PROJECT GROUNDWORK
your pipeline to clean water

Lick Run Project

The Lick Run Project – part of the Metropolitan Sewer District of Greater Cincinnati's (MSD) solution for Lower Mill Creek – will eliminate about 369 million gallons of combined sewer overflows (CSOs) into the Mill Creek each year during a typical year of rain. The project will also improve water quality, create new jobs, and provide opportunities for neighborhood revitalization.

Challenge in Lower Mill Creek

During rains, our combined sewer system can overflow into streams and rivers, making Cincinnati among the top five communities in the U.S. for combined sewer overflows (CSOs).

MSD is under a federal Consent Decree to reduce the overflows and has implemented a major public works initiative called "Project Groundwork" to achieve compliance and bring value to the community through this significant investment.

More than half of our 11 billion gallons in annual overflows occur in the Lower Mill Creek watershed, which covers 40,000 acres in the heart of Cincinnati.

As a result, MSD is implementing a near-term solution called the "Lower Mill Creek Partial Remedy (LMCPR)" that seeks to significantly reduce the overflows by 2018. Additional solutions will be implemented after 2018.

Lower Mill Creek Solution

MSD's Lower Mill Creek solution — which was officially approved by the U.S. EPA in May 2013 — will eliminate 1.78 billion gallons of CSOs annually into the Mill Creek.

The remedy seeks to reduce CSOs by primarily focusing on reducing the amount of stormwater entering combined sewers during heavy rains.

This approach integrates green infrastructure (e.g., stream restoration, wetlands, bioswales, rain gardens and stormwater detention basins) with gray (e.g., new storm sewers) to provide cost-effective solutions with community benefits.

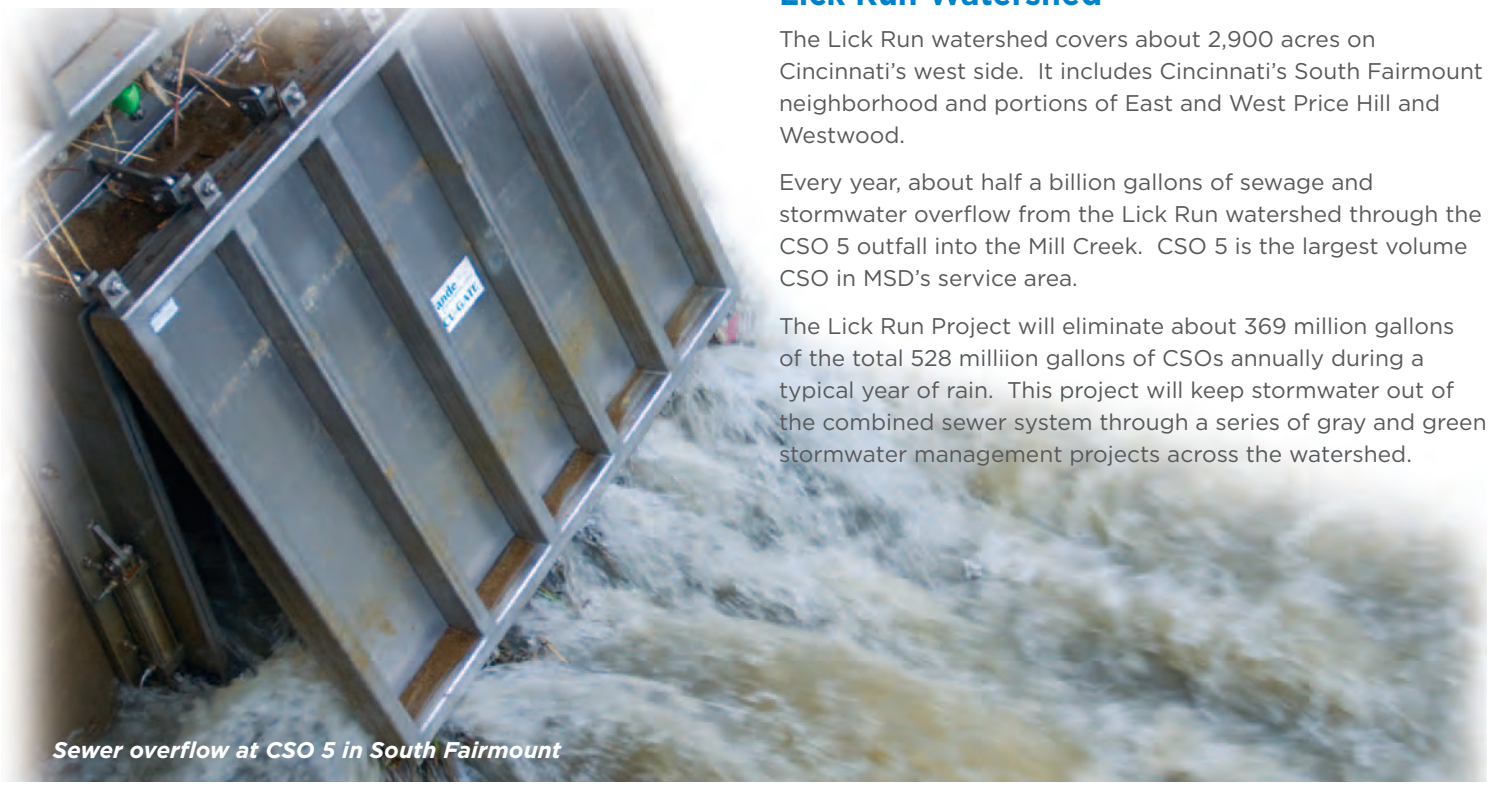
The remedy includes projects in the Lick Run, Kings Run, Bloody Run, and West Fork watersheds. Overall project costs are estimated at $244 million (in 2006 dollars).

