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August 17, 2012

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Environmental and Natural Resources Division
U.S. Department of Justice
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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: Story Avenue and Main Street Storage Basin
Minor Project Modification
IOAP Project No. L_OR_MF_020_S_09B_B_A_8
DOJ Case No. 90-5-1-1-08254

Attention Chiefs and Director:

MSD is requesting approval of a proposed minor project modification to the Story Avenue and Main Street Storage Basin project (IOAP Project No.L_OR_MF_020_S_09B_B_A_8). 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 Story Avenue and Main Street Storage Basin project entailed the construction of a 0.13 million gallon (MG), off-line storage basin adjacent to the Starkey Pump Station to be completed by December 31, 2013. The project controlled CSO 020 to an eight overflow per typical year level of control.

Proposed Project Modification

The project modification involves the construction of a 5.42 MG, off-line storage basin adjacent to the Starkey Pump Station to be completed by December 31, 2020. The project will control CSO 020 to an eight overflows per typical year level of control.

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 part of an internal modeling review and re-calibration, MSD initiated a detailed review of the combined sewer system hydraulic model. Upon completion of this review MSD discovered that the Story Avenue and Main Street Storage Basin was undersized in the previous submittal.

Since the last IOAP submittal, additional flow monitors have been installed in the system and on the outfalls. Detailed topographic surveys were conducted at many of the CSO structures. The combined sewer system model was updated with the new survey data and re-calibrated based on the data from the additional flow monitors. The flows in the re-calibrated model differed from the original model and required changes to some of the IOAP projects. Additionally, MSD Operations staff determined that the Starkey Pump Station could not run at the design pumping rate of 140 million gallons per day (MGD) as assumed in the original analysis. A revised pumping rate of 108 MGD was used in the current model.

Based on the results of the re-calibration, a level of control analysis was conducted on the Story Avenue and Main Street Storage Basin. The level of control analysis showed that the basin size of 5.42 MG would limit the number of overflows to eight per year while providing the best benefit/cost ratio. Therefore, MSD proposes to change the Story Avenue and Main Street Storage Basin solution from 0.13 MG to 5.42 MG. MSD is proposing to revise the schedule from the original completion date of December 31, 2013, to December 31, 2020. The need for this proposed change is based on the scale of the change and the size of the property that is needed. Additionally, MSD would like to further monitor the pumping rate of the Starkey Pump Station to verify that the 108 MGD pumping rate can be met.

For your reference, a copy of the original project fact sheet and map from the 2009 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.

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 Ms. Angela Akridge, Project WIN Program Manager, or myself at (502) 540-6000.

Sincerely,

W. Brian Bingham
Regulatory Services Director

cc: G. Heitzman P. Purifoy

Attachments

MSD

Metropolitan Sewer District

ATTACHMENT A

CSO LTCP
Project Fact Sheet

LTCP Project Number: *L_OR_MF_020_S_09B_B_A_8*

Project Name: Story Avenue and Main Street Storage Basin

Project Type: Off-Line Storage

Receiving Stream: Ohio River

Project Description: This project includes the construction of a 0.13 MG off-line underground covered storage basin for CSO020 to reduce overflows to 8 overflows per year. The facility will require a 0.13 MGD PS the stored flow to the RSPS following the wet weather event.

Design Parameters / Assumptions: Basins are designed to the 9th overflow event volume, resulting in 8 CSO overflows/year. The 9th 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: This project is located within an 'Industrial' property, approximately 100' Northeast of Franklin St. and approximately 200' Northwest of CSO020.

Apparent Utilities Description: No major utilities conflict relating to the proposed basin

Capital Projects: 2008~Middle Fork Rehab Phase 2; Floodwall Closure @ Buchanan; CSO020 and 62 S&F Control - Awaiting Start; 2007~District 4 General Fund DRI - Complete; 2015~Integration of Buchanan PS to RTC - Hidden

