



MSD

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

July 30, 2008

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

Subject: Quarterly Report Number 11
June 30, 2008
DOJ Case No. 90-5-1-1-08254

Attention Chief:

Please find attached our Quarterly Report, prepared in accordance with Paragraph 25 of our Consent Decree. This report is for the period April 1, 2008 through June 30, 2008.

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

Q11 Certification EPA 7-30-08
cc: H. J. Schardein, Jr.

Paula Purifoy

Laurence J. Zielke



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



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July 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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July 30, 2008

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

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W. Brian Bingham
Regulatory Services Director

Q11 Certification KDEP 7-30-08

cc: H. J. Schardein, Jr.

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INTRODUCTION

The Louisville and Jefferson County Metropolitan Sewer District (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 eleventh Quarterly Report submitted in accordance with Paragraph 25 of the Consent Decree. This report covers the time period from April 1, 2008, through June 30, 2008. 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 April 1, 2008, through June 30, 2008. 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 Combined Sewer Overflow (CSO) locations, identified in the Morris Forman Wastewater Treatment Plant (WWTP) Kentucky Pollutant Discharge Elimination System (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 (July 1, 2008 through September 30, 2008) for continued compliance with the Consent Decree.

Section 4: Capacity Management, Operations and Maintenance (CMOM) Report - The program activities performed during the reporting period April 1, 2008 through June 30, 2008 and activities planned for the next reporting period (July 1, 2008 through September 30, 2008) are included in this section.

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. Highlights of the NMC program implementation over this reporting period are outlined below:

NMC 1: Proper Operation and Maintenance Program

- Inspected and cleaned 8042 catch basins within the combined sewer system (CSS) during this reporting period.
- Continued to inspect, maintain and properly operate the CSS pump stations and the Morris Forman Wastewater Treatment Plant (MFWTP).
- Performed 1368 weekly inspections on CSOs, 273 creek inspections, and initiated over 150 work orders for debris removal and/or repairs as determined to be necessary to allow proper system operation during this reporting period.
- MSD cleaned 2200 sewer line segments in the CSS, ranging in size from 6 inches to 15 inches, during this reporting period.



- Cleaned the strip of pervious pavement located in front of the MSD building.
 - CSO Inventory updated to include revised survey information of elevations, and improvements to the system.
 - Created inspection work orders for Fats, Oils, and Grease (FOG) inspections in known hotspots. Based on findings, cleaning work orders will be created.
- Several projects underway to create improved access to some CSO sites to facilitate cleaning activities. Most of these projects are now in the easement acquisition stage. The Hamilton Road access project to improve access to CSO120 has been constructed.
 - Administered CSO training on June 12, 2008 and June 19, 2008 for CSO inspections, maintenance, and documentation of activities. Attendees included managers, CSO crews, and dispatch personnel assisting with documentation.
 - Continued evaluation of CSO quick hit eliminations in concert with Long Term Control Plan efforts. Initial investigation shows that CSO181 may be a candidate for quick closure.

- The Wheeler Basin and MDS/SWPS/MFWTP projects were combined into one project for bidding and construction. The project was advertised in May and the bid opening was held on June 12, 2008.
- Continued the review of flood pump stations within the CSS to determine if modifications can be made to further maximize flow transported to the Morris Forman WWTP, as required by the Consent Decree.
- Process developed for a field analysis of outfalls to see if additional flap gates will improve system storage. Associated flap gate data has been updated in Hansen. The field analysis initially scheduled for March 3, 2008, continued to be postponed due to high water.
- The regulators at CSO118 and CSO132 were removed by contractors on June 20, 2008 and the float chambers have been filled with concrete.
- The removal of the CSO108 Regulator is included in the scope of the RTC project at CSO108. During this timeframe, MSD advertised for construction.
- Continued evaluation of quick closures of CSOs on the Central Relief Drain and any additional CSOs that have low annual overflow volumes or occurrences.

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.
- Revised NDD Fact Sheets for the top five NDDs based on the most recent InfoWorks hydraulic results. These Fact Sheets contain information specific to the NDD, receiving CSO, as well as the receiving stream the CSO discharges to during wet weather overflow events. The Fact Sheets were reviewed with each NDD during follow-up meetings/inspections. They are intended to further educate each NDD on the possible impacts of discharges from their facilities during wet weather events.
- Follow-up inspections and meetings were conducted at the top five NDDs to discuss the requests listed in their respective letters and to review the forms used to document wet weather discharge minimization activities. Follow-up meetings will help determine the value in incorporating the voluntary commitments into permit requirements. Meeting summary correspondence was sent to each top five NDD.
- Continued the implementation of the CSO-SIU project in conjunction with the LTCP preparation. Data from the June 2008 InfoWorks Hydraulic model of the Combined Sewer System (CSS) was used to reassess pollutants of concern and NDDs of interest in the spreadsheet models for conventional pollutants and metals. MSD formalized and documented the internal procedures that will be used for the regulation of new significant NDDs in the CSS.
- Developed performance measures to monitor the effectiveness of the implementation of NMC #3 within the Pretreatment Program.

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 Morris Forman WWTP during and after wet weather events.
- Held kickoff meetings with the design consultant on the RTC Phase II projects.
- Discussion continued on the changes required to the flood pump stations' operations to maximize the flow to Morris Forman WWTP.
- Evaluated the use of alternatives to sodium hypochlorite for disinfection during high flows during the month of April. Waiting on the analysis report to determine if 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.
- Started modifications to the Operations web page that displays flow, capacity and percent of capacity at the Morris Forman WWTP.
- There were 14 days during this quarter where the peak flow was over 300 MGD. There were no KPDES permit violations during this reporting period.

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.
- MSD reported dry weather overflows from the CSS in accordance with the Sewer Overflow Response Protocol (SORP). During this time period, 2 dry weather discharges were reported. One from CSO15 and one from CSO191, which discharge to the river through the same outfall conduit. Both were related to elevated Ohio River levels and operation of the Flood Protection System in compliance with the U.S. Army Corps of Engineers (USACE) flood pumping protocols.

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

- Continued inspection and maintenance procedures for the solids and floatables structures as part of the weekly CSO inspections and PM cleaning routines, outlined under NMC 1. During this period, 125 work orders were issued for debris removal at the solids and floatables structures.
- Finalized record drawings for the baffle vault at CSO146 (Budget ID H07026) were submitted and approved by MSD in June.
- Reviewed inspection and maintenance procedures for solids and floatables controls during CSO training on June 12 and June 19, 2008.

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.

- Placed an advertisement in the *Courier Journal* on April 9, 27, 30 and May 11 and 14, 2008 to inform the public about the Project WIN public meetings.
- Placed an advertisement in the May issue of *Today's Woman* to inform the public on how to install a rain garden.
- Placed information on Project WIN in the May and June issues of *Business First*. The May issue contained a listing of all of the Project WIN public meetings and the June issue focused on **Stormwater Tip #1 - Use the Low Tech, Old-Fashioned Technology of Rain Barrels to Disconnect Drains.**
- Placed information on Project WIN in the April, May and June issues of *Louisville Magazine*. April and May issues focused on rain barrels and the June ad covered the **"Know the rules when it rains."**
- MSD *Update* sent to customers and staff in April, May and June. Project WIN related articles are contained in each issue. These publications are available on the MSD website.
- The spring issue of *Crosscurrents* was distributed to over 9500 customers. This publication, also available through the MSD website, contains Project WIN related articles on how hauling operations can prevent and reduce overflows and how rain gardens can help keep water out of the sewers.
- Facilitated public meetings throughout Louisville Metro to alert residents to water quality issues and Project WIN initiatives related to the Consent Decree.

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

- Continued development of a draft of the Post Construction Monitoring Plan section of the Integrated Overflow Abatement Plan. This plan outlines the monitoring and modeling procedures to be followed to assess combined sewer overflow reduction through traditional overflow controls as well as reductions due to source control related to green infrastructure.
- Continued to monitor the largest CSOs for flow volume to define the wet weather contribution of the overflows to the stream. In addition, the following monitoring activities have occurred:
 - Continued project to install flow meters at CSO62, CSO97, CSO146 and CSO16. Project costs are being developed for the meters, telemetry and power needed for installation at each site.
 - Continued project to upgrade existing flow meters with telemetry and power at CSO210 and CSO211.
 - Developing process to use existing Plant Information data tags to calculate the flow at CSO15 and CSO191.
 - Developing process to install and use the level indicator to calculate flow at CSO20.

- United States Geological Survey (USGS) has installed 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. The initial data from this gauge will be analyzed to determine data quality and characterize the interaction between Beargrass Creek and the Ohio River.
- Continued to collect stream flow, sonde and other environmental data sets for use in further characterization of the combined service area.
- Completed the calibration of the Water Quality Tool model of the Beargrass Creek Watershed in preparation for use in the CSO Long Term Control Plan (LTCP) and the fecal and dissolved oxygen TMDLs. Continued the preparation of the Ohio River water quality model for use in the LTCP.
- Negotiated a contract for updated radar rainfall services with OneRain. These services will provide 6-hour predictive rainfall estimates to MSD, streamline rainfall data transfer between OneRain and the RTC model simulation, and provide a monthly, calibrated data set for use in historical event analysis. The services should be available in late 2008.
- Overflow/wet weather inspection routes are being reviewed and coordinated between the various MSD teams as well as the development of an inspection tracking process.

