RUTGERS UNIVERSITY
Water Resources Program
New Jersey Agricultural Experiment Station

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WATER PAGES eNEWSLETTER

May every day of the new year inspire you to grow!

Happy New Year !

~Rutgers Cooperative Extension Water Resources Program~

Building Community through Green Infrastructure: A Journey in Long Branch

In the fall of 2024, the Long Branch community came together to embrace sustainable practices, starting with the Homeowner Rain Garden Program. This initiative showcased how education, collaboration, and action could inspire a greener future for all.

A quick summary of the fall session

On September 18th, the Long Branch Township Senior Center hosted an engaging rain garden education session, drawing 43 residents eager to learn about green infrastructure. Christopher Obropta of the RCE Water Resources Program led the presentation, highlighting how rain gardens help manage stormwater. Organized by Green Infrastructure Champion Faith Teitelbaum, along with the Whale Pond Brook Association and the Long Branch Green Team, the session inspired several attendees to join a follow-up rain garden design workshop on September 25th.

During the workshop, six homeowners collaborated with engineers Matt Leconey and Chris Perez to create custom rain garden designs. These plans aim to manage runoff from 3,087 square feet of impervious surfaces, introducing 635 square feet of rain garden space and nearly 200 native plants. Once installed, these gardens will bring both environmental and aesthetic benefits to the community.

From plans to action, a community at work

The educational sessions laid the foundation for hands-on community action. Faith Teitelbaum and volunteers from the Whale Pond Brook Association brought these plans to life, starting with the installation of Kate Rafferty's rain garden. This collaborative effort marked the first step in creating a network of green infrastructure solutions.

Photo credit: Faith Teitelbaum

But the momentum didn't stop there. Inspired by the success of the rain garden, Faith and the team planted a demonstration meadow on her property. This meadow, alongside the rain garden, now serves as a living classroom for the Whale Pond Brook Watershed Association, showcasing how small changes on individual properties can contribute to healthier ecosystems.

Photo credit: Faith Teitelbaum

Growing the vision

Looking ahead, the community is gearing up for even more impact. Plans are underway for a fall fundraiser featuring 100 acorn seedlings and 500 plugs planted in a seedling box. These seedlings will help expand green spaces throughout the watershed, encouraging residents to participate in reforestation efforts.

The team has also reached out to local schools, including the middle school, to assist with a new rain garden project on Avenel Avenue in Long Branch, NJ, which would engage students in these initiatives and create environmental stewardship in younger generations.

A model for change

The Homeowner Rain Garden Program in Long Branch demonstrates the power of community-driven green infrastructure. Through education, collaboration, and action, residents are getting back to their environment and strengthening their neighborhoods. As the Long Branch community continues to plant, educate, and grow together, they serve as an example of how green infrastructure can build stronger, more connected communities — one rain garden, meadow, and seedling at a time.

Vineland Stormwater Tree Beds

The Water Resource Program has successfully installed its first stormwater tree bed project on East Elmer Street, Vineland City**,** Cumberland County, NJ. This green infrastructure design utilized engineered soil and trench drains to allow rainfall to be directed into the tree beds providing water to vegetation while reducing stormwater runoff. The subsoil consists of CU-Structural Soil (engineered soil) designed to bear the load of the pavement and provide room for the roots of the installed trees to grow. Many urban street trees are subjected to small soil volumes due to being surrounded by compacted soils. Soil volumes are key to tree health, so projects like these provide a unique benefit of providing benefits to both tree health and stormwater management.

An existing section of parking lot with asphalt was removed and replaced with structural soils under it to create additional area to allow for rainwater to infiltrate and be stored for use for the tree beds. The tree beds supported a total of four trees that were installed in the turfgrass area between the parking lot and sidewalk. The project included a curb with trench drains to intercept and collect stormwater runoff from the parking lot and direct it into the tree beds. Runoff is stored and infiltrated into the subsoil storage layer below the pavement and tree beds. The project can also include porous pavement instead of trench drains in some areas, and underdrains can be utilized in locations where there is poor infiltration (Figure 1).

