



*Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
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February 16, 2015

Dennis J. Sayre
NPDES Permitting and Enforcement Branch
U.S. EPA Region 4
61 Forsyth St., SW
Atlanta, Georgia 30303

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

Subject: Prospect #3 – ORFM System Improvements
Minor Project Modification
IOAP Project No. S_OR_MF_NB04_M_03_B_B
DOJ Case No. 90-5-1-1-08254

Attention Dennis and Jeff:

MSD is requesting approval of a proposed minor project modification to the Prospect #3 – ORFM System Improvements project (IOAP Project No. S_OR_MF_NB04_M_03_B_B). This modification is part of an overall adaptive management review of the approved 2012 IOAP Modification.

2009 IOAP Project Description

The Prospect #3 – ORFM System Improvements project originally involved upsizing 8,350 LF of gravity interceptor to 27-inch diameter to provide in-line storage for peak flows. Three pump stations were also to be upgraded, and the force main from the Muddy Fork Pump Station was to be upsized to 24-inch. The in-line storage was intended to attenuate flow peaks that exceeded the capacity of the Muddy Fork Pump Station and the downstream Ohio River Force Main (ORFM), thereby eliminating SSOs along the Muddy Fork Interceptor and at the Muddy Fork Pump Station. This project has an IOAP completion date of December 31, 2016.

Project Modification Request

The project modification proposed constructs a 1.96 million gallon (MG) covered off-line storage basin at the location of the upper-most SSO on the Muddy Fork Interceptor. This provides the same function as the originally proposed in-line storage, without the disruption caused by removing and replacing an existing 8,350 LF of interceptor through several established subdivisions. The three pump stations will be upgraded and the discharge of the Muddy Fork Pump Station will be upsized in accordance with the original project concept. No change in project schedule is proposed.



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Technical Justification

The proposed project modification provides the same wet weather capacity storage volume as the original project scope. The only difference is that storage is provided in an off-line basin rather than through in-line storage. Additionally, hydraulic modeling demonstrates that the level of control remains the same, at a 2.25-inch 3-hour cloudburst rain event. MSD prefers to construct a project on a single site rather than disrupting a much larger and densely populated area while replacing an active gravity pipe.

For your reference, a copy of the current project fact sheet and map from the 2012 IOAP Modification are in Attachment A. A new project fact sheet and map reflecting the location of the new off-line storage basin have been provided in Attachment B.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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) 540-6000.

Sincerely,



Angela L. Akridge, PE
Infrastructure Planning and Environmental Compliance Director

cc: Greg Heitzman Paula Purifoy

Attachments

X:\...Final Prospect # 3 - ORFM System Improvements February 2015 Modification.docx

Attachment A



SSO Project Fact Sheet

2012 IOAP Project Modification



Project Name Prospect #3 - ORFM System Improvemtns

Project Number S_OR_MF_NB04_M_03_B_B

Modeled Area ORFM

Branch or SSO ID NB04

Project Type Pump Station & Pipe Upgrades

Receiving Stream Goose Creek, Ohio River

Project Description Upsize 8,350 LF of interceptor upstream of Muddy Fork PS to 27". Upgrade pumps at Muddy Fork, Winding Falls/Phoenix Hill PS and New Market PS. Upsize force main from Muddy Fork PS to 24".

Reason for Overflow ORFM and pump station capacity

Design Parameters This solution is based on a 2.25 inch cloudburst rain event.

Project Constraints N/A

Estimated Capital Cost \$4,500,000

Weighted Benefit/Cost Ratio 4.8

Asset ID	SSO Start Date	Volume (Gal)
MSD0183-PS	1/1/2005	6000
MSD1063-PS	1/1/2005	6000
MSD1063-PS	1/13/2005	5000
89791	1/13/2013	21000
65623	1/13/2013	67500
40880	1/13/2013	174000
MSD0192-PS	1/13/2013	70875
MSD0183-PS	1/14/2007	100
40872	1/21/2010	12450
MSD1063-PS	1/22/2006	500
MSD0192-PS	1/24/2002	100000
MSD1063-PS	1/24/2002	6000
MSD1063-PS	1/26/2012	36375
MSD0186-PS	1/27/2012	37000
40880	1/27/2012	6020
89791	1/27/2012	7400
65623	1/27/2012	6200
40879	1/27/2012	181500
MSD0192-PS	1/3/2005	105000
MSD1063-PS	1/3/2005	3000
22436	1/3/2005	90000
40870	1/3/2005	81000
MSD0183-PS	1/3/2005	120000
MSD1063-PS	1/30/2002	1000
MSD1063-PS	1/4/2004	3000
MSD1063-PS	1/4/2005	110000
MSD0183-PS	1/4/2005	75000
MSD0183-PS	1/5/2005	100000
MSD0193-PS	1/6/2005	14000

Integrated Overflow Abatement Plan

Vol. 3 - Sanitary Sewer Discharge Plan

Ohio River Force Main Sewershed

Prospect #3 - ORFM System Improvements

Preliminary - For Budget Development Only

- Documented SSO
- Suspected SSO
- Haulop Locations
- Proposed Pump Station Solution
- Pump Stations
- WQTC
- Proposed Pipe Solution
- Combined Sewer Pipe
- Force Main
- Collector < 12"
- Interceptor >= 12"
- Streams
- Floodway
- Jefferson County Boundary

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

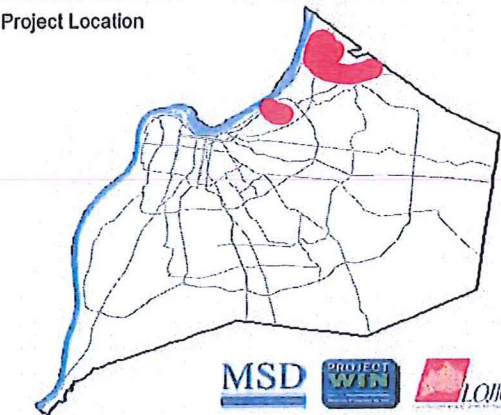
1 inch = 1,000 feet



Aerial Date: 2009

Map Revision: April 9, 2012

Project Location



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Attachment B

Project Name Prospect #3 - ORFM System Improvemets

Modeled Area ORFM
Branch or SSO ID NB04
Project Type Pump Station Upgrades & Storage
Receiving Stream Goose Creek, Ohio River
Project Description Construct a 1.96 MG covered storage basin. Upgrade pumps at Muddy Fork, Winding Falls/Phoenix Hill PS and New Market PS. Upsize force main from Muddy Fork PS to 24".
Reason for Overflow ORFM and pump station capacity
Design Parameters This solution is based on a 2.25 inch cloudburst rain event.
Project Constraints N/A
Estimated Capital Cost \$4,500,000
Weighted Benefit/Cost Rati 4.8

Asset-ID	SSO Start Date	Volume (Gal)
	No Data	No Data
22436	12/15/2007	30000
22436	1/3/2005	90000
40870	5/8/2009	18000
40870	9/27/2002	10000
40870	9/20/2009	39600
40870	1/3/2005	81000
40870	12/24/2008	2400
40870	12/19/2002	50000
40870	10/23/2007	75000
40870	3/28/2005	10000
40870	5/28/2004	18000
40871	11/30/2010	97500
40871	6/23/2011	75000
40871	9/26/2011	10050
40871	4/23/2011	1429875
40871	11/28/2011	549000
40871	12/5/2011	962500
40871	3/9/2011	126000
40871	3/5/2011	30000
40871	3/12/2011	16750
40871	2/28/2011	8750
40871	2/25/2011	36000
40871	11/16/2011	11750
40871	4/11/2011	123625
40871	3/4/2008	18000
40871	3/18/2008	312200
40871	11/25/2010	38750
40871	4/4/2008	120000

**Integrated Overflow Abatement Plan
Vol. 3 - Sanitary Sewer Discharge Plan**

Ohio River Force Main Sewershed

Prospect #3 - ORFM System Improvements

Preliminary - For Budget Development Only

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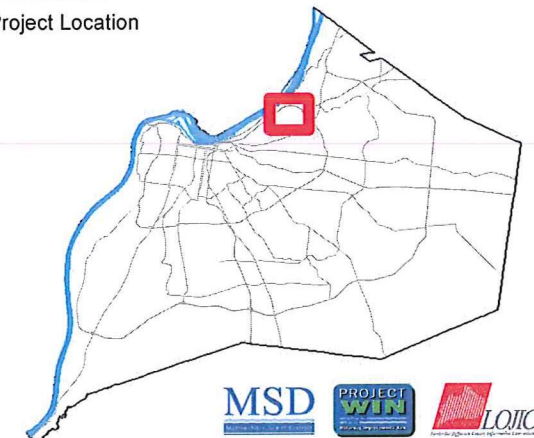
1 inch = 1,000 feet



Aerial Date: 2009

Map Revision: 11/17/2014

Project Location



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