1.2 Sewer Overflow Response Protocol Implementation

Per Paragraph 23.d. of the Consent Decree, MSD initially submitted the Sewer Overflow Response Protocol (SORP) to EPA and KDEP on February 10, 2006 and received comments on March 13, 2006. MSD resubmitted the revised SORP on May 12, 2006, and 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. The following activities were performed during this reporting period.

Overflow Management and Field Documentation

- Continued daily review, monthly review and quarterly reviews with staff from Metro Operations, Infrastructure & Flood Protection (I&FP) and Regulatory Services.
- MSD I&FP staff routinely monitors 11 locations and takes preventive measures to reduce basement backups. Work orders are used to track these various activities. During this period, MSD staff mobilized 21 times.
- MSD’s Regulatory Services (RS) 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. During this period, MSD’s RS staff reported 50 overflows.
- MSD Metro Operations continues to monitor over 300 sites via telemetry. There are approximately 20 sites where sewage is routinely hauled from pump stations 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 68 times.

- An additional field audit on 13 sites was performed on modeled overflow points throughout MSD's separate sanitary sewer area on April 5, 2008, to assist in the validation of the sewer models. Another field audit on 59 sites was performed on May 12, 2008. The modeled overflows that were verified during these audits have been established as documented or suspected SSOs and will be addressed in the SSDP.

Public Notification and Communication

- Work orders for the annual CSO/SSO Water Quality sign inspection process were completed on April 24, 2008. During this period, 194 inspections were completed. Twenty-five signs have been replaced and six signs have been cleaned. In the CSS, 159 signs were inspected by April 24, 2008. In the separate sewer system, approximately 35 signs were inspected by April 24, 2008. The annual inspection process for all 1092 signs was completed prior to the start of the summer recreation contact season which officially began May 1.
- Continued to update the Project WIN website. Customers who voluntarily sign up to receive email alerts regarding sewer overflows will now receive a revised notice that indicates when overflow conditions have returned to normal. In addition, there are messages from MSD, a repository of approved documents, Stakeholder meeting minutes and access to a public notification email system. This website can be found at www.msdlouky.org/projectwin.
- An advertisement was published in the *Sunday Courier Journal* on April 6, 2008 that discussed water quality issues and the Consent Decree. This same publication also appeared in the Neighborhood Section on Wednesday of that week.
- Distributed informational material the week of April 14, 2008 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.
- Placed an advertisement in the *Courier Journal* on April 9, 27, 30 and May 11 and 14, 2008, to inform the public about the Project WIN public meetings.
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Regulatory Reporting and Data Management

- MSD continued to improve the accessibility of data captured by the SCADA system for pump station and Real Time Control information. MSD continues to standardize various environmental data sets in preparation for integration with an upcoming SharePoint site.
- Monthly meetings continue to be held with staff to perform quality control on discharge work orders.
- The monthly review of discharge work orders was performed. The associated assets in Hansen were updated to track any new overflow locations.
- The XY coordinates for all signs were added to the Hansen Inventory on April 1, 2008.
- Templates have been created for the required BYPASS and BLENDING 5 day notification letters. Once approved by staff, these templates will be posted and available through MSDnet.

Staff Training and Communication

- Entering this third year of training, feedback from MSD field crews has been used to refine SORP training and to build on successes in the field. Participants actively shared field experiences and mitigation problem-solving strategies, feedback was shared regarding MSD's overflow data for the previous period and other performance information was reviewed.
- Two SORP classes were held for I&FP staff on June 20, 2008. Nineteen staff members have gone through training this period.
- SORP classes were held for Metro Operations staff on May 7, 2008, and on May 21, 2008. Thirty-three staff members have gone through training this period.
- MSD continues to review and update the data associated with discharges.

Annual SORP Review

- Definitions, routes and inspections will be key areas updated in the annual SORP review.
- MSD has started the modifications to several sections of the SORP. The revised document will be submitted to EPA by August 22, 2008.

1.3 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 Morris Forman WWTP KPDES permit and the improvement of water quality in the receiving waters. The Sanitary Sewer Discharge Plan

and the CSO Long Term Control Plan will be submitted concurrently under the title of the Integrated Overflow Abatement Plan (IOAP).

1.3.1 Sanitary Sewer Discharge Plan

The Sanitary Sewer Discharge Plan (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.

1.3.1.1 Updated Sanitary Sewer Overflow Plan Implementation

MSD prepared and submitted the Updated Sanitary Sewer Overflow Plan (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 active during the reporting period and will be completed as required by the Consent Decree:

- Interceptor Condition Assessment Phase 1 (Budget ID H04272) – The first phase of these interceptor rehabilitation projects have been identified and the contract plans and specifications continue to be prepared. The first capital project (Northern Ditch Interceptor Rehabilitation – H07298) was advertised, bid and awarded during this timeframe. The contractor received a notice to proceed on June 30, 2008. The contract documents for the remaining capital rehabilitation projects (Budget IDs: H07294, H06301, H07295, H07296, H07297 and H04276) are being prepared for advertisement for construction contracts. The projects will be completed by December 31, 2008, in accordance with the Consent Decree.
- Murray Hills Area Pump Station Upgrades (Budget ID F06297) – This project has been declared complete during this period. The flow has been diverted and remains in the Morris Forman WWTP service area. The final project was certified on May 13, 2008 prior to the September 30, 2008 deadline, in accordance with the Consent Decree.
- Fern Hill Subdivision Interceptor #8 (Budget ID C94086) – This construction contract was awarded January 28, 2008 and the notice to proceed for construction was issued on February 18, 2008. Included in this scope of work is the elimination of the Holly Oaks Pump Station. The flow which was being treated in the Cedar Creek WWTP service area was diverted to the West County WWTP service area as of April 18, 2008. The elimination of the Holly Oaks Pump Station was certified on May 9, 2008 and therefore completed prior to the March 30, 2009 deadline, in accordance with the Consent Decree. The Fern Hill Subdivision Interceptor #8 Project will continue with final punch list items to be completed.
- Thurman Drive Pump Station Elimination (Budget ID B06299) - The construction contract was executed during the first quarter of 2008 with construction beginning in January 2008. The elimination of the Thurman Drive Pump Station is near completion. The flow will remain in the West County WWTP service area but will be diverted to a

new interceptor. The project will be completed by September 30, 2008, in accordance with the Consent Decree.

- Zabel Way Pump Station Elimination (Budget ID C06295) – MSD advertised for bids on the construction contract to eliminate this pump station. The construction contract was awarded and a notice to proceed was issued during this reporting period. Construction will be completed by September 30, 2008, in accordance with the Consent Decree.

1.3.1.2 Interim Sanitary Sewer Discharge Plan

MSD submitted for approval an ISSDP on September 30, 2007. Comments were received on January 8, 2008. The response was resubmitted on March 7, 2008. MSD is waiting to receive the final approval. 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 WWTP. A high-rate secondary treatment system is proposed to treat some of the diluted wastewater conveyed by this relief sewer during wet weather. Refer to Appendix A-2 for a chart showing the schedule of the activities described in the section.

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

- Beechwood Village (Budget IDs E07261 and E08034) - The new collector system design has reached 90% and is now on hold while MSD negotiates necessary easements for the route of the new outlet (Sinking Fork Interceptor Relief Budget ID H08357). At this time it is expected to begin east of Beechwood Village, cross Shelbyville Road, through the Shelbyville Road Plaza to Middle Fork of Beargrass Creek. MSD has also received over 300 of the 574 temporary easements needed to complete the construction project. The project will be completed by April 2011, in accordance with the revised ISSDP.
- Southeast Diversion Structure (Budget ID H08358) - 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 the existing Buechel Branch Interceptor. During development of the final SSDP, alternatives have been identified for the Upper Middle Fork Pump Station and the Jeffersontown Wastewater Treatment Plant that could impact the sizing of this relief interceptor, and require the addition of a flow equalization basin somewhere along the route. Professional services selection and scope development have been put on hold pending selection of the alternatives for eliminating unauthorized discharges at these locations. This project has considerable “float” as it is not required until the proposed Hikes Lane Interceptor is completed. The construction to eliminate the Southeast Diversion overflow will be completed by December 2011, in accordance with the revised ISSDP. The junction structure and the Southeastern Relief Interceptor will be completed in coordination with the Hikes Lane Interceptor by May 2012, in accordance with the revised ISSDP.

