



Green Infrastructure & Stormwater Management CASE STUDY

Pike River Restoration

Location: Village of Mount Pleasant, Racine County, WI

Client: Village of Mount Pleasant

Design Firm(s): Crispell-Snyder, Inc.

Landscape architect/Project contact: Todd B. Weik, ASLA

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ASLA Chapter: Wisconsin

Project Specifications

Project Description: This is a multi-phase river restoration project that was initially a flood control project but became a water quality enhancement, recreation corridor, prairie and woodland and in-stream fish habitat restoration project. The project planning began in 1986 and was finally under construction in 2001. A team approach was initiated in the planning of the project that included, engineers, biologists, wetland experts, PR firms, accountants, and regulatory agencies. Approximately 2 1/2 miles of a 5 mile project has been completed. The corridor is fully owned by the municipality and a multi-use trail has been installed to allow public access. The water quality features treat nearby industrial, high density residential and commercial land uses. The flood control aspect has removed over 100 structures from the floodplain. In-stream fish habitat has improved salmon spawning, the corridor has been restored with native prairie plant materials and approximately 16 acres of wetlands have been created.

Project Type:

Flood control, habitat restoration, water quality improvements, recreational corridor
A retrofit of an existing property

Design features: Bioretention facility, wet detention ponds, and natural buffers.

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

State statute, local ordinance

Impervious area managed: greater than 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: greater than 5 acres

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

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: >\$5,000,000 (Public funding: Federal, state, local)

Related Information: This is a 9 phase river restoration project that integrates the elements of flood control, water quality, recreational facilities and upland/fish habitat restoration. Five of the nine phases have been completed. Approximately \$7 million dollars in construction, \$1 million in land acquisition, \$3 million in Federal, state and local grants have been obtained. Bid tabs for each phase can be provided upon request.

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: It was a requirement of the Wisconsin Department of Natural Resources Regulatory Permit. This was a primary goal of the project.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Did not influence costs.

Number of jobs created: Approximately 300.

Job hours devoted to project:

Planning and Design: 20,000

Construction: 4,000

Annual Maintenance: 300

Performance Measures

Stormwater reduction performance analysis:

The project water quality features were all designed to reduce total suspended solid loadings by 80%. All facilities have met or exceeded the standard. This is based upon a 2-year storm event.

Community & economic benefits that have resulted from the project: Over 100 habitable structures have been removed which has increased their property values. The local population has taken a strong ownership role in the recreation area. Phases 7 through 9 will be in an

agricultural area. It is anticipated that this area will become highly desirable for development once the project has been completed. The community utilizes it for stormwater education and recreation purposes. The UW-Milwaukee system utilizes it for research and the local schools have utilized it for biology classes. The DNR points to the project as a legacy project and an example of agency community team work.

Project Recognition

EPA Clean Water Partner Award; Wisconsin Business Friend of the Environment, Wisconsin Top Jobs - 2001

Additional Information

Links to images: Please contact Todd Weik for images.