



*Louisville and Jefferson County Metropolitan Sewer District
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August 17, 2012

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

Subject: Lexington Road and Payne Street Storage Basin
Minor Project Modification
IOAP Project No. L_SO_MF_083_M_09B_B_A_8
DOJ Case No. 90-5-1-1-08254

Attention Chiefs and Director:

MSD is providing advanced notification of a proposed minor project modification to the Lexington Road and Payne Street Storage Basin project (IOAP Project No. L_MI_MF_127_M_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. No action is requested at this time.

2009 IOAP Project Description

The original Lexington Road and Payne Street Storage Basin project involved the construction of a 7.31 million gallon (MG) storage basin to be completed by December 31, 2020, with an eight overflows per typical year level of control.

Proposed Project Modification

The project modification involves the construction of an 8.18 MG storage basin to be completed by December 31, 2020, with a zero overflow 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



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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. No action is requested at this time.

Technical Justification

Since the last IOAP submittal, additional flow monitors have been installed in the system and on the overflow structures and 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.

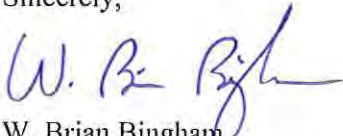
Based on the results of the re-calibration, a level of control analysis was conducted on the Lexington Road and Payne Street Storage Basin. The level of control analysis showed that the basin size of 8.18 MG would meet zero overflows in a typical year level of control while providing the best benefit/cost ratio. Therefore, MSD proposes to change the Lexington Road and Payne Street Storage Basin solution from 7.31 MG to 8.18 MG. These improvements will maintain the same completion date of December 31, 2020, as the original solution.

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: Greg Heitzman Paula Purifoy

Attachments

MSD

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ATTACHMENT

A

CSO LTCP Project Fact Sheet



LTCP Project Number: L_SO_MF_083_M_09B_B_A_8

Project Name: Lexington Road and Payne Street Storage Basin

Project Type: Off-Line Storage

Receiving Stream: South Fork Beargrass Creek

Project Description: This project includes an 7.31 MG off-line covered storage basin for CSO082, 84, 118, 119, 120, 121, 141, & 153 to reduce overflows to 8 overflows per year. The basin will require an 7.31 MGD PS to return the stored flow to the interceptor.

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: The project is located within 'Industrial' property. The project is located approx. 120 ft. SE from CSO082. The project is located N off of Lexington Rd.

Apparent Utilities Description: Streetlights within proposed basin area, sewer line < 5 ft. from SE corner of proposed basin

Capital Projects: 2011~Solids & Floatables CSO118- Hidden 2007~Middle Fork Rehab Phase 2; 2013~Solids & Floatables CSO084; 2013~RTC @ CSO118 & 2012~Real Time Control @ CSO118 (BG1) - Awaiting Start

Advanced Site Restoration: The area of the proposed tank is undeveloped green space. Current and previous public use or development proposals for these areas have identified potential environmental mitigations. The project budget includes a site restoration allowance.

