge Simpson and entered in United States District Court, Western Division of Kentucky, Louisville Division, on August 12, 2005.

This is the ninth Quarterly Report submitted in accordance with Paragraph 25 of the Consent Decree. This Report covers the time period from October 1, 2007 through December 31, 2007. The structure for this report is outlined as follows:

**Section 1: Project WIN Program Activities Performed during the Reporting Period** (excluding CMOM) - This section describes the scope, schedule and status for projects and other activities that were active during the reporting period October 1, 2007 through December 31, 2007. The projects and activities described are those that demonstrate the efforts conducted to comply with the Consent Decree.

**Section 2: Performance Overview** - This section provides an accounting of the number of occurrences of overflows, including unauthorized discharges, from the separate sanitary sewer and combined sewer system and the estimated volumes of each. A discussion of the probable reductions, in both unauthorized discharge points and the discharges from MSD's CSO locations, identified in the MFWTP KPDES, permit that are expected to result from MSD's projects and activities during the reporting period are also contained in this section.

**Section 3: Project WIN Program Activities for the Next Reporting Period** (excluding CMOM) - This section describes the anticipated projects and activities that are scheduled to be performed during the next reporting period (January 1, 2008 through March 31, 2008) for continued compliance with the Consent Decree.

**Section 4: Capacity Management, Operations and Maintenance (CMOM) Annual Report** - The program activities performed during the reporting period October 1, 2007 through December 31, 2007 and activities planned for the next reporting period (January 1, 2008 through March 31, 2008) are included in this section.

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## **SECTION 1: Project WIN Program Activities Performed during the Reporting Period**

### **1.1 Nine Minimum Controls Implementation**

Per Paragraph 23.a. of the Consent Decree, the Nine Minimum Controls (NMC) Compliance Report was initially submitted to EPA and KDEP on February 10, 2006. MSD received an approval letter, dated February 22, 2007 for the NMC Compliance Report. The approved NMC Compliance document can be viewed on the MSD Project WIN website [www.msdlouky.org/projectwin](http://www.msdlouky.org/projectwin). Highlights of the NMC program implementation over this reporting period are outlined below:

#### NMC 1: Proper Operation and Maintenance Program

- Continued to inspect and maintain catch basins within the combined sewer system (CSS).
- Continued to inspect, maintain and properly operate the CSS pump stations and the Morris Forman Wastewater Treatment Plant (MFWTP).
- Continued to perform weekly inspections of each CSO and related structures, and initiated work orders for debris removal and/or repairs as determined to be necessary to allow proper system operation.
- Reviewed and enhanced the inspection and maintenance procedures for CSOs, based upon the system assets at each location.
- Siphon inventory review and enhancement of the documentation was performed. Detailed sketches were developed for each siphon location. This inventory was completed in October 2007 and posted to eB.
- Removed mechanical regulators from the following CSO sites:
  - CSO109
  - CSO110
  - CSO125
  - CSO126
  - CSO131
  - CSO144
  - CSO151
  - CSO152
- Developed a plan to remove the remaining regulators from three CSOs (CSO108, CSO118 & CSO132)
- Continued to compile a comprehensive library of mapping, record drawings and documentation of each CSO location for inspection and maintenance to allow for a more streamlined response to any maintenance or system issue that may occur.

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**NMC 2: Maximization of Storage in the Collection System**

- Continued operation of Phase I of the Real Time Control (RTC) system. Received performance report from BPR CSO of the RTC system for its first nine months of operation from April 2006 through December 2006.
- Continued design activities related to Real Time Control Phase II. This phase of RTC is to be completed by December 31, 2008, as required within the Consent Decree.
- A contract for construction of an inflatable dam in the Southwestern Trunk was awarded during this period. Submittals were reviewed and approved with equipment being ordered in anticipation of active construction beginning in January 2008.
- As part of the additional access provided to the wave screen at CSO 125, an analysis of potential backwater impacts was performed, and the dam was raised an additional 12" to reduce overflow and increase in-system storage.
- Initiated the review of pump stations within the CSS to determine if modifications can be made to further maximize flow transport to the MFWTP.

**NMC 3: Review and Modification of Pretreatment Requirements**

- Continued to send wet weather alerts to the Non-Domestic Dischargers (NDD) prior to rain events, reminding them of their commitment to implement controls during wet weather events.
- Completed the Threat Matrix exercise to determine the NDDs having the greatest potential to impact the stream during wet weather events.
- Continued implementation of the CSO-SIU project in conjunction with the LTCP preparation.

**NMC 4: Maximization of Flow at the Morris Forman Wastewater Treatment Plant**

- Continued operation of RTC Phase I, which minimizes wet weather overflows from the Southwestern Pump Station, providing an optimized method for delivering more consistent flows into MFWTP during and after wet weather events.
- Developed a scope of work to generate reporting from actual wet weather events captured through Real Time Control.

**NMC 5: Elimination of CSOs During Dry Weather**

- Continued implementation of the Unusual Discharge Request permit program, to prevent negative impacts on the CSS from discharges not already covered by a wastewater discharge permit.
- Continued coordination with E.ON U.S. to ensure that any power shut downs will not negatively impact operation of MSD facilities.
- Performed reconnaissance and preventive maintenance of collection system "hot spots" to proactively remove grease and debris buildup, minimizing the possibility of overflows at these locations.

- Initiated an analysis of ten locations throughout the District that historically have experienced excessive accumulation of fats, oils or greases (FOG) in sewers to determine if an engineered solution could cost-effectively and efficiently solve the maintenance problem. More details on this effort can be found in Section 4 of this report.
- Reported dry weather overflows from the CSS in accordance with the Sewer Overflow Response Protocols (SORP).

**NMC 6: Control of Solid and Floatable Materials in Combined Sewer Overflows**

- During the reporting period, the wave screen at CSO 125 was damaged, and required replacement and reinforcement. During this effort, additional hatch access was provided, the screen was additionally supported with steel, and water service was provided to the site.
- Continued inspection and maintenance procedures for the new solids and floatables structures as part of the weekly CSO inspections and PM cleaning routines, outlined under NMC 1.
- Constructed the CSO 146 solids and floatables baffle vault structure, as detailed in the Interim CSO LTCP, and was substantially complete as of December 31, 2007.

**NMC 7: Pollution Prevention Programs to Reduce Contaminants in CSOs**

- Continued coordination of activities performed by Louisville Metro such as: street sweeping, Operation Brightside (garbage pick-up), and other Metro pollution prevention programs.
- Continued implementation of the Hazardous Materials Ordinance, which requires users with hazardous materials on site to submit a spill prevention and control plan. Continued response to spills of hazardous materials and incidents involving discharges to the sewer system and provide spill mitigation kits to the Louisville Metro Fire Department to use to absorb vehicle fluids rather than flushing to the sewer.
- Continued implementation of the Erosion Prevention and Sediment Control Ordinance.
- Continued to issue wastewater discharge permits under the Industrial Pretreatment Program.
- Planned 2008 clean sweep events. Butchertown invasive plant removal event held November 17, 2007.
- Held rain barrel distributions on November 10, 2007 and December 15, 2007.

**NMC 8: Public Notification**

- Mailed "Holiday Tip" postcards to customers
- Distributed grease scrapers at various public events
- Continued to update the Project WIN website that was launched with the ability to alert customers of water quality conditions relative to the potential to contain sewage, on a real time basis, through the use of a "traffic signal" showing the status of water quality.

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Customers voluntarily sign up to receive email alerts. In addition, there are messages from MSD, a repository of approved documents, Stakeholder meeting minutes, and access to a public notification e-mail system. This website can be found at [www.msdlouky.org/projectwin](http://www.msdlouky.org/projectwin).

- Inspected approximately 1100 Overflow Advisory signs along the creeks and the Kentucky side of the Ohio River within both the combined and separate sanitary sewer systems as outlined in the NMC Report and the Sewer Overflow Response Protocol. In the CSS, approximately 300 signs were inspected by December 31, 2007. In the separate sewer system, approximately 800 signs were inspected by December 31, 2007. Work Orders were created to replace 184 signs that had been damaged or removed.

#### NMC 9: Monitoring to Characterize CSO Impacts and the Efficacy of CSO Controls

- Continued monitoring of wet weather impacts within the Beargrass Creek Watershed, sampled during a wet weather event.
- Completed the recreational use survey for the Ohio River and Beargrass Creek.
- Continued to monitor the largest CSOs for flow volume to define the wet weather contribution of the overflows to the stream. Sonde data for the period from 2005 through 2007 was given to the USGS for cleaning and verification.
- Collected stream flow, sonde and other environmental data sets for use in further characterization of the combined service area.
- Calibrated the InfoWorks CSS Model in anticipation of increased use for the LTCP development. Additional sewer lines, up to an 18-inch diameter, were coded into the model and pump station and other physical parameter information were updated. The evaluation of the synthetic year rainfall used for simulation within the model was completed.
- Calibrated the Water Quality Tool for the Beargrass Creek Watershed and the Ohio River model and prepared for use in the LTCP and bacteria TMDL.
- Submitted the Water Quality Synthesis Report in December 2007 which included a watershed description of land use, population, impervious area and various environmental parameters. The report included a statistical analysis of water quality data collected within the Beargrass Creek watershed from 2000 through 2005.

#### **1.2 Sewer Overflow Response Protocol (SORP) Implementation**

Per Paragraph 23.d. of the Consent Decree, MSD initially submitted the SORP to EPA and KDEP on February 10, 2006. MSD received an approval letter for the SORP on August 22, 2006. The approved SORP document can be viewed on the MSD Project WIN website [www.msdlouky.org/projectwin](http://www.msdlouky.org/projectwin). The following activities were performed during this reporting period.

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### Overflow Management and Field Documentation

- Enhancements were made to the Overflow Report form to assist staff with overflow data collection.
- MSD continued the more rigorous quality assurance and quality control program for the review of overflows. This includes daily review, monthly review and quarterly review.
- SORP training documents and job aides were developed to assist staff in all aspects of SORP implementation.
  - Sample Text guide for Spot Inspections (posted in Hansen Help)
  - Step by Step guide for Overflow reporting
  - Volume Estimation Guide
- Telemetry added to the Jeffersontown WTP siphon structure to facilitate data collection and overflow monitoring.
- MSD I&FP staff continue to monitor 11 overflow locations and takes preventive measures to reduce basement backups. Work orders are used to track these various activities.
- MSD's Regulatory Services staff continues to monitor approximately 60 sanitary sewer overflow (SSO) sites, which have been grouped into routes based on the range of rainfall rates necessary to cause an SSO. These routes are monitored during rain events depending on the magnitude and location of the storm. If an overflow is observed, a Discharge Work Order is created to document the event.
- MSD Metro Operations continues to monitor approximately 20 sites where sewage is routinely hauled from pump station wet wells to wastewater treatment plants to prevent overflows during rain events depending on the magnitude and location of the storm. Due to capacity issues during this reporting period, MSD hauled approximately 23 times.

