RUTGERS UNIVERSITY
Water Resources Program
New Jersey Agricultural Experiment Station

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WATER PAGES eNEWSLETTER

2024 Rutgers Cooperative Extension Water Resources Program Summer Internship Program: A Season of Growth and Impact

Rutgers Cooperative Extension (RCE) Water Resources Program 2024 Summer Interns

This summer, the Rutgers Cooperative Extension (RCE) Water Resources Program had the privilege of hosting eight full-time interns, each bringing their unique expertise and passion for stormwater and green infrastructure to the program. These interns came from diverse academic backgrounds, including environmental engineering, civil engineering, environmental sciences, agriculture and natural resources, and landscape architecture. Together, they contributed an impressive 3,612 hours over the course of a 14-week internship, leaving a lasting impact on our program and our green infrastructure projects.

The interns played an important role in our fieldwork efforts. They were able to complete five days of green infrastructure site surveys. These efforts led to the

identification and evaluation of seven potential sites for implementing green infrastructure practices. Their work didn't stop there! Over a span of seven days, they assessed a total of 28 municipalities in the Highlands area of the state, specifically in the North Branch Raritan, South Branch Raritan, and Lamington River watersheds. In the southern portion of the state, similar assessments were conducted throughout the Oldmans Creek and Racoon Creek watersheds.

Further, the interns conducted assessments of detention basins in the Oldmans Creek and Racoon Creek watersheds as well the South Branch Raritan, North Branch Raritan, and Lamington River watersheds. This evaluation was spread over five days and also included assessments of agricultural sites in the Rancocas Creek watershed.

In addition to these site surveys and assessments, our interns completed 16 days of outfall and catch basin inspections in Hamilton Township, Mercer County. They were able to inspect 993 catch basins in an inspection zone of roughly six square miles as well as inspect 86 outfalls in an inspection zone of about 11 square miles.

The interns also contributed to the hands-on construction of green infrastructure practices. This summer, they successfully installed and planted two school rain gardens, one in Passaic, NJ and another in Plainfield, NJ. Additionally, they planted a rain garden after it was constructed by contractors at a school in South Toms River, further advancing our goals of addressing water resources issues and empowering communities.

Our summer internship program was more than just a learning experience for these aspiring professionals; it was an opportunity for them to make a difference in the communities we serve. Their hard work, dedication, and enthusiasm have set a high standard for future internship programs and have significantly contributed to our ongoing green infrastructure efforts. We are immensely proud of their achievements and look forward to seeing the continued positive impact of their work in the years to come!

Join ANJEC for their 51st Environmental Congress!

Friday, September 27th 9am-4pm

Rowan College, Votta Hall
Burlington County Campus
900 College Circle
Mt Laurel, NJ

REGISTER NOW!

CUMBERLAND COUNTY SOIL & WATER CONSERVATION DISTRICT

Sharing Ideas at the Maine Stormwater Conference

I was invited last week to deliver the keynote address at the Maine Stormwater Conference in Portland, Maine. I was a little worried that stormwater professionals in Maine would not want to hear what I had to say in a 90-minute presentation. In front of 350 people, I told a cautionary tale of how rapid urbanization can severely impact Maine's waterways just as it has in New Jersey. I talked about the very good New Jersey Stormwater Regulations, emphasizing that they only apply to major development. I talked about how our municipal separate storm sewer system (MS4) permits only focus on good housekeeping and maintenance of existing infrastructure and how the MS4 regulations do not require the municipalities to retrofit historic development with stormwater management. I pointed out to the Mainers that the only way New Jersey is going improve water quality, eliminate harmful algal blooms, and reduce flooding is by retrofitting past development that was built prior to the current stormwater regulations. I spoke about how preservation of water resources is a lot cheaper than restoration. I encouraged them to think about this as development continues to flourish in Maine.

I shared with the audience the Rutgers Cooperative Extension Water Resources Program philosophy and discussed our programs. I talked about how we are working with combined sewer communities to help them advocate for green infrastructure as the first line of defense to eliminate combined sewer overflows. I introduced them to impervious cover assessments, reduction action plans, and green infrastructure feasibility studies that we have been preparing for municipalities and how these plans will serve as a foundation for the Watershed Improvement Plans that each municipality has to complete as part of their MS4 permit requirements. I shared information about the robust partnerships we have built throughout the state of New Jersey as we work to fix the state's water resources problems.

Finally, I described our Green Infrastructure Champions Program. As a result of my son, Cody working for the Maine Department of Environmental Protection in their stormwater division, several Mainers have already taken the program and have become certified Green Infrastructure Champions. Many of them wore their Green Infrastructure Champions baseball caps to the meeting! I expect many more Mainers

to be enrolled in the program when it begins in January 2025.

Every chance I get I attended stormwater conferences in New England. New Jersey has a lot to learn from our colleague in New England, and they appreciate all that we share with them. This conference was no exception. I came back to New Jersey wanting to test our porous asphalt projects to see how well they are still infiltrating. The data collected by the University of New Hampshire Stormwater Center on infiltration has made me very concerned. I want to explore the underdrain sand filter that is Maine's most popular stormwater best management practice. want to examine pre-treatment options for our green infrastructure systems to help reduce maintenance as recommended by many professionals at the conference. One of the best parts of the conference was seeing my son give a presentation to a room of 200 Mainers. The respect and appreciation they have for Cody was heartwarming. He is doing great work for the Maine DEP, and I am very proud. Maine DEP has an opening for a junior engineer to work under Cody. Maybe I'll apply!

~ Christopher C. Obropta, Ph.D., P.E., Extension Specialist in Water Resources

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Stormwater Solutions at the Middlesex Public Library

This fall, the Middlesex Public Library in Middlesex, NJ will become an example of sustainability, thanks to the efforts of Clare Levourne and Doriann Kerber. These two dedicated Green Infrastructure Champions are leading the installation of a 560-square-foot rain garden project designed to capture and manage stormwater runoff from the library and the adjacent Middlesex municipal building's parking lots. With a combined drainage area of 14,460 square feet, this rain garden is designed to have a significant impact on the local environment.

The project will be brought to life with the help of Drake's Excavating from Blairstown, NJ, who will handle the task of excavating the site. Once the groundwork is accomplished, Clare and Doriann will lead a community planting event, inviting local volunteers to join them in planting 170 native perennials and shrubs. These plants will not only beautify the space but will also play a critical role in absorbing and filtering stormwater, reducing runoff, and preventing pollution from reaching nearby water bodies. This rain garden is more than just a green space; it's a tool for the community to show how they are being green and fighting against stormwater pollution!

Funding for this project has been generously provided by the ***New Jersey Sea Grant Consortium*** *(NJSGC) under NJSGC project number 6238-0018, "Green Infrastructure Implementation in New Jersey's Overburdened Communities – Phase 2."*

Construction of the Middlesex Public Library rain garden, September 2024 [Photo credit: Chris Perez, RCE Water Resources Program]

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