Estimated Capital Cost (2008): \$25,200,000

Capital Cost / Gallon Overflow Removed: \$0.18

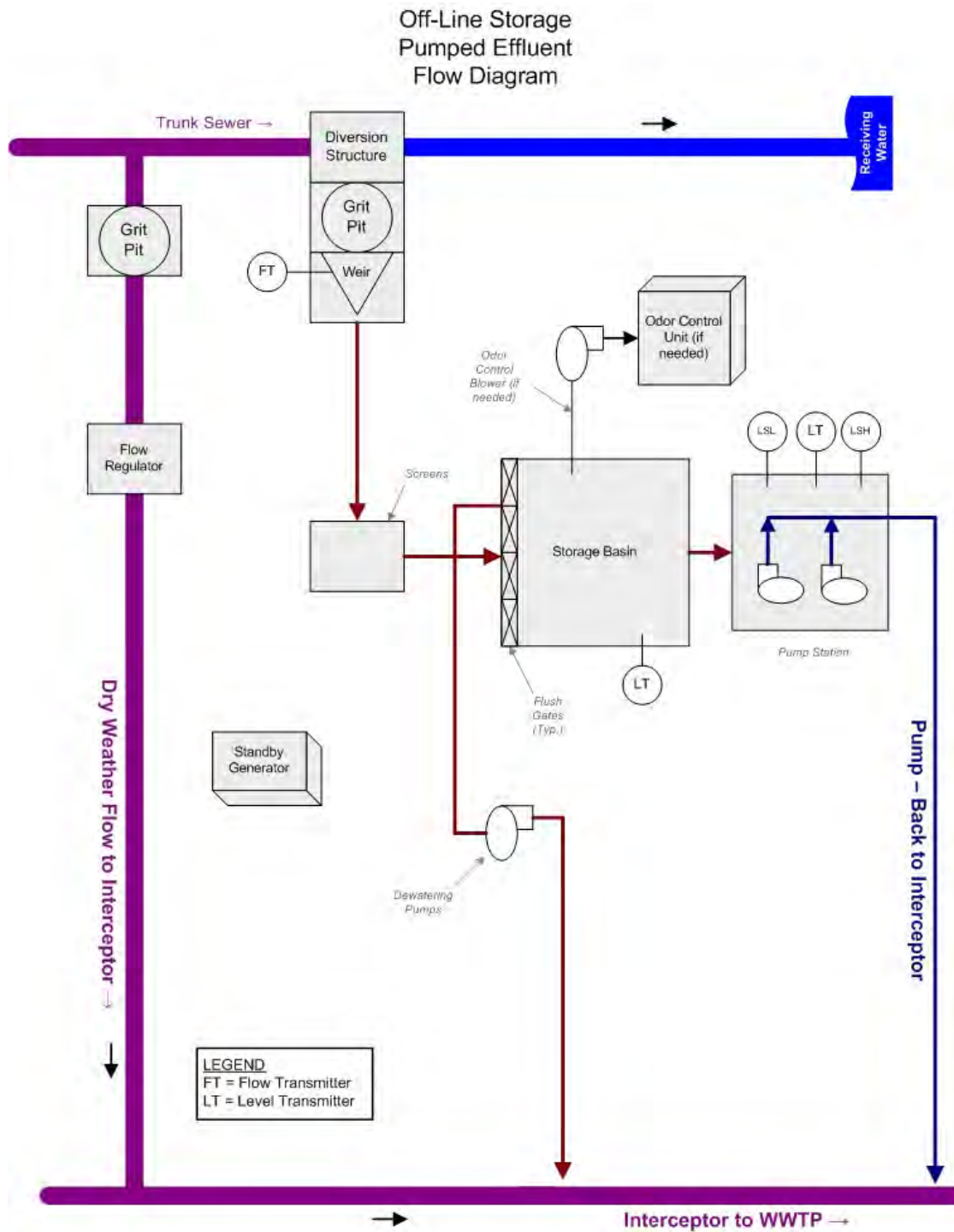
Weighted Benefit / Cost Ratio (Capital Cost): 45.60

Overflow Points Addressed:

<u>CSO Number</u>	<u>CSO Name</u>	<u>CSO Area (Acres)</u>	<u>2008 AAOV (MG / Yr)</u>	<u># of Overflows / Yr</u>	<u>Post LTCP AAOV (MG/Yr)</u>	<u>Post LTCP # Overflows / Year</u>
CSO082	Beargrass Interceptor Beargrass Creek	0.00	1.10	24	0.42	8
CSO084	Brent Street at Beargrass Creek	125.07	17.91	34	1.92	8
CSO118	Regulator Number 15 - East Broadway	354.12	99.69	39	13.37	8
CSO119	Brent Street Sewer	7.58	12.38	40	2.04	8
CSO120	Phoenix Hill Sewer	16.51	9.22	51	1.44	8
CSO121	Regulator Number 18 - Green Street	107.19	11.22	28	1.82	8
CSO141	Baxter Avenue at Beargrass Creek	7.72	5.06	27	0.94	8
CSO153	Cooper Street	41.65	15.59	56	1.44	8

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

LTCP Project Number: L_SO_MF_083_M_09B_B_A_8



Integrated Overflow Abatement Plan
Vol. 2 - Final CSO Long Term Control Plan
 South Fork Beargrass Creek
 SolutionID # L_SO_MF_083_M_09B_B_A_8
 Lexington Rd and Payne St Storage Basin

Preliminary - For Budget Development Only
Legend

- PS Proposed Pump Station Solution
- Active CSO
- Eliminated CSO
- PS 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.

