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

August 17, 2012

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

Jeff Cummins, Acting Director
Division of Enforcement
Department of Environmental Protection
300 Fair Oaks Lane
Frankfort, KY 40601

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

Subject: Adams Street Storage Basin
Minor Project Modification
IOAP Project No. L_OR_MF_172_S_09B_B_A_0
DOJ Case No. 90-5-1-1-08254

Attention Chiefs and Director:

MSD is requesting approval of a proposed minor project modification to the Adams Street Storage Basin project (IOAP Project No. L_OR_MF_172_S_09B_B_A_0). This modification is part of an overall adaptive management review of the approved 2009 IOAP that will be documented in the proposed 2012 IOAP Modification to be formally submitted in 2013. Since the project modifications will affect MSD's implementation activities prior formal submittal of the revision documentation, approval of the proposed modification is requested at this time.

2009 IOAP Project Description

The original Adams Street Storage Basin project included construction of a 0.12 million gallon (MG) underground covered storage basin to control CSO 172 to zero overflows per year typical year level of control, with a completion date of December 31, 2012.

Proposed Project Modification

The project modification involves the separation of two catch basins connected to the combined sewer system and closure of the overflow point for CSO 172 by the same December 31, 2012, completion date. By closing the CSO, this effort will exceed the overflow level of protection agreed upon in the IOAP. The project will be renamed 'River Road Sewer Separation and CSO Closure'.

These modifications are part of an overall adaptive management review of the approved 2009 IOAP. Additional sewer system monitoring, hydraulic modeling recalibration and enhancements to the physical representation of the sewer system resulted in a redistribution of the flow in individual sewer lines, thus affecting project approach and sizing in some cases. Each proposed change will be justified in detail through minor modification letters. Detailed benefits, costs and program implementation refinements to the overflow abatement program will be documented in proposed 2012 IOAP Modification to be submitted in 2013.

Technical Justification

As the first step in design for this project, MSD initiated a detailed inspection of the combined sewer system and surface connections that flow toward CSO 172, which serves as the wet weather overflow relief to the Ohio River in this area. Upon completion of this inspection, MSD discovered that only two of the catch basins in the stormwater system were still connected to the combined system.

During a recent rerouting and expansion of River Road, which runs through the project area, all other catch basins were separated from the combined system and routed to existing stormwater lines by Louisville Metro Public Works Department. This separation was not communicated to MSD and, as such, was not reflected in the hydraulic sewer model of this system during IOAP development. An area map that displays the location of the combined sewer overflow and the two catch basins still connected into the combined system can be reviewed in Attachment A.

To confirm the conclusions of the inspection, MSD placed a sewer flow meter just upstream of the overflow weir to monitor the flow and depth in the system during dry and wet weather. Over the course of 6 months and various rain events up to a 1.5 inch rainfall on November 24, 2010, the depth in the sewer did not exceed 5 inches compared to a minimum necessary CSO overflow depth of 11.3 inches and demonstrated no discernible reaction to wet weather (see graph in Attachment B). Note: The depth graph reflects a small adjustment in the sensor location in early November 2010 due to solids dropping out of the flow and fouling the sensor.

Given this evidence, MSD intends to separate the final two catch basins connected to the combined sewer system and close the overflow point for CSO 172 by the same December 31, 2012, completion date. By closing the CSO, this effort will exceed the overflow level of protection agreed upon in the IOAP. The project will be renamed 'River Road Sewer Separation and CSO Closure'.

For your reference, a copy of the original project fact sheet and map from the IOAP are in Attachment A. New project fact sheets and maps have been provided in Attachment B. Additional documentation on the costs and level of control analysis will be included in the 2012 IOAP Modification.

If you have questions or need additional information, please contact me or Angela Akridge, Project WIN Program Manager, at (502) 540-6000.

Sincerely,

W. Brian Bingham
Regulatory Services Director

cc: Greg Heitzman Paula Purifoy

Attachments

MSD

Metropolitan Sewer District

ATTACHMENT A

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
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April 19, 2011

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

Jeff Cummins, Acting Director
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Department of Environmental Protection
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Subject: Adams Street Storage Basin
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IOAP Project No. L_OR_MF_172_S_09B_B_A_0
DOJ Case No. 90-5-1-1-08254

Attention Chiefs and Director:

MSD is providing this letter as certification of the need for a minor project modification to the Adams Street Storage Basin project (IOAP Project No. L_OR_MF_172_S_09B_B_A_0), which has a required completion date of December 31, 2012. As the first step in design for this project, MSD initiated a detailed inspection of the combined sewer system and surface connections that flow toward CSO172, which serves as the wet weather overflow relief to the Ohio River in this area. Upon completion of this inspection, MSD discovered that only two of the catch basins in the stormwater system were still connected to the combined system.