### Public Notification and Communication

- Approximately 1100 Overflow Advisory signs were inspected along the creeks and the Ohio River within both the combined and separate sanitary sewer systems as outlined in the SORP. In the CSS, approximately 300 signs were inspected by December 31, 2007, and in the separate sewer system, approximately 800 additional signs were inspected by December 31, 2007. Work Orders were created to replace or repair approximately 184 signs.

### Regulatory Reporting and Data Management

- A supplemental email will now be sent if a discharge work order was not completed prior to the initial reporting. The EPA contact name to receive the discharge notification emails was changed from John Harkins to Sean Ireland.
- A link from the Hansen sign inventory to the GIS was created.
- Monthly meetings were held with staff to perform QA/QC of Discharge Work Orders.

- The Discharge Report was updated to include additional information on the monthly report that is submitted with the DMRs and the Quarterly Reports.
  - **DISSUP** log code and data was added. This code tracks when supplemental data is sent to KDEP and EPA on Discharge work orders.
  - **DISPUB** log code and data was added. This code tracks how MSD provided public notification of an overflow. The report now also includes **Assigned To** information.
- A review of the historical Discharge work orders was started for all data back to July 1, 2004. The associated assets in Hansen are being updated to track overflow locations.

#### Staff Training and Communication

- In accordance with the approved SORP, and to ensure that the specific requirements of the SORP were well understood and adhered to by staff in positions of SORP responsibilities, the 2007 annual training program was completed in December 2007. The training department combined the modules into a single “Field Training” module. This helped to integrate the information into a format that more closely simulates an actual overflow response. While the names of the modules have been placed under the umbrella name “Field Training”, all of the content is still covered, though in a more comprehensive way.
- The full SORP training module was provided in a 4.0 hour session format for those staff directly responsible for daily implementation of the SORP procedures. 162 employees were trained in 12 Field Training sessions.
- The module that overviews MSD’s SORP Obligations and Project WIN was provided in a 30 minute session format for all MSD staff, the Wet Weather Team/Stakeholders and the MSD Board. 507 employees were trained in 14 SORP Overview sessions.

#### Annual SORP Review

- Planning for the annual review commenced.

### **1.3 Capital Improvement Projects**

Paragraph 23.b of the Consent Decree requires the implementation of a specific list of projects to be completed and/or initiated prior to the implementation of the final Sanitary Sewer Discharge Plan (SSDP) and final LTCP. All projects from the original Consent Decree have been completed so this subsection of future Annual and Quarterly Reports will be eliminated.

### **1.4 Discharge Abatement Plans**

A requirement of the Consent Decree, per Paragraph 24, is to prepare and submit for review and approval discharge abatement plans for the elimination of unauthorized discharges from the separate sanitary sewer system and the combined sewer system, the reduction and control of discharges from the CSO locations identified in the MFWTP KPDES permit, and the improvement of water quality in the receiving waters.

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### **1.4.1 Sanitary Sewer Discharge Plan (SSDP)**

The SSDP will address the overflows and unauthorized discharges from the separate sanitary sewer system. Three separate plans will be submitted under this program as described below and outlined in Paragraph 24.a. of the Consent Decree.

#### **1.4.1.1 Updated SSOP Implementation**

MSD prepared and submitted an updated SSOP on February 10, 2006. This plan included an overview of the MSD sanitary sewer overflow abatement program and specific actions taken to reduce/eliminate overflows from the sanitary sewer system. This document included a list of the proposed improvements to be accomplished by December 31, 2008. Refer to Appendix A-1 for a chart showing a schedule of the activities described in this section.

The following projects were completed within the reporting period.

- Broadfern Pump Station Upgrade (Budget ID F02327) - Two new dry pit pumps have been installed along with new suction and discharge piping and pump level controller. Installation and initial testing was completed on December 28, 2007. Additionally, final testing is required to verify pump performance prior to certification which will occur by January 30, 2008.

The following projects were active during the reporting period and will be completed as required by the Consent Decree:

- Interceptor Condition Assessment Phase 1 (Budget ID H04272) – The inspection portion of this project was completed prior to July 1, 2006. MSD received the reports summarizing the results of the inspections during this reporting period and began reviewing and prioritizing findings from the inspections. Inspections included portions of the Goldsmith, Middle Fork, and Northern Ditch Interceptors along with the interceptor from Highgate Springs Pump Station to the Southeast Diversion Structure. Phase 1 improvements, based on the inspection results, will be completed by December 31, 2008, in accordance with the Consent Decree.
- Murray Hills Area Pump Station Upgrades (Budget ID F06297) – The project scope was modified to eliminate one pump station in the Murray Hills area. The project name was revised to Acushnet Pump Station Elimination. The design of this project was completed in June 2007 and construction of this project began on October 11, 2007. The flow from the pump station was diverted in December 2007 and the construction is expected to be completed in the next reporting period which will meet the required completion date of September 30, 2008, in accordance with the Consent Decree.
- Fern Hill Subdivision Interceptor #8 (Budget ID C94086) – The design phase and easement acquisition was completed during this period. A construction contract is expected to be awarded during the next reporting period, in order to complete the construction by March 30, 2009, in accordance with the Consent Decree. This project will eliminate the Holly Oaks Pump Station which is a documented SSO.

- Thurman Drive Pump Station Elimination (Budget ID B06299) - The design was completed and the bid for a construction contract was advertised and the contract awarded during the reporting period. This project will be completed by September 30, 2008, in accordance with the Consent Decree.
- Zabel Way Pump Station Elimination (Budget ID C06295) - The design has been completed and easement acquisition has started during the reporting period. Easement acquisition will continue in the next reporting period. Construction will be completed by September 30, 2008, in accordance with the Consent Decree.

#### **1.4.1.2 Interim Sanitary Sewer Discharge Plan (ISSDP)**

MSD submitted for approval an ISSDP on September 30, 2007. The overall project concept includes reconstruction of the Beechwood Village sanitary sewer system along with the construction of relief sewers, elimination of the Highgate Springs Pump Station and offloading sewers in the Hikes Point area that currently create unauthorized discharges during wet weather. The concept also involves conveying flow from the Southeast Diversion Structure through the Southeast Interceptor and the Northern Ditch Interceptor to a new relief sewer that will convey wet weather flows from the Northern Ditch Interceptor to the West County WTP. A high-rate secondary treatment system is proposed to treat some of the diluted wastewater conveyed by this relief sewer during wet weather.

To meet the implementation schedule required by the Consent Decree, the following activities have occurred:

- Final design and related field surveys are continuing for the Beechwood Village sanitary sewer reconstruction.
- Work scopes were negotiated and a notice to proceed was issued for preliminary engineering of the West County WTP Wet Weather Treatment and Equalization Project.
- The preliminary engineering continued for the Northern Ditch Interceptor diversion sewer.
- A proposal for professional services to design the facilities needed for off-loading and decommissioning of the Highgate Springs Pump Station was received and evaluated during this period. This project would also eliminate the need for wet weather manhole pumping in the Hikes Point area.

#### **1.4.1.3 Final Sanitary Sewer Discharge Plan**

MSD is required to submit for approval a final SSDP by December 31, 2008. Refer to Appendix A-2 for a chart showing a schedule of the activities that will be in the SSDP. During this reporting period, MSD completed the conversion and continued the calibration of InfoWorks CS sewer models for its six regional treatment plant service areas and seventeen small plant service areas. Each model was upgraded with additional detail down to an 8-inch sewer diameter in the sanitary service area and to an 18-inch sewer diameter in the combined sewer area. In all, 12 models were upgraded with additional detail and standardization and are being calibrated to a flow monitoring period from the first half of 2007.

Sewer modeling guidelines were utilized and improved to standardize the technical design of each model. Each of these models will be utilized for analyzing various solutions for the





- Continued water quality and in-stream hydraulic monitoring at selected receiving water locations to calibrate and validate a Water Quality Tool (WQT). The WQT will be used in the development of a Total Maximum Daily Load (TMDL) for the three branches of Beargrass Creek, and also in LTCP process to evaluate the effectiveness of various CSO and SSO control alternatives. The WQT is comprised of three integrated models (HSPF, XP-SWMM and CE-QUAL Riv 1). The Tool was calibrated and validated during this reporting period. Meetings to finalize the modeling begin load allocations, and drafting the TMDL report will be initiated during the next reporting period.
- Presented information about CSO locations, water quality impacts, and potential CSO mitigation strategies at the Project WIN public meetings described in Section 1.5.2. Feedback obtained from customers at these meetings will be used in developing and evaluating projects for CSO control.

### 1.5 Public Outreach, Education, Notification and Participation

In addition to the technical aspects of Consent Decree implementation, MSD has enhanced programs to inform, educate and involve both staff and the local community. The program is broken down into different components aimed at accomplishing the goals for Discharge Abatement Plan development, as well as Consent Decree program implementation. The programs involve basic understanding of the community's water quality challenges and the personal behavioral changes necessary for complete success. A description of the programs follows.

#### 1.5.1 Public Outreach

MSD has developed a public outreach program aimed at educating the public on MSD's primary business functions with emphasis on wastewater, stormwater and flood protection. Presentations were given to numerous community groups during the reporting period. A portion of the presentation contains information related to the Consent Decree, including potential program direction and anticipated costs.

