



700 West Liberty Street | Louisville, KY 40203-1911
Phone: 502.540.6000 | LouisvilleMSD.org

February 27, 2024

Director, Division of Enforcement
Department for Environmental Protection
300 Sower Blvd.
Frankfort, KY 40601

Chief, Water Enforcement Branch
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street SW
Atlanta, GA 30303

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

Subject: Gunpowder Pump Station Elimination
Project Modification
IOAP Project No. S_HC_HN_NB02_S_09A_C_B
DOJ Case No. 3:05-cv-00236-CRS

Attention Chiefs and Director:

MSD is requesting approval of a proposed minor project modification to the Gunpowder PS Inline Storage project (IOAP Project No. S_HC_HN_NB02_S_09A_C_B). This request is part of the ongoing adaptive management review of the approved Integrated Overflow Abatement Plan (IOAP) dated April 2021.

2009 IOAP Project Description

The original Gunpowder PS Inline Storage Project consisted of replacing 120 LF of 8" gravity sewer with 60" sewer to be used for inline storage. The project completion date was December 31, 2021.

2012 IOAP Modification Project Description

No changes were proposed in the 2012 IOAP Modification (approved in 2014). The project details remained the same as the 2009 project.

2021 IOAP Modification Project Description

No technical changes were proposed in the 2021 IOAP Modification. The project details remained the same as the 2009 and 2012 projects. The project completion date was changed to December 31, 2025.

2022 Project Modification

In November 2022 a minor modification letter was sent requesting to change the project from pump station improvements to a pump station elimination project. The project name was changed to *Gunpowder Pump Station Elimination*. The modification request was approved in June 2023.

2023 Project Modification Request

The project modification request changes the completion data from December 31, 2025, to December 31, 2027. The project solution type remains the same (pump station elimination) as the 2022 project modification request. The project details include construction of approximately 2300 LF of 12" gravity sewer, a new pump station downstream of the existing pump station, and 200 LF of 6" force main, and 250 LF of 42" sewer to be used as inline storage upstream of the proposed pump station.

Gunpowder PS Inline Storage Minor Modification Request

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Technical Justification

After submittal of the minor modification request, MSD began preliminary design of the interceptor to eliminate the Gunpowder Pump Station, using the initial planning level alignment as a basis. A detailed review of the preliminary alignment revealed severe constructability challenges. These challenges included the depth of the sewer in a major roadway, significant utility conflicts along the route, and significant long-term impacts to several area businesses including the local post office. In addition, the proposed sewer would be required to tie into the invert of a much larger diameter sewer potentially causing future operational and maintenance concerns. MSD then began considering other alternatives for elimination of the pump station. MSD assessed approximately 30 alternatives and performed a value engineering process to review constructability, duration, and feasibility of each proposed alternative. Ultimately, an alternative alignment was selected, that included the construction of a new pump station downstream of the existing pump station. The new alignment has less challenges than the original alternative but is also deep, in poor soils and requires a bore under a highway resulting in an extended construction schedule. MSD is currently proceeding with the design of this selected alternative. Procurement has begun for the purchase of the property for the new pump station to help the schedule. Although MSD will continue efforts to expedite the project as much as possible, the final construction is currently estimated to be completed in 2026 pushing the completion schedule beyond December 31, 2025.

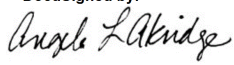
MSD regularly monitors this site and will pump and haul from the existing wet well to avoid sanitary sewer overflows. The most recent overflow at the station was recorded in 2015. The most recent hauling operation was performed in December 2021. While modeling indicates the project is needed, MSD operations and maintenance activities have minimized the overflows from this site.

For your reference, a copy of the original project fact sheet from the 2021 IOAP Modification can be found in Attachment "A". The approved 2022 Project Modification fact sheet is included as 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) 540-6136.

Sincerely,

DocuSigned by:

88FCD6928904119

Angela L. Arkridge, PE
Chief Strategy Officer
for Business Transformation and Regulatory Compliance

cc: T. Parrot D. Johnson, PE J. Quarles

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Attachment A: 2021 IOAP Modification Fact Sheet
Attachment B: 2022 Project Modification Fact Sheet

Attachment A





SSO Project Fact Sheet

2012 IOAP Project Modification



Project Name	Gunpowder PS Inline Storage
Project Number	S_HC_HN_NB02_S_09A_C_B
Modeled Area	Hunting Creek North WQTC
Branch or SSO ID	NB02
Project Type	Inline Storage
Receiving Stream	Harrods Creek
Project Description	This alternative includes replacing 120 LF of 8" with 60" in-line storage pipe. In addition, 28 LF of pipe upgrades will be needed.
Reason for Overflow	Pump station capacity
Design Parameters	This solution is based on a 1.82 inch cloudburst rain event.
Project Constraints	N/A
Estimated Capital Cost	\$176,000
Weighted Benefit/Cost Ratio	78.71

Asset ID	SSO Start Date	Volume (Gal)
MSD1055-LS	1/1/2005	1000
MSD1055-LS	1/24/2002	600
MSD1055-LS	1/3/2005	95000
MSD1055-LS	1/4/2005	4000
MSD1055-LS	1/5/2005	50000
MSD1055-LS	11/11/2004	5490
MSD1055-LS	12/16/2000	0
MSD1055-LS	12/19/2002	6000
MSD1055-LS	3/28/2005	1200
MSD1055-LS	4/21/2002	3000
MSD1055-LS	4/23/2011	36000
MSD1055-LS	4/23/2011	9000
MSD1055-LS	4/5/2006	5000
MSD1055-LS	5/19/2005	6000
MSD1055-LS	5/27/2004	2500
MSD1055-LS	5/3/2011	92100
MSD1055-LS	5/30/2004	10000
MSD1055-LS	5/5/2003	2000
MSD1055-LS	6/6/2002	3000
MSD1055-LS	7/14/2006	9000
MSD1055-LS	9/26/2011	267000
MSD1055-LS	9/27/2002	3000

