



PROJECT GROUNDWORK
your pipeline to clean water

CSO 125 Project (Martha and North Basins)

The West Fork Project – part of the Metropolitan Sewer District of Greater Cincinnati’s (MSD) solution for Lower Mill Creek – will eliminate about 173 million gallons of combined sewer overflows (CSOs) a year into the West Fork Channel, a tributary of the Mill Creek. Located in Northside, the CSO 125 project is part of the West Fork Project and includes two stormwater detention basins.

What’s the Challenge?

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.

The Challenge in Northside

When it rains, stormwater enters combined sewers in the vicinity of Kirby and Virginia avenues. If the sewers become too full, sewer overflows can occur at CSO 125 (near Beekman Street and Colerain Avenue) into the West Fork Channel, a tributary of the Mill Creek. About 188 million gallons of raw sewage and stormwater overflow annually from this location.

The Solution in Northside

MSD is designing two stormwater detention basins – North Basin and Martha Basin – off Kirby Avenue that will keep stormwater out of the combined sewer system and transport it directly to the West Fork Channel.

The CSO 125 basin project will reduce sewer overflows into the channel by about 138 million gallons a year. This project is part of MSD’s West Fork Project, which is part of MSD’s Lower Mill Creek Partial Remedy (LMCPR).

The basins are designed to hold stormwater during rain events. During lighter storms, the water will flow through a “low flow channel” (like a stream bed) along the bottom of the basins and will drain to an outlet structure. The outlet will release the water at a controlled rate into an underground stormwater outlet pipe that will convey it to the West Fork Channel. The four-foot-diameter outlet pipe will be about 1.2 miles long and will be constructed underground primarily in the right-of-way along Kirby and Virginia avenues.

During heavier storms, the basins will fill up when the stormwater coming in exceeds the outlet capacity. If the basins fill up completely, they will take less than 24 hours to empty.

Each basin is designed to hold stormwater from a 100-year storm. During extreme weather events, the basins are designed to overflow back into the combined sewer to prevent flooding. The basins will be mostly dry during dry weather.

Proposed Alignment of Basins



North Basin

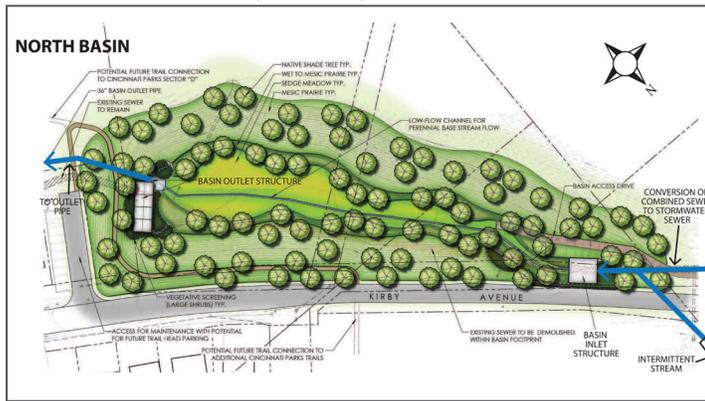
The North Basin — located off Kirby Avenue just northwest of Mehmert Avenue — will be about 21 acres in size and will hold up to 5.8 million gallons of stormwater. The basin will be about 25 feet deep (at its deepest point) with a 33% slope on its sides.

The basin will collect stormwater from nearby streams as well as from overland stormwater flow.

The basin will slowly release water into the underground stormwater outlet pipe that leads to the West Fork Channel.

An access road off Kirby Avenue will allow MSD personnel to gain access to the basin, to mow grass and maintain the inlet and outlet structures.

Concept drawing of North Basin



Martha Basin

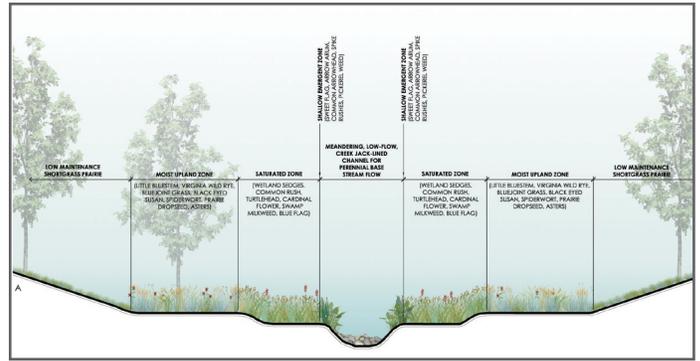
The Martha Basin — located south of Martha Street between Virginia/Kirby Avenues and Badgeley Street — will be about 2.2 acres in size and will hold up to 0.75 million gallons of stormwater. The basin will be about seven feet deep (at its deepest point) with a 33% slope on its sides.

The basin will collect stormwater from nearby streams as well as from overland flow.

The basin will slowly release water into the underground stormwater outlet pipe that leads to the West Fork Channel. The outlet pipe connects to both basins.

A driveway off Martha Street will allow MSD personnel to gain access to the basin for maintenance.

Concept drawing of Martha Basin



Cross section of the CSO 125 detention basins.

Landscaping

The basins are designed to look as natural and as attractive as possible to adjacent neighbors.

In coordination with Cincinnati Parks and the Northside community, the basins will be planted with grass, along with native trees, shrubs and other plants that can tolerate wet conditions. Examples of trees include:

- Ash
- Basswood
- Buckeye
- Maple
- Oak
- Paw Paw
- Sycamore
- Tulip
- Yellowwood

Plants include Black Willow, Buttonbush, Dogwood, Hazelnut, Hibiscus, Ninebark, Sweetspire and Virburnum. Various prairie and meadow seed mixes will also be planted.

Some existing trees and vegetation will need to be cleared to construct the basins. MSD will make the wood available to interested neighbors.

Safety

The detention basins will not be fenced, as they are intended to blend into the natural space. However, safety signage will be placed around the basins.

During heavy rain storms, the basins should be treated with caution. Like any natural stream or creek, they 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 is responsible for maintaining the basins and should be alerted of any public safety hazards.

Schedule

The proposed estimated schedule for construction of the basins is as follows:

- **Design** (includes easements and property acquisition): 2010 through 2015
- **Anticipated Construction:** Summer 2016 to Fall 2017

Need More Information?

For more information contact:

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