



West Fork Creek Riparian/Floodplain Restoration Project

The Metropolitan Sewer District of Greater Cincinnati (MSD) and Groundwork Cincinnati-Mill Creek were awarded a Clean Ohio grant to design and construct a bioinfiltration basin along West Fork Road in Northside. The basin will help keep stormwater out of the combined sewer system and reduce combined sewer overflows into the West Fork Channel, a tributary of the Mill Creek.

What's the Challenge?

During heavy rains, raw sewage — mixed with stormwater — overflows from our sewers into local rivers and streams and can also back up into basements.

The vast majority of overflows occur from combined sewers, which carry both sewage and stormwater in the same pipe.

When large amounts of stormwater enter combined sewers, these pipes are often filled beyond their capacity and can overflow directly into local waterways through outfalls known as combined sewer overflows or CSOs.

Hamilton County is among the top five locations in the nation for urban CSOs. Overflows occur as many as 105 times a year at some locations.

What's the Solution?

To resolve this public health and environmental issue, MSD has embarked on the largest public works project in the history of our community to rebuild and improve our sewer system.

Called **Project Groundwork**, this multi-year and multi-billion dollar initiative includes hundreds of sewer improvements and stormwater control projects.



West Fork Channel

What's the Challenge in West Fork?

The West Fork watershed covers more than 6,000 acres within the City of Cheviot, Green Township and the City of Cincinnati, including the following neighborhoods: College Hill, East Westwood, Fay Apartments, Mt. Airy, Northside, South Cummins and Westwood.

This watershed was named after West Fork Creek, which transports natural drainage and stormwater runoff to the Mill Creek. West Fork Creek flows naturally in upstream portions (Mt. Airy Forest) but is channelized (concrete sides and bottom) in the valley where it parallels West Fork Road.

Fifteen CSO locations within the watershed — many along the West Fork Channel — contribute to millions of gallons of sewer overflows each year. The majority of this overflow is not sewage — it's stormwater runoff from forested hillsides (including Mt. Airy Forest, the City's largest park) and natural stream flow from upper reaches of the creek.

What's the Solution in West Fork?

MSD is implementing sustainable solutions to reduce CSOs and improve water quality in the West Fork Channel during Phase 1 of Project Groundwork (by 2018).

The projects, which will eliminate about 173 million gallons of CSOs annually, include:

- CSO 125 Stream Separation Project (also known as Martha and North Basin) - collection of stormwater in two stormwater detention basins with discharge directly to the West Fork Channel. Construction anticipated to start in 2018.
- CSO 127 and 128 Stream Separation Project - collection of stormwater from Mt. Airy Forest with discharge directly to the West Fork Channel. This project was completed in 2015.

MSD is also evaluating a longer-term solution (post 2018) that could potentially include restoration of the West Fork Channel, among other projects.

In the interim, MSD and Groundwork Cincinnati-Mill Creek applied for and were awarded a Clean Ohio Conservation Fund grant to help restore a portion of the West Fork Channel floodplain (see back page).

West Fork Creek Floodplain Project

MSD — in partnership with Groundwork Cincinnati-Mill Creek — will construct a stormwater bioinfiltration basin in the floodplain of the West Fork Channel in summer 2017. The project is mostly funded by the Clean Ohio Conservation Fund grant.

The basin — to be located on four vacant parcels of land in the vicinity of 1769 West Fork Road in Northside — will capture about 500,000 gallons of stormwater annually, thereby preventing it from entering the combined sewer system. The project will reduce CSOs into the West Fork Channel.

Bioinfiltration Basin Details

The basin, which will be about 0.8 acres in size and 2-3 feet deep, will use native plant species, special soils and layers of gravel to absorb, cleanse and store stormwater during a rain event. It will also promote the infiltration of stormwater into the ground and groundwater.

The basin will capture stormwater runoff from the south side of West Fork Road through an inlet drain in the street and from stormwater flowing overland. Excess stormwater in the basin will drain to the West Fork Channel.

During heavy storms, the basin will fill up when the stormwater coming in exceeds the outlet capacity. If the basin fills up completely, it will take 24 hours or less to empty. The basin will be mostly dry during dry weather.

Landscaping

The landscaping for the basin was coordinated with Cincinnati Parks and the Northside community. It will be planted with native trees, shrubs, grasses and other plants that can tolerate wet conditions. Examples of trees include:

- Paw Paw
- Various Apples
- Bald Cypress
- Various Redbuds
- Stanley Plum
- American Yellowwood
- Various Oaks
- Tulip Tree

Examples of plants include Autumn Magic Black Chokeberry, Buttonbush, various Dogwoods, Pee Wee Oakleaf Hydrangea, Henry's Garnet Virginia Sweetspire and Blackhaw Viburnum. Various grasses and perennials will also be planted.

In addition, a gravel walking path will be constructed around the basin, and educational signage will be installed.

Safety

The basin will not be fenced, as it is intended to be a community amenity.

During heavy rain storms, the basins should be treated with caution. Like any natural stream or creek, it can start to fill up with water which can pose a potential hazard. Caution should also be exercised around the inlet and outlet structures.

MSD will be responsible for maintaining the basin and should be alerted of any public safety hazards.

Schedule

The project is scheduled for construction in summer 2017.

Need More Information?

Contact **MSD Engineering Customer Service**

at **(513) 557-3594**

or **MSD.Communications@cincinnati-oh.gov**

Visit **www.projectgroundwork.org/westfork**



Concept drawing of the West Fork Creek Riparian/Floodplain Restoration Project

