



NOVEMBER 2021 ~ HAPPY THANKSGIVING!
WATER PAGES eNEWSLETTER

A Cleaner, Greener Fulton Street for Woodbridge



*Fulton Street rain garden #4
construction, Woodbridge, NJ*



*Curb-cut for Fulton Street rain
garden #4, Woodbridge, NJ*

The intersection of Fulton Street and Coley Street in Woodbridge is abuzz with pollinators on late autumn blooms following completion of the fourth rain garden near the Fulton Street overpass. The design plan called for four rain gardens, totaling 3,400 square feet, to be installed in the public right-of-way to manage stormwater runoff.

Woodbridge Township Department of Public Works skillfully constructed all four rain gardens as part of a municipal green infrastructure initiative. The Water Resources Program provided the rain garden design plans and technical oversight of installation through an ongoing partnership with Woodbridge Township.

Rain gardens are a type of green stormwater infrastructure, designed to intercept runoff and allow stormwater to slowly infiltrate into the ground, recharging groundwater, enhancing water quality, and managing runoff. The gardens along Fulton Street intercept stormwater runoff from the roadway through a series of curb cuts and shallow basins. Runoff is managed from a combined impervious drainage area of 12,000 square feet, and the gardens have the potential to capture 266,600 gallons of stormwater annually.

Rain gardens are also planted with a diverse selection of grasses and flowering native plant species that add value to the landscape by attracting and supporting pollinators. As perennials go dormant for the winter, their seeds and structure provide food and shelter for wintering birds. Keep an eye out for next year's blooms!



Hibiscus moscheutos (swamp mallow) & *Solidago rugosa* (fireworks goldenrod), *Fulton Street rain garden #2, Woodbridge, NJ*



Completed Fulton Street rain garden #4, Woodbridge, NJ

Green Infrastructure at Pittsgrove Township Schools

As part of a partnership with the South Jersey Land & Water Trust, during the month of October, the Water Resources Program completed two green infrastructure demonstration projects in Pittsgrove Township, Salem County, one at Pittsgrove Township Middle School and one at Olivet Elementary School.

Pittsgrove Township Middle School: Phase 1 of the detention basin retrofit project at Pittsgrove Township Middle School consisted of installing four rain gardens in the basin in August 2021. Two check dams were installed to divert the stormwater from the existing low-flow concrete channel into the newly built rain gardens. Phase 2 of the project consisted of naturalizing the basin area before the rain gardens to decrease stormwater flow and increase pollinator habitat. To achieve the design, the existing sod (turfgrass) was removed. The garden bed was prepped with seed and a coconut matting to help prevent the seed and newly installed plants from washing away during storm events. We can't wait to see the basin in full bloom next spring and summer!



Phase 1: Rain garden installation in the detention basin at Pittsgrove Township Middle School, August 2021



Phase 2: Removal of sod to retrofit the basin at Pittsgrove Township Middle School, October 2021



Artistic rendering of completed project at Pittsgrove Township Middle School

Olivet Elementary School: Phase 1 of the bioswale project at Olivet Elementary School consisted of installing a 3,255 square foot bioswale in the school's courtyard. In an already eroding area, the Water Resources Program team carefully made sure that the bioswale was at the correct elevation to allow water to flow and to mitigate further erosion from the rooftop and sidewalk. The garden bed was prepped with seed and a coconut matting to help prevent the seed and newly installed plants from washing away during storm events. A large stone rock flow area was placed at the beginning of the bioswale to slow down the initial stormwater runoff. Two rain gardens are planned for installation as part of Phase 2 in the northeastern section of the courtyard to capture, treat, and infiltrate the stormwater runoff from the rooftop and nearby sidewalk area. To be continued....



