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November 16, 2022

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: Kavanaugh Road PS Elimination
Project Modification
IOAP Project No. S_HC_HC_MSD1085_S_03_A
Civil Action No. 3:05-cv-236-S
DOJ Case No. 90-5-1-1-08254

Attention Chiefs and Director:

MSD is requesting approval of a proposed minor project modification to the Kavanaugh Road PS Improvements project (IOAP Project No. S_HC_HC_MSD1085_S_03_A). This request is part of the ongoing adaptive management review of the Integrated Overflow Abatement Plan (IOAP), approved May 2021.

2009 IOAP Project Description

The original Kavanaugh Lane PS Improvements Project consisted of upgrading the existing pump station to 0.84 MGD and upsizing approximately 2,500 LF of force main to 8". The project completion date was December 31, 2024.

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 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 Request

The project modification request accounts for the recent acquisition of sewer infrastructure in Oldham County and changes the solution from pump station improvements to elimination of the existing pump station by constructing approximately 1,700 LF of 8" sewer and 7,100 LF of 18"-21" sewer from the pump station site to a future interceptor at the former Ash Avenue Wastewater Treatment Plant Site. The interceptor would be sized for the potential future elimination of the Cherry Lane and Kavanaugh Center pump stations. The project level of control will remain a 10-year, 3-hour storm event. The project completion date will remain December 31, 2025. The new name associated with this project is listed below.

Project Name Change	
Old (2021)	New
Kavanaugh Road PS Improvements	Kavanaugh Road PS Elimination

Technical Justification

Since the development and approval of the IOAP, MSD acquired the Oldham County Environmental Authority (OCEA) collection systems and treatment plants, including the Ash Avenue Wastewater Treatment Plant (WWTP). MSD recently finished construction of the Upper Floyds Fork Interceptor and is currently constructing an interceptor that will eliminate the Ash Avenue WWTP. These interceptors are shown in Figure 1. The construction of these new interceptors provides an additional alternative that wasn't available at the time of the IOAP development. The new interceptors were sized to provide capacity for the Kavanaugh Road Pump Station, two additional pump stations in the gravity watershed area, and potential growth in the upstream area. The flow from the pump station will be treated at the Floyds Fork Water Quality Treatment Center (FFWQTC). The FFWQTC currently has adequate capacity for the additional flow, and MSD is currently developing a facility plan that will accommodate long-term needs in the FFWQTC in the sewershed.



Figure 1

MSD analyzes select new capital projects using a Business Case Evaluation (BCE) Methodology to compare long-term costs and benefits of various alternatives. The BCE incorporates the same parameters as the IOAP benefit-cost analysis (BCA), but also provides a larger scale review to assist in selecting the best long-term capital project for MSD priorities. Pump stations generally have significantly higher annual operations and maintenance costs when compared to gravity interceptors. When comparing the overall benefits to MSD and the sewershed, elimination of the pump station allows for better planned future growth and to potentially eliminate two additional pumps stations in the future. Based on the results of the BCE analysis, Kavanaugh Road Station should be eliminated via gravity in lieu of inline storage. The elimination maintains the same level of control as the 2021 IOAP commitment while providing additional long-term benefits to MSD and its customers.

For your reference, a copy of the original project fact sheet from the 2021 IOAP Modification can be found in Attachment "A". An updated fact sheet to reflect this project modification 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

Kavanaugh Road PS Improvements Minor Modification Request
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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,



Angela L. Akridge, 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: Update Fact Sheet

Attachment A



Project Name **Kavanaugh Rd. PS Improvements**

Project Number **S_HC_HC_MSD1085_S_03_A**

Modeled Area Hite Creek

Branch or SSO ID MSD1085

Project Type PS Upgrades

Receiving Stream Hite Creek

Project Description This alternative includes upgrading the Kavanaugh Road pump station to handle peak flows of 0.84 MGD and upsize 2,458 LF of force main to 8".

Reason for Overflow Pump station capacity

Design Parameters This solution is based on a 2.60 inch cloudburst rain event.

Project Constraints Project will occur in MSD easements or land

Estimated Capital Cost \$1,110,000

Weighted Benefit/Cost Ratio 21.09

Asset ID	SSO Start Date	Volume (Gal)
MSD1085-PS	4/4/2008	176000
MSD1085-PS	5/11/2003	800