Lick Run Watershed

The Lick Run watershed covers about 2,900 acres on Cincinnati's west side. It includes Cincinnati's South Fairmount neighborhood and portions of East and West Price Hill and Westwood.

Every year, about half a billion gallons of sewage and stormwater overflow from the Lick Run watershed through the CSO 5 outfall into the Mill Creek. CSO 5 is the largest volume CSO in MSD's service area.

The Lick Run Project will eliminate about 369 million gallons of the total 528 milliion gallons of CSOs annually during a typical year of rain. This project will keep stormwater out of the combined sewer system through a series of gray and green stormwater management projects across the watershed.



Sewer overflow at CSO 5 in South Fairmount

Lick Run Project

N

Watershed Boundary
Sediment and Debris Separator
Pond
Detention Feature
Storm Sewer
Natural Conveyance
Urban Waterway
Sanitary Sewer

Lick Run Project
Early Success Project
SMU Project

1 Harrison Avenue Phase A

Completed in Fall 2013. New storm sewers along Harrison Avenue. Coordinated with Cincinnati Department of Transportation & Engineering (CDOTE) road work. A curb-side bumpout planter at Tremont Street was installed in Spring 2014.

2 Rapid Run Park

Completed in Fall 2014. First green project completed in Lick Run. Bioswale at Rapid Run Park, two small bioretention basins and new storm sewers. MSD partnered with Cincinnati Park Board.

3 Queen City Avenue Phase 1

Under Construction: Fall 2013 to Spring 2015. New storm sewers along Queen City Avenue from the Bypass to Sunset Avenue and along Tillie/Champlain.

4 Harrison Avenue Phase B

Under Construction: Fall 2014 to Spring 2015. New storm sewers along Harrison Avenue, Moellering Avenue and Beekman Street near the Western Hills Viaduct.

5 White Street

Coming Soon. New storm sewers along White Street and multiple adjacent streets. Construction: Spring 2015 - Summer 2016.

6 Sunset Avenue

Coming Soon. New storm sewers along Sunset Avenue, Sunset Lane, Guerley Road and Rapid Run Pike and a new stormwater detention basin. Construction: Spring 2015 - Summer 2016.

7 Quebec Heights

Coming Soon. Restoration of a stream in Glenway Woods that was enclosed in a combined sewer, retrofit of one existing stormwater detention basin and new storm sewer. Partnering with Cincinnati Parks. Construction: Summer 2015 - Fall 2016.