Below is a chronological summary of the general outreach activities during the reporting period.

|                 |   |
|-----------------|---|
| October 2007    | MSD co-sponsored a visit from ORSANCO's water quality education and demonstration boat - the P.A. Denny. The boat was docked at the Louisville waterfront for a week in October, providing education opportunities for JCS students and the general public. |
| October 1, 2007 | District 20 Town Hall Meeting   |
| October 1, 2007 | Joint Agencies Discussion on LID/Green Infrastructure   |
| October 2, 2007 | Presentation on Consent Decree, addressed rate increase and senior citizen discount.  |
| October 2, 2007 | JCS meeting to discuss development of green infrastructure concept plans for three elementary schools located in the CSO area.  |
| October 3, 2007 | Environmental task force meeting - task force includes representatives of all government agencies with focus on partnerships and green building initiative.   |
| October 9, 2007 | City of Thornhill - Presentation on Consent Decree initiatives and any current or planned projects for area.  |

|                   |   |
|-------------------|---|
| October 13, 2007  | Rain Barrel Distribution  |
| October 15, 2007  | Site meeting with developer to discuss green alternatives and sanitary sewer issues within combined sewer area relating to the Consent Decree. Provided guidance on implementation of LID methods.  |
| October 18, 2007  | Crime Prevention Summit at Brandeis Elementary School - MSD staffed a table and distributed Project WIN educational materials, raffled one rain barrel and encouraged participation at upcoming scheduled events.   |
| October 18, 2007  | Project Win public meetings with residents  |
| October 19, 2007  | Met with Metro Works to explore partnering in a high profile beautification project underway, and proposal for alternative plan to install a bio-retention swale and curb inlets to direct stormwater flows away from the CSS to reduce CSO's. Opportunity for community education of green solutions in urbanized high traffic area. |
| October 24, 2007  | Met to discuss green infrastructure possibilities at the MSD facilities Beargrass Creek /Letterle Pump Station.   |
| October 25, 2007  | Jeff. Co. League of Cities – presentation on the Consent Decree and recent rate increase  |
| October 29, 2007  | Bellarmino College – Executive Director's speaking engagement with college students to discuss the role of leadership in business and current consent decree initiatives in our community.  |
| November 1, 2007  | Climate change committee - Discussed how to involve partnering to achieve mutual environmental benefits.  |
| November 6, 2007  | Sustainable Cities Forum – Keynote Speaker  |
| November 8, 2007  | MSD participated in the 2007 Kentucky Restaurant Association Exposition on November 8, 2007, at Churchill Downs Race Track. MSD distributed FOG educational materials, as well as information on Project WIN to expo attendees and race going members of the public.  |
| November 10, 2007 | Rain Barrel Distribution  |
| November 13, 2007 | Green Opportunities and Partnerships between Metro agencies.  |
| November 17, 2007 | Butchertown Greenway Invasive Vegetation Removal and Native Tree and Shrub Planting   |
| November 27, 2007 | Metro Council Transportation & Public Works Committee - Presented overview of Consent Decree and the importance of continued support by Metro Council for future CD rate increases and bond rating for the community.   |
| November 29, 2007 | Ad campaign sponsorship 2008 - Met to discuss the focus of the High School marketing/advertising campaign to increase awareness about Project WIN initiatives and encourage community involvement.  |
| December 11, 2007 | Beechwood Wood Village Council Meeting - Updated residents on Consent Decree Project status   |
| December 13, 2007 | Met with the Louisville Metro Housing Authority to present MSD's obligations required by the Consent Decree and explore partnership and opportunities for implementing Green Infrastructure for Government owned properties.  |

|                   |   |
|-------------------|---|
| December 14, 2007 | MSD hosted a workshop on Pervious Concrete Hydrological Design and Resources training for the Kentucky Ready Mixed Concrete Association & The Kentucky Concrete Pavement Association. |
| December 15, 2007 | Rain Barrel Distribution  |

In addition, MSD staff attended the following “District 12 Dialogues” at the request of Councilmember Blackwell:

|                   |  |
|-------------------|--|
| October 16, 2007  | Greenwood Elementary, 5801 Greenwood Rd.       |
| October 24, 2007  | Conway Middle School, 6300 Terry Rd            |
| November 13, 2007 | Doss High School, 7601 St. Andrews Church Road |
| November 21, 2007 | Greenwood Elementary, 5801 Greenwood Rd        |

MSD staff also attended the following District 3 Town Hall Meeting at the request of Councilmember Mary Woolridge:

|                 |   |
|-----------------|---|
| October 3, 2007 | Hill St. Baptist Church, 2203 Dixie Highway |
|-----------------|---|

MSD staff also attended the following “Mayor’s Community Conversations”:

|                   |   |
|-------------------|---|
| October 15, 2007  | Seneca High School, 3510 Goldsmith Lane         |
| November 19, 2007 | Eastern High School, 12400 Old Shelbyville Road |

### 1.5.2 Project WIN Public Meetings

As part of preparing the discharge abatement plans, MSD conducted a second round of Project WIN meetings during the reporting period.

The second round of public meetings provided an update on Project WIN progress, and obtained feedback from customers on the proposed Project WIN rate increase. The meetings also described the CSO and SSO issues that MSD is addressing, and illustrated this through a series of maps with the locations of the CSOs and SSOs, and the likely locations for abatement projects in the future. An overview of available control technologies and approaches also gave the public an indication of the types of projects that may be occurring in their neighborhoods in the future. Ample time was available for feedback from the general public on issues that affect their neighborhood.

The mechanisms for communicating this message included a PowerPoint presentation, summary handouts and brochures on the various programs discussed. Question and answer sessions followed each set of presentations.

Meetings were held on the dates and at the locations as follows:

|                   |                                |
|-------------------|--------------------------------|
| October 29, 2007  | The NIA Center                 |
| October 30, 2007  | Fern Creek Firehouse           |
| November 12, 2007 | East Government Center         |
| November 13, 2007 | Fairdale Playtorium Center     |
| November 20, 2007 | Sun Valley Community Center    |
| November 27, 2007 | Clifton Center                 |
| December 4, 2007  | Shawnee Golf Course Club House |

Copies of the PowerPoint presentation, the handouts and all the brochures distributed at the Project WIN meetings can be found on the Project WIN website described in Section 1.5.4.

### 1.5.3 Wet Weather Team Meetings

The process of organizing a Wet Weather Team (WWT) as outlined in Consent Decree Paragraph 22 has been completed and WWT meetings are underway. Two WWT meetings were held during this reporting period, as detailed below.

- October 18, 2007 – This meeting continued discussions on SSO elimination approaches, with a focus on inflow and infiltration (I&I) removal. Project WIN funding methods were discussed, as the first in a series of discussions about the funding approaches. The draft outline of the Wet Weather Plan was also distributed for comment.
- December 6, 2007 – This meeting continued the discussion of I&I control approaches, and dealt specifically with the draft private property ordinance that has been proposed to Louisville Metro government. Further discussions of funding approaches were held.

All information provided to the WWT is available on the Project WIN website, at [www.msdlouky.org/projectwin](http://www.msdlouky.org/projectwin).

### 1.5.4 Public Education and Notification

MSD produced and distributed a number of products aimed at educating the community on the objectives of Project WIN and how to lessen the risks associated with coming into contact with sewage overflows. Descriptions of these products are provided in sections 1.1 and 1.2 of this report.

MSD also posts Project WIN information on the website. On MSD's home page, the Project WIN area provides important information on the condition of area streams, and shows a warning if overflows are likely to be happening or have happened in the past 48 hours. Clicking on the Project WIN logo brings up the Project WIN site, which includes a repository of public documents related to Project WIN, tips for customers to help control overflows through their personal actions, information about the history and background of Project WIN, and a place to sign up for overflow advisory emails warning when significant precipitation has caused overflows in MSD's system.

Project WIN Capital Project Signs have been developed and are available for posting at Project WIN jobsites.

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MSD has developed an annual “calendar” of public information activities for the upcoming year. It is anticipated that the calendar will address unique activities such as Project WIN public meetings held in support of SSDP and LTCP development, and also repetitive information and outreach activities. An example of repeating activities is MSD’s plan to develop and disseminate information about control of household fats, oils and grease prior to the holiday season. MSD anticipates repeating this message every year before the holidays. Messages will also be developed and disseminated prior to the winter wet weather season, the summer recreation season and the autumn lawn-clean-up season.

The following materials were developed for distribution within this reporting period:

- FOG postcard with plastic grease scraper
- A “Holiday Tips” postcard was mailed to MSD customer accounts.

The following materials were under development during this reporting period:

- FOG brochures geared toward residential customers as well as and commercial food service establishments
- SSO brochure

Information related to this Consent Decree and Project WIN may be found at [www.msdlouky.org/projectwin](http://www.msdlouky.org/projectwin).

## **SECTION 2: Performance Overview**

### **2.1 Unauthorized Discharges to Waters of the United States**

Appendix B includes information related to MSD's discharges to waters of the United States for the reporting period. This information is entered and maintained in the Hansen Information Management System (Hansen) utilizing procedures reviewed and improved through efforts associated with various components of the Consent Decree. These discharges have been reported to KDEP and EPA through automated email, telephone calls and monthly wastewater treatment plant discharge monitoring reports (DMRs).

### **2.2 Overflows to Ground**

MSD records information related to overflows to the ground that did not reach waters of the United States for the reporting period. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Consent Decree. These overflows will be included in the FY 2008 Annual Report for the period of July 1, 2007 through June 30, 2008.

### **2.3 Overflows to Interior**

MSD records information related to overflows to building interiors for the reporting period. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Consent Decree. These overflows will be included in the FY 2008 Annual Report for the period of July 1, 2007 through June 30, 2008.

### **2.4 CSO Reductions**

Appendix C includes the June 30, 2007 version of modeled Annual Average Overflow Volume (AAOV) for the permitted CSOs. No projects were completed during this reporting period that impacted modeled AAOV from permitted CSOs.

Appendix D includes CSO flow monitoring information for the reporting period. During this reporting period, the flow monitor at CSO 211 was out for a portion of the time and CSO125 data collection started in November when a meter was installed.

### **2.5 SSO Reductions**

Estimation of SSO volume is not available in the same manner as it is for the CSO locations. The SSO volume reductions are estimates based on actual observations or from flow monitoring information. The Acushnet Pump Station was eliminated in the reporting period in an effort to reduce or eliminate SSOs.

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### **SECTION 3: Project WIN Program Activities for the Next Reporting Period**

This section describes the anticipated projects and activities (CMOM activities can be found in Section 4 of this document) that are scheduled to be performed during the next reporting period (January 1, 2008, through March 31, 2008) for continued compliance with the Consent Decree.

#### **3.1 Nine Minimum Controls Implementation**

Implementation of the NMC program is an on-going initiative. MSD will continue to review programs and assess the need to employ programmatic enhancements and CSS improvements. Specific enhancement activities to be implemented during the next reporting period, over and above the routine activities already in place and discussed in Section 1.1, are as follows:

##### NMC 1: Proper Operation and Maintenance Program

- Construction activities will continue to remove the mechanical regulators within the CSS on the last three regulators at CSO 108, CSO 118 and CSO 132.
- Revisions to the CSO components will be made in Hansen to show that the regulators have been removed.

