

CSO LTCP Green Infrastructure Project Fact Sheet



LTCP Project Number: L_OR_MF_053_S_12_A_A

Project Name: MSD Main Office Parking Lot Biofiltration Swale

Project Type: Biofiltration technique

Receiving Stream: Ohio River

Project Description: Biofiltration swale in the MSD headquarters parking lot.

**Design Parameters /
Assumptions:**

- 63,000 sq ft of the MSD parking lot drains to 4,000 sq ft of biofiltration swale located on MSD's property.
- The contributing drainage area is 100% impervious.
- The contributing drainage area would generate approximately 1.40 million gallons of runoff during a typical year of rainfall.
- Depth of engineered soil layer would be 12 to 24 inches.
- Depth of gravel base layer would be 12 to 24 inches.
- Estimated infiltration rate is 3.5 in/hr.
- Typical biofiltration swale cost is approximately \$20 per sq ft.
- The biofiltration swale could completely capture and reduce approximately 10 times the footprint area of the biofiltration swale during a typical year of rainfall.

**Surrounding Area
Land Use:** Project is located on the MSD headquarters parking lot, labeled as 'General Commercial and Office' and across the street from 'Public and Semi-Public'.

**Apparent Utilities
Description:** No major utility conflicts

**Estimated Capital Cost
(2008 dollars):** \$80,000

**Capital Cost / Stormwater
Reduction:** \$0.09/gal

Overflow Points Addressed:

<u>CSO Number</u>	<u>CSO Name</u>	<u>2008 AAOV (MG/Yr)</u>	<u>Number of Overflow / Yr</u>	<u>CSO Area (Acres)</u>
CSO053	Eighth Street	4.52	23	34.10

**Integrated Overflow Abatement Plan
Vol. 2 - Final CSO Long-Term Control Plan**

Ohio River Sewershed
Solution ID # L_OR_MF_053_S_12_A_A
MSD Main Office Parking Lot Biofiltration Swale

Preliminary - for Budget Development Only

Legend

- Active CSO
- Eliminated CSO
- PS Pump Station
- WWTP
- BMP Footprint
- BMP Drainage Area
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Existing Drainage Line
- Streams
- 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 = 100 feet
Scalable when printed on 11"x17" paper
Some boundaries are uniquely symbolized within the map.
Map Revision August 19, 2008
Aerial Date: 2006



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BMP Footprint: 4,000 sf
BMP Drainage Area: 63,000 sf



CSO LTCP Green Infrastructure Project Fact Sheet



LTCP Project Number: L_OR_MF_053_S_12_A_B

Project Name: Seventh and Cedar Green Parking Lot

Project Type: Biofiltration technique

Receiving Stream: Ohio River

Project Description: Green parking lot located on the northwest corner of the Louisville Metro office.

Design Parameters / Assumptions:

- Project assumes that 4,800 sq ft of biofiltration swales will capture the runoff from 78,000 sq ft of parking lot and rooftop.
- The contributing drainage area is 100% impervious.
- The contributing drainage area would generate approximately 1.70 million gallons of runoff during a typical year of rainfall.
- Depth of engineered soil layer would be 12 to 24 inches.
- Depth of gravel base layer would be 12 to 24 inches.
- Estimated infiltration rate is 3.5 in/hr.
- Typical biofiltration swale cost is approximately \$20 per sq ft.
- The biofiltration swale could completely capture and reduce approximately 10 times the footprint area of the biofiltration swale during a typical year of rainfall.

Surrounding Area Land Use: Project is located within 'Public and Semi-Public' at the corner of Cedar Street and Seventh Street.

Apparent Utilities Description: No major utility conflicts

Estimated Capital Cost (2008 dollars): \$96,000

Capital Cost / Stormwater Reduction: \$0.09/gal

Overflow Points Addressed:

<u>CSO Number</u>	<u>CSO Name</u>	<u>2008 AAOV (MG/Yr)</u>	<u>Number of Overflow / Yr</u>	<u>CSO Area (Acres)</u>
CSO053	Eighth Street	4.52	23	34.10

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Ohio River Sewershed
Solution ID # L_OR_MF_053_S_12_A_B
Seventh and Cedar Green Parking Lot

Preliminary - for Budget Development Only

Legend

- Active CSO
- Eliminated CSO
- PS Pump Station
- WWTP
- BMP Footprint
- BMP Drainage Area
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Existing Drainage Line
- Streams
- MP Metro Parks
- CB County Boundary

