



Green Infrastructure & Stormwater Management CASE STUDY

Millers Creek Rainwater Project

Location: Ann Arbor, MI

Client: Huron River Watershed Council

Design Firm(s): JFNew

Landscape architect/Project contact:

Paul Steen

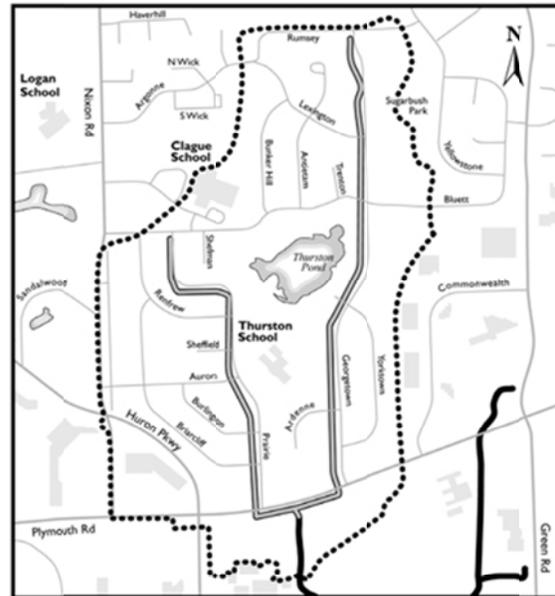
Email: psteen@hrwc.org

ASLA Chapter: None

Project Specifications

Project Description: The purpose of this project was to determine if a series of small best management practices (BMPs), combined with an information and education campaign, could be successful in stabilizing the water flow and improving the habitat and biota of Millers Creek, a highly disturbed urban stream in Ann Arbor, MI. The project efforts were focused on the creek's headwaters section, where the Huron River Watershed Council (HRWC)

built two community rain gardens, helped design four private residential rain gardens, retrofitted a detention pond to hold more rainwater, and distributed rain barrels to residents. In addition, HRWC shared all of its efforts with neighborhood residents, kept them involved in construction projects and maintenance activities, and encouraged them to take initiative in changing their behaviors and using their own property to reduce impacts on Millers Creek. To determine project effectiveness, HRWC collected stream flow, macroinvertebrate, habitat, and channel morphology data prior to and after BMP implementation. The data analysis demonstrated that macroinvertebrates are returning to the creek, and that the creek's flow is less intense after storms.



- Stream (above ground)
- Underground Pipe
- Project area



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**Millers Creek
Rainwater Project Area
(inside dotted line shown above)**

Project Type:

Single family residential
A retrofit of an existing property

Design features: Rain garden, rain barrels, downspout removal, and enhancement of a retention pond.

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

Developer/client preference, reduce flashy flows in draining creek

Impervious area managed: greater than 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: 5,000 sq/ft to 1 acre. Green space was created by the conversion of a road stub to raingarden.

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? No.

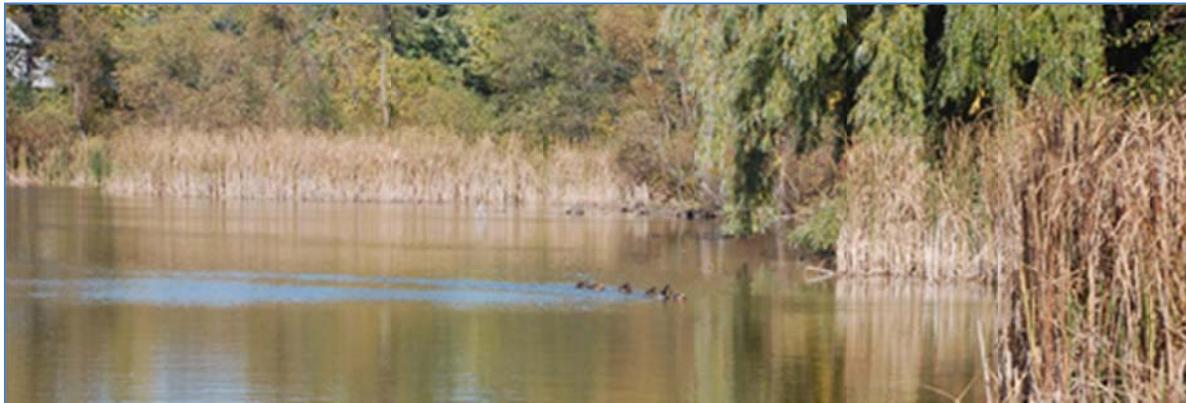


Photo: Huron River Watershed Council

Cost & Jobs Analysis

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

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: Unknown, keeping the green space was the whole point of the project and other options weren't considered.

Number of jobs created: 3

Job hours devoted to project:

Planning and Design: 3 years of work with many partners involved; numbers unknown.

Construction: 4,000 (including volunteer help with plantings)

Annual Maintenance: 30

Performance Measures

Stormwater reduction performance analysis:

Peak flows in creek have been reduced by 40% after heavy storm events.

Community & economic benefits that have resulted from the project: A walkable raingarden in a suburban neighborhood; increased stabilization of the draining creeks banks.

Additional Information

Links to images: <http://www.hrwc.org/millerscreek/>