##### NMC 2: Maximization of Storage in the Collection System

- Continuation of the review of flood pump stations within the CSS to determine if additional operational modifications are feasible, further maximizing operations and efficiently transporting more flow to the MFWTP for treatment.
- Completion and bidding of RTC Phase II Final Design, which includes the four RTC projects described in Section 1.4.2.1 Interim LTCP. RTC Phase II construction is to be completed by December 31, 2008, as required within the Consent Decree.
- Evaluation of the need to add flapgates to the CSO outfall pipes, further limiting the possibility for inflow of river/creek water into the CSS during high stream flow events.

##### NMC 3: Review and Modification of Pretreatment Requirements

- Completion of the Threat Matrix exercise to determine the NDDs which have the greatest potential to impact the stream during wet weather events. These NDDs will undergo further evaluation of the potential implementation of controls. Follow-up inspections and meetings will be conducted at each NDD to discuss the requests listed in their respective letters and to review forms used to document impact minimization activities.
- Continued implementation of the CSO-SIU project in conjunction with the LTCP preparation.

##### NMC 4: Maximization of Flow at the Morris Forman Wastewater Treatment Plant

- Evaluation of alternatives to sodium hypochlorite for disinfection during high flows. A successful replacement or addition may allow MSD to improve disinfection system effectiveness at high flows to ensure that disinfection performance does not become a constraint on treatment capacity.

- Begin development of a system to track and continuously display the availability of the critical (i.e. rate-limiting) unit processes, the percentage of time the full firm capacity of the treatment system is available to treat wet weather flows, and the percentage of time during wet weather events that the plant operates within 95% of the peak flow capacity of the plant as determined by the capacity calculator.
- Complete the RTC Phase II final design. RTC Phase II includes a project that will allow the RTC computer system to regulate the flows into MFWTP, based on the current availability of treatment trains. Construction is to be completed by December 31, 2008, as required within the Consent Decree.

NMC 5: Elimination of CSOs During Dry Weather

- Evaluation of dry weather overflows, with emphasis on the CSS, to determine causes and to determine the need for corrective activities, such as the addition of backup generators.
- Continue the analysis of locations throughout the District that historically have experienced excessive accumulation of fats, oils or greases (FOG) in sewers to determine if an engineered solution could cost-effectively and efficiently solve the maintenance problem.

NMC 6: Control of Solid and Floatable Materials in Combined Sewer Overflows

- Development will begin on an expanded visual inspection program to determine the efficiency of installed controls.
- The CSO 146 solids and floatables control baffle vault was operational by December 31, 2007, and will be certified in accordance with the Consent Decree by January 31, 2008.

NMC 7: Pollution Prevention Programs to Reduce Contaminants in CSOs

- Continue to facilitate clean sweep events and coordinate volunteers to remove trash and debris from the waterways in Jefferson County. An X-Stream Clean Sweep event is scheduled for March 15, 2008, for Pond Creek, Beargrass Creek, Bee Lick and the Portland watersheds.
- Continue to develop a rain garden manual outlining design and installation procedures for homeowners.
- Facilitate rain barrel give-away events and a spring sale.
- Prepare and distribute informational pieces, targeted to inform customers and residents on activities that can be practiced within their homes to assist in the reduction of overflows within the collection system. See NMC 8 for more details.
- Continue to promote Green Infrastructure initiatives within Jefferson County, such as pervious pavement.
- Schedule cleaning of the strip of pervious concrete along the curb-line at the main office in downtown Louisville. Video documentation of process is planned.

- Continue coordination with Louisville Metro staff for programs such as street sweeping, Operation Brightside, “Adopt-a-Highway” cleanup programs, and litter pick-up activities to maximize the efficiency of those operations and determine the amounts of materials as they relate to preventing solids and floatables from entering the CSS.

NMC 8: Public Notification

- Inspect the Overflow Advisory Signs annually, before May 1, which is the official start of the recreational contact season in Kentucky. Missing or damaged signs will be replaced.
- Distribute informational material, by May 1, providing a general overview and awareness relating to public health impacts associated with sewer overflows and an update of Project WIN initiatives.
- Distribute information material, by May 1, to residents living within 500 feet of the Ohio River and Beargrass Creek, alerting them to wet weather issues, particularly how to minimize the risks of coming into contact with water that may contain sewage.
- Finalize a Recreational Contact Survey detailing the extent of potential human contact to impacted waterways during the recreational season. This survey was conducted by visual observations of recreational use in and nearby key locations along Beargrass Creek and the Ohio River within Jefferson County. The results of the study will be analyzed to determine if additional signage, information displays or other public notification efforts are warranted at locations of high use.
- Continue efforts to partner with various media outlets, including television media, to serve as a conduit for disseminating information to the public.

NMC 9: Monitoring to Characterize CSO Impacts and the Efficacy of CSO Controls

- Development will begin on an expanded visual inspection program to determine the efficiency of installed controls.
- MSD will plan for the sampling upstream and downstream of CSO 206 during dry and wet weather to establish baseline conditions prior to its elimination. Wet weather sampling will also continue on a large scale within the Beargrass Creek watershed in anticipation of a rainfall in excess of 1-inch.
- MSD will perform monitoring to characterize CSO impacts. MSD will continue to monitor its largest CSO for flow volume to continue to define the wet weather contribution of the overflows to the stream. United States Geological Survey (USGS) will begin installation of a “side-looking” stream flow gauge near the mouth of Beargrass Creek and its confluence with the Ohio River to more accurately measure the backflow effects from the river on the stream and tie this data to dissolved oxygen readings in the area. Sonde data will continue to be collected through the USGS Automated Data Processing System (ADAPS) site and additional quality control review procedures will be defined.
- The InfoWorks combined sewer model will be calibrated in preparation for simulating the CSO mitigation projects to be included in the final LTCP. CSO mitigation projects will be simulated within the model and analyzed for efficacy and collective impact. Additionally,



to both discharge abatement plans. These are scheduled to be completed on an integrated program rather than the individual components.

### **3.3.1 Sanitary Sewer Discharge Plan**

As noted previously, the schedule for development of the Sanitary Sewer System discharge abatement plan is shown in Appendix A.

#### **3.3.1.1 Updated SSOP Implementation**

The following projects are under design and/or construction, and will be active during the next reporting period: Refer to Appendix A-1 for a chart showing a schedule of the activities described in this section.

- Broadfern Pump Station Upgrade (Budget ID F02327) - Two new dry pit pumps were installed along with new suction and discharge piping and pump level controller. Installation was completed and an initial round of performance testing completed on December 28, 2007. The test results were inconclusive and therefore additional testing is needed and will be completed in January 2008. As soon as the testing is completed, a certification letter will be submitted in accordance with the Consent Decree.
- Fern Hill Subdivision Interceptor #8 (Budget ID C94086) – This project will allow for the elimination of the Holly Oaks Pump Station, a documented SSO. Necessary easements will be negotiated during the next reporting period, in order to complete the construction by March 30, 2009, in accordance with the Consent Decree.
- Thurman Drive Pump Station Elimination (Budget ID B06299) - The design is complete and a contract for construction was awarded in December 2007. Construction will be underway in January 2008. This project will be completed by September 30, 2008, in accordance with the Consent Decree.
- Zabel Way Pump Station Elimination (Budget ID C06295) - The design will be completed and MSD will negotiate the necessary easements during the next reporting period. Construction will be completed by September 30, 2008, in accordance with the Consent Decree.
- Murray Hills Area Pump Station Upgrades (Budget ID F06297) – This project scope was revised after operating records were analyzed and it was determined that the Acushnet Pump Station (in the Murray Hills area) was the primary station in need of elimination. The design of this project was completed in June 2007 and construction began in October 2007. The flow from the Acushnet PS was diverted to a gravity sewer in December. The project will be completed prior to September 30, 2008, in accordance with the Consent Decree.
- Interceptor Condition Assessment Phase 1 (Budget ID H04272) – The inspection portion of the Interceptor Condition Assessment Phase 1 (Budget ID H04272) was completed prior to July 1, 2006. In the next reporting period, MSD will schedule and begin corrective/rehabilitation projects to address the Phase 1 findings from the Interceptor Condition Inspections. Project will be completed prior to December 31, 2008, in accordance with the Consent Decree.

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### **3.3.1.2 Interim Sanitary Sewer Discharge Plan (ISSDP)**

The ISSDP was submitted on September 30, 2007, in accordance with the Consent Decree. The actual submittal and the implementation of this plan, upon approval, will continue during the next reporting period, with preliminary engineering, route selection, easement acquisition and related activities underway on the following projects:

- Beechwood Village – The proposed plan will include the replacement of the neighborhood sanitary sewer collection system to reduce the inflow and infiltration to the Sinking Fork Interceptor. The scope will include installing new property service connections to individual homes and possible plumbing improvements in nearly 600 residences. In addition, the hydraulic constriction of the downstream Sinking Fork Interceptor at the Shelbyville Road crossing will be relieved with the addition of a Sinking Fork Relief Sewer.
- Highgate Springs and Hikes Point Area – The proposed plan will include a new Hikes Lane Interceptor that will convey the wastewater upstream of the Highgate Springs Pump Station to the Southeast Interceptor, downstream of the Southeast Diversion Structure. This will allow the elimination of the Highgate Springs Pump Station. In addition, there are improvements to several existing sewers in the Hawthorne area which are caused by the excessive flows in the Goldsmith Trunk Sewer that will need to be expanded in order to eliminate the need for wet weather manhole pumping in the Hikes Point area.
- Southeast Diversion Structure - Construction will be required for a new relief interceptor parallel to the Southeast Interceptor from the Southeast Diversion Structure to the Northern Ditch Interceptor. A new junction structure is expected to be constructed to connect this relief sewer to the proposed Hikes Lane Interceptor and Buechel Branch Interceptor.
- West County WTP Wet Weather Equalization and Treatment Project - Improvements described in previous three paragraphs will result in significantly more wet weather flow in the West County WTP and MFWTP service areas. The proposed plan will include the installation of a new interceptor parallel to the Northern Ditch drainage channel, allowing wet weather flow to be diverted from the MFWTP service area (currently through the Northern Ditch Pump Station) to the West County WTP service area. Construction of flow equalization and high-rate secondary treatment at the West County WTP will be completed by December 31, 2011, in accordance with the Consent Decree.

