Green Infrastructure & Stormwater Management CASE STUDY

Reifsnyder Park Stormwater Treatment Wetland

Location: Canton, OH
Client: City of Canton
Design Firm(s): URS Corp, Cleveland
Landscape architect/Project contact: Thomas Evans, ASLA
Email: tom_evans@urscorp.com
ASLA Chapter: Ohio

Project Specifications

Project Description: The Reifsnyder Park Stormwater Treatment Wetland provides a one acre stormwater treatment wetland situated at the outfall of a 36" storm sewer discharging to Nimishillen Creek. Nimishillen Creek suffers from elevated phosphorous levels. The City of Canton desired to demonstrate innovative measures to uptake or filter phosphorous levels from storm runoff. The Reifnyder Park Stormwater Treatment Wetland was the first of several planned stormwater treatment wetlands situated at stormwater outfalls. Reifsyder Park is a 64-acre open space park located on Nimishillen Creek in urbanized Canton, Ohio.

Project Type:
Open space - park
A retrofit of an existing property

Design features: Stormwater treatment wetland.

This project was designed to meet the following specific requirements or mandates: To meet funding criteria

Impervious area managed: greater than 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: This project represents wetland restoration serving stormwater management functions within an existing 64-acre open space park.

The regulatory environment and regulator was supportive of the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? The project was intended to explore potentials for reduction of phosphorous levels upstream of the City wastewater treatment plant in order to reduce costs for wastewater plant upgrades.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $100,000-$500,000 (Public funding: Local)

Was a green vs. grey cost analysis performed? No

Cost impact of conserving green/open space to the overall costs of the site design/development project: Use of existing public parkland reduced costs.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Significantly reduced costs (10% or greater savings). Acquisition of private land for the project would have significantly increased costs.

Number of jobs created: 3

Job hours devoted to project:

Planning and Design: 1,000
Construction: 1,000
Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

The one acre stormwater treatment was sized to adequately provide uptake and filtration from the outfall of the 36" storm sewer and the approximately 40-acre drainage area. USEPA data for similar sized stormwate treatment wetlands indicates reduction of a variety of pollutants by 25-75%.

Community & economic benefits that have resulted from the project: The stormwater treatment wetland represents restoration of wetlands and ecological functions lost due to wetland filling which occured during park development.

Additional Information

Links to images: Project plans, images, and descriptive text are readily available from the landscape architect.