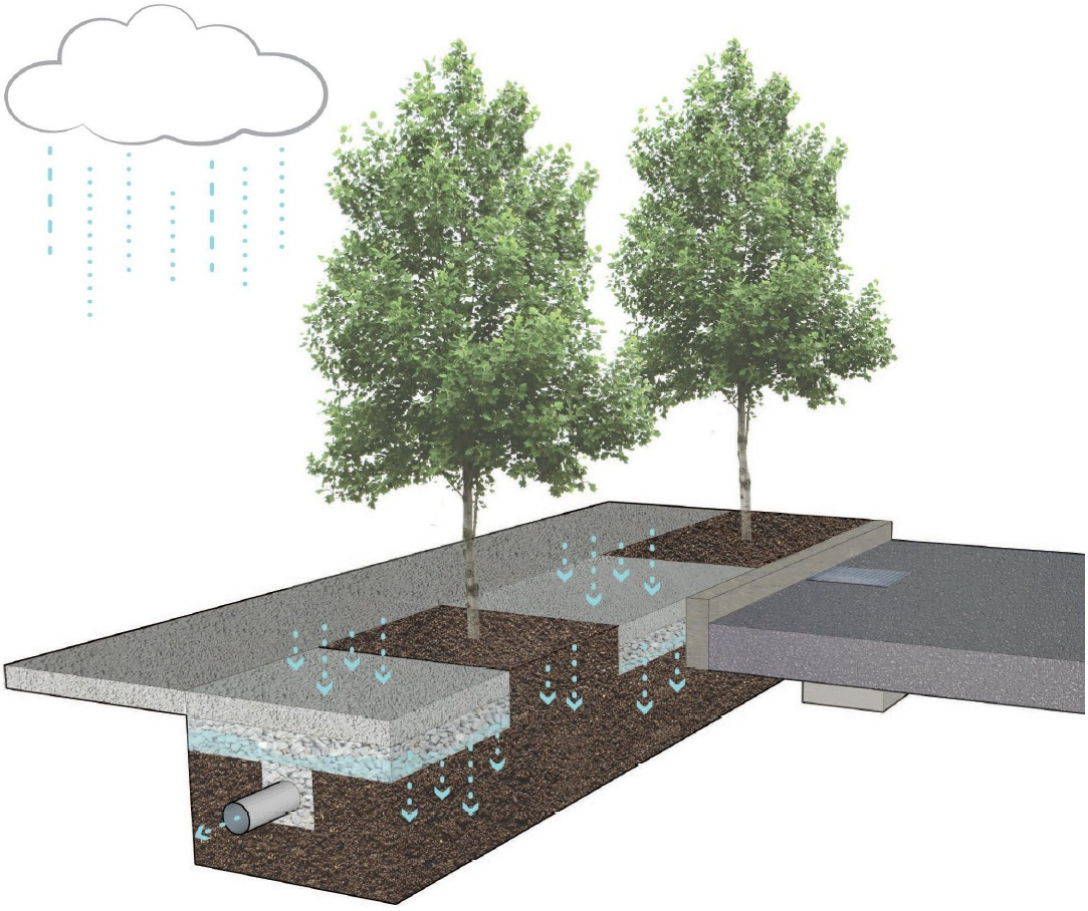

Figure 1: An example cross-sectional rendering of tree beds with porous pavement, engineered soils, and underdrain

This green infrastructure project demonstrates a cost-effective, sustainable, and environmentally friendly approach to stormwater management. This project allows for 475,562 gallons/year of stormwater to be managed for pollutant removal. Pollutant removal includes 0.5 lb/yr of total phosphorus, 4.7 lb/yr of total nitrogen, and 69.1 lb/yr of total suspended solids. This green infrastructure design also includes a maintenance program to ensure the project continues to improve water quality and reduce flooding for years to come.

Vineland stormwater tree pit construction, October 2024
[Photo credit: Roy Messaros]

DID YOU REGISTER?

Become a leader, become a Green Infrastructure Champion in 2025!

It's not too late!
Classes start Friday, January 10, 2025

The next Green Infrastructure Champions Training Program will be offered every other Friday from 10AM to 12NOON starting January 10, 2025!

All sessions for the 2025 training program will be offered via an online format.

Generous support from our funders is allowing us to offer the 2025 training for FREE.

Here is what we can offer as part of the program:

- Training on green infrastructure planning and implementation
- Technical support to develop a design for a green infrastructure demonstration project
- Networking opportunities with other certified Green Infrastructure Champions for mutual support
- Assistance with grant writing

2025 Training Program Class Schedule:

1. How to identify green infrastructure projects in your town (January 10)
2. Moving from planning to implementation of green infrastructure (January 24)
3. Maintaining green infrastructure practices/projects (February 7)
4. Stormwater management regulations, policies, and ordinances (February 21)
5. Green infrastructure planning and implementation for Sustainable Jersey points (March 7)
6. Green infrastructure projects for targeted audiences (March 21)
7. How to design and build a rain garden (April 4)
8. Retrofitting traditional detention basins with green infrastructure (April 18)
9. Developing green infrastructure master plans for an entire site or neighborhood (May 2)
10. Using green infrastructure to promote climate resiliency (May 16)

Registration is required and OPEN!

Go to water.rutgers.edu today to learn more and register!

Attendance at a minimum of five (5) classes is **needed for certification**.

This program is partially funded by the **New Jersey Agricultural Experiment Station** and **New Jersey Sea Grant Consortium**.

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