- Highgate Springs and Hikes Point Area (Budget ID H07286 and H07287) – Work continued on the Preliminary Engineering Report for the design of the Hikes Lane Interceptor and Hikes Point Relief Sewer Improvements. In mid June 2008, a meeting was held at MSD to review status of the preliminary design, discuss information found in the geotechnical investigation, traffic analysis and the recommendations made to date on the Hikes Lane Interceptor pipe materials and alignment. In addition, a review of the necessary Hikes Point Relief Sewer Improvements was made to determine if project scopes could be separated from the large interceptor work. The entire project package will be completed by November 2012, in accordance with the revised ISSDP.
- Northern Ditch Diversion Interceptor (budget ID C85017) - Improvements described in previous three paragraphs will result in significantly more wet weather flow in the West County WWTP and Morris Forman WWTP 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 Morris Forman WWTP service area (currently through the Northern Ditch Pump Station) to the West County WWTP service area. The Interceptor design is underway with the surveying completed and the 60% design milestone reached.
- West County WWTP Wet Weather Equalization and Treatment Project (Budget ID H06302) - The preliminary design of the West County WWTP improvements is underway with treatment alternatives reviewed and a recommendation provided by the design firm. Construction of flow equalization and high-rate secondary treatment at the West County WWTP will be completed by December 31, 2011, in accordance with the revised ISSDP.

1.3.1.3 Final Sanitary Sewer Discharge Plan

MSD is required to submit for approval a final Sanitary Sewer Discharge Plan (SSDP) by December 31, 2008. During this reporting period, MSD completed the following activities:

- Completed the calibration, validation, quality control reviews and addressed all quality control comments for the hydraulic models addressing the regional treatment plant sewersheds (Jeffersontown, Floyd's Fork, Cedar Creek, Hite Creek and West County) and the sewersheds that are tributary to the Morris Forman WWTP. Developed a template for calibration/validation reports and each modeling consultant began preparing their version of this report. Completed the tables that document the quality control reviews and how each was addressed. Developed a template for reviewing potential SSO solutions and distributed to modelers.
- Conducted two additional rounds of field investigation of "modeled overflow points" not previously identified as documented or suspected SSOs. Several additional SSOs were identified as either documented or suspected during these investigations.
- Completed the first draft mapping of system characterization and deficiencies. GIS data was used to characterize MSD's separate sanitary sewer system based upon pipe material, location relative to the floodplain, and slope versus minimum design slope. Existing conditions hydraulic modeling of the separate sanitary sewer system was used to identify and analyze areas of surcharging and bottlenecks for the 2-year 3-hour cloudburst design storm. This data and mapping will be used for multiple initiatives

including the continuing sanitary sewer assessment program, system capacity assurance, and SSO elimination analysis and design.

- Completed build-out analyses for Hite Creek, Cedar Creek, Jeffersontown, Floyds Fork, Pond Creek and Mill Creek modeling areas. Build-out projections were incorporated into the models and considered in solution evaluations.
- Completed the identification of potential solutions for all documented and suspected SSOs in all watersheds.
- Conducted a field verification of potential SSO solutions in the Pond Creek basin and began the same process in other basins prior to alternative development.
- Completed the initial development and sizing based on the 2-year storm boundary condition for the SSO elimination alternatives. Continued work on the benefit/cost evaluation of SSO elimination alternatives.
- Conducted a consolidation workshop on June 17, 2008, allowing us to begin the process of consolidating, validating and prioritizing the alternatives. As a result of this workshop, a first draft of the entire list of preferred alternatives was discussed in a follow-up workshop June 30, 2008. Two alternatives were identified for further evaluation to be completed and several questions were raised that require investigation.
- Completed third-party quality control reviews on both the construction cost estimates and the benefit/cost ratio development.
- Conducted several workshops with MSD staff to review the potential solutions being considered in each watershed, to solicit feedback regarding constructability, land acquisition, permitting issues, etc.
- Completed preliminary treatment plant capacity reviews for the purpose of alternative evaluation and also continued work in parallel on the Comprehensive Performance Evaluations (CPE) and Composite Correction Plan (CCP) evaluations in accordance with EPA guidance documents for those plants that are projected to receive additional flows as a result of SSO elimination.
- Met with representatives of EPA and KDEP on April 16, 2008, to discuss issues relative to completion of the Integrated Overflow Abatement Plan (IOAP).
- Completed drafting IOAP Volume 1, Sections 1 and 3, and continued work on Section 2.
- Drafted IOAP Volume 3 Section 1, and continued work on Sections 2 and 3.
- The baseline for the SSDP is being defined in an official document to ensure that all documented and suspected overflows are being addressed by the SSDP. This baseline is being coordinated with MSD's GIS Services department so that the overflows being tracked in Hansen and those addressed by the SSDP have a one to one match. The SORP inspection routes will be adjusted once this baseline is formally documented.
- Cross-checked the complete list of documented and suspected SSOs compared to the list of SSOs with solutions developed. Many discrepancies were identified that were later determined to be SSOs that only discharge in a storm greater than the 2-year design event. A few additional SSOs have been documented during the calendar year

2008 that were not on the original list of SSOs incorporated in the sewer model. These additional SSOs will have solutions developed and will be included in the final SSDP.

1.3.2 Long Term Control Plan

The Long Term Control Plan (LTCP) will address the overflows and unauthorized discharges from the CSS. Two separate plans will be submitted under this program as described below and outlined in Paragraph 24.b. of the Consent Decree.

1.3.2.1 Interim Long Term Control Plan

The Interim CSO LTCP was initially submitted to EPA and KDEP on February 10, 2006. MSD received an approval letter dated February 22, 2007, for the Interim LTCP. The approved Interim LTCP can be viewed on the MSD Project WIN website www.msdlouky.org/projectwin.

This plan includes an overview of the MSD program, efforts taken to reduce/eliminate discharges from the CSS and the list of proposed improvements to be accomplished by December 31, 2008. Refer to Appendix A-3 for a chart showing a schedule of the activities described in this section.

The following projects were active during the reporting period:

- RTC at Southwestern Outfall SWOR2 (Budget ID I05055) – This project, part of Phase 2 of the RTC program, involves the installation of an inflatable dam for storage near the upper end of the Southwestern Outfall. Storage will primarily occur in the Upper Dry Run Trunk and the Mill Creek Trunk. The storage will be integrated into the Global Optimization RTC system. High water levels in the sewer system are impacting the progress of this project.



The dam has been delivered and is in storage at the contractor's yard. The contractor has been delayed but lower flows in the sewers during June have allowed contractor to complete the shaft and begin necessary work in the pipe during off peak hours. In addition the control building is 75% complete. This schedule delay is pushing back the operational date by at least 30 days. This project will be completed by December 31, 2008, in accordance with the Consent Decree.

- RTC at CSO108 (Budget ID I03588) – This project, part of Phase 2 of the RTC program, involves improving the connection between the Beargrass Interceptor and the Beargrass Interceptor Relief Sewer and automating the control of flow through these systems and, therefore, Nightingale Pump Station. The design phase continued during this period. MSD reached agreement on the terms of the extension of the Memorandum of Understanding with the property owner. MSD advertised for construction bids and held a mandatory pre-bid meeting on June 19, 2008 for potential contractors. Bids are

expected to be opened in July 2008. This project will be completed by December 31, 2008, in accordance with the Consent Decree.

- Integration of Southwestern Pump Station/Main Diversion Structure/Morris Forman WWTP (Budget ID I05056) – This project, part of Phase 2 of the RTC program, links the Southwestern Pump Station, Main Diversion Structure and the Morris Forman WWTP with the Global Optimization RTC system. MSD advertised and opened bids for this project on June 12, 2008. Two bids for the construction were received, both significantly higher than the engineer's estimate. MSD staff is determining best course of action at this time. This project 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 scope of this work has been combined with the project - Integration of Southwestern Pump Station/Main Diversion Structure/Morris Forman WWTP (Budget ID I05056). This project will be completed by December 31, 2008, in accordance with the Consent Decree.
- CSO206 Separation – This project includes the separation of combined sewers on the most upstream CSO on Middle Fork of Beargrass Creek. The sewershed had been divided into 15 sub-areas. Construction on the separation of areas 1-9 has been completed. Separation of areas 10-12 (Budget ID I01061) was completed during the reporting period. The final design for areas 13 through 15 (Budget ID I01062) (of 15 total) is at 95% complete. An additional sewer line needs to be addressed by expanding the existing contract scope. This project will be completed in accordance with the Consent Decree by March 31, 2009.

1.3.2.2 Final Long Term Control Plan

Efforts associated with the final LTCP continued through this reporting period and included the following activities.

