Green Infrastructure & Stormwater Management
CASE STUDY

Glencoe Elementary School Parking Lot Stormwater Retrofit

Location: Portland, OR
Client: City of Portland, Bureau of Environmental Services
Design Firm(s): City of Portland, Bureau of Environmental Services
Landscape architect/Project contact: Kevin Robert Perry, ASLA
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ASLA Chapter: Oregon

Project Specifications
Project Description: Completed in 2002, this project at a local elementary school retrofitted a 12,000 sq/ft parking lot with a 1,000 sq/ft stormwater swale. An additional 3,000 sq/ft of impervious area was converted into landscape space. The project responded to the neighborhoods chronic problem with local basement sewer backups. Because the existing parking lot had a very inefficient parking layout, the stormwater swale was installed with only a

![Photo: Kevin Robert Perry, ASLA](image-url)
loss of two parking spaces and created a much safer traffic condition for parents and students. Project is considered a strong success with most of the annual rainfall from the parking lot managed within the stormwater swale.

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

**Design features:** Bioswale and curb cuts.

This project was designed to meet the following specific requirements or mandates:
Resolve local basement sewer backup problems

**Impervious area managed:** 5,000 sq/ft to 1 acre

**Amount of existing green space/open space conserved or preserved for managing stormwater on site:** less than 5,000 sq/ft

**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?** Yes

**Cost & Jobs Analysis**

**Estimated Cost of Stormwater Project:** $50,000-$100,000 (Public funding: Local, City of Portland operating dollars)

**Was a green vs. grey cost analysis performed?** No

**Number of jobs created:** 0

**Job hours devoted to project:**
- Planning and Design: 120
- Construction: 240
- Annual Maintenance: 40

**Performance Measures**

**Stormwater reduction performance analysis:**
Detailed project performance data can be obtained on the Bureau of Environmental Services Website at: [http://www.portlandonline.com/bes/index.cfm?c=45388&a=78198](http://www.portlandonline.com/bes/index.cfm?c=45388&a=78198)
Community & economic benefits that have resulted from the project: The parking lot is a much safer and aesthetically pleasing element to the school. Also, the children learn on a day to day basis what sustainable stormwater management looks like.

Additional Information
Links to images: Pictures can be available by contacting Kevin Robert Perry at 503-239-0600 or email at kevin@nevengan.com

Photo: Kevin Robert Perry, ASLA