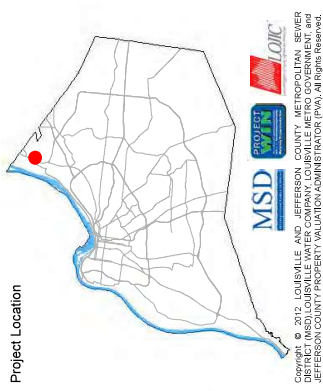
Integrated Overflow Abatement Plan
Vol. 3 - Sanitary Sewer Discharge Plan
Hunting Creek North Sewershed
Gunpowder PS Inline Storage

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 = 100 feet
Aerial Date: 2009
Map Revision: April 9, 2012



This document was developed in color. Reproduction in black and white may not represent the data as intended. Scaleable when printed on 11"x17" paper.

Attachment B



SSO Project Fact Sheet

2022 IOAP Project Modification



Project Name	Gunpowder PS Elimination
Project Number	S_HC_HN_NB02_S_09A_C_B
Modeled Area	Hunting Creek North WQTC
Branch or SSO ID	NB02
Project Type	Pump Station Elimination
Receiving Stream	Harrods Creek
Project Description	This project will eliminate the existing pump station by constructing approximately 3,000 LF of 18" sewer from the pump station site to the existing River Road Interceptor.
Reason for Overflow	Pump station capacity
Design Parameters	This solution is based on a 1.82 inch cloudburst rain event.
Project Constraints	N/A
Estimated Capital Cost	\$6,825,700
Weighted Benefit/Cost Ratio	78.71

Asset ID	SSO Start Date	Volume (Gal)
MSD1055-LS	1/24/2002	600
MSD1055-LS	1/3/2005	95000
MSD1055-LS	1/1/2005	1000
MSD1055-LS	11/11/2004	5490
MSD1055-LS	5/30/2004	10000
MSD1055-LS	5/27/2004	2500
MSD1055-LS	5/5/2003	2000
MSD1055-LS	4/5/2006	5000
MSD1055-LS	9/27/2002	3000
MSD1055-LS	1/4/2005	4000
MSD1055-LS	5/19/2005	6000
MSD1055-LS	12/16/2000	0
MSD1055-LS	4/21/2002	3000
MSD1055-LS	12/19/2002	6000
MSD1055-LS	3/28/2005	1200
MSD1055-LS	6/6/2002	3000
MSD1055-LS	9/26/2011	267000
MSD1055-LS	1/5/2005	50000
MSD1055-LS	5/3/2011	92100
MSD1055-LS	4/23/2011	36000
MSD1055-LS	4/23/2011	9000
MSD1055-LS	7/14/2006	9000



Integrated Overflow Abatement Plan Vol 3 Sanitary Sewer Discharge Plan

Hunting Creek North Sewershed

Gunpowder PS Elimination

Preliminary - For Budget Development Only

Documented SSO

Suspected SSO

Pump Stations

Haulop Locations

Proposed Pipe Solution

Combined Sewer Pipe

Force Main

Collector < 12"

Interceptor >= 12"

Drainage Mains

Streams

Floodway

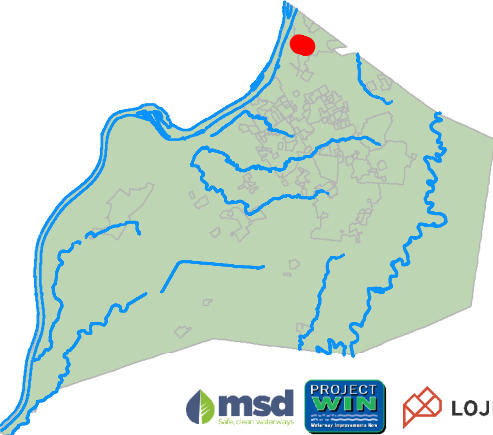
Small WWTP Service Area

Large WWTP Service Area

Jefferson County Boundary

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

1 inch = 200 feet
Aerial Date: 2021
Map Revision: Sep 30, 2022



Certificate Of Completion

Envelope Id: 6F0F84A119DE4F4783A2404B858FD8A8		Status: Completed
Subject: Complete with DocuSign: Minor Mod Letter - Kavanaugh - Feb 2024.pdf, Minor Mod Letter - Gunpowd...		
Source Envelope:		
Document Pages: 16	Signatures: 2	Envelope Originator:
Certificate Pages: 1	Initials: 0	Stephanie Laughlin
AutoNav: Enabled		700 W. Main St.
Envelopeld Stamping: Enabled		Louisville, KY 40203
Time Zone: (UTC-05:00) Eastern Time (US & Canada)		stephanie.laughlin@louisvillemtd.org
		IP Address: 199.15.73.232

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angela.akridge@louisvillemtd.org		Viewed: 2/29/2024 09:02 AM
Chief Strategy Officer		Signed: 2/29/2024 09:03 AM
Louisville & Jefferson County Metropolitan Sewer District		
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Notary Events	Signature	Timestamp
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Signing Complete	Security Checked	2/29/2024 09:03 AM
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