- Completed the rainfall analysis summary memo and selected calendar year 2001 as the typical year to use for both water quality modeling and CSO hydraulic modeling.
- Completed the calibration and validation of the hydraulic model of the CSS. Completed quality control reviews and addressed the quality control comments. Work began to merge the models of the sanitary sewer system sewersheds that are tributary to the CSS into the CSS model, to allow a comprehensive evaluation of the impacts of SSO control projects on the CSS. Model run times have resulted in the need to simplify the level of detail in all the models to allow the merging to be useful. Detailed Real Time Control rules have been coded into the combined sewer model for Phase I & II to better define the model baseline for ultimate LTCP sizing.
- Completed modifications to the Ohio River Valley Water Sanitation Commission (ORSANCO) model of a segment of the Ohio River in the vicinity of Louisville. Completed calibration and validation, and began to use the model for evaluating the water quality impacts of CSOs on the river and resulting benefits of certain CSO abatement scenarios. A 'desktop' TMDL report for the Ohio River is being developed to

help determine source loading in preparation for the water quality justification to be written for the IOAP development. This summary report will allocate loadings to the Louisville CSOs that contribute to the Ohio River to enable a clear picture to be defined on the limits of the LTCP to solely meet water quality standards.

- Initiated a water quality standards review in accordance with the CSO Policy and LTCP development guidance. Final model results confirm the preliminary findings. The water quality standards review illustrates the inability of CSO controls to solely achieve water quality standards for bacteria during significant wet weather events. Further work on the water quality standards review will develop preliminary load allocation approaches to achieve water quality standards and provide a long-term target for CSO control. The control levels required may not be achievable or necessary during the time frame addressed by this IOAP, given the overwhelming need to control other load sources outside the scope of the IOAP before water quality standards can be achieved.
- Completed the load tables to support the development of dissolved oxygen and fecal coliform TMDLs for Beargrass Creek (BGC). The contractor working on the TMDL submitted the draft TMDLs to KDEP. Began runs using the WQT to evaluate the effectiveness of various CSO levels of control, assuming no background loads. This, combined with the TMDL, addresses the inability of CSO controls to solely achieve these standards for bacteria in BGC during wet weather. The draft TMDL will provide long-term goals for CSO control levels, but may not be achievable in the time frame addressed by this IOAP.
- The WQT, used to support the BGC TMDLs, and Ohio River Model are being prepared to analyze the preferred LTCP projects to assess the projected impacts of water quality on the water bodies.
- MSD began summarizing the following data for the Combined Sewer System by CSO basin: basin drainage area, land use, population, percent impervious, CSO receiving stream, AAOV, overflows in a typical year, average overflow duration and average volume per overflow incident.
- MSD began summarizing the following data for water monitoring activities on the receiving waters: stream flow monitoring, velocity, level, temperature, dissolved oxygen, pH, and turbidity at certain locations for inclusion in the IOAP.
- Completed a draft of a new AAOV table for CSOs based on the new detailed InfoWorks model for the CSS, using the new typical year input data.
- Identified and documented the baseline conditions for CSS overflow abatement alternative analysis.
- Identified opportunities for green infrastructure in each CSO basin and began identifying both project and programmatic goals for green infrastructure runoff reduction. This volume reduction will be recognized in the sizing of the final traditional 'gray' solutions, assessed at an identified milestone during LTCP implementation and adjusted according to the results of this assessment.
- Completed preliminary alternative development and sizing based on a control level of 4 overflows per year. Presented the results at June 17, 2008, consolidation workshop, and

identified additional evaluations to be done. These were almost complete by the end of the month, with a draft revised list of preferred alternatives scheduled to be discussed July 2, 2008.

- Completed the Recreational Use Survey.
- Completed the Stream Reach Characterization Study.
- The Post Construction Monitoring (PCM) section for the IOAP is being drafted. Research for the best approach to green infrastructure and sewer rehabilitation impact measurement and projection is underway.

1.4 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.

1.4.1 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.

April 2, 2008	Presentation on Native Plants, Rain Gardens and Rain Barrels for Stormwater Management for Floyds Fork Watershed Group
April 14, 2008	Rain Barrel Sales are on-going. During this period 263 rain barrels were distributed.
April 19, 2008	Rain Garden Workshop for Louisville Nature Center/Rain Garden Installation at Louisville Nature Center
May 10, 2008	Public presentation on Native Plants, Rain Gardens and Rain Barrels for Stormwater Management - Louisville Nature Center
May 18, 2008	Presentation on Native Plants, Rain Gardens and Rain Barrels for Stormwater Management for Old Louisville Neighborhood Association
June 3, 2008	Urban Stormwater Class for Youthbuild E-Corps
June 12, 2008	Presentation for Deer Park Neighborhood Association
June 20, 2008	Presentation on Urban Stormwater, Rain Gardens, Rain Barrels for Sierra Club



June 21, 2008	Ohio River Sweep ORSANCO
June 28, 2008	Rain Garden/Rain Barrel Workshop for Bernheim Arboretum and Research Forest

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

April 15, 2008	Shively Christian Church - 1822 Kendall Lane
May 20 2008	St. Lawrence Catholic Church - 1925 Lewiston Drive
June 17, 2008	Ormsby Heights Baptist Church - 2120 Lower Hunters Trace

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

April 21, 2008	Fairdale High School small gym, 1001 Fairdale Road
May 19, 2008	Jeffersontown High School gym, 9600 Old Six Mile Lane
June 16, 2008	Knight Middle School large gym, 9803 Blue Lick Road

1.4.2 Project WIN Public Meetings

During the month of May, MSD conducted 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. Meetings were held on the following dates:

- May 5 – Republic Bank Building (Northeast)
- May 6 – Shawnee Golf Course (West)
- May 13 – Okolona Fire House (South)
- May 14 – MSD Main Office (Central Business District)
- May 14 – Long Run Golf Course (East)
- May 27 – Sun Valley Community Center (Southwest)
- May 28 – Swiss Hall (Central)
- May 29 – Jeffersontown Fire House (Southeast)

MSD presented an overview of the emerging vision for the IOAP and also presented preliminary overflow abatement projects tentatively planned in the areas near the meeting center. Public input was obtained relative to project location and project integration into the surrounding neighborhoods.

1.4.3 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. Three WWT meetings were held during this reporting period, as detailed below.

- April 3, 2008 - This meeting included presentations on funding requirements and potential strategies for rate structures and fees. A presentation of the emerging MSD vision for the IOAP was given, with the expectation that comments would be discussed in May. The CSO control strategies were presented, along with examples of how the benefit cost evaluation is being used to select projects for CSO control.
- May 15, 2008 - In this meeting, MSD reported on the status of the third round of Project WIN public meetings. A brief discussion of comments received on the IOAP vision presentation was followed by a more extensive discussion planned for June. A progress report was given of the evaluation of green infrastructure, with specific examples of potential green infrastructure projects.
- June 19, 2008 - This meeting presented the complete list of projects evaluated, a draft list of potential preferred projects and showed in detail how the Benefit/Cost process was used to evaluate and select the recommended preferred alternatives.

All information provided to the WWT is available on the Project WIN website, at www.msdlouky.org/projectwin.

1.4.4 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. The following activities occurred within this reporting period:

- Continued to update the Project WIN website. Customers who voluntarily sign up to receive email alerts regarding sewer overflows now receive a revised notice that indicates when conditions have returned to normal. In addition, there are messages from MSD, a repository of approved documents, Stakeholder meeting minutes and access to a public notification email system. This website can be found at www.msdlouky.org/projectwin.
- MSD held a competition where 15 teams of Louisville high school students competed in a High School Marketing Challenge. The competition was focused this year on developing a marketing and advertising campaign around MSD's clean water initiative, Project WIN. Students were asked to build their campaigns around the idea of reducing the effects of pollution on streams and waterways by encouraging others to take simple steps and make slight behavior modifications. Competitors presented their campaigns over two days of competitions, culminating with the judging on April 29, 2008 at MSD. The grand prize went to Team Prodigy of Doss High whose slogan was *Simple Game Plans WIN*.
- Placed an advertisement in the Sunday issue of the *Courier Journal* on April 6, 2008, and the Wednesday Neighborhood Section of the *Courier Journal* on April 9, 2008, to inform the public about Project WIN.

- Placed an advertisement in the *Courier Journal* on April 9, 27, 30 and May 11 and 14, 2008 to inform the public about the Project WIN public meetings.
- Placed an advertisement in the May issue of *Today's Woman* to inform the public on the benefits of a rain garden.
- Placed information on Project WIN in the May and June issues of *Business First*. The May issue contained a listing of all of the Project WIN public meetings and the June issue focused on **Stormwater Tip #1 - Use the Low Tech, Old-Fashioned Technology of Rain Barrels to Disconnect Drains.**
- Placed information on Project WIN in the April, May and June issues of *Louisville Magazine*. April and May issues focused on rain barrels and the June ad covered the **"Know the rules when it rains."**
- MSD *Update* sent to customers and staff in April, May and June. Project WIN related articles are contained in each issue. These publications are available on the MSD website.
- The spring issue of *Crosscurrents* was distributed to over 9500 customers. This publication, also available through the MSD website, contains Project WIN related articles on how hauling operations can prevent and reduce overflows and how rain gardens can help keep water out of the sewers.
- The annual mailing to all residents within 500 feet of Beargrass Creek was sent out the week of April 14, 2008.

MSD continues to post 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.

MSD updated the "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.

Information related to this Consent Decree and Project WIN may be found at www.msdlouky.org/projectwin.

