

Tree-Safe Rain Garden

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Problem:

Stormwater runoff from Woodend, a 40-acre nature sanctuary in Chevy Chase, MD that serves as headquarters of the Audubon Naturalist Society, was impacting neighboring property and adding to pollution in nearby Rock Creek. Design challenges included the site's historic registration, steep slope and existing mature trees.

Solution:

To avoid disturbing the mature tree roots which are essential for soil retention and water uptake, the Audubon Naturalist Society devised a stormwater management solution that did not disturb the ground. Two terraced rain gardens with Filtrexx EnviroSoxx® permeable, compost-filled berms and additional native trees, shrubs, and plants were installed to slow and filter the stormwater.

Community Engagement: Due to the site's educational value and highly visible location as the headquarters of a 120-year-old organization, it was important to highlight the project as a demonstration site for innovative stormwater problem solving. The organization held a 50-person community meeting to review the design plan before installation. After construction numerous workshops, educational events and tours have been held with school groups, campers, and county decision-makers to share the innovative story.



Before: Bare slope and mature trees



After: Compost soxx raingardens planted with shrub livestakes

Photo Credit: Audubon Naturalist Society

Key Project Facts

Project Location: Chevy Chase, MD

Type of Project: Rain Gardens & Tree Planting

Size: 1,514 ft²

Pollutants Removed per year: 0.55 lbs. phosphorous, 5.4 lbs. nitrogen, 629 lbs. sediment

Total Cost: \$105,323

Funding Sources: Chesapeake Bay Trust; U.S. Environmental Protection Agency; Montgomery County Water Quality Protection Fund; Wallace Genetic Foundation; Cornell Douglas Foundation

Partners: Center for Watershed Protection; Environmental Quality Resources, LLC; Chesapeake Bay Trust; Montgomery Parks

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What is Polluted Runoff?

The growth of our cities has resulted in too many paved surfaces, which prevent rain water from being absorbed by the ground. Instead, the water runs off streets and buildings, collecting trash and dangerous chemicals on its way. This contaminated water overflows into our streams and rivers, creating public health hazards and toxic waters.

Stormwater projects create safe paths for polluted runoff to be captured and filtered before it reaches our waterways. Projects like these keep communities healthy and the environment clean.

When communities and their local governments work together to solve big problems like stormwater runoff, that's a story worth telling!