8 Valley Conveyance System (VCS)

Coming Soon. Stormwater conveyance system with a urban waterway and underground stormwater conveyance box. Construction: Summer 2015 - Summer 2018. ***See back page for more details.***

9 Queen City Avenue Phase 2

New storm sewers along Queen City Avenue from Sunset Avenue to apartment complex off East Tower Drive and retrofit of one existing stormwater detention basin. Construction: Winter (Dec.) 2015 - Winter (Dec.) 2017.

10 Queen City and Cora Avenues

Restoration of a stream in a ravine behind the Judson Care Center that was enclosed in a combined sewer, retrofit of three existing stormwater detention basins and new storm sewer along Fenton Avenue and at bottom of ravine. Construction: Summer 2016 - Summer 2017.

11 Wyoming & Minion Avenues

New storm sewers along Wyoming Avenue and multiple adjacent streets. Construction: Summer 2016 - Summer 2017.

12 Quebec Road

New storm sewers along Quebec Road and multiple adjacent streets. Construction: Summer 2016 - Summer 2017.

Early Success Projects

A San Antonio Church
Permeable pavers and four small bioinfiltration basins (rain gardens) were installed in 2011.

B St. Francis Court Apartments
Two unused parking lots were converted to bioinfiltration basins (rain gardens) in 2010.

C Immanuel United Church
A bioinfiltration basin (rain garden) was installed in 2010.

D Roberts Academy
Retrofit of an existing stormwater detention basin and five new bioinfiltration basins installed in 2014.

Guerley Road Detention Dam

Completed in Summer 2014. Large stormwater detention dam off Guerley Road. This project will help reduce street flooding and CSOs.

Project Details

Overview of the Lick Run Project

The Lick Run Project is comprised of 12 individual projects that will be constructed between 2012 and 2018. The central element is a Valley Conveyance System (VCS) that includes a mile-long urban waterway through the heart of South Fairmount. The VCS will carry or convey stormwater and natural drainage from the watershed to the Mill Creek. The other 11 projects will convey stormwater and natural drainage to the VCS.

The projects — described in detail in the map on the inside spread — include (in order of anticipated construction starts):

- Harrison Avenue, Phase A **(completed)**
- Rapid Run Park **(completed)**
- Queen City Avenue Phase 1 **(under construction)**
- Harrison Avenue Phase B **(under construction)**
- White Street **(starting soon)**
- Sunset Avenue, Sunset Lane and Rapid Run Pike **(starting soon)**
- Quebec Heights **(starting soon)**
- Valley Conveyance System/Urban Waterway **(starting soon)**
- Queen City Avenue Phase 2 (in design)
- Queen City and Cora Avenues (in design)
- Wyoming & Minion Avenues (in design)
- Quebec Road (in design)

The map also includes projects that are related to (but separate from) the Lick Run Project, including Early Success Projects to showcase green/sustainable ways to manage stormwater and a City of Cincinnati Stormwater Management Utility (SMU) project to reduce street flooding along Guerley Road.

VCS and Urban Waterway in South Fairmount

The VCS (see map below) will be located in South Fairmount from old Queen City Avenue to the Mill Creek between Queen City and Westwood avenues. This area is a gateway to the west side of Cincinnati from I-75 and downtown Cincinnati.

The VCS will include a mile-long urban waterway with a meandering stream channel, natural stone, runs, pools and riffles and a riparian edge planted with native plants and trees. An underground stormwater conveyance box will be constructed beneath the system to handle flows from large rain events. The VCS will also include a wetland forebay, headwaters area and a pond, among other features.

The VCS also includes multi-use paths, lighting, safety railing, signage, retaining walls, an improved civic recreation space, parking, five vehicular bridges and one pedestrian bridge.

The project is currently in design with construction anticipated to begin in summer 2015.

Conceptual rendering at 60% Design

Lick Run Valley Conveyance System (VCS) at 60% Design

For more information:

Visit www.projectgroundwork.org/lickrun or

Contact MSD Engineering Customer Service at (513) 557-3594 or MSD.Communications@cincinnati-oh.gov

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