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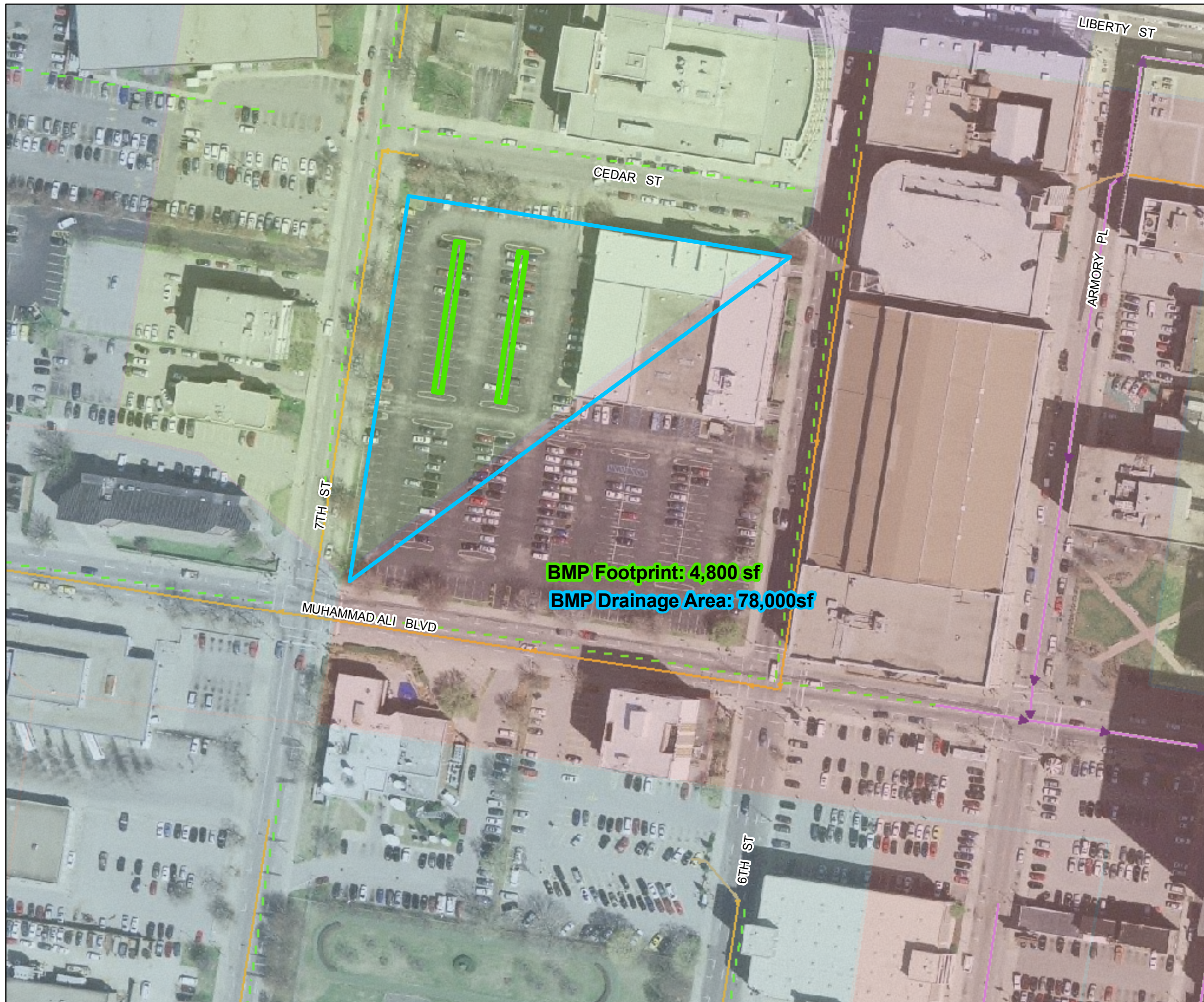
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BMP Footprint: 4,800 sf
BMP Drainage Area: 78,000sf

CSO LTCP Green Infrastructure Project Fact Sheet



LTCP Project Number: L_OR_MF_181_S_12_A

Project Number: Second and Broadway Green Parking Lot

Project Type: Biofiltration technique

Receiving Stream: Ohio River

Project Description: Green parking lot at Jefferson Community College located at the northeast corner of Second Street and Broadway.

Design Parameters / Assumptions:

- Project assumes that 4,800 sq ft of biofiltration swales will capture the runoff from 236,000 sq ft of parking lot.
- The contributing drainage area is 100% impervious.
- The contributing drainage area would generate approximately 5.20 million gallons of runoff during a typical year of rainfall.
- Depth of engineered soil layer would be 12 to 24 inches.
- Depth of gravel base layer would be 12 to 24 inches.
- Estimated infiltration rate is 3.5 in/hr.
- Typical biofiltration swale cost is approximately \$20 per sq ft.
- The biofiltration swale could completely capture and reduce approximately 10 times the footprint area of the biofiltration swale during a typical year of rainfall.