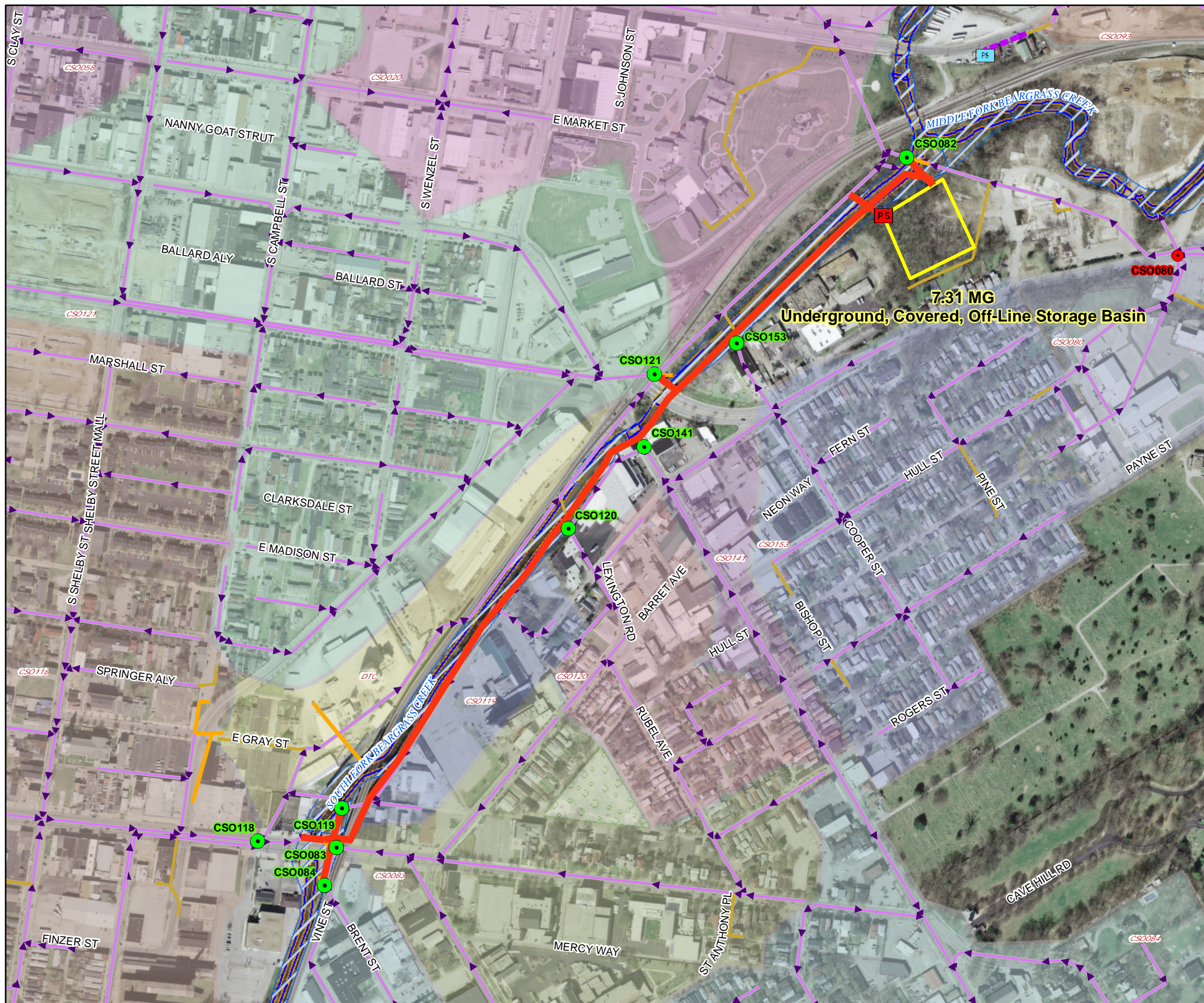
1 inch equals 400 feet
 Scalable when printed on 11" X 17" paper



Some boundaries are uniquely symbolized within the map.
 Map Revision
 December 3, 2008
 Aerial Date: 2006



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Metropolitan Sewer District

ATTACHMENT

B

Project Name: **Lexington Road and Payne Street Storage Basin**

Project Type: Off-Line Storage

Rec Stream: Middle Fork Beargrass Creek

Project Description: This project includes an 8.18 MG off-line covered storage basin for CSO083, 84, 118, 119, 120, 121, 141, 153 & 082 to reduce overflows to zero overflows per typical year. The basin will require an 16.46 MGD PS to return the stored flow to the interceptor.

Design Assumption: Basins are designed to the largest overflow event volume, resulting in zero CSO overflows in a typical year. The 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.

Capital Cost: \$28,102,000

Capital Benefit/Cost: 67.61

Present Worth Benefit Cost: 75.46

CSO	CSO Name	Existing May 2012 ¹		Baseline May 2012 ²	
		Avg. Annual Overflow Volume	Avg. Annual Frequency	Avg. Annual Overflow Volume	Avg. Annual Frequency
CSO082	BGI AT BGC	25.31	39	7.11	31
CSO083	BRENT ST & BROADWAY CONNECT	0.00	0	0.00	0
CSO084	BRENT ST @ BGC	3.27	18	3.26	18
CSO118	REG NO 15 - E BRDWY	41.27	33	38.88	33
CSO119	BRENT STREET SEWER	4.24	29	4.02	29
CSO120	PHOENIX HILL SEWER	15.51	51	15.36	52
CSO121	REG NO 18 - GREEN ST	1.06	6	0.92	6
CSO141	BAXTER AVE @ BGC	0.36	38	0.36	38
CSO153	COOPER STREET	9.72	47	8.63	46

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**

South Fork Beargrass Creek

Lexington Rd and Payne 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 = 400 feet



Aerial Date: 2009

Map Revision: April 9, 2012



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