SECTION 2: Performance Overview

2.1 Unauthorized Discharges to Waters of the United States

Appendix B-1 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).

Included in Appendix B-2 is a report that lists the details of the 17 bypasses that occurred at our treatment plants during this reporting period. Bypasses were reported for the following treatment plants:

- Cedar Creek - KPDES Permit Number KY0098540
- Chenoweth Hills - KPDES Permit Number KY0029459
- Floyds Fork - KPDES Permit Number KY0102784
- Hite Creek – KPDES Permit Number KY0022420
- Hunting Creek South - KPDES Permit Number KY0029114
- Jeffersontown (3) - KPDES Permit Number KY0025194
- Lake Forest/Beckley Woods (4) - KPDES Permit Number KY0042226
- McNeely Lake - KPDES Permit Number KY0029416
- Silver Heights - KPDES Permit Number KY0028801
- Timberlake - KPDES Permit Number KY0043087
- Yorktown (2) - KPDES Permit Number KY0036323

Included in Appendix B-3 is a report that lists the six blending events that occurred at the Jeffersontown WWTP during this quarter. Blending events, as posted on the Project WIN website, started on the following days:

- April 1, 2008
- April 3, 2008
- May 3, 2008
- May 8, 2008
- May 14, 2008
- May 15, 2008

2.2 Overflows to Ground

MSD recorded 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 recorded 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 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. As mentioned previously, a new AAOV for permitted CSOs is being developed and is undergoing quality control. This should be available for use in the next Quarterly Report. The new AAOV will be derived from the newly calibrated and detailed CSO hydraulic model.

Two projects were completed during this reporting period that impacted permitted CSOs, achieving a reduction in wet weather CSO volume.

- CSO30 Elimination, as reported in Section 1.1 was completed. This CSO was estimated to have a CSO AAOV of approximately 1.36 million gallons per year.
- CSO33 Elimination, as reported in Section 1.1 was completed. This CSO was estimated to have a CSO AAOV of approximately 0.012 million gallons per year.

In addition, the following occurred over the reporting period related to CSO monitoring. Appendix D includes CSO flow monitoring information for the reporting period.

- The CSO105 flow meter experienced a power failure due to bad batteries. Batteries have been replaced. Batteries are tested before installation and the CSO flow monitoring sites are inspected every three weeks. Batteries are replaced every 90 days or when the voltage falls below four. MSD was unable to download data from June 25, 2008 to June 30, 2008.
- The CSO206 flow meter experienced a power failure due to bad batteries. Batteries have been replaced. Batteries are tested before installation and the CSO flow monitoring sites are inspected every three weeks. Batteries are replaced every 90 days or when the voltage falls below four. MSD was unable to download data from April 1, 2008 to April 14, 2008 and June 21, 2008 to June 30, 2008.
- Continued project to install flow meters at CSO62, CSO97, CSO146 and CSO16. Project costs are being developed for the meters, telemetry and power needed for installation at each site.
- Continued project to upgrade existing flow meters with telemetry and power at CSO210 and CSO211.
- Developing process to use existing Plant Information data tags to calculate the flow at CSO15 and CSO191.

- Developing process to install and use the level indicator to calculate flow at CSO20.

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 Holly Oaks Pump Station, a documented SSO, was eliminated on April 18, 2008 as part of the Fern Hill Subdivision Interceptor #8 (Budget ID C94086).

2.6 Wastewater Treatment Plants

Morris Forman WWTP

There were 14 days during this quarter where the peak flow was over 300 MGD. There were no KPDES permit violations during this reporting period.

Jeffersontown WWTP

Beginning July 1, 2008, the following activities will occur for this treatment plant:

- Plant effluent will be sampled 7 days per week, analyzing for the parameters listed per the KPDES Permit. This data will be submitted in the Quarterly Reports starting October 30, 2008.
- Electronic monitoring of the water surface elevation in the siphon head box will begin. When this level indicates that SSOs are close to occurring, the constructed overflow siphon and manholes on the gravity interceptor within two thousand feet of the headworks of the Jeffersontown WWTP that may overflow will be inspected. When these inspections identify an SSO, the occurrence will be documented and reported in accordance with the approved SORP for the 24-hour notification. Unauthorized Discharges will be submitted in the Quarterly Reports starting October 30, 2008.

Discharge Monitoring Reports

By July 31, 2008, MSD will start posting, on the Project WIN website, a DMR (Discharge Monitoring Report) packet for each WWTP. Historical DMR data will be available back through January 2007. The new DMR packets will include the DMR, Monthly Operating Report (MOR), discharge report and the 5-day follow up letter for any bypass events that occurred during that period.

The information on the DMRs may be found at www.msdlouky.org/projectwin in the section Wastewater Treatment Plant Reports.

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 (July 1, 2008, through September 30, 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 start to remove the last mechanical regulator within the CSS at CSO108.
- Revisions to the CSO components will be made in Hansen to show that the regulators have been removed.
- The text in the CSO Inventory will be reviewed and drawings will be updated and in some cases digitized to provide clarity during the next reporting period.
- Evaluation of CSO quick hits eliminations will continue into the reporting period in concert with Long Term Control Plan efforts. Start the development of a plan for the elimination of CSO181.

NMC 2: Maximization of Storage in the Collection System

- Continuation of the review of pump stations within the CSS to determine if additional operational modifications are feasible, further maximizing operations and efficiently transporting more flow to the Morris Forman WWTP for treatment. Discussions with the U.S. Army Corps of Engineers (USACE) will continue regarding proposed modifications to the operation of flood and sanitary pump stations that will minimize sewer overflows.
- Bidding and construction of RTC Phase II projects: RTC at CSO108, Integration of SWPS/MDS/MFWTP/Wheeler, (described in Section 1.3.2.1 Interim LTCP) will occur. RTC Phase II construction is to be completed by December 31, 2008, as required within the Consent Decree.
- The construction phase of the SWOR2 project should be nearing completion. The design consultant will start the testing and verification process. This final phase may last a couple of months since it is dependent upon rain events.
- The majority of the RTC Phase II analytical and administrative projects will continue.
- Completion of flapgate evaluation on CSO outfall pipes, further limiting the possibility for inflow of river/creek water into the CSS during high stream flow events. Note: High water conditions may delay this initiative.

NMC 3: Review and Modification of Pretreatment Requirements

- MSD will work with the top five NDDs to review follow-up documentation requested as a result of the recent meetings. MSD is encouraging the NDDs to take additional measures where feasible.
- Continue implementation of the CSO-SIU project in conjunction with the LTCP preparation. The revised spreadsheet model will be used to identify any new NDDs of interest and to base future data collection initiatives intended to validate the spreadsheet model predictions or confirm new NDDs of interest. Metals data may be collected to compare to the spreadsheet model predictions to establish confidence in the model. Next, the spreadsheet model predictions for metals discharge to the CSOs will be compared to acute water quality standards to determine if there are any new pollutants of concern for specific CSO outfalls. In the event any specific pollutants of concern are identified, MSD will review industrial user data to determine if any users discharge a disproportionate share of that pollutant to the particular CSO outfall. This review and evaluation process may result in identification of new NDDs of concern who will be subject to the same evaluation process (relative to opportunities to reduce/eliminate discharge to CSOs) as the currently identified NDDs under the approved NMC #3 program activities.
- Finalize performance measures to monitor the effectiveness of the implementation of NMC #3 within the Pretreatment Program.

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

- Continue the 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.
- RTC Phase II includes a project that will allow the RTC computer system to regulate the flows into Morris Forman WWTP, based on the current availability of treatment trains. Construction is to be completed by December 31, 2008, as required within the Consent Decree.
- Tested the use of alternatives to sodium hypochlorite for disinfection during high flows during the month of April. During the next reporting period the analysis report will be reviewed to determine if 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.

NMC 5: Elimination of CSOs During Dry Weather

- Continue the 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.

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

- Development will continue on an expanded visual inspection program to determine the efficiency of installed controls.
- Evaluation of the proper placement of the COPA Cyclone removed from CSO30 (eliminated in June 2008) will occur in the next reporting period.

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.
- Distribute a rain garden manual outlining design and installation procedures for homeowners.
- Facilitate rain barrel give-away events and sales in partnership with the Louisville Nature Center.
- 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.
- Continue to promote Green Infrastructure initiatives within Jefferson County, such as pervious pavement.
- 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

- Write an article on the closure of CSO33 and CSO30 for the July addition of the MSD Update.

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

- MSD will periodically review the potential impacts of Significant Industrial Users (SIUs) on pollutant discharges from CSOs. For those CSOs that have SIUs in the tributary sewershed, the SIU discharge characteristics (flows and loads) will be assessed to determine if these discharges could have a significant impact on the assumed Event Mean Concentration (EMC) of pollutants. If EMCs could be significantly increased due to SIU discharges during wet weather events, the EMC for that CSO will be adjusted to account for this load. This may have an impact on the scoring of the benefits of providing higher levels of control on the particular CSO during the benefit/cost evaluation being conducted as part of the IOAP. This evaluation may also indicate that additional wet weather control strategies should be considered for implementation at SIUs discharging those pollutants, if the impacts on overflow control costs are potentially significant. MSD may also share the cost of control strategies at these SIUs.
- Development will continue on an expanded visual inspection program to determine the efficiency of installed controls.