Advanced Site Restoration: N/A

Estimated Capital Cost (2008): $1,580,000

Capital Cost / Gallon Overflow Removed: $1.10

Weighted Benefit / Cost Ratio (Capital Cost): 74.25

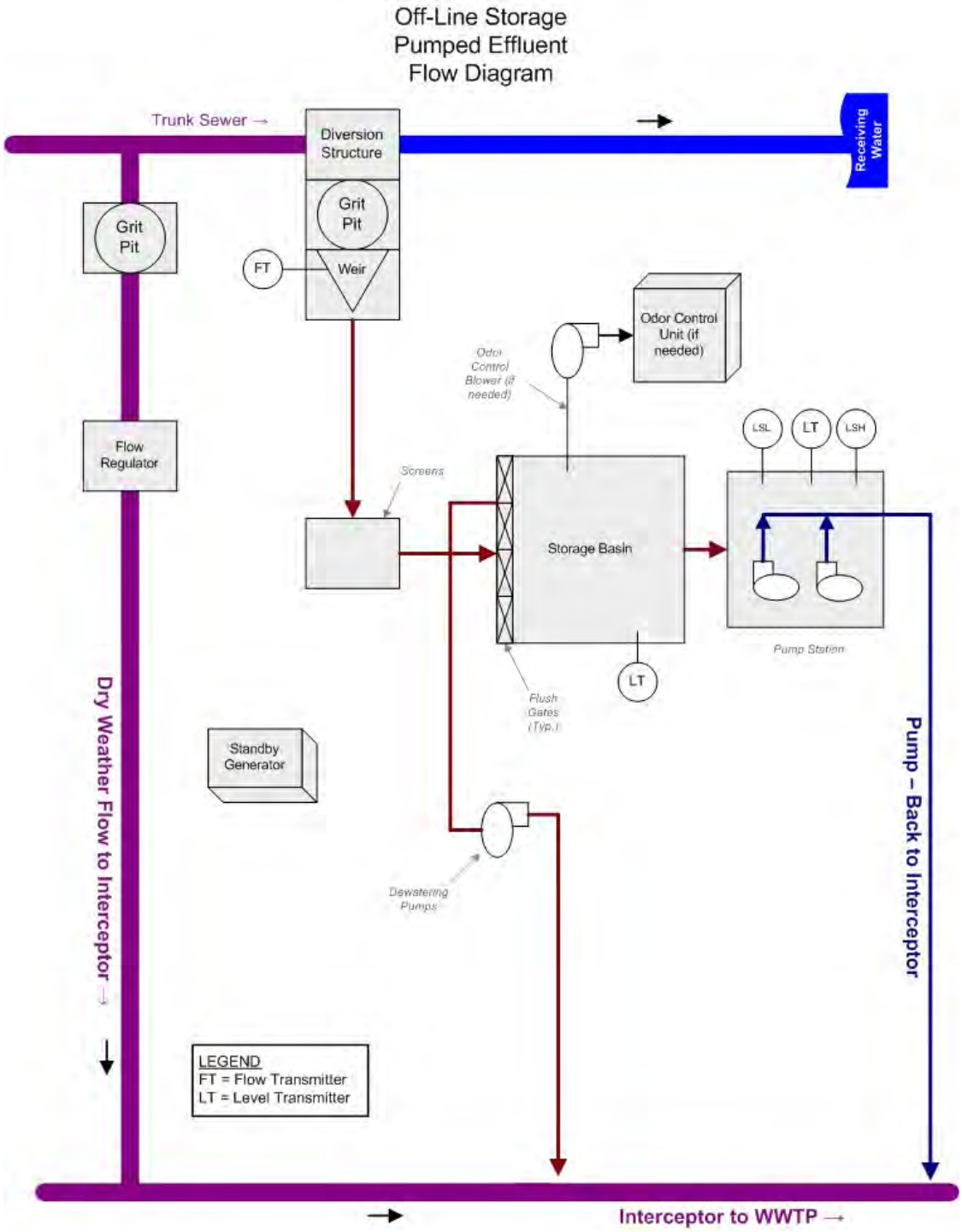
Overflow Points Addressed:

CSO Number	CSO Name	CSO Area (Acres)	2008 AAOV (MG / Yr)	# of Overflows / Yr	Post LTCP AAOV (MG/Yr)	Post LTCP # Overflows / Year
CSO020	Buchanan Pump Station	86.59	6.29	11	4.21	8

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

CSO LTCP
Project Fact Sheet

LTCP Project Number: *L_OR_MF_020_S_09B_B_A_8*



Integrated Overflow Abatement Plan

Volume 2 - Final CSO Long-Term Control Plan

Ohio River
Solution ID # L_OR_MF_020_S_09B_B_A_8
Story Avenue and Main Street Storage Basin

Preliminary - For Budget Development Only

Legend

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

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

1 inch = 100 feet
Scaleable when printed on 11"x17" paper

Some boundaries are uniquely symbolized within the map.

Map Revision
Mar 13, 2009

Aerial Date: 2006

N

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MSD

Metropolitan Sewer District

ATTACHMENT B

Project Name: Story Avenue and Main Street Storage Basin

Project Type: Off-Line Storage

Rec Stream: Middle Fork Beargrass Creek

Project Description: This project includes the construction of a 5.42 MG off-line underground covered storage basin for CSO020 to reduce overflows to 8 overflows per typical year. Project assumes that the Starkey Pump Station has a typical, minimum pumping rate of 108 MGD. Additional storage or a higher pump-out rate may be added if deemed advantageous to operational and maintenance flexibility as well as impacts to other downstream CSO control projects.

Design Assumption: Basins are designed to the 9th overflow event volume, resulting in 8 CSO overflows per typical year. Type of basin based on hydraulics and surroundings. Starkey PS must be able to maintain a minimum pumping rate of 108 MGD.