During the rerouting and expansion of River Road, which runs through the project area, all other catch basins were separated from the combined system and routed to existing stormwater lines by Louisville Metro Public Works Department. This separation was not communicated to MSD and, as such, was not reflected in the hydraulic sewer model of this system during IOAP development. An area map that displays the location of the combined sewer overflow and the two catch basins still connected into the combined system can be reviewed in Attachment A.

To confirm the conclusions of the inspection, MSD placed a sewer flow meter just upstream of the overflow weir to monitor the flow and depth in the system during dry and wet weather. Over the course of 6 months and various rain events up to a 1.5 inch rainfall on November 24, 2010, the depth in the sewer did not exceed 5 inches compared to a minimum necessary CSO overflow depth of 11.3 inches and demonstrated no discernible reaction to wet weather (see graph in Attachment B). Note: The depth graph reflects a small adjustment in the sensor location in early November 2010 due to solids dropping out of the flow and fouling the sensor.

Given this evidence, MSD intends to separate the final two catch basins connected to the combined sewer system and close the overflow point for CSO172 by the same December 31, 2012 completion date. By closing the CSO, this effort will exceed the overflow level of protection agreed upon in the IOAP. The project will be renamed 'River Road Sewer Separation and CSO Closure.'

For your reference, I have enclosed copies of the original project fact sheet and map from the IOAP in Attachment C, respectively. A revised project fact sheet and map reflecting the project modifications have been provided in Appendix D.

If you have questions or need additional information, please contact me or Angela Akridge, Project WIN Program Manager, at (502) 540-6000.

Sincerely,

W. Brian Bingham
Regulatory Services Director

cc: Greg Heitzman Paula Purifoy
jtg/WBB

Attachments

CSO LTCP
Project Fact Sheet

LTCP Project Number: L_OR_MF_172_S_09B_B_A_0

Project Name: Adams Street Storage Basin

Project Type: Off-Line Storage

Receiving Stream: Ohio River

Project Description: This project includes a 0.12 MG underground covered concrete basin for CSO172 to reduce overflows to 0 overflows per year. The basin is located near River Road/CSX RR. The facility will be a pump out operation.

Design Parameters / Assumptions: Basins are designed to the 1st overflow event volume, resulting in 0 CSO overflows/year. The 1st peak flowrate is evaluated to compare gravity vs. pumped conveyance. Design for pump-back is 24 hours. Type of basin based on hydraulics and surroundings.

Surrounding Area Land Use: The project is located between River Rd. and I-64. CSO172 is located to the East of the project. The project is located within 'Parks, Cemeteries, etc.'

Apparent Utilities Description: Sewer Line approx. 2 ft. from proposed basin.

Capital Projects: No capital projects identified within the project area

Advanced Site Restoration: N/A

Estimated Capital Cost (2008): $983,000

Capital Cost / Gallon Overflow Removed: $1.11

Weighted Benefit / Cost Ratio (Capital Cost): 96.02

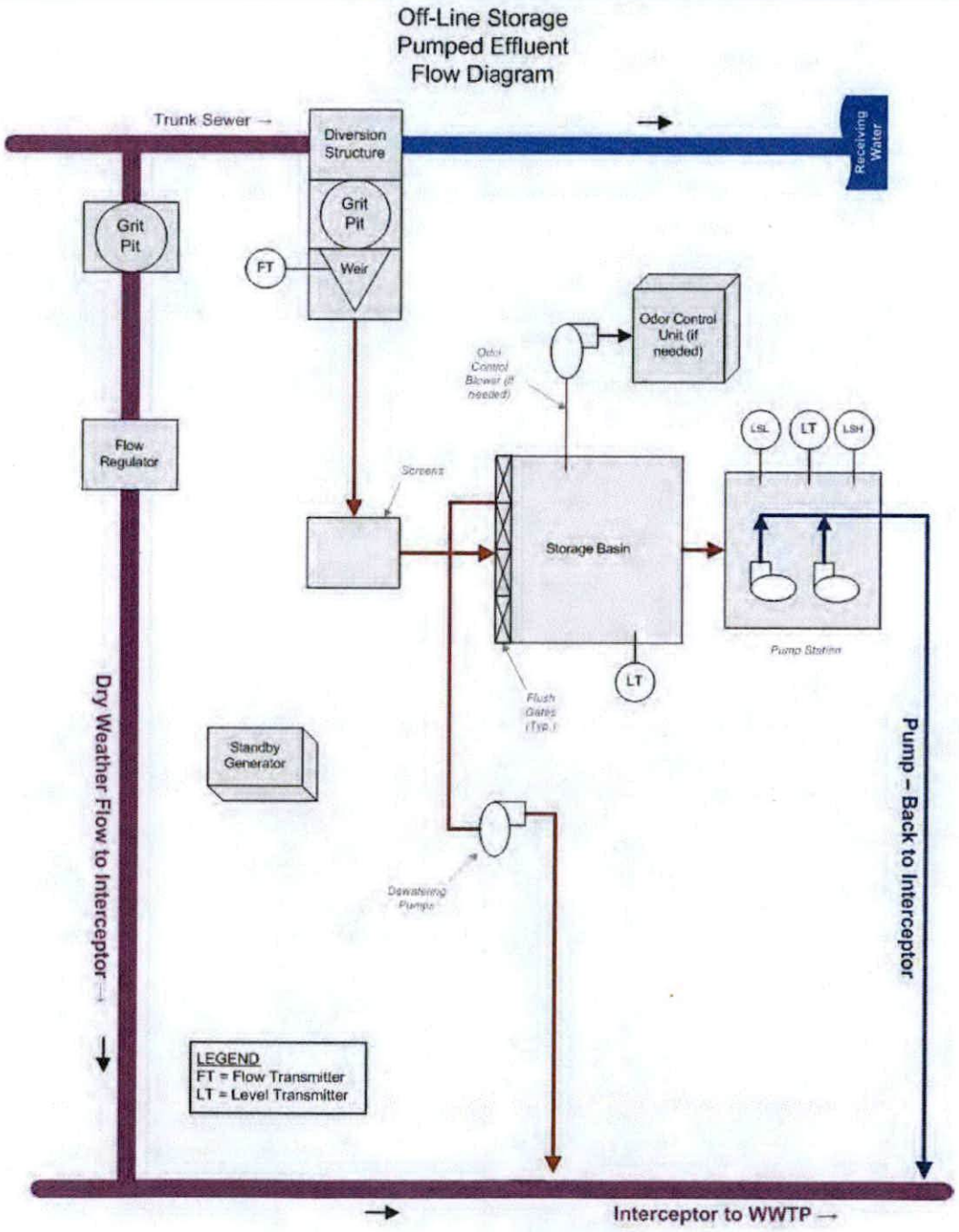
Overflow Points Addressed:

