

Millburn High School Rain Garden

462 Millburn Avenue, Millburn, NJ, 07041



Before



After

The Millburn High School (MHS) Environmental Club, Millburn Middle School PEEPs (Peers Educating about Environmental Problems), Millburn Environmental Commission, Rutgers Cooperative Extension, and the Rahway River Watershed Association partnered to design and build a rain garden as part of the 1,000 Rahway River Raingardens project.

The rain garden was designed to absorb the stormwater from two downspouts that collect water from the greenhouse roof and the surrounding grass and is approximately 10' wide by 10' long. The MHS Environmental Club and the PEEPs, with the help of Rutgers, designed the layout, performed soil and percolation tests, chose the plants, and built the rain garden in the spring of 2015. The club is responsible for maintaining the site. The Rahway River Watershed Association provided \$1,500 funding, of which \$891.30 was used for the initial construction.

The selected location, chosen by the Millburn Public Schools Director of Buildings and Grounds and the principal of the Millburn High School, is a grassy area near the greenhouse and was ultimately chosen because of its visibility, accessibility, and proximity to a water source (i.e. hose bib).



General:

Type of development (residential, mixed use, commercial): School

Project partners: Millburn High School (MHS) Environmental Club, Millburn Middle School PEEPs (Peers Educating about Environmental Problems), Millburn Environmental Commission, Rutgers Cooperative Extension, and the Rahway River Watershed Association

Types of green infrastructure used on site: Rain garden

Project status: Complete



Costs and Benefits:

Anticipated cost of green infrastructure features:

Actual cost: \$891.30 for installation

Cost of green infrastructure installation vs. anticipated cost of gray: N/A

Competitive advantage (How did your project design beat out the competition?): N/A

Financing strategy: \$1,500 grant from the Rahway River Watershed Association

Design Details:

What design storm was used to size the green infrastructure practice? New Jersey's Water Quality Design Storm of 1.25 inches of rain over 2 hours. Source: [Rain Garden Manual of New Jersey](#).

Number of gallons or cubic feet of stormwater the project captures per storm? 62.5 cubic feet or 468 gallons

What percentage of this capture will be managed by recharge vs. detention vs. reuse? 10.4 cubic feet or 78 gallons

What are the pre-development runoff rates for those design storms for the project? N/A

Takeaways:

Benefits to/impacts on the end user and larger community:

- Demonstrates downspout disconnection
- Educates students about stormwater, green infrastructure designs, and appropriate plant selection and cultivation for bioretention systems. (Partnered with the Green House Club and science classes)
- Provides habitat and food for pollinators

Challenges:

- Finding a site that was suitable and acceptable to all invested parties.
- Gaining access to water spigot when plants were getting established.
- Weeding and keeping plants alive.
- Providing suitable signage.

Lessons Learned:

- Make sure that all of the administrators are on board and understand the intent of the green infrastructure element.
- Developing concise language on outdoor, durable signs was not within the scope of this project. It would be beneficial to have uniform signage for raingardens and a vendor source for budgeting and ordering signs.

For more information about this case study, please contact:

Jennifer Duckworth

Environmental Engineer, Tetra Tech

jennifer.duckworth@tetrattech.com

973-378-9115

This case study is a product of **Mainstreaming Green Infrastructure**, a program of New Jersey Future.

Making green infrastructure the first choice for stormwater management in New Jersey.

Last updated: 08/09/16