### **3.3.1.3 Final Sanitary Sewer Discharge Plan**

Refer to Appendix A-2 for a chart showing a schedule of the activities described in this section. The hydraulic models for the regional treatment plant sewersheds (Jeffersontown, Floyds Fork, Cedar Creek, Hite Creek and West County) and the sanitary sewer sub-sewersheds that are tributary to the MFWTP will be completed, calibrated, and validated. Work will continue on development and evaluation of SSO elimination alternatives. The evaluation of alternatives will use a standard cost estimating tool to allow for cost comparisons between sewersheds. The development of the benefit/cost evaluations will also use a standard tool that uses the value based the risk-management approach to quantifying benefits that was developed through the Wet Weather Team Stakeholder Group. For SSOs occurring in the sewersheds of the small



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MFWTP with the Global Optimization RTC system. The design of this project will continue during the next reporting period and will be completed by December 31, 2008, in accordance with the Consent Decree.

- Integration of Wheeler Basin (Budget ID I05057) – This project, part of Phase 2 of the RTC program, employs additional controls to better utilize approximately one million gallons of storage in the trunk line that drains the Wheeler Basin. The design of this project will continue during the next reporting period and construction will be completed by December 31, 2008, in accordance with the Consent Decree.
- CSO 146 Solids and Floatables Control (Budget ID H07026) – In accordance with the Consent Decree, a solids and floatables control capital project at CSO 146 was operational on December 22, 2007 with the construction contract to be completed during the first quarter of 2008.
- CSO 206 Sewer Separation (Budget ID I01061) – Areas 10 through 12 of this project are under construction, separating sanitary from storm sewer flow, and the entire project will be completed in accordance with the Consent Decree by March 31, 2009.
- CSO 206 Sewer Separation (Budget ID I01062) - Areas 13 through 15 (of 15 total) of this project will have final design completed, the contract will be bid during the next reporting period and construction will commence prior to June 30, 2008. This project will be completed in accordance with the Consent Decree by March 31, 2009.

### **3.3.2.2 Final Long Term Control Plan**

A brief description of the major activities planned in the next reporting period is contained in the following paragraphs. Refer to Appendix A-4 for a chart showing a schedule of the activities described in this section.

The hydraulic model of the CSS will be completed, calibrated and validated. The models of the sanitary sewer system sewersheds that are tributary to the CSS will be merged into the CSS model, to allow a comprehensive evaluation of the impacts of SSO control projects on the CSS.

Modifications have been completed on the Ohio River Valley Water Sanitation Commission (ORSANCO) model of a segment of the Ohio River in the vicinity of Louisville. During the next period the model will begin to be used in evaluating the impacts of CSOs on the water quality of a large river and resulting benefits of a range of CSO abatement scenarios. If final model results confirm the preliminary findings, a water quality standards review may be performed in accordance with the CSO Policy and LTCP development guidance to address the inability of CSO controls to achieve water quality standards for bacteria during significant wet weather events. A potential approach will be drafted for review with regulatory agencies.

Water quality and in-stream hydraulic monitoring will be continued at selected receiving water locations, making data available to refine calibration of the Beargrass Creek Water Quality Tool. This tool will be used in the development of a TMDL for Beargrass Creek, and also in LTCP process to evaluate the effectiveness of various CSO control alternatives. In addition to the ongoing CSS flow monitoring work, MSD is performing flow monitoring on approximately 22 CSO outfalls. Data obtained as part of this monitoring effort will be used to validate the CSO model and provide general guidance on the operational characteristics of the CSS.

In parallel with model development and calibration, work will continue on developing a wide range of alternative CSO control, and a preliminary engineering review of potential alternatives completed. This preliminary engineering review will screen potential alternatives based on a variety of factors related to protecting the community values identified by the WWT Stakeholder Group, including an assessment of the potential hydraulic and pollutant reduction, probable benefits towards achieving water quality objectives, consideration of sensitive areas, and probable costs. The hydraulic and water quality models will be used to begin sizing abatement alternatives and assessing the potential benefits of each alternative. The alternatives will be evaluated using the same standardized cost estimating tools and benefit/cost templates to ensure that the benefit/cost evaluations are on the same basis as is being used in the SSDP development. Preliminary alternative development is scheduled to be completed during the next reporting period, and the process to consolidate, validate, and prioritize potential abatement approaches will continue through the entire reporting period.

A review of EPA affordability guidelines will be completed during the next reporting period. It is anticipated that discussions with regulatory agencies will be initiated during the next reporting period, to ensure that the regulatory compliance approach is understood and accepted by all involved parties. It is expected that these discussions will clarify a proposed approach to the use of either the “presumptive” or “demonstrative” approach to water quality compliance.

**3.4 Public Outreach, Education, Notification and Participation**

The public participation process consists of several related components: Stakeholder involvement as part of the WWT; public outreach through community meetings and MSD’s Speaker’s Bureau; public education through MSD mailings, brochures, newsletters and MSD’s webpage; and, public input through a series of public meetings and a public hearing.

**3.4.1 Public Outreach**

A series of public outreach meetings will be held during the next reporting period. The intent of these meetings is to discuss with the public the extent of the CSO and SSO issues, and potential mitigation/elimination strategies. This will be an opportunity to hear from the public what concerns they have about projects that might occur in their neighborhood, and what other opportunities for problem solving they might see.

Below is a chronological summary of the general outreach activities scheduled to occur during the next reporting period.

|                  |  |
|------------------|--|
| January 3, 2008  | Meeting with Metro Public Works about bioswales for Meyzeek Middle School  |
| January 19, 2008 | The theme for the 2008 KY Derby Festival Conference is “Going Green!” The KY Derby festival committee has requested a representative from MSD to sit on the panel and talk about Green Initiatives |
| January 24, 2008 | Keynote Speaker for Annual Meeting of Salt River Watershed Basin   |
| January 26, 2008 | Volunteer event - Invasive Plant Removal with Living Lands and Waters and Metro Parks along Butchertown Greenway   |

|                                   |   |
|-----------------------------------|---|
| February 8,15,22,28,              | Stormwater Management and Rain Garden Design Class for Louisville Youthbuild  |
| February 5, 2008 – April 22, 2008 | MSD is sponsoring the 2008 Advertising Federation HS campaign. The Challenge: This year’s marketing challenge is to create a marketing/advertising campaign that increases awareness about MSD’s Project WIN and encourages our community to prevent both point and non-point sources of water pollution when possible. |
| February 6, 2008                  | Presentation on Consent Decree, Disconnect Down Spouts to Douglass Blvd. Neighborhood Association   |
| February 12, 2008                 | Presentation on Using Native Plants for Stormwater Infiltration to Wild Ones Louisville Chapter   |
| February 22, 2008                 | Kentucky Nurseryman Association – Keynote Address   |
| February 23, 2008                 | Volunteer event – Invasive Plant Removal with Metro Parks and Living Lands and Waters   |
| March 7, 8, 14, 21, 22, 2008      | Professional development workshops for Living Lands and Waters on Consent Decree Stormwater Management  |
| March 7,14, 2008                  | Stormwater Management and Rain Garden Design Class for Louisville Youthbuild  |
| March 15, 2008                    | X-Stream Clean Sweep for Pond Creek, Beargrass, Bee Lick and Portland areas   |

MSD staff is scheduled to attend the following “District 12 Dialogues” at the request of Councilmember Blackwell during the next reporting period:

|                   |  |
|-------------------|--|
| January 15, 2008  | Incarnation Catholic Church - 2229 Lower Hunters Trace |
| February 19, 2008 | Hillview Baptist Church -5319 Dixie Highway            |
| March 18, 2008    | Beechland Baptist Church - 4613 Greenwood Rd.          |

The following Mayor’s Community Conversation meetings are scheduled for the next reporting period:

|                   |  |
|-------------------|--|
| January 28, 2008  | Stuart Middle School large gym, 4601 Valley Station Rd |
| February 18, 2008 | Atherton High School small gym, 3000 Dundee Rd         |
| March 17, 2008    | Butler High School small gym, 2222 Crums Ln            |

### 3.4.2 Project WIN Public Meetings

During the next reporting period, MSD will be planning the third round of public meetings to provide an update on progress of the community’s Consent Decree compliance, and to obtain input on the discharge abatement plans being developed. The first round of meetings informed the public about the Consent Decree, about Project WIN, and what individual homeowners can do. The second round of meetings provided an update on Project WIN progress, and obtained feedback from customers on the proposed Project WIN rate increase.

The third round of public meetings is scheduled for April and for May 2008. The purpose of these meetings will be to present preliminary overflow abatement projects tentatively planned in the areas near the meeting center. Public input will be solicited relative to project location,

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project appearance and project integration into the surrounding neighborhoods. Input from the public obtained during these meetings will be used to shape the final configuration of projects that are proposed for inclusion in the Wet Weather Plan.

### **3.4.3 Wet Weather Team Meetings**

The WWT has been formed and regular meetings are being conducted approximately every four to six weeks during this reporting period. As previously discussed, this team will address the issues related both to the development of the SSDP and LTCP. Although the meetings are shown in both schedules, they are the same. The stakeholder component of this team is comprised of community leaders, environmental advocates and industry representatives. The stakeholder group will assist MSD in the development and implementation of programs and projects that will satisfy the requirements of the Consent Decree while meeting the level of service objectives of the community.

The schedule of WWT meetings, along with the meeting topics, planned for the next reporting period is as follows:

- January 15, 2008 – In this meeting the preliminary results of water quality modeling updates for the Ohio River and Beargrass Creek water quality models will be presented. A discussion on the regulatory compliance impacts of the model results is scheduled. A discussion of the impacts of the different financing methods discussed previously is scheduled, along with the start of discussions about potential refinements to the MSD rate structure.
- February 26, 2008 – This meeting will include a report on green infrastructure opportunities in the community. A further discussion of regulatory compliance approaches is scheduled, along with discussions about CSO control approaches.

### **3.4.4 Public Education and Notification**

MSD is developing an annual “calendar” of public information activities for the upcoming year. It is anticipated that the calendar will address unique activities such as Project WIN public meetings held in support of SSDP and LTCP development, and also repetitive information and outreach activities. An example of repeating activities is MSD’s plan to develop and disseminate information about control of household fats, oils and grease prior to the holiday season. MSD anticipates repeating this message every year before the holidays. Messages will also be developed and disseminated prior to the winter wet weather season, the summer recreation season and the autumn lawn-clean-up season.

