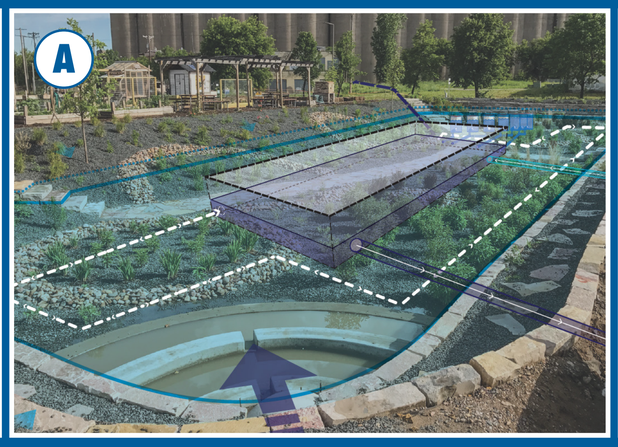
Towerside district stormwater management system

A formerly industrial, rapidly redeveloping neighborhood, the 300-acre Towerside District is the first designated "innovation district," focused on creative, sustainable community development, in Minneapolis and Saint Paul. The Mississippi Watershed Management Organization (MWMO) saw a rare opportunity to manage urban stormwater runoff on a district scale to reduce landowner costs, implement more effective and environmentally friendly stormwater treatment, and provide public greenspace. First of its kind in the Twin Cities, the Towerside system is the result of an agreement among four property developers and several government organizations to achieve a common vision.

Two large biofiltration basins collect and treat runoff that is conveyed to a 207,000-gallon underground cistern for irrigation storage and treatment.



Interconnected components were sized to collectively manage a 100-year storm event and treat the first flush of runoff before it enters the Mississippi River.

The pollinator-friendly greenspace offers stormwater education through artistic installations and is the heart of a new park that will connect with the city's linked parks and trails system.

Drought-tested, the stormwater reuse system distributes over 100,000 gallons of irrigation water. UV treatment allows for community garden use, possibly a first in Minnesota.

Barr's design features two large biofiltration basins that collect, treat, and convey runoff to a massive underground cistern for more treatment. Thousands of feet of piping connect the integrated components, cross under four streets, and link to the University of Minnesota's storm sewer. Design and installation maximized flexibility to accommodate future developments and infrastructure. The busy urban setting required creative construction solutions and careful coordination with contractors from other projects—all working in the same sandbox.

Fully operational after a decade of planning and implementation, the initial district system supports about $250 million in new development. It contributes to local climate resiliency by reducing the burden on nearby storm sewers and offering a reliable source of non-potable water for the developments, street landscaping, parkland, and community gardens. Barr and the MWMO have modeled what can be collectively achieved for the larger Towerside Innovation District and region—and demonstrated that public-private infrastructure partnerships can deliver greater public value.

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Mississippi Watershed Management Organization (MWMO)

Location:
Minneapolis, MN

ACEC Minnesota