CSO Number	CSO Name	CSO Area (Acres)	2008 AAOV (MG / Yr)	# of Overflows / Yr	Post LTCP AAOV (MG/Yr)	Post LTCP # Overflows / Year
CSO172	Adams Street	13.67	1.28	31	0	0

NOTE: CSO hydraulic statistics are predicted based on InfoWorks model results.

CSO LTCP
Project Fact Sheet

LTCP Project Number: *L_OR_MF_172_S_09B_B_A_0*



Integrated Overflow Abatement Plan

Vol. 2 - Final CSO Long Term Control Plan

Ohio River

SolutionID # L_OR_MF_172_S_09B_B_A_0

Adams Street Storage Basin

Preliminary - For Budget Development Only

Legend

- Proposed Pump Station Solution
- Active CSO
- Eliminated CSO
- Pump Station
- Proposed Pipe Solution
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Streams
- Proposed Storage Solution
- Floodway
- Metro Parks
- County Boundary

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

1 inch equals 100 feet

Scalable when printed on 11" X 17" paper

Some boundaries are uniquely symbolized within the map.

Map Revision
December 3, 2008

Aerial Date: 2006

N

This document was developed in color. Reproduction in black and white may not represent the data as intended.

MSD

Metropolitan Sewer District

ATTACHMENT B

Project Name: Adams Street Sewer Separation

Project Type: Sewer Separation

Rec Stream: Ohio River

Project Description: This project includes the separation of the final two stormwater catch basins from the CSO172 drainage area and closure of the CSO. Televised investigation of the upstream drainage area determined that the system had been mostly separated during the re-configuration of River Road. Project will reduce overflows to zero overflows in a typical year.

Design Assumption:

Capital Cost: $20,000

Capital Benefit/Cost:

Present Worth Benefit Cost:

		Existing May 2012[1]		Baseline May 2012[2]	
CSO	CSO Name	Avg. Annual Overflow Volume	Avg. Annual Frequency	Avg. Annual Overflow Volume	Avg. Annual Frequency
CSO172	ADAMS STREET	1.13	25	1.11	25

1. Existing May 2012 conditions reflect existing system operating conditions as of that date.

2. Baseline May 2012 assumes all SSDP projects are complete and critical combined sewer facilities (e.g. Morris Forman WQTC Southwestern Pump Station, Starkey Pump Station) are operating at optimal, sustainable levels.

Integrated Overflow Abatement Plan

Volume 2 - Final CSO Long-Term Control Plan

River Road Sewer Separation and CSO172 Closure

INITAL SOLUTIONS

Preliminary - For Budget Development Only

Legend

- Active CSO
- Eliminated CSO
- Existing Catch Basin
- Existing Drainage Line
- Proposed Storm Catch Basin
- Proposed Storm Manhole
- Proposed Storm Pipe Solution
- Pump Station
- FORCE MAIN
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Floodway
- Metro Parks

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

1 inch = 200 feet

Scaleable when printed on 11"x17" paper

Some boundaries are uniquely symbolized within the map.

Map Revision
April 13, 2011

Aerial Date: 2006

N

LTCP Map Series: I:\projects\10777_ MSD\40109_CSO LTCP Development\LTCP PROJECT\GIS\MXDs\11x17template_final_msd_19.mxd

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