The following materials will be developed for distribution within the next reporting period:

- New Year’s Resolutions local magazine advertisements in Today’s Woman and the Louisville Magazine
- New Year’s Resolution poster distribution contest for MSD staff
- Continued development of FOG and SSO brochures

Information related to this Consent Decree and Project WIN may be found at [www.msdlouky.org/projectwin](http://www.msdlouky.org/projectwin).



- M-H-2 Inventory and Spare Parts Plan (Due December 31, 2007). MSD developed a strategic inventory and spare parts plan. The Inventory and Spare Parts Plan optimized spare parts and tools procurement, storage, and checkout procedures. A Technical Memorandum documenting the Inventory and Spare Parts Plan was prepared.
- M-K-1 Water Quality Data Access (Due October 30, 2007). MSD has been collecting environmental data sets for years and housing the data in various locations and formats. The data sets include: precipitation, stream flow, sewer flow, biological stream, sonde and laboratory. In order to improve water quality data access, MSD developed queries and standardized reports to make the data more accessible. MSD has also formatted databases to be more consistent and converted text files into Access Databases. A Technical Memorandum documenting the water quality data access was prepared.
- M-L-1 Implement Back-up Power (Due December 31, 2008). (Budget ID F07226) MSD installed and successfully tested the generator at the Westover Pump Station. Construction continued on the installation of the generators at Wind Ridge, Trail Ridge, Breakwater and Grand Isle pump stations. MSD also awarded construction contracts for the installation of generators at Anchor Estates #2, St. Patrick and Fairway Lane pump stations during the reporting period.
- O-A-5 Identify Facility Upgrades (December 31, 2007). MSD Engineering staff developed a schedule to meet with Operations staff on a monthly basis to determine capital project priorities. On a quarterly basis this information is used to adjust budgetary needs.
- O-D-1 Fats, Oil and Grease (FOG) Program (Due December 31, 2007). MSD completed the evaluation of its FOG Program pertaining to the public education activities evaluation. Educational materials were distributed at public events where MSD was a participant. Materials were also distributed to inform residents in areas with collection system blockages due to residential sources of FOG.
- O-F-3 Flow Monitoring Program (Due September 29, 2008). MSD continued to develop a long term flow monitoring plan that includes 45 locations for permanent sewer flow monitors. The flow monitoring plan includes equipment for measurement and telemetry.
- S-C-1 Gravity Line PM Risk Evaluation (Due January 31, 2008). MSD continued to develop an overall plan for preventive maintenance of gravity sewers. As part of this effort MSD is developing a staffing and resource plan for the division that maintains the sewers (sanitary, storm and combined) to ensure that the proper resources are available to maintain the system.

#### **4.1.2 Continued CMOM Program Implementation for this reporting period**

Although the program implementation deadlines from the CMOM Self Assessment Report were previously met, MSD continued to enhance the following activities during this reporting period:

- M-E-2 Design and Construction Standards. MSD continued to review its design and construction standards to identify opportunities to reduce inflow and infiltration of new construction.

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- M-J-1 Ordinance Private Property. MSD discussed the draft ordinance with the Wet Weather Stakeholder Team and obtained comments.
  - O-A-1 Update Pump Station SOPs. MSD reviewed the SOPs for the flood pump stations. Based on the review of the SOPs, MSD determined that flow schematics should be prepared to show the flow path and gate positions for various modes of operation.
  - S-A-1 Modify/Develop PS PM Plan. MSD continued the process of updating its preventive maintenance and inspection plan for its flood pump stations based on a review of the US Army Corps of Engineers Inspection Guide. Several of the flood pump stations provide sanitary and/or combined sewerage capabilities.
  - S-B-2 Implement Force Main and Air Relief Valve Preventive Maintenance Program. The program was implemented in June 2007. The following force mains were inspected over this reporting period:
    - ParkRidge (November 07)
    - Rosa Terrace (November 07)
    - Chenoweth Run (November 07)
    - Floydsburg (October 07)
    - Kavanaugh Court (October 07)
    - Kavanaugh Rd (October 07)
    - Pope Lick (November 07)
    - Lakelet Way (November 07)
    - Mockingbird Valley (December 07)

#### **4.2 Program Activities for the Next Reporting Period (January 1, 2008 to March 31, 2008)**

Section 4.2.1 describes those activities that are still in progress and have upcoming deadlines. Refer to Appendix A-5 for a chart showing a schedule of the activities described in this section.

##### **4.2.1 Activities for Next Reporting Period (January 1, 2008 to March 31, 2008)**

- M-E-4 Annual Continuing Sewer System Assessment Update (Due December 31, 2008). The Annual Continuing Sewer System Assessment (CSSA) Update Report will address accomplishments for each fiscal year and identify specific infrastructure rehabilitation/replacement projects and O&M actions based on asset condition assessment. The Annual CSSA Update Report will also propose areas of the system to assess for the coming year.
- M-E-5 Continuing Sewer System Assessment (Due June 30, 2008). The Continuing Sewer System Assessment (CSSA) will provide information needed to prioritize condition assessment projects. The CSSA will use Condition Assessment data to identify and prioritize rehabilitation projects in the annual CSSA Update Reports. MSD

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will use the results of the Interceptor Condition Assessment Phase 1 (Budget ID H04272) project to schedule corrective/rehabilitation projects to address the Phase 1 findings.

- M-E-8 Current and Committed Capacity (Due February 28, 2008). Treatment plant capacity and new development flow tracking will be streamlined as the Capacity Certification program is completed.
- M-E-9 Build-Out Capacity (Due September 30, 2008). MSD will begin to develop flow projections for build-out conditions of each sewershed. The analysis will identify the timing of flow additions, and the location and timing of potential future capacity limitations. During the next reporting period, MSD will complete the initial steps of the Floyds Fork Action Plan Update which will provide an analysis of the build out capacity of the major infrastructure of the sewersheds of the Cedar Creek, Floyds Fork and Jeffersontown WTPs.
- M-E-10 Available Capacity SOP (Due February 28, 2008). MSD will finalize the process to regularly review and update the capacity of operating assets, and the current, committed and projected wastewater loads. The process will identify current or projected capacity problems on a regular basis and identify mitigation approaches or capacity improvement projects to address limitations.
- M-L-1 Implement Back-up Power (Due December 31, 2008). The delivery of the equipment to complete the installation of permanent emergency generators at Wind Ridge, Trail Ridge, Breakwater and Grand Isle pump stations is expected before April 2008. The emergency generators will be ordered and the site preparation will begin for the Anchor Estates #2, St. Patrick and Fairway Lane pump station sites during the next reporting period.
- O-F-3 Flow Monitoring Plan (Due September 29, 2008). The flow monitoring plan will be updated as the LTCP and SSDP are developed to support the post construction compliance monitoring program being developed as part of the Wet Weather Plan. The equipment purchase, data delivery and quality control plan for an expanded sewer monitoring network is currently under review.
- S-C-1 Gravity Line PM Risk Evaluation (Due January 31, 2008). MSD will complete an overall plan for preventive maintenance of gravity sewers. As part of this effort, MSD is continuing to develop a staffing and resource plan for the division that maintains the sewers (sanitary, storm and combined) to ensure that the proper resources are available to properly maintain the system.
- S-C-2 Integrate Maintenance Activities & Capital Improvement Plan (Due December 31, 2008). MSD will begin the process to integrate the information obtained in the CSSA Report with field information from MSD's I&FP Division to identify potential infrastructure assets requiring consideration for renewal or replacement. This CSSA Report will also be used to identify maintenance issues that should be dealt with proactively.

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#### **4.2.2 Continued CMOM Program Implementation for the next reporting period**

Although the program implementation deadlines from the CMOM Self Assessment Report were previously met, MSD will continue to enhance the following activities during the next reporting period:

- M-E-2 Design and Construction Standards. MSD will continue to review its design and construction standards to identify opportunities to reduce overflows. As part of the updating process MSD is reviewing the design and construction standards for other desired improvements and will complete the comprehensive updating during the next reporting period.
- M-H-1 Fleet Management. MSD currently uses SAP as its Fleet Information Management System (IMS). Although the SAP database captures pertinent fleet related data, it requires custom interfaces to access the data. Based on the valuation of fleet management completed in the current reporting period, MSD plans to evaluate a different Fleet IMS that will provide standardized interfaces and reports to track data that will improve both the management of the fleet assets and the operations of the Fleet Department.
- M-H-2 Inventory and Spare Parts Plan. MSD will continue to implement activities identified in the Storeroom Enhancement Plan, which was developed as part of the Inventory and Spare Parts Plan. MSD will continue to identify obsolete items, negotiate vendor warehousing on low-volume critical inventory items and investigate bar-code scanning and labeling.
- O-A-1 Update Pump Station SOPs. MSD will prepare flow schematics for the flood pump stations. The flow schematics will show the gate positions for the various modes of operation.
- O-A-2 Greenline Analysis. MSD will continue to review overflow elevations at pump stations and small wastewater treatment plants to improve information management and alarm notifications and to find opportunities to reduce the frequency and volume of unauthorized discharges while at the same time protecting properties from interior discharges.
- O-F-1 Flow Meter Inventory and SOP. The inventory of the physical meters owned by MSD is being updated to include more detailed information on each meter, such as the manufacturer, model, age, features, location and purpose. Additionally, an expanded flow monitoring and telemetry system is under development in support of the following programs: Continuing Sewer System Assessment, Sewer Capacity Analysis, Capacity Assurance and RTCs.
- O-F-2 Flow Data Access Improvement. MSD will review flow meter telemetry equipment to facilitate remote communication of flow data and meter status back through MSD's website to the Oracle database. This process will preserve the flow data integrity and provide early indication of the need for calibration or maintenance. MSD staff will have the ability to see meter data in real time and identify meters in need of cleaning, calibration or battery replacement. MSD will continue to integrate the efforts of the



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The annual review of the FM program is scheduled for January 11, 2008. Discharge Work Orders on all force main components will be reviewed to see if any adjustments are needed to the force mains assigned to Groups 2 or 3. The force mains in the Group 4 subsets will also be reviewed and changes will be made to the scheduled inspection time if warranted. Group 4B is scheduled for inspection in 2008 in addition to the force mains in Group 1, 2 and some of the force mains in Group 3. As defined in the program, Groups 1 & 2 are inspected annually, Group 3 force mains are on a three year inspection cycle and Group 4 force mains are on a ten year inspection cycle.

