



Metropolitan St. Louis Sewer District

Driving equitable participation in green stormwater

Project at a Glance

Utility Overview

- Utility: Metropolitan St. Louis Sewer District
- Location: St Louis, MO
- Population served: 1.3 million
- Service area: 525 square miles
- Project Developer: Greenprint Partners
- Project Proponents: Institutional ratepayers in MSD's service area

Challenges

- Combined sewer overflows
- Aging water infrastructure
- Need to motivate private property owners and equitably build resilient solutions

Solution

- Institutional ratepayer and vacant lot participation in MSD's Rainscaping Large Scale Grants Program to install green infrastructure on their private property and bring multiple benefits to vulnerable communities.

Costs and Funding Sources

- Total project cost: \$2.4M
- Funding sources: Rainscaping Large Scale Grants Program

Benefits



Visible investments in the property that drive economic development



Creating green spaces for the surrounding community



Community Gathering Spaces



Increasing community pride through place-making



Access to green spaces, encouraging community to interact with nature



Increasing community health by encouraging healthy living

BACKGROUND

Metropolitan St. Louis Sewer District (MSD) provides sanitary sewer collection and treatment and stormwater management services to 362,000 single-family residences and 26,000 commercial/industrial businesses for a total population of approximately 1.4 million in the City of St. Louis and approximately 90 percent of St. Louis County. MSD operates its system within three major watersheds: the Mississippi River, the Missouri River, and the Meramec River.

MSD's task is to increase the capacity of its aging combined sewer system and address 400 remaining overflow facilities.



CHALLENGE

MSD faces the overlapping water management challenges of combined sewer overflows and aging infrastructure. Throughout MSD's service area, there are hundreds of points where a combination of stormwater and wastewater discharges into local waterways from the sewer system during moderate to heavy rainstorms. From 1992 to 2012, MSD spent approximately \$2.7 billion to remove more than 350 overflows. The task now is to increase the system capacity to address the remaining 400 overflow facilities.

SOLUTION

As part of MSD Project Clear, MSD's Consent Decree with the Environmental Protection Agency (EPA) and the Missouri Coalition for the Environment, MSD will spend \$100 million in rainscaping investments over a period of 23 years, with an overall goal of reducing combined sewer overflows to the Mississippi River. Having acquired EPA approval for the program, MSD seeks to continue to build partnerships with municipalities, local government agencies, schools, community development organizations, and private developers through the Rainscaping Large Scale Grants Program.

The Rainscaping Large Scale Grants Program offers private landowners a per-acre reimbursement for installing green infrastructure. However, a variety of barriers prevent some property owners from participating. Through an innovative partnership with a mission-driven project developer, Greenprint Partners, MSD is able to deliver funding to institutional ratepayers located in lower-income areas of the St. Louis. These projects drive more equitable distribution of grant funds and while helping prevent combined sewer overflows.

MSD's Rainscaping Large Scale Grants Program offers great promise to help St. Louis scale its green infrastructure investments and avoid the economic consequences of continued failure to upgrade America's wastewater infrastructure. MSD's program incentivizes private property owners and developers to identify and build commercial scale green infrastructure installations on public and private land—the most cost effective, risk-managed, and simple way for cities and water authorities to deploy these localized water management solutions. For example, in 2019 Greenprint Partners expects approval and funding for three green infrastructure installations through MSD's program.

Wells Goodfellow Neighborhood-

Scale Green Infrastructure:

Currently a contiguous block of vacant parcels comprised of over four acres of turf grass and the buried foundations of demolished homes, these Land Bank-owned properties are destined to be transformed into a community-hub of green infrastructure and sustainable landscape practices. In 2019, four newly installed raingardens will capture rainwater from the site and surrounding land parcels, as well as portions of adjacent roadways. Already community members have been rallied to assist in initial site improvement. By putting this vacant land back into productive use, a safer, healthier space is being developed within a low-income neighborhood.



The partnership with Greenprint Partners drives more **equitable distribution** of grant funds and while helping **prevent combined sewer overflows**.

Historic Baptist Church (Pending Approval):

Founded in the 1800s by enslaved and free Christians, the Baptist church is a historic African American church community that today has 1,500 members dedicated to social justice. Planned green infrastructure installations will transform several blocks by adding stormwater bump-outs and rain gardens. These features will improve curb appeal, calm traffic, and improve pedestrian safety through shortened crossing length and the addition of ADA accessible ramps.



Catholic Social Services Provider (Pending Approval):

This social services provider is a historic St. Louis landmark that features a residential assisted living facility, an addiction treatment and recovery center for women, and a children’s center. Green infrastructure designs call for expanding parking capacity by replacing and expanding existing pavement with new permeable pavement while installing swales and flowering rain gardens to enhance the beauty and function of the site. These improvements will assist the women and children on their road to recovery.



RESULTS

Environmental benefits

Stormwater management is at the core of each of these three projects. Together they will generate 13 greened acres that will cost-effectively manage more than 5 million gallons of stormwater per year.

Economic & equity benefits

Shared Prosperity is woven deeply through each project's Benefits-Driven Design process. This project developer's unique process encourages landowners to consider the following "Shared Prosperity" co-benefits as they decide on their priorities.

- Beautifying the property
- Beautifying the neighborhood
- Stabilizing property values
- Preventing people from moving out of the neighborhood
- Attracting development and investment
- Increasing nearby business / retail activity

Based on the community and landowner feedback, these priorities are considered in the design process to ensure the maximum economic benefit is incorporated into the site.

Social benefits

Strengthened Community is another important theme in these projects. This project developer's process encourages landowners to consider the following co-benefits as they decide on their priorities during the design process:

- Increasing mental health / reducing stress
- Improving air quality for respiratory health
- Increasing active living for physical health
- Increasing student focus / academic performance
- Increasing community pride
- Increasing positive social interactions
- Calming traffic
- Reducing loitering-related crime (e.g., public drinking, drugs, gambling, prostitution)

Sources

[Rainscaping Large Scale Grant Program website](#)
[Metropolitan St. Louis Sewer District \(MSD\) website](#)
[Greenprint Partners website](#)
[GSI and Co-Benefits Fact Sheet \(PDF\)](#)
Industry-Specific Benefits (Affordable housing, Faith communities, Healthcare facilities, Nonprofits, schools, parks, and other public benefit organizations)