- MSD will perform sampling upstream and downstream of CSO206, as well as the overflow stream, during dry and wet weather to establish baseline conditions prior to its elimination. This sampling is scheduled to occur during the 2008 and 2009 recreational seasons.
- 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 CSS model has been calibrated in preparation for simulating the CSO mitigation projects to be included in the final LTCP. Preliminary preferred overflow mitigation projects will be selected for an initial annual overflow target of 4 per year. CSO mitigation projects will be simulated within the model and analyzed for efficacy, collective impact and other levels of protection (e.g. 0, 2, 8, or 12 overflows per year). Additionally, this model will be truly integrated with the contributing separate sanitary sewer service areas into a complete sewer model for all areas flowing to the Morris Forman WWTP. Additional RTC rules will be defined for the selected projects to analyze their storage effects within the InfoWorks model.
- The CSO control projects and their overflow volume reduction will be simulated to assess the LTCP's ability to meet water quality standards and the extent to which other loading sources are responsible. Overall impacts of CSOs on receiving streams will be summarized using the results of these models combined with professional opinion of model limitations and additional environmental parameters. Results of these analyses will be included in the IOAP.
- Continued review and update of the CSS pollutant characterization table is planned for the next reporting period.

3.2 Sewer Overflow Response Protocol Implementation

The following activities will be performed in the next reporting period as identified in the approved SORP:

Overflow Management and Field Documentation

- Additional field reviews of SORP procedures to both ensure successful implementation and to assist with the annual SORP overall review will be performed.

Public Notification and Communication

- The feasibility and cost effectiveness of providing public service announcements via local radio channels will be explored.
- MSD will investigate the possibility of taping the IOAP presentation and showing the meeting on Metro TV.

Regulatory Reporting and Data Management

- Review of discharge work orders will continue and assets will be updated to reflect status.
- BYPASS and BLENDING 5-day letter templates will be posted on MSDnet for use by staff.

- Modifications will be made to the discharge work orders for Blending events at Jeffersontown WWTP. MSD will capture the peak flow and total flow on the work order for reporting needs.

Staff Training and Communication

- SORP Training will be scheduled and administered.

Annual SORP Review

- MSD will finish the annual SORP protocols and procedures review. A new SORP will be submitted to EPA and KDEP for review and approval by August 22, 2008.

3.3 Discharge Abatement Plans

The activities for the two discharge abatement plans (SSDP and LTCP) are described separately below. While the plans are discussed separately, many of the same activities are required, such as alternative development and evaluation, performance evaluations, etc. In addition, some of the activities such as affordability evaluation and rate impacts are programmatic in nature, applying to both discharge abatement plans. These are scheduled to be completed on an integrated program rather than the individual components and will be submitted as the Integrated Overflow Abatement Plan (IOAP) by December 31, 2008.

3.3.1 Sanitary Sewer Discharge Plan

The following discussion of the Sanitary Sewer Discharge plan includes the implementation of the Updated SSOP, implementation of the Interim SSDP, and development of the final SSDP.

3.3.1.1 Updated Sanitary Sewer Overflow Plan Implementation

The following projects are under design and/or construction, and will be active during the next reporting period:

- Fern Hill Subdivision Interceptor #8 (Budget ID C94086) – Final punch list items will be addressed on this project that has accomplished the elimination of the Holly Oaks Pump Station. The project was required to be completed by March 30, 2009, in accordance with the Consent Decree.
- Thurman Drive Pump Station Elimination (Budget ID B06299) - The contractor is expected to have completed the elimination of the Thurman Drive Pump Station during the next reporting period. The flow will be diverted to a gravity interceptor, remaining in the West County WWTP service area. This project must be completed by September 30, 2008, in accordance with the Consent Decree.
- Zabel Way Pump Station Elimination (Budget ID C06295) - The construction contract is expected to be nearly complete in the next reporting period. The flow, once diverted from the Zabel Way Pump Station will remain in the West County WWTP service area. The project will be completed by September 30, 2008, in accordance with the Consent Decree.
- Interceptor Condition Assessment Phase 1 (Budget ID H04272) – In the next reporting period, MSD will continue to schedule and begin corrective/rehabilitation projects to address the Phase 1 findings from the Interceptor Condition Inspections.

The first project – Northern Ditch Int. Rehab Phase 1 (Budget ID H07298) will be under construction in the next reporting period.

In addition, construction contracts for all of the remaining phase 1 rehabilitation projects are expected to be advertised for bidders during this reporting period. Projects will be completed prior to December 31, 2008, in accordance with the Consent Decree.

- H07294- Sinking Fork Int. Rehab Phase 1
- H06301-Beechwood Village SSO Abatement Phase 1
- H07295-Hikes Lane Rehab Phase 1
- H07296-Goldsmith Lane Rehab Phase 1
- H07297-Buechel Branch Rehab Phase 1
- H04276-Middle Fork System Improvements Phase 1

3.3.1.2 Interim Sanitary Sewer Discharge Plan

The revised ISSDP was submitted on March 7, 2008. 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 (Budget ID E07261 & E08036) - Design is expected to progress to 95% with the revisions in the existing sewer plans to address the change in the outlet sewer. MSD will continue to negotiate for the remaining temporary easements needed to complete the construction project. In the upcoming three months, it is expected that easement negotiations for the Sinking Fork Interceptor Relief Sewer (Budget ID H08357) will be completed. The project will be completed by April 2011, in accordance with the revised ISSDP.
- Southeast Diversion Structure (Budget ID H08359) – Professional services selection for design of the relief interceptor will be initiated during this reporting period. Negotiations for purchase of a flow equalization basin site will be initiated, if a basin is determined to be needed. The construction to eliminate the Southeast Diversion overflow will be completed by December 2011, in accordance with the revised ISSDP. The junction structure and the Southeastern Relief Interceptor will be completed in coordination with the Hikes Lane Interceptor by May 2012, in accordance with the revised ISSDP.
- Highgate Springs and Hikes Point Area (Budget ID H07286 & H07287) – The Preliminary Design Report will continue and a preliminary alignment will be selected so MSD can move forward with affected utility agency and property owner discussions. A final design contract will be negotiated in order to address one of the Hikes Point Relief Sewer Efforts in the Carson-Ribble area separately from the Hikes Lane Interceptor contract. Construction will be completed by November 2012, in accordance with the revised ISSDP.
- Northern Ditch Diversion Interceptor (Budget ID C08507) - The design of the Northern Ditch Diversion Interceptor to divert wastewater to the West County WWTP will continue, with easement negotiations expected to continue in the next reporting period. MSD will continue communications with USACE regarding stream crossing and wetlands permits.

- West County WWTP Wet Weather Equalization and Treatment Project (Budget ID H06302) – A Technical Memorandum (TM) will be prepared describing the selected alternative for the flow equalization and wet weather treatment process. A refined implementation schedule and cost estimate will be included. Construction of flow equalization and high-rate secondary treatment at the West County WWTP will be completed by December 31, 2011, in accordance with the revised ISSDP.
- Increased Performance for ISSDP Elements - Additional overflow eliminations that may require flow to be routed through the conveyance and treatment processes listed above are currently being analyzed. Adjustments to design parameters (size, storage) of the above are being considered to allow the projects to accommodate additional wet weather flows. A summary of these elimination projects will be included in the Final SSDP by December 31, 2008, in accordance with the Consent Decree.

3.3.1.3 Final Sanitary Sewer Discharge Plan

The following activities are planned for the next reporting period:

- Complete the evaluation of alternatives and develop the list of recommended alternatives for the 2-year storm, including those SSOs identified in 2008 as noted above.
- Evaluate differing levels of control (1-year, 5-year, and possibly 10-year) for the preferred alternative solution addressing each SSO.
- Refining selected alternatives, develop site-specific cost estimates and develop summary of recommended program.
- Analyze the programmatic performance of the full list of selected alternatives.
- Develop programmatic costs related to annual inspection and rehabilitation programs to reduce inflow and infiltration as well as a possible enhanced private property program to eliminate illicit connections.
- Begin an analysis of possible rate impacts after the list of preferred projects and site specific cost estimate is developed.
- Present results of preferred projects to Wet Weather Team Stakeholder Group.
- Complete the first draft of the IOAP Volume 1, all remaining sections.
- Finish the first draft of the IOAP Volume 3.

3.3.2 Long Term Control Plan

The activities described under Long Term Control Plan include implementation of the Interim Long Term Control Plan and development of the final Long Term Control Plan

3.3.2.1 Interim Long Term Control Plan

The following projects are under design and/or construction, and will be active during the next reporting period: Refer to Appendix A-3 for a chart showing a schedule of the activities described in this section.