Appendix A – Activity Schedules (A-1 to A-5)

## Appendix A-1 Updated Sanitary Sewer Overflow Plan (SSOP) Implementation Schedule

| ID | Task Name   | 2008         |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
|----|---|--------------|-----|-----|-----|-----|-----|---------------------------------|-----|-----|-----|-----|-----|--|--|
|    |   | Jul          | Aug | Sep | Oct | Nov | Dec | Jan                             | Feb | Mar | Apr | May | Jun |  |  |
| 1  | <b>A. Capital Improvement Project List</b>  | <hr/>        |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 2  | <b>1. Broadfern Pump Station Upgrade (Budget ID F02327)</b>   | <hr/>        |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 3  | Installation and Initial Testing  | █            |     |     |     |     |     | ○                               |     |     |     |     |     |  |  |
| 4  | Final Testing and Certification   |              |     |     |     |     |     | Final Testing and Certification | ↓   |     |     |     |     |  |  |
| 5  | <b>2. Interceptor Condition Assessment Phase 1 (Budget ID H04272) and other Rehabilitation Projects</b> | <hr/>        |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 6  | Inspection (Completed)  |              |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 7  | Rehabilitation  |              |     |     |     |     |     | Rehabilitation                  | █   |     |     |     |     |  |  |
| 8  | <b>3. Murray Hills Area Pump Station Upgrades (Budget ID F06297)</b>                                    | <hr/>        |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 9  | Design (Completed)  |              |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 10 | Construction  | Construction |     | █   |     |     |     |                                 |     |     |     |     |     |  |  |
| 11 | Certification   |              |     |     |     |     |     | Certification ↓                 |     |     |     |     |     |  |  |
| 12 | <b>4. Fern Hill Subdivision Interceptor #8 (Budget ID C94086)</b>                                       | <hr/>        |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 13 | Design  | █            |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 14 | Easement Acquisition  | █            |     |     |     |     |     | ↓                               |     |     |     |     |     |  |  |
| 15 | Construction  |              |     |     |     |     |     | Construction                    | █   |     |     |     |     |  |  |
| 16 | <b>5. Thurman Drive Pump Station Elimination (Budget ID F06297)</b>                                     | <hr/>        |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 17 | Design  | █            |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 18 | Construction  |              |     |     |     |     |     | Construction                    | █   |     |     |     |     |  |  |
| 19 | <b>6. Zabel Way Pump Station Elimination (Budget ID C06295)</b>   | <hr/>        |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 20 | Design  | █            |     |     |     |     |     |                                 |     |     |     |     |     |  |  |
| 21 | Easement Acquisition  |              |     |     |     |     |     | Easement Acquisition            | █   |     |     |     |     |  |  |
| 22 | Construction  |              |     |     |     |     |     | Construction                    | █   |     |     |     |     |  |  |

Refer to Sections 1.4.1.1 and 3.3.1.1  
Date: Wed 1/30/08

Task █ Summary █ Submittal/Certification ↓



## Appendix A-2 Sanitary Sewer Discharge Plan (SSDP) Schedule

| ID | Task Name   | 2007 |                                    |     |     |     |     |      |  |     |     |     |     | 2008  |  |     |     |     |     |     |     |     |     |     |     | 2009 |     |     |     |     |     |     |     |  |  |  |  |
|----|---|------|------------------------------------|-----|-----|-----|-----|------|--|-----|-----|-----|-----|-------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
|    |   | Jul  | Aug                                | Sep | Oct | Nov | Dec | Jan  | Feb  | Mar | Apr | May | Jun | Jul   | Aug  | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul  | Aug | Sep | Oct | Nov | Dec | Jan | Feb |  |  |  |  |
| 1  | <b>Planning</b>   |      |                                    |     |     |     |     |      |  |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 2  | Initial Flow Monitoring                                     |      |                                    |     |     |     |     | 1/2  | Initial Flow Monitoring                      |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 3  | On-going Flow Monitoring                                    |      |                                    |     |     |     |     |      |  |     |     |     |     | 4/30  | On-going Flow Monitoring                           |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 4  | Middle Fork Model/Capacity Analysis Update                  |      |                                    |     |     |     |     |      |  |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 5  | Hikes Point Model/Capacity Analysis Update                  |      |                                    |     |     |     |     |      |  |     |     |     |     | 5/2   | Hikes Point Model/Capacity Analysis Update         |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 6  | Goldsmith Lane Model/ Capacity Analysis Update              |      |                                    |     |     |     |     |      |  |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 7  | Buechel Branch Model/ Capacity Analysis                     |      |                                    |     |     |     |     | 2/1  | Buechel Branch Model/ Capacity Analysis      |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 8  | West County Model/Capacity Analysis Update                  |      |                                    |     |     |     |     |      |  |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 9  | Northern Ditch Model/Capacity Analysis                      |      |                                    |     |     |     |     | 2/6  | Northern Ditch Model/Capacity Analysis       |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 10 | Prepare Interim SSDP  |      |                                    |     |     |     |     |      |  |     |     |     |     | 7/10  | Prepare Interim SSDP                               |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 11 | Submit Interim SSDP   |      |                                    |     |     |     |     |      |  |     |     |     |     | 9/30  | Submit Interim SSDP                                |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 12 | <b>Interim Sanitary Sewer Discharge Plan Implementation</b> |      |                                    |     |     |     |     |      |  |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 13 | Northern Ditch Diversion Interceptor                        |      |                                    |     |     |     |     |      |  |     |     |     |     | 7/5   | Northern Ditch Diversion Interceptor               |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 14 | West County Wet Weather Treatment and Storage               |      |                                    |     |     |     |     |      |  |     |     |     |     | 12/4  | West County Wet Weather Treatment and Storage      |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 15 | Southeast Diversion Structure                               |      |                                    |     |     |     |     |      |  |     |     |     |     | 5/16  | Southeast Diversion Structure                      |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 16 | Highgate Springs and Hikes Point Area                       |      |                                    |     |     |     |     |      |  |     |     |     |     | 2/28  | Highgate Springs and Hikes Point Area              |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 17 | Beechwood Village Sanitary Sewer Replacement                |      |                                    |     |     |     |     | 3/12 | Beechwood Village Sanitary Sewer Replacement |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 18 | <b>Sanitary Sewer Discharge Plan</b>                        |      |                                    |     |     |     |     |      |  |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 19 | Stakeholder Group Monthly Meetings                          | 9/21 | Stakeholder Group Monthly Meetings |     |     |     |     |      |  |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 20 | Integrate Hydraulic Models                                  | 10/2 | Integrate Hydraulic Models         |     |     |     |     |      |  |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 21 | Small WTP Sewershed Capacity Analysis                       |      |                                    |     |     |     |     | 2/1  | Small WTP Sewershed Capacity Analysis        |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 22 | WTP Capacity Analysis                                       |      |                                    |     |     |     |     | 2/1  | WTP Capacity Analysis                        |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 23 | Public Information Meetings (Series No. 1)                  |      |                                    |     |     |     |     | 4/2  | Public Information Meetings (Series No. 1)   |     |     |     |     |       |  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 24 | Compile Capacity Analysis Results/Develop Projects          |      |                                    |     |     |     |     |      |  |     |     |     |     | 12/4  | Compile Capacity Analysis Results/Develop Projects |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 25 | Milestone 1 - Prelim Project List and SSDP Outline          |      |                                    |     |     |     |     |      |  |     |     |     |     | 2/24  | Milestone 1  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 26 | Populate Risk Matrices                                      |      |                                    |     |     |     |     |      |  |     |     |     |     | 2/25  | Populate Risk Matrices                             |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 27 | Review and Confirm Risk Management                          |      |                                    |     |     |     |     |      |  |     |     |     |     | 3/26  | Review and Confirm Risk Management                 |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 28 | Develop Cost Benefit Analysis                               |      |                                    |     |     |     |     |      |  |     |     |     |     | 3/26  | Develop Cost Benefit Analysis                      |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 29 | Program Performance Evaluation                              |      |                                    |     |     |     |     |      |  |     |     |     |     | 4/25  | Program Performance Evaluation                     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 30 | Affordability Analysis                                      |      |                                    |     |     |     |     |      |  |     |     |     |     | 2/4   | Affordability Analysis                             |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 31 | Rate Impacts  |      |                                    |     |     |     |     |      |  |     |     |     |     | 5/26  | Rate Impacts                                       |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 32 | Prioritize Projects   |      |                                    |     |     |     |     |      |  |     |     |     |     | 5/26  | Prioritize Projects                                |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 33 | Milestone 2 - Affordability Analysis                        |      |                                    |     |     |     |     |      |  |     |     |     |     | 3/25  | Milestone 2  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 34 | Regulatory Compliance Discussions                           |      |                                    |     |     |     |     |      |  |     |     |     |     | 2/14  | Regulatory Compliance Discussions                  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 35 | Public Information Meetings 2                               |      |                                    |     |     |     |     |      |  |     |     |     |     | 10/25 | Public Information Meetings 2                      |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 36 | Public Information Meetings (Series No. 3)                  |      |                                    |     |     |     |     |      |  |     |     |     |     | 4/25  | Public Information Meetings (Series No. 3)         |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 37 | Develop Implementation Schedule                             |      |                                    |     |     |     |     |      |  |     |     |     |     | 5/26  | Develop Implementation Schedule                    |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 38 | Draft SSDP Report   |      |                                    |     |     |     |     |      |  |     |     |     |     | 6/24  | Draft SSDP Report                                  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 39 | Board Review and Approve                                    |      |                                    |     |     |     |     |      |  |     |     |     |     | 9/26  | Board Review and Approve                           |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 40 | Milestone 3 - Draft SSDP Release                            |      |                                    |     |     |     |     |      |  |     |     |     |     | 10/27 | Milestone 3  |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 41 | 30 Day Comment Period                                       |      |                                    |     |     |     |     |      |  |     |     |     |     | 10/27 | 30 Day Comment Period                              |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 42 | Public Info Mtg - Plan Review                               |      |                                    |     |     |     |     |      |  |     |     |     |     | 10/27 | Public Info Mtg - Plan Review                      |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 43 | Public Hearing  |      |                                    |     |     |     |     |      |  |     |     |     |     | 11/27 | Public Hearing                                     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 44 | Final Draft to Board  |      |                                    |     |     |     |     |      |  |     |     |     |     | 11/27 | Final Draft to Board                               |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 45 | Board Approval  |      |                                    |     |     |     |     |      |  |     |     |     |     | 12/15 | Board Approval                                     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |
| 46 | Submit  |      |                                    |     |     |     |     |      |  |     |     |     |     | 12/31 | Submit   |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |     |  |  |  |  |