Capital Cost: $13,949,000

Capital Benefit/Cost: 19.63

Present Worth Benefit Cost: 21.6

		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
CSO020	BUCHANAN PS	436.87	51	143.94	37

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.

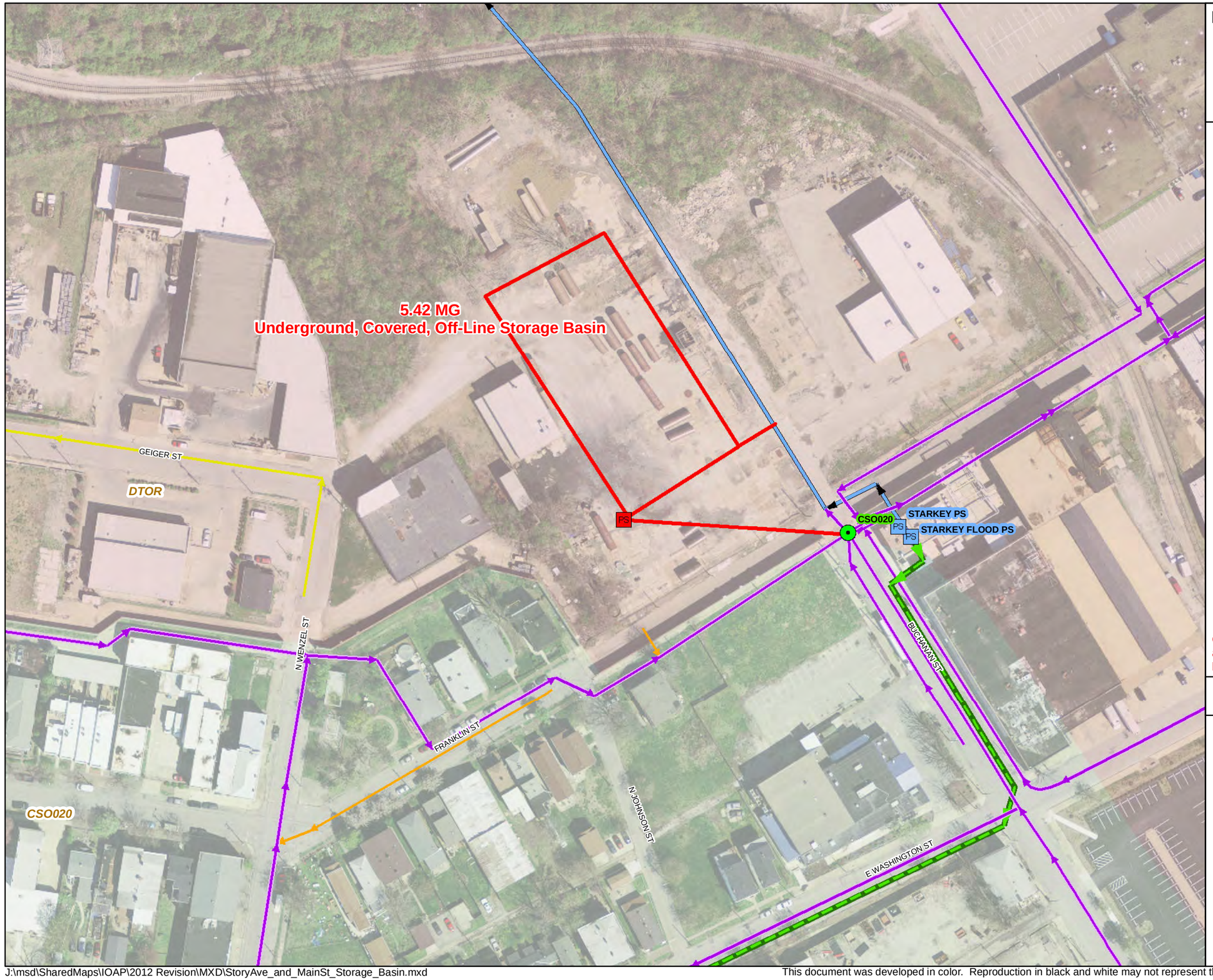
Integrated Overflow Abatement Plan

Vol. 2 - Final CSO Long Term Control Plan

Ohio River

Story Ave & Main St Storage Basin

Preliminary - For Budget Development Only



- Active CSO
- Eliminated CSO
- Proposed Pump Station Solution
- Pump Stations
- Proposed Pipe Solution
- Combined Sewer Pipe
- Force Main
- Collector < 12"
- Interceptor >= 12"
- Drainage Mains
- 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 = 100 feet	N	Aerial Date: 2009	Map Revision: April 9, 2012

J:\msd\SharedMaps\IOAP\2012 Revision\MXD\StoryAve_and_MainSt_Storage_Basin.mxd

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