- RTC at CSO108 (Budget ID I03588) – During the next reporting period construction bids

will be opened and if found to be responsive and responsible, MSD will award a construction contract for this project. This project will be completed by December 31, 2008, in accordance with the Consent Decree.

- Integration of Southwestern Pump Station/Main Diversion Structure/Morris Forman Wastewater Treatment Plant (Budget ID I05056) – During the next reporting period the contract is expected to be awarded for construction. This project will be completed by December 31, 2008, in accordance with the Consent Decree.
- Integration of Wheeler Basin (Budget ID I05057) – During the next reporting period the contract is expected to be awarded for construction. This project will be completed by December 31, 2008, in accordance with the Consent Decree.
- RTC at Southwestern Outfall SWOR2 (Budget ID I05055) – Construction will continue during the next reporting period. High water from excess rain has hindered progress. Safety is a concern since the contractor is working in a live sewer. The inflatable dam is expected to be delivered to the site and installed along with an initial testing period during the next quarter. This project will be completed by December 31, 2008, in accordance with the Consent Decree.
- CSO206 Sewer Separation (Budget ID I01062) – During the next reporting period construction on Areas 13 through 15 (of 15 total areas) of this project will be advertised for a construction contract. 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 follows.

- Final updates to the LTCP modeling will be completed for the sizing of overflow controls for the initial level of protections.
- The list of preferred projects will be determined, and an assessment of the potential impacts of a proposed green infrastructure program will be performed. Following these steps, optimization of preferred solutions will be completed.
- Evaluations of different levels of control (e.g. other than 4 overflows/year) will be completed using the benefit/cost evaluation process for the preferred alternative approaches.
- Programmatic performance of the different levels of control will be evaluated, and a recommended level of control selected and documented. The approach to demonstrating compliance with water quality standards will be developed and discussed with the regulatory agencies.
- The possible overflow reduction impacts of a green infrastructure program will be analyzed on a CSO basin level and a 'business-case' will be evaluated to justify and establish annual funding levels related to implementation of various 'green' technologies.
- The final recommended list of projects, project schedules and probable cash flow will be presented to the MSD Board, and subsequently discussed with the Wet Weather Team Stakeholder Group.

- Rate impacts of the recommended projects will be developed.
- The first draft of all sections of Volume 2 of the IOAP will be completed.

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.

July 19, 2008	Rain Garden & Rain Barrel Workshop for Louisville Nature Center
July 21, 2008	Presentation on Urban Stormwater, Rain Gardens and Rain Barrels for Germantown Neighborhood Association
July 29, 2008	Field trip to Floyds Fork Wastewater Treatment Plant – Whitney Young Scholars
August 14 – 24, 2008	Educational exhibit at the KY State Fair - exploring the underground world of sewers
September 15, 2008	Presentation on Urban Stormwater, Native Plants, Rain Gardens and Rain Barrels for Federation of Gardens, Bon Air Public Library
September 17, 2008	Presentation on Urban Stormwater, Native Plants, Rain Gardens and Rain Barrels for World of Flowers Garden Club
September 27, 2008	Beargrass Creek Clean Sweep with Metro Parks and Natural Resource Conservation Service

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

July 15, 2008	Rockford Lane Baptist Church - 2006 Rockford Lane
August 19, 2008	Mt. Everest Baptist Church - 6012 Mt. Everest Drive
September 16, 2008	St. Paul Catholic Church - 6901 Dixie Highway
October 21, 2008	St. Polycarp Catholic Church - 7718 Columbine Drive
November 18, 2008	PRP High School - 5901 Greenwood Road

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

July 21, 2008	Carter Elementary School cafeteria, 3600 Bohne Avenue
August 18, 2008	T.J. Middle School large gym, 1501 Rangeland Road
September 15, 2008	Central High School large gym, 1130 W. Chestnut Street
October 20, 2008	Waggener High small gym, 330 Hubbards Lane
November 17, 2008	Pleasure Ridge Park large gym, 5901 Greenwood Road

3.4.2 Project WIN Public Meetings

There are no Project WIN public meetings scheduled during the next reporting period.

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 are as follows:

- July 17, 2008 – The plan is to present at this meeting the complete list of preferred alternatives and the initial look at the knee of the curve evaluations.
- September 23, 2008 – The draft IOAP will be presented to the group, including the final recommended project list, implementation schedule and total program costs.

3.4.4 Public Education and Notification

MSD will continue to update an annual “calendar” of public information activities. 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 activities will occur during the next reporting period:

- Advertisements to inform the public on Project WIN activities will be published during the months of July, August and September in *Business First* and August and September in *Louisville Magazine*.

- Advertisement to inform the public on Project WIN activities will be published during the month of September in *Today's Woman*.

Information related to this Consent Decree and Project WIN may be found at www.msdlouky.org/projectwin.

remaining portion of Phase 1 of this project includes the installation of the natural gas generators at Trail Ridge and Grand Isle Pump Stations and propane generators at the Wind Ridge and Breakwater Pump Stations. During this reporting period, the contractor has installed the generators on concrete pads at all four locations. There is additional equipment needed for the propane generators in order to address cold weather conditions. The Trail Ridge and Grand Isle generators are installed and awaiting connection to the public gas system. In a separate Phase 2 construction contract, the natural gas generator for the Anchor Estates #2 Pump Station and the propane generator systems for the St. Patrick and Fairway Lane Pump Stations have been installed on concrete pads at the sites. There is additional equipment needed for the propane generators in order to address cold weather conditions. The Anchor Estates #2 generator is installed and awaiting connection to the public gas system.

- O-F-3 Flow Monitoring Program (Due September 29, 2008). MSD continued to develop a long-term flow monitoring plan that includes approximately 45 locations for permanent sewer flow monitors. The flow monitoring plan includes equipment for measurement and telemetry. Several CSO sites have had flow monitoring equipment installed during the last reporting period. The flow monitoring program is being integrated with the post construction compliance monitoring plan that will be implemented to track performance of the Integrated Overflow Abatement Plan. A workshop was held with MSD staff and with a meter consultant to review the sites and begin preparation of the proposal.
- S-C-2 Integrate Maintenance Activities & Capital Improvement Plan (Due December 31, 2008). MSD continued the process to integrate the information obtained in the CSSA Report to assist MSD's I&FP Division in identifying 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.

4.1.2 Activities for the Next Reporting Period (July 1, 2008, through September 30, 2008)

Section 4.1.2 describes those activities that are still in progress and have upcoming deadlines. Refer to Appendix A-4 for a chart showing a schedule of the activities described in this section.

- M-D-4 Revise Utility Information Management (UIM) Support Plan (Due May 14, 2009). Contract and MSD staff will continue the development of the SharePoint site during the next reporting period. The target is to have the start of a SharePoint site running by the end of July and start the population of system.
- M-E-4 Annual Continuing Sewer System Assessment Update (Due December 31, 2008). MSD will continue to work on the Annual Continuing Sewer System Assessment (CSSA) Update Report, which will address accomplishments for each fiscal year and identify specific infrastructure rehabilitation/replacement projects and O&M actions based on asset condition assessment. Activities will continue to update missing age and material types on sewer assets, develop a method for assumed condition based on this data, and further prioritize inspection accounting for those assets in worst assumed condition, wet weather issues, and new development pressures. The Annual CSSA Update Report will also propose areas of the system to assess for the coming year.
- M-E-9 Build-Out Capacity (Due September 30, 2008). MSD will prepare a Technical Memorandum summarizing the flow projections for build-out conditions of each

sewershed. The TM will identify the timing of flow additions, and the location and timing of potential future capacity limitations.

- M-L-1 Implement Back-up Power (Due December 31, 2008). The permanent emergency generators at Wind Ridge, Trail Ridge, Breakwater, Grand Isle, Anchor Estates #2, St. Patrick and Fairway Pump Stations are expected to be installed and operating by the end of September 2008.
- 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-2 Integrate Maintenance Activities & Capital Improvement Plan (Due December 31, 2008). MSD will continue the process to integrate the information obtained in the CSSA Report to assist the I&FP Division in identifying 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.

4.2 Continued CMOM Program Implementation

Although the program implementation deadlines from the CMOM Self Assessment Report were previously met, MSD continued to enhance the activities listed in the table below during this reporting period.

The CMOM ID numbers in the table below correspond to the CMOM ID numbers in the original EPA checklist and Table 3.2 from the CMOM Self Assessment. All “Continued CMOM Program Implementation” activities (Section 4.2 of this document) will be reported using these original CMOM ID numbers. These original ID numbers do not correspond to the numbering system used in Section 4.1 of this document. The ID numbering system referenced in Section 4.1 is a numbering system which was based on the schedule submitted in the CMOM Self Assessment Report that was submitted to EPA and KDEP on February 10, 2006.

This conflict in the numbering systems has become a point of confusion when reporting progress. Therefore, as the CMOM deadlines are met in Section 4.1, future progress will be reported using the original CMOM ID numbering system.

