Green Infrastructure & Stormwater Management
CASE STUDY

Stormwater Wetland Garden

Location: Temple University, Ambler, PA
Client: Temple University
Design Firm(s): Department of Landscape Architecture and Horticulture
Landscape architect/Project contact: Mary Myers, ASLA, Department Chair
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ASLA Chapter: Pennsylvania/Delaware

Project Specifications
Project Description: The stormwater wetland garden infiltrates stormwater from a 5 acre area. The garden was constructed and planted by students between 1997-99 and has been in place for over a decade. Three hundred species of native plants transevaporate water back into the atmosphere and increase biodiversity.

Project Type:
Institutional/education
A retrofit of an existing property

Design features: Bioretention facility, rain garden, downspout removal, and porous pavers.

This project was designed to meet the following specific requirements or mandates: Not applicable

Impervious area managed: 1 acre to 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: 5,000 sq/ft to 1 acre

The regulatory environment and regulator was indifferent to 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: $50,000-$100,000 (Public funding: Not available)

Was a green vs. grey cost analysis performed? No

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). Not sure but believe there was a great cost savings over piped infrastructure. No pipes are used and there is no surface water outletting from the site.

Number of jobs created: volunteer labor by students/faculty/staff

Job hours devoted to project:
- Planning and Design: Not available
- Construction: Not available
- Annual Maintenance: 100 maximum

Performance Measures

Stormwater reduction performance analysis:
It appears that virtually 100% of water is retained on the site. No swale or off-site drainage is observable. We are in the process of collecting data.

Community & economic benefits that have resulted from the project: The stormwater wetland garden provides a campus amenity for passive recreation—quiet study place for students and a place to observe nature. Edible plants and plants that were selected for habitat (shade/cover) have increased insects, birds and small mammals in the area than previously.