Olivet Elementary School courtyard before bioswale construction, May 2021



Olivet Elementary School courtyard during bioswale construction and installation, October 2021

50 Rain Gardens for the 50th Anniversary of Earth Day - Featured Rain Garden for November 2021

The Water Resources Program worked with our partners to install over 50 rain gardens in 2020, while following social distancing guidelines, as part of our *50 Rain Gardens for the*

#25

**Angelo L. Tomaso Elementary School
46 Washington Valley Road, Warren, NJ**

Construction and installation of the Angelo L. Tomaso (ALT) Elementary School rain garden was completed on August 21, 2020. The design and installation of this rain garden was funded by a 319(h) grant from the New Jersey Department of Environmental Protection to implement green infrastructure projects in the Raritan River watershed. The Warren Township Department of Public Works excavated the rain garden, and the Water Resources Program added bioretention media and spread a three-inch layer of mulch. The Warren Township Green Team and a 2020 Green Infrastructure Champion assisted with the planting. The managed drainage area of the rain garden is 9,200 square feet, and the rain garden is 1,900 square feet in size. The rain garden will capture, treat, and infiltrate approximately 157,170 gallons of stormwater runoff per year and will serve as a demonstration project to township residents of how they can incorporate green infrastructure on their property. Most importantly, the rain garden will be used as an educational resource for students and teachers at the school.



ALT Elementary School rain garden following planting, August 2020

**HOLD THE DATES: Become a leader, become a
Green Infrastructure Champion!**



The next Green Infrastructure Champions Training Program will be offered every other Friday from 10AM to 12NOON starting January 14, 2022!

All sessions for the 2022 training program will be offered via an online format.

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 Green Infrastructure Champions for mutual support
- Assistance with grant writing

2022 Training Program Class Schedule:

1. How to identify green infrastructure projects in your town (January 14)
2. Moving from planning to implementation of green infrastructure (January 28)
3. Maintaining green infrastructure practices/projects (February 11)
4. Stormwater management regulations, policies, and ordinances (February 25)
5. Green infrastructure planning and implementation for Sustainable Jersey points (March 11)
6. Green infrastructure projects for schools (March 25)
7. How to design and build a rain garden (April 8)
8. Retrofitting traditional detention basins with green infrastructure (April 22)
9. Developing green infrastructure master plans for an entire site or neighborhood (May 6)
10. Using green infrastructure to promote climate resiliency (May 20)

Registration is **required** (*Coming soon to water.rutgers.edu! Registration will open December 1*); the fee will be **\$10/class**, and attendance at a minimum of **five (5) classes** is **needed for certification**.

This program is partially funded by the Rutgers New Jersey Agricultural Experiment Station, The Geraldine R. Dodge Foundation, and New Jersey Sea Grant Consortium and is a collaboration of the Rutgers Cooperative Extension Water Resources Program and the Green Infrastructure Subcommittee of Jersey Water Works.

Contact **Hollie DiMuro** (hollie.dimuro@rutgers.edu) if you are interested in becoming a Green Infrastructure Champion.

Municipal Action Team Green Infrastructure Initiative Updates

Camden Collaborative Initiative Water

The Camden Collaborative Initiative Water group met on November 17 via Zoom. The group got an update on the Adopt-a-Drain program which will officially start in the next few weeks with about 25 people already signed up.

Municipal action teams have been formed to foster collaboration and collective action that helps the municipality speak with a

Partners are also excited about the new Port Roads Project which involves road improvements on Broadway and Atlantic and nearby streets which will include curb bump-outs with green infrastructure as well as other improvements. The rain garden projects at the Historical Society and Gateway Park have been completed. Additional projects at Cooper Poynt and Molina School are nearly completed, too, with major redevelopment of playground areas and incorporating green infrastructure throughout the properties. Also, SAVE THE DATE, Tuesday, November 23 for the Camden Environmental Summit 2021. Register for the Summit **HERE** (<https://www.eventbrite.com/e/camden-environmental-summit-2021-registration-187690416087>)!

The next regular meeting will be on December 8 at 2PM via Zoom. Please go to the following to get added to the email list:

<http://www.camdencollaborative.com/meetings.html> or contact camdencollaborative@coopersferry.com.

Gloucester City Green Team

The Gloucester City Green Team meeting for November 10 was cancelled.

The next regular meeting will tentatively be on December 8 at 1:30PM via Zoom. The group is considering moving the meeting to accommodate new members. Please contact lryan@cityofgloucester.org to join the green team mailing list.