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Programs and Activities	CMOM Program Implementation (Current Quarter)	CMOM Program Implementation (Next Quarter)
I. Management Programs		
<p>M-E-4 Engineering Programs (Sewer System Design Program)</p>	<p>MSD continued to review its design and construction standards to identify opportunities to reduce infiltration and inflow of new construction. As part of the updating process, MSD has initiated a third party review of the design and construction standards for other desired improvements.</p> <p>A notice to proceed letter was sent May 7, 2008 with a targeted completion date of September 30, 2008 for the consulting engineer to provide additional resources to aid in updating the standards and preparing new documentation for distribution.</p>	<p>MSD will continue to review its design and construction standards to identify opportunities to reduce overflows. As part of the updating process, MSD will continue the third party review of the design and construction standards for other desired improvements.</p> <p>Internal meetings will be held to gather input from MSD staff in several divisions regarding recommended improvements to the existing documents. Work will continue with the comprehensive updating of the standards during the next reporting period.</p>
<p>M-E-9 Engineering Programs (Infrastructure Rehabilitation Program)</p>	<p>MSD will continue to schedule and begin corrective/rehabilitation projects to address the Phase 1 findings from the Interceptor Condition Inspections. The first project – Northern Ditch Int. Rehab Phase 1 (Budget ID H07298) was advertised and bids opened.</p>	<p>The first project – Northern Ditch Int. Rehab Phase 1 (Budget ID H07298) will be completed. In addition, construction contracts for all of the remaining six rehabilitation projects are expected to be advertised and awarded for construction during the next reporting period.</p> <p>The projects are scheduled to be completed by December 31, 2008, in accordance with the Sanitary Sewer Overflow Plan (SSOP).</p> <ul style="list-style-type: none"> • H07294- Sinking Fork Int. Rehab Phase 1 • H06301-Beechwood Village SSO Abatement Phase 1 • H07295-Hikes Lane Rehab Phase 1 • H07296-Goldsmith Lane Rehab Phase 1 • H07297-Buechel Branch Rehab Phase 1 • H04276-Middle Fork System Improvements Phase 1

Programs and Activities	CMOM Program Implementation (Current Quarter)	CMOM Program Implementation (Next Quarter)
M-J-2 Legal Support Programs (Ordinances)	<p>MSD discussed the proposed Ordinance with the Wet Weather Team Stakeholder group. Redraft of the ordinance was completed. Development of the financial impacts of implementation is being worked on as part of the Integrated Overflow Abatement Plan.</p> <p>In support of this effort, MSD identified for implementation in the next fiscal year a pilot program to inspect and rehabilitate property service connections (PSCs) in areas prone to interior discharges.</p>	<p>MSD will complete the financial impacts analysis and present the redrafted ordinance and the financial analysis to Metro Council members of the Stakeholder Group.</p>
M-K-1 Water Quality Monitoring Programs (Routine Water Quality Monitoring Programs)	<p>MSD continued to improve the accessibility of data reported to the SCADA system for pump station and Real Time Control information as well as standardize various environmental data sets in preparation for integrated data querying and display through an upcoming SharePoint site.</p>	<p>MSD continued work on improving and broadening staff access to the Laboratory Information Management System (LIMS), the Plant Information System (PI), sonde data and sewer flow data. MSD is working toward developing its flow meter and sonde data warehouses to an Oracle application interfaced with its Hansen asset management system.</p> <p>MSD is also working toward having its radar rainfall vendor provide more extensive Quality Assurance and correction on the data it provides.</p>
II. Operations Programs		
O-A-1 Pump Station Operations Programs (Routine Operating Programs)	<p>MSD continued to work on draft flow schematics showing the flow path at different river elevations for the combination flood/sanitary pump stations.</p>	<p>MSD will finalize flow schematics for the flood pump stations. The flow schematics will show the gate positions for the various modes of operation.</p>
O-A-2 Pump Station Operations Programs (Emergency Operating Programs)	<p>MSD updated the list of pump stations that have the potential of flooding residents if the wet well reaches a critical elevation.</p>	<p>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.</p>
O-A-2 Pump Station Operations Programs (Emergency Operating Programs)	<p>MSD Engineering staff meets with Operations staff on a monthly basis to determine capital project priorities. On a quarterly basis this information is used to adjust budgetary needs. During this reporting period MSD held the April 2008 budget meetings.</p>	<p>MSD Engineering staff will continue to meet on a monthly basis with Operations staff to determine capital project priorities and advise on the budgetary needs on a quarterly basis.</p>

Programs and Activities	CMOM Program Implementation (Current Quarter)	CMOM Program Implementation (Next Quarter)
<p>O-D-1 Grease Trap Inspection and Enforcement Program (Permitting Program)</p>	<p>MSD presented the updated FOG program documents (policy, guidelines, design specifications and Best Management Practices (BMP)), as well as revised Wastewater/Stormwater Discharge Regulations (WDR) and an Enforcement Response Plan (ERP) to the MSD Board Policy Committee on May 7, 2008. The Policy Committee approved the documents for submittal to the full MSD Board. This occurred on May 27, 2008 and the documents were approved by the MSD Board.</p> <p>On June 4, 2008, MSD submitted the WDRs and ERP to the KDEP for approval. This process involves a 30-day public comment period once KDEP approves the documents. KDEP has committed to a speedy review of the documents.</p> <p>In addition, MSD sent FOG educational letters to 517 residential customers that discharge to pump stations experiencing repeated FOG accumulations. MSD hopes that this outreach activity will inspire these homeowners to practice FOG BMPs and reduce FOG discharges from their homes.</p>	<p>MSD will begin development of the training modules for the Certified Hauler/Plumber initiative and Food Service Establishments (FSE) personnel under the updated FOG program.</p> <p>MSD will conduct reconnaissance at FOG "hot spot" locations along with concurrent inspections of online FSE grease control equipment (GCE).</p>
<p>O-F-1 Flow Monitoring Field Operation Programs (Permanent Stations; Temp Stations)</p>	<p>MSD continued to review proposed locations for new sewer flow monitoring installations that will be made available through telemetry. Existing sites that are not currently on telemetry are intended to be retrofitted with equipment to ease maintenance and data availability.</p>	<p>The inventory of the 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 post construction compliance monitoring plan being developed as part of the IOAP, the SCAP being implemented as part of M-E-10, and others. Flow meters are being added as assets in the Hansen system to better track the location and history of these assets. A proposal will be finalized for implementing an expanded flow monitoring network and retrofit.</p>
<p>O-F-2 Flow Monitoring Field Operation Programs (Permanent Stations; Temp Stations)</p>	<p>See O-F-1</p>	<p>MSD will install additional permanent flow meters with 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 integrate the efforts of the Operations and Regulatory Services Division to set common goals in monitoring different points of the sewer system. A proposal will be finalized for implementing an expanded flow monitoring network and retrofit.</p>

III. Maintenance Programs		
S-A-1,2 & 3 Pump Station Preventive Maintenance (Electrical; Mechanical; Physical)	MSD continued the process of updating its preventive maintenance and inspection plan for its flood pump stations based on a review of the <i>USACE Inspection Guide</i> . Staff has started using the Hansen database to track Flood Pump Station work orders.	MSD currently uses SAP as its computerized maintenance management system (CMMS) for its sanitary pump stations. MSD will continue the process of converting its pump station CMMS to Hansen and enhancing the use of Hansen for Flood Pump Stations.
S-B-1 & 2 Force Main Preventive Maintenance (Air Release Valves, Valve Exercise Program)	The program was implemented in June 2007. Inspection walks for the Lea Ann Way, Long Creek Way, Diode Court, Landherr and Ohio River force mains were completed during this period. The annual West County Force Main walk was started. Rain events have impacted the schedules.	The program was implemented in June 2007. The following force mains are scheduled for inspection over the next reporting period: <ul style="list-style-type: none"> • Meadowstream • West Goose Creek • Stannye Drive • Rubbertown • West County Sludge Main – remaining portions
S-C-1, 2, 3 & 4 Gravity Line Preventive Maintenance (Routine Hydraulic Cleaning, Routine Mechanical Cleaning, Root Control Program, Manhole Preventive Maintenance)	Infrastructure & Flood Protection Resource and Staffing Plan was updated to address a better understanding on how to address overflows due to problems in the lateral. This information was to be used to help establishing operating budgets for the next fiscal year. Budgets were established during this reporting period.	During the reporting period the existing PM Cleaning program will be reviewed and enhancements made to expand the program to include new areas as needed. Develop new PM maintenance areas based on priorities related to NMC #1 and Advanced Asset Management (AAM) data gaps, develop detailed PM plan for FY 2009, identify transition plan to new PM recommended program.

Appendix A – Activity Schedules (A-1 to A-4)

Appendix B-1 - Discharge Work Orders – Waters of the US

Appendix B-2 - Discharge Work Orders – Bypass

Appendix B-3 - Discharge Work Orders – Blending

Appendix C – Annual Average Overflow Volume

Appendix D – Flow Monitoring Data

Appendix E - Acronyms