Refer to Sections 1.4.1.2, 1.4.1.3, 3.3.1  
Date: Wed 1/30/08

Task   Milestone ◆ Summary  Submittal ↓



### Appendix A-3 Interim Long Term Control Plan (ILTCP) Schedule

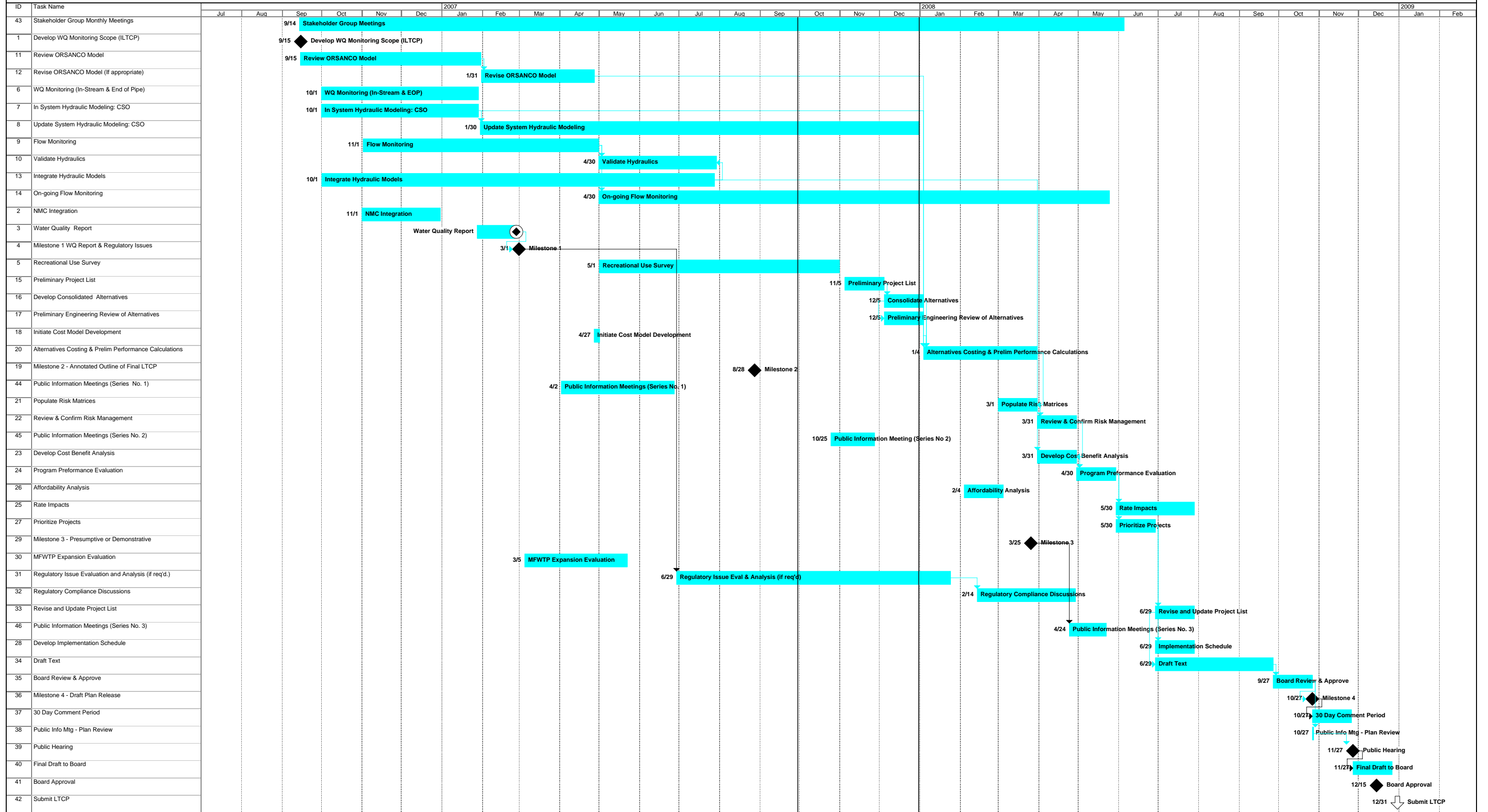
| ID | Task Name   | 2008  |     |     |     |     |     |     |     |     |     |     |     |
|----|---|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|    |   | Jul   | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| 1  | <b>Capital Improvement Project List</b>   | <hr/> |     |     |     |     |     |     |     |     |     |     |     |
| 2  | <b>1. CSO 146 Solids and Floatables Control (Budget ID H07026)</b>              | <hr/> |     |     |     |     |     |     |     |     |     |     |     |
| 3  | Preliminary and Final Design  |       |     |     |     |     |     |     |     |     |     |     |     |
| 4  | Construction  |       |     |     |     |     |     |     |     |     |     |     |     |
| 5  | Certification   |       |     |     |     |     |     |     |     |     |     |     |     |
| 6  | <b>2. RTC at Southwestern Outfall (Budget ID I05055)</b>                        | <hr/> |     |     |     |     |     |     |     |     |     |     |     |
| 7  | Design (Completed)  |       |     |     |     |     |     |     |     |     |     |     |     |
| 8  | Construction  |       |     |     |     |     |     |     |     |     |     |     |     |
| 9  | <b>3. RTC at CSO 108 (Budget ID I03588)</b>                                     | <hr/> |     |     |     |     |     |     |     |     |     |     |     |
| 10 | Design  |       |     |     |     |     |     |     |     |     |     |     |     |
| 11 | Construction  |       |     |     |     |     |     |     |     |     |     |     |     |
| 12 | <b>4. Integration of Southwestern Pump Station/MDS/MFWTP (Budget ID I05056)</b> | <hr/> |     |     |     |     |     |     |     |     |     |     |     |
| 13 | Design  |       |     |     |     |     |     |     |     |     |     |     |     |
| 14 | Construction  |       |     |     |     |     |     |     |     |     |     |     |     |
| 15 | <b>5. Integration of Wheeler Basin (Budget ID I05057)</b>                       | <hr/> |     |     |     |     |     |     |     |     |     |     |     |
| 16 | Design  |       |     |     |     |     |     |     |     |     |     |     |     |
| 17 | Construction  |       |     |     |     |     |     |     |     |     |     |     |     |
| 18 | <b>6. CSO 206 Separation (Budget ID I01061)</b>                                 | <hr/> |     |     |     |     |     |     |     |     |     |     |     |
| 19 | Design (Completed)  |       |     |     |     |     |     |     |     |     |     |     |     |
| 20 | Construction  |       |     |     |     |     |     |     |     |     |     |     |     |
| 21 | <b>7. CSO 206 Separation (Budget ID I01062)</b>                                 | <hr/> |     |     |     |     |     |     |     |     |     |     |     |
| 22 | Design  |       |     |     |     |     |     |     |     |     |     |     |     |
| 23 | Construction  |       |     |     |     |     |     |     |     |     |     |     |     |

Refer to Section 1.4.2.1 and 3.3.2.1  
Date: Wed 1/30/08

Task Summary Submittal/Certification



## Appendix A-4 Final Long Term Control Plan (LTCP) Schedule



Refer to Sections 1.4.2.2 and 3.3.2.2  
Date: Mon 1/28/08

Task  Milestone  Submittal ↓

## Appendix A-5 CMOM Implementation Schedule

| ID | Task Name                                | 2008 |     |     |     |     |     |     |     |     |     |     |     |  |  |
|----|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
|    |  | Jul  | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |  |  |
| 1  | M-D-1 Resubmit CMOM                      |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 2  | M-D-2 UIM Support Plan                   |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 3  | M-D-3 Implement UIM Support Plan         |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 4  | M-D-4 Revise UIM Support Plan            |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 5  | M-E-1 Inventory Protocols                |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 6  | M-E-2 Design & Const Stds                |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 7  | M-E-3 Initial CSSA                       |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 8  | M-E-4 Annual CSSA Update                 |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 9  | M-E-5 Continuing Sewer System Assessment |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 10 | M-E-6 Major Facility Capacity            |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 11 | M-E-7 Facility Capacity Protocol         |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 12 | M-E-8 Current & Committed Capacity       |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 13 | M-E-9 Build-out Capacity                 |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 14 | M-E-10 Available Capacity SOP            |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 15 | M-H-1 Fleet Equipment Plan               |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 16 | M-H-2 Inventory & Spare Parts Plan       |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 17 | M-I-1 Customer Complaint Protocols       |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 18 | M-J-1 Ordinance Private Property         |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 19 | M-K-1 WQ Data Access                     |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 20 | M-L-1 Implement Back-Up Power            |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 21 | O-A-1 Update PS SOPs                     |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 22 | O-A-2 Greeline Analysis                  |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 23 | O-A-3 Implement Greenline                |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 24 | O-A-4 Implement SOPs                     |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 25 | O-A-5 Identify Facility Upgrades         |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 26 | O-D-1 FOG Development Mods               |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 27 | O-D-2 FOG Inspection Benchmarking        |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 28 | O-D-3 FOG Public Education               |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 29 | O-D-4 FOG Enforcement Benchmark          |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 30 | O-D-5 FOG Enforcement Mods               |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 31 | O-E-1 Tap Connection Protocols           |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 32 | O-F-1 Flow Meter Inventory & SOP         |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 33 | O-F-2 Flow Data Access Improvement       |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 34 | O-F-3 Flow Monitoring Plan               |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 35 | S-A-1 Modify/develop PS PM Plan          |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 36 | S-A-2 Train and Implement PS PM Plan     |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 37 | S-B-1 FM and ARV Inspection PM           |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 38 | S-B-2 Implement FM & ARV PM              |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 39 | S-C-1 Gravity Line PM Risk Eval          |      |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 40 | S-C-2 Ingrate Maint Activities &CIP      |      |     |     |     |     |     |     |     |     |     |     |     |  |  |

Refer to Sections 4.1 and 4.2  
Date: Mon 1/28/08

Task  Task Completion



Appendix B – Discharge Work Orders – Waters of the US

Appendix C – Summary of Wet Weather Combined Overflows

Appendix D – Flow Monitoring Data

Appendix E - Acronyms