Jersey City START

START members met on October 28 at 2PM via Zoom to discuss plans for how the group will move forward when the new LTCP permits are finalized, given that Jersey City will be covered by the PVSC regional LTCP. This plan must address flooding due to CSOs, and cost sharing and allocation is still being finalized and is only focusing on grey infrastructure solutions. The JCMUA is in the process of a green infrastructure siting analysis to be completed by the end of the year. Resilient Northeastern NJ presented on their regional flooding/hazard mitigation planning project and requested START's help in providing feedback on their documents as they are produced. Jersey City's Master Plan is being presenting at the November 30 Special Planning Board meeting.

The next START meeting is tentatively scheduled for December 16, in accordance with the new bi-monthly schedule. Contact lsigmund@jcnj.org for the link for the upcoming meeting or to be added to the email list.

Newark DIG

Newark DIG met on October 26 to discuss recent

common voice and achieve a common goal while advocating for green infrastructure. Updates on the various municipal action teams across the state are listed in this newsletter.

Technical assistance provided to these municipal action teams by the RCE Water Resources Program is currently funded in part by the Rutgers New Jersey Agricultural Experiment Station (NJAES) and the Passaic Valley Sewerage Commission with support from the New Jersey Department of Environmental Protection (NJDEP) and our local partners.

Camden Collaborative Initiative Water

Gloucester City Green Team

Jersey City START

Newark DIG

Paterson Green Team

Perth Amboy SWIM

Trenton Green Infrastructure Partners

activities and initiatives of Newark DIG partners. The Newark Office of Sustainability hosted Canoemobile, a program in Riverfront Park which offered guided canoeing on the Passaic River on October 14, 15, and 16. The New Jersey Tree Foundation held successful tree plantings on October 1 on Fairmount Avenue, October 16 on Sanford Place, and on October 20 in Branch Brook Park. Newark DIG's own Nathaly Agosto Filion will be honored at the NY/NJ Baykeeper Annual Gala at Kearny Point on October 27.

Newark DIG Zoom meetings are on the fourth Tuesday of the month at 11AM. Please contact newarkdig@gmail.com to attend and for more information about any of the listed events.

Paterson Green Team

Paterson Green Team met virtually on November 17 to discuss the state of the group and future event planning. There will be a clean-up event hosted by the Girl Scouts and PSE&G at the Paterson Great Falls on December 4 (December 5 - rain date). Residents who attend can learn more and sign up for the Adopt-A-Catch Basin program in Paterson and will have the opportunity to tell their own water story at a live open-mic event with New Jersey Future. Members shared ideas for renewing the efforts of Paterson SMART (Stormwater Management and Resource Training), a collaborative group of community organizations, local government, and residents focused on stormwater, green infrastructure, and CSO (combined sewer overflow) issues.

For more information and to join the green team mailing list please contact marthaaren333@yahoo.com.

Perth Amboy Green Team/SWIM

Perth Amboy SWIM members met virtually this month in conjunction with the Perth Amboy Green Team on Tuesday, November 16 at 6PM. The Green Team held a successful clean-up event on November 13 with participation from students, resident volunteers, and local businesses. Members discussed the potential of forming organizational structure, including officer positions and committees for specific Sustainable Jersey actions and interest areas. Planning for future Green Team outreach events included the discussion of how to better engage youth and retain audiences through participatory activities, giveaways, and ways for residents to take action at home. Partners also discussed the need to take inventory of city catch basins and educate residents about combined sewer overflows and the storm sewer system, potentially through an adopt-a-catch basin program. The City of Perth Amboy Clean Communities coordinator shared information about a campaign to deploy cigarette

butt recycling receptacles in litter-prone areas.

The next meeting will be on December 21 at 6PM. Please contact jrosa@perthamboynj.org to be added to the email list.

Trenton Green Infrastructure Partners

Trenton Green Infrastructure Partners (GIP) met virtually on November 16 to discuss ongoing partner initiatives and events including a successful tree planting hosted by the New Jersey Tree Foundation at Martin Luther King Jr. Elementary School on November 5. Temple University Landscape Architecture students shared their park design concepts for the Trenton waterfront. Members listened to details and discussed the City of Trenton Management Plan for Forests and Trees by DVRPC (Delaware Valley Regional Planning Commission). The RCE Water Resources Program and the City of Trenton completed work at the Hetzel Pool rain garden on November 10.

The next meeting will be on December 21 at 3PM via Zoom; please contact atabas@njfuture.org to be added to the mailing list for the group.

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