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

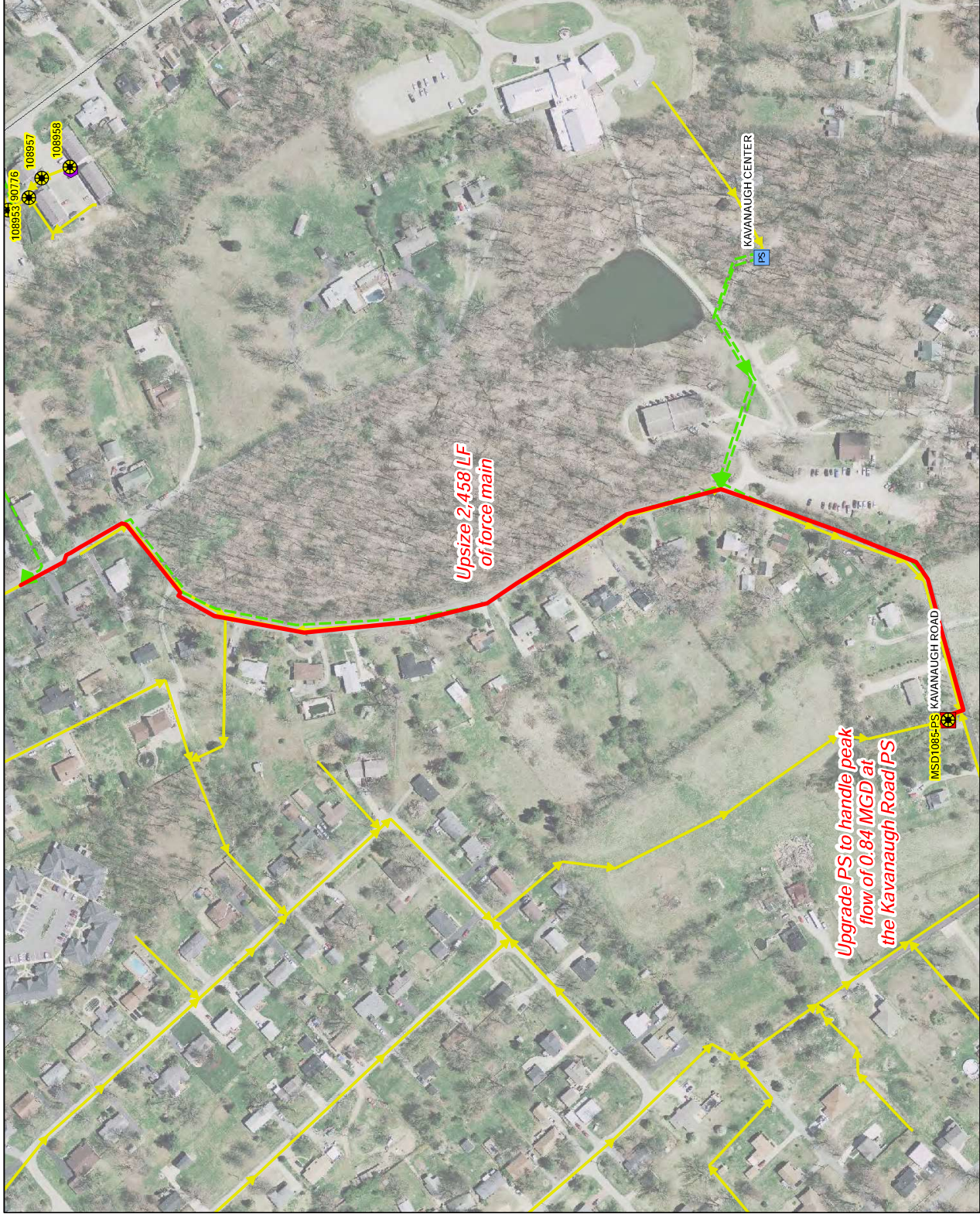
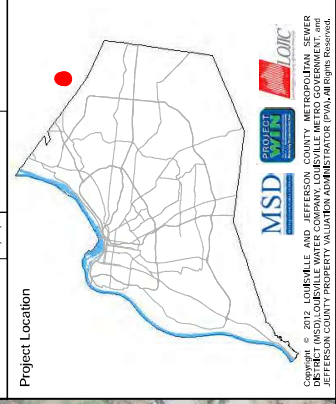
Hite Creek Sewershed
 Kavanaugh Rd PS Improvement

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 \geq 12"
- Proposed Storage Solution
- 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 = 200 feet
 Aerial Date: 2009
 Map Revision: April 9, 2012



Attachment B

Project Name **Kavanaugh Rd. PS Elimination**

Project Number **S_HC_HC_MSD1085_S_03_A**

Modeled Area Floyds Fork

Branch or SSO ID MSD1085

Project Type Pump Station Elimination

Receiving Stream Floyds Fork

Project Description This project will eliminate the existing pump station by constructing approximately 1,700 LF of 8" sewer and 7,100 LF of 18"-21" sewer from the pump station site to a future interceptor at the former Ash Avenue Wastewater Treatment Plant Site. The interceptor would be sized for the potential future elimination of the Cherry Lane and Kavanaugh Center pump stations. The elimination of these stations is not included in the project cost.

Reason for Overflow Pump station capacity

Design Parameters This solution is based on a 2.60 inch cloudburst rain event.

Project Constraints Project will occur in MSD easements or land

Estimated Capital Cost \$3,655,900

Weighted Benefit/Cost Ratio 21.09

Asset ID	SSO Start Date	Volume (Gal)
MSD1085-PS	4/4/2008	176000
MSD1085-PS	5/11/2003	800

Integrated Overflow Abatement Plan Vol 3 Sanitary Sewer Discharge Plan

Floyds Fork Sewershed

Kavanaugh Road PS Elimination

Preliminary - For Budget Development Only

- Proposed MH Solution
- Documented SSO
- Suspected SSO
- PS Pump Stations

Haulop Locations

Proposed Pipe Solution

Combined Sewer Pipe

Force Main

Collector < 12"

Interceptor >= 12"

Drainage Mains

Streams

Floodway

Jefferson County Boundary

Small WWTP Service Area

Large WWTP Service Area

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

1 inch = 900 feet



Aerial Date:
2021

Map Revision:
Sep 30, 2022



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