



RUTGERS UNIVERSITY

Water Resources Program

New Jersey Agricultural Experiment Station



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WATER PAGES eNEWSLETTER

Project Update ~ Green Infrastructure Implementation in New Jersey's Overburdened Communities ~ A New Jersey Sea Grant Consortium Coastal Adaptation and Resilience Project

Transforming School Grounds: A Collaborative Green Infrastructure Project

South Toms River Elementary School's Environmental Club is taking a step toward sustainability with the installation of a rain garden project on their school grounds. This initiative has been made possible through the combined efforts of multiple project partners, highlighting a strong community commitment to environmental stewardship.

Leading this effort are Green Infrastructure Champions Karen Walzer and Bailey Sanders, both affiliated with the Barnegat Bay Partnership and Jersey Friendly Yards. Their knowledge and dedication have been important in bringing this project to fruition.

The project received funding from the Veolia Water Company and New Jersey Sea Grant Consortium Coastal Adaptation and Resilience Project. This combined funding enabled the hiring of Down to Earth Landscaping, a contractor based in Jackson, NJ. The contractor's role included excavation, material addition, and the creation of rock-lined concrete inlets and outlets. With the assistance of the RCE Water Resources Program student interns and Karen and Bailey, the team successfully planted and mulched the rain garden. A 290 square foot rain garden was designed to capture runoff from the 910 square foot paved sidewalk. The garden features 130 perennials along with 18 shrubs, they were selected and planted to enhance the aesthetic appeal of the school grounds and to provide habitat for pollinators and other wildlife.

This rain garden can be used as an educational tool for the students at the school, demonstrating the importance of sustainable practices in managing stormwater runoff and improving local water quality.



*South Toms River Elementary School rain garden installation, July 24, 2024
[Photo credit: Hollie DiMuro, Water Resources Program]*

**Rain Garden Design Workshops
offered by Certified Green Infrastructure
Champions ~ *with the support of the RCE Water
Resources Program***

In 2004, the Rutgers Cooperative Extension (RCE) Water Resources Program

developed the **Stormwater Management in Your Backyard (SWMIYB)** extension education program to address nonpoint source pollution by training homeowners throughout New Jersey about stormwater best management practices (BMPs). This program highlights rain gardens as being a cost-effective BMP that can be readily implemented by homeowners to quickly achieve reductions in runoff volume and nutrient loading. The educational components of the SWMIYB program have resulted in a greater interest and understanding of the water resources issues facing our state.

The SWMIYB program encourages early adopters to install rain gardens at their home. A rain garden guidance manual was the main tool homeowners could use to design their rain garden coupled with training through educational presentations by the Water Resources Program. Grant funding was also secured to install demonstration rain gardens throughout the state that provided great educational value for further encouraging and engaging homeowners to take action.

While the SWMIYB program was touted as a great success by many, more needed to be done to get homeowners to build rain gardens. In 2012, the Water Resources Program partnered with New Jersey Water Supply Authority to develop and deliver a **Rain Garden Rebate Program** in the Peters Brook Watershed in Somerset County. The rain garden rebate program had some success. The program was in-person. People would attend an education session and then come back a week later and sit down with RCE professional staff to get a rain garden designed specifically for their home. Approximately 30% of the rain gardens designed were installed. Surveys of participants suggested that the hardest part of building a rain garden was digging out the garden. The soil in the Peters Brook Watershed contains lots of shale, making excavation difficult. At this time, the Water Resources Program aided senior citizens and others that were unable to dig out the garden by having Rutgers student interns and staff provide assistance with this labor intensive activity.

The Water Resources Program continues to offer the rain garden rebate program in a virtual format. Sometimes the program is offered as a stand-alone program, but more recently, it has been incorporated into a landscape makeover program that involves design and the installation of rain gardens at highly visual municipal sites while offering homeowners rain garden designs and rebates. The demand is still great from homeowners for assistance with rain garden designs. The Water Resources Program is struggling to keep up with this demand.

Over the last six years, we have certified over 800 green infrastructure champions through the **Green Infrastructure Champions Training Program**. We began discussing how these green infrastructure champions can help us help homeowners design rain gardens. On Wednesday, August 14, we set out to begin testing our hypothesis that certified green infrastructure champions can be trained to design rain gardens for homeowners with some technical support tools and training from the Water Resources Program. Fifty certified green infrastructure champions showed up in Ocean Township to help us test our hypothesis.

The ultimate goal would be to have green infrastructure champions host a workshop in their community to provide rain garden designs to homeowners. The way it would work is that homeowners that are interested in building a rain garden would go online and watch a 45-minute educational video on rain gardens. After viewing the video, the homeowners would attend a design workshop where the green infrastructure champion would help them pick a location for the garden, size the garden, and select plants. These design sessions are typically one-hour with the homeowner leaving

with a hand sketched rain garden design specifically for their home that includes a planting plan of native plants.

The green infrastructure champions that attended the workshop provided input to the Water Resources Program on the tools and training they feel they would need to launch this new program. A design worksheet was created for the green infrastructure champions with a sizing table. Ten sample planting plans were created. Plans were created for a rain garden that has a natural look and one that has a more manicured look. Planting plans were created for rain gardens with all shrubs, all perennials, a combination of shrubs and perennials, deer tolerate species, and shade tolerate species.

At our next workshop, we will be working with green infrastructure champions to provide designs for homeowners so they can hone their design skills. For more information, contact Hollie.Dimuro@rutgers.edu.



"Rain Garden Design Workshop: Train-the-Trainer for Green Infrastructure Champions" at the Ocean Township Senior Center in Oakhurst, Monmouth County, NJ on August 14, 2024

[Photo credit: Hollie DiMuro, Water Resources Program]



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