Surrounding Area Project is located on 'Public and Semi-Public'

Land Use:

Apparent Utilities No major utility conflicts

Description:

Estimated Capital Cost \$96,000
(2008 dollars):

Capital Cost / Stormwater \$0.09/gal
Reduction:

Overflow Points Addressed:

<u>CSO Number</u>	<u>CSO Name</u>	<u>2008 AAOV</u> <u>(MG/Yr)</u>	<u>Number of</u> <u>Overflow / Yr</u>	<u>CSO Area (Acres)</u>
CSO181	CRD Second & Broadway NO 2	0.01	3	22.63
CSO118	REG NO 15 – East Broadway	99.69	39	354.10

**Integrated Overflow Abatement Plan
Vol. 2 - Final CSO Long-Term Control Plan**

Ohio River Sewershed
Solution ID # L_OR_MF_181_S_12_A
Second and Broadway Green Parking Lot

Preliminary - for Budget Development Only

Legend

- Active CSO
- Eliminated CSO
- PS Pump Station
- WWTP
- BMP Footprint
- BMP Drainage Area
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Existing Drainage Line
- Streams
- Metro Parks
- County Boundary

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BMP Footprint: 4,800 sf
BMP Drainage Area: 236,000 sf

CSO LTCP Green Infrastructure Project Fact Sheet



LTCP Project Number: L_OR_MF_198_S_12_A

Project Name: Third and Ormsby Biofiltration Swales

Project Type: Biofiltration technique

Receiving Stream: Ohio River

Project Description: Project is located in the right of way along Third Street north of Ormsby Avenue

Design Parameters / Assumptions:

- Project assumes that 2,400 sq ft of biofiltration swales will drain approximately 49,000 sq ft including 39,000 sq ft of parking lot.
- The contributing drainage area is 80% impervious.
- The contributing drainage area would generate approximately 0.90 million gallons of runoff during a typical year of rainfall.
- Depth of engineered soil layer would be 12 to 24 inches.
- Depth of gravel base layer would be 12 to 24 inches.
- Estimated infiltration rate is 3.5 in/hr.
- Typical biofiltration swale cost is approximately \$20 per sq ft.
- The biofiltration swale could completely capture and reduce approximately 10 times the footprint area of the biofiltration swale during a typical year of rainfall.

Surrounding Area

Project is located within 'Vacant and Undeveloped' but surrounded by 'Public and Semi-Public', 'General Commercial and Office' , and 'Multi-Family Residential'

Land Use:

Apparent Utilities

No major utility conflicts

Description:

Estimated Capital Cost (2008 dollars): \$48,000

Capital Cost / Stormwater Reduction: \$0.09/gal

Overflow Points Addressed:

<u>CSO Number</u>	<u>CSO Name</u>	<u>2008 AAOV (MG/Yr)</u>	<u>Number of Overflow / Yr</u>	<u>CSO Area (Acres)</u>
CSO198	CRD S Third & Ormsby	0.002	2	4.4

**Integrated Overflow Abatement Plan
Vol. 2 - Final CSO Long-Term Control Plan**

Ohio River Sewershed
Solution ID # L_OR_MF_198_S_12_A
Third and Ormsby Biofiltration Swale

Preliminary - for Budget Development Only

Legend

- Active CSO
- Eliminated CSO
- PS Pump Station
- WWTP
- BMP Footprint
- BMP Drainage Area
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Existing Drainage Line
- Streams
- MP Metro Parks
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BMP Footprint: 2,400 sf
BMP Drainage Area: 49,000 sf



**CSO LTCP
Green Infrastructure
Project Fact Sheet**



LTCP Project Number: L_OR_MF_022_S_12_A

Project Name: Sixth and Muhammad Ali Green Parking Lot

Project Type: Biofiltration Swale

Receiving Stream: Ohio River

Project Description: Green parking lot located in the southeast corner of the Louisville Metro office.

**Design Parameters /
Assumptions:**

- Project assumes that the 4,800 sq ft of biofiltration swale will capture the runoff from 78,000 sq ft of parking lot and rooftop.
- The contributing drainage area is 100% impervious.
- The contributing drainage area would generate approximately 1.70 million gallons of runoff during a typical year of rainfall.
- Depth of engineered soil layer would be 12 to 24 inches.
- Depth of gravel base layer would be 12 to 24 inches.
- Estimated infiltration rate is 3.5 in/hr.
- Typical biofiltration swale cost is approximately \$20 per sq ft.
- The biofiltration swale could completely capture and reduce approximately 10 times the footprint area of the biofiltration swale during a typical year of rainfall.

**Surrounding Area
Land Use:** Project is located within 'Public and Semi-Public' at the corner of Muhammad Ali and Sixth Street.

**Apparent Utilities
Description:** No major utility conflicts

**Estimated Capital Cost
(2008 dollars):** \$96,000

**Capital Cost / Stormwater
Reduction:** \$0.09/gal

Overflow Points Addressed:

<u>CSO Number</u>	<u>CSO Name</u>	<u>2008 AAOV (MG/Yr)</u>	<u>Number of Overflow / Yr</u>	<u>CSO Area (Acres)</u>
CSO022	Fourth Street PS	0.95	4	100.89

**Integrated Overflow Abatement Plan
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Ohio River Sewershed
Solution ID # L_OR_MF_022_S_12_A
Sixth and Muhammad Ali Green Parking Lot

Preliminary - for Budget Development Only

Legend

- Active CSO
- Eliminated CSO
- PS Pump Station
- WWTP
- BMP Footprint
- BMP Drainage Area
- Force Main
- Collector < 12"
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BMP Footprint: 4,800 sf
BMP Drainage Area: 78,000 sf