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WELLSPRING

A publication of The Watershed Institute. Keeping central New Jersey's water clean, safe, & healthy since 1949.

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The
Watershed
Institute



FROM THE EXECUTIVE DIRECTOR

Disastrous Flooding Demands Bold Action

by Jim Waltman

Raging floods are something we've grown all too accustomed to in the Garden State. Ida and Henri are just the latest entries in a parade of ferocious storms that have slammed New Jersey in the last decade. Irene, Sandy and the summer's big events caused tragic loss of life, displaced millions of people, and exposed many to the health hazards of floodwaters contaminated with fecal matter, industrial toxins, and other pollutants from overwhelmed storm and sewage systems.

Climate change and the continual creep of development are a double whammy that portends more flood damage to homes and businesses unless federal, state and local governments act decisively. We need your continued help to ensure bold action.

In the northeast, the amount of precipitation dumped during the largest storms increased 55 percent between 1958 and 2016, according to the National Climate Assessment from the U.S. Global Climate Change Research Program. The recent "code red" report from the United Nations concluded that this trend is likely to continue.

To avoid the most extreme changes to our climate, we must dramatically accelerate our transition away from fossil fuels and towards clean, renewable forms of energy. And to protect our state from the storms that will continue to come with greater intensity, we need to implement a four-part policy agenda.

First, strengthen protections against development near streams, rivers, and coastlines. Allowing more homes and businesses to be built near waterbodies will lead to more costly damage from flooding. State and local policy makers must strengthen protections against building near water.

Second, remove imperiled homes and businesses from harm's way. New Jersey's Blue Acres program uses state and federal funding to purchase and demolish flood prone structures from willing sellers. The land is then restored so that it can absorb floodwaters, protecting downstream homes.

Third, require developers to build smarter. Flooding can be mitigated by requiring builders to install "green infrastructure" systems to catch stormwater runoff. With your support, we've secured amendments to the state's stormwater regulations to require more such infrastructure on large new developments. These measures—and municipal ordinances that complement the state rules—must be strengthened to protect our communities from flooding and water pollution.



Parts of Trenton were underwater from the summer storms.

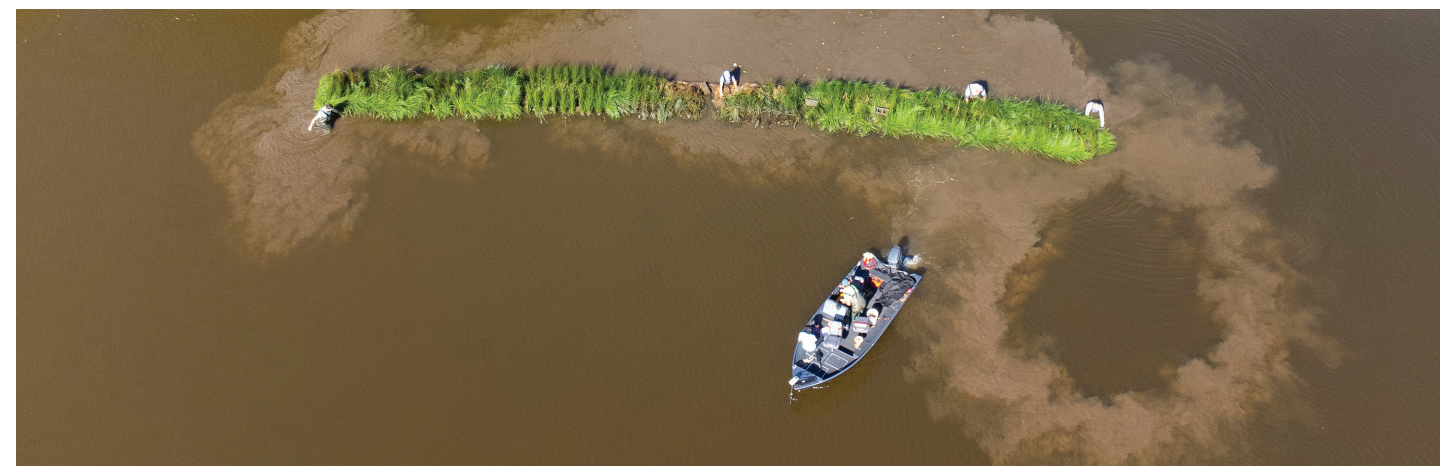
Fourth, retrofit older developments to address flooding. Most of our state was developed long before there were concerns about runoff or flooding. To really tackle our flooding problems, we must address developments built before these regulations were adopted. The legislature created a great opportunity to do so when it adopted the Flood Defense Act in 2019. The law authorized towns and counties to create utilities to address stormwater runoff from such older developments, but none have done so yet.

Your support is helping us advance this four-part agenda but much more needs to be done to prepare us for the inevitable extreme weather that will bring more flooding.

Jim

INNOVATION FOR CLEAN WATER

Floating Wetlands Address Harmful Algal Blooms



The summer storms moved the floating wetlands around Rosedale Lake. The science team moved them back into position and re-anchored them in late September.

The Watershed Institute has deployed an innovative approach to halt Harmful Algal Blooms (HABs), toxic algal colonies that are dangerous to people, pets and wildlife. Scientists believe that higher water temperatures resulting from global warming, combined with nutrient pollution from stormwater runoff, may be contributing to more frequent and widespread outbreaks of HABs.

Two dozen Watershed staff and volunteers built, planted and deployed features called "floating wetlands" in Rosedale Lake, a popular Hopewell Township waterbody where recreation has been sharply curtailed because of toxic HABs. The floating wetlands were lashed together to form two long islands totaling 1,000 square feet and strategically placed near tributaries that flow into the lake from adjacent farmlands and residential properties.

The floating wetlands were built from marine foam, jute, a special soil material, and filter floss made from recycled plastic and then planted with fast-growing grasses, swamp milkweed, and cardinal flowers. The hardy, long-rooted plants will soak up nitrogen, phosphorus and other nutrients that stimulate the growth of blue-green algae, which can emit cyanotoxins. One pound of phosphorous can stimulate the growth of 1,100 pounds of algae in a lake or pond.

The project is a collaboration with the Mercer County Park Commission and is supported by a grant from the NJ



The wetlands were planted and installed in May by Watershed staff and volunteers from Trout Unlimited.

Department of Environmental Protection. Volunteers from Trout Unlimited have assisted with the effort.

"The purpose of the floating wetlands is to reduce the nutrients that drain into the lake from polluted stormwater. The nutrients come from fertilizers from nearby lawns and animal waste," said Steve Tuorto, Ph.D., Director of Science at the Watershed.

Watershed staff will monitor the floating wetlands for two years to determine their efficacy. Additionally, county officials will add aeration devices and barley bales along the shoreline to absorb polluted stormwater runoff coming from nearby lands and upstream tributaries that drain into Rosedale Lake.

PROTECTING OPEN SPACE

Watershed and Partners on Track to Preserve Key Open Space in Princeton

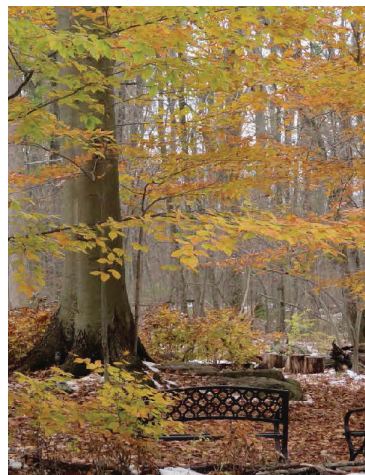
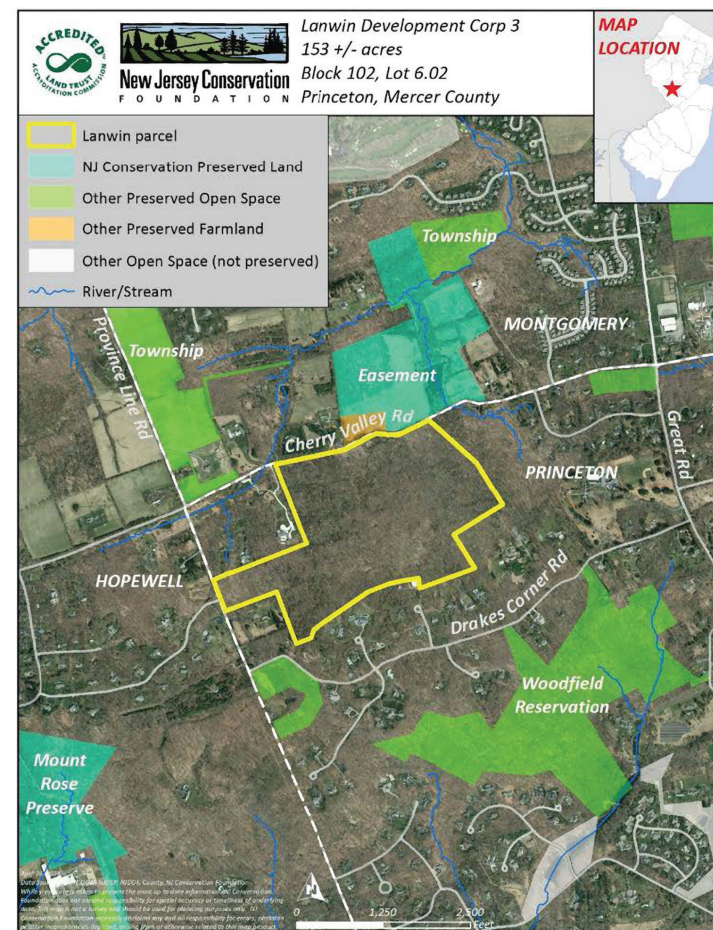
The Watershed Institute and several non-profit and government partners will soon preserve a 153-acre tract of mature forest, the largest remaining parcel of undeveloped land in Princeton. The land is being purchased from the Lanwin Group and the family of the late Bryce Thompson.

Preserving this beautiful, mature forest has many benefits, from protecting fragile wetlands and streams, to conserving habitats for imperiled wildlife, to sustaining mature forests that help soak up precipitation and mitigate flooding.

A development consisting of large homes had been approved on the land despite active opposition from The Watershed Institute, the Princeton Environmental Commission (PEC), and others, and would have resulted in significant deforestation—the loss of approximately 4,000 trees that form part of a mature forest on this site.

The Watershed Institute's partners on this project include Friends of Princeton Open Space, New Jersey Conservation Foundation, Ridgeview Conservancy, PEC, the town of Princeton, Mercer County, the New Jersey Green Acres Program, The George H. and Estelle M.

Sands Foundation, and numerous other individual donors. Princeton Councilwomen Mia Sacks and Eve Niedergang have provided particularly strong leadership in this effort.



ENGAGING COMMUNITIES

Watershed Fellows Leave Their Mark

Six barrels filled with native plants in downtown Trenton are testament to this summer's community service by Watershed Fellows Mafanta Swaray and Edgar Rivera.

sophomore majoring in nursing studies and minoring in biology at Stockton University, and Edgar is a freshman interested in studying biology at Middlebury College.



Watershed fellows Mafanta Swaray and Edgar Rivera's capstone planting in Trenton with the team from Isles inc.

The two Trenton residents participated in summer fellowships at The Watershed Institute through a program sponsored by the Alliance for Watershed Education of the Delaware River (AWE), a network of 23 education centers located near the Delaware River.

"We wanted to build a rain garden for the environment, but we also wanted to connect people with the environment," Mafanta said. "We grew up in Trenton and we knew people don't get a chance to see the environment, so we said let's replicate it."



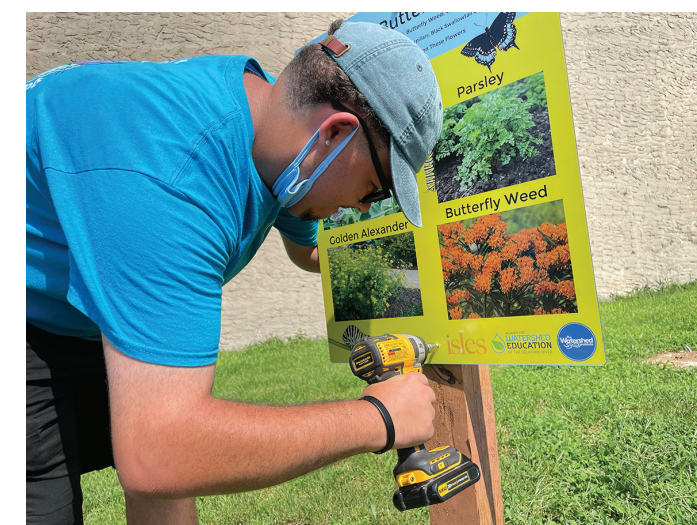
Swaray helps the Boys & Girls Club of Trenton catch butterflies.

They gathered about 20 volunteers from the greater Trenton area and planted the barrels with native plants to attract butterflies and other pollinators. They also wanted to involve the community, reaching out to nonprofit organizations such as Isles, Inc. and the Boys & Girls Club of Trenton. During the daylong event, Mafanta said they ordered lunch for everyone from Trenton Pizza to involve the local community further.

"This outreach was definitely important and it is such a new thing that we're bringing to the city of Trenton," Edgar said. "We wanted to bring a piece of nature to Trenton that is really lacking."

Volunteers from Isles will be involved in helping to water and maintain those rain barrel gardens.

Now that they are in college, they are working remotely on several science and stewardship projects for the Watershed. They will continue to develop the connections they made to several Trenton communities and ensure those ties remain strong.



Rivera attaches a sign explaining what is planted in the barrels

In addition to their project in Trenton, the two conducted education programs at the 950-acre Watershed Reserve and the Kate Gorrie Butterfly House.

For their capstone AWE project this summer, the duo wanted to combine science and education. Mafanta is a

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Members share why they Support The Watershed Institute



Anita Bhala and Rajiv Dave

The Watershed Institute is fortunate to have many loyal supporters who have been a part of our community for decades. We also appreciate our newest members, who have discovered us more recently.

Anita Bhala and her husband, Rajiv Dave, moved to a home in Pennington in 1996 and became Watershed

members the following year. Their children, now ages 25 and 27, attended our programs here including the Watershed Nature Camp. Anita and Rajiv have appreciated the education programs for adults as well, especially Winnie Spar's Language of Nature classes. Raj shared, "Winnie has been extraordinary. She is a very special person. In recent years especially, I appreciated that we could focus on poetry and nature, which was soothing." Visit [thewatershed.org](https://bit.ly/wspar_registration) to learn more and register for Spar's program here: https://bit.ly/wspar_registration.

They also credit the Watershed for teaching them how to have a "greener" home and yard. Rajiv was introduced to Jersey Solar in 2004 when Education Director Jeff Hoagland gave him a tour of the solar panels on the old Nature Center. The couple subsequently had panels installed on their own house. They are River-Friendly Residents who, with the Watershed's help and advice, have naturalized their backyard over the years. They started by planting more native plants in their yard and, more recently, have chosen to not mow the grass at all behind their house, preferring to allow a natural meadow to grow and flourish.



Julia Delark

Member support makes all of our work keeping water clean, safe and healthy possible! Thank you to these members and all of our generous donors. Please consider making a gift to The Watershed Institute today.

Julia Delark, of Pennington, is 6 years old and she loves riding her bike with her family to the Watershed, walking along the trails and visiting the Kate Gorrie Butterfly House during the summer months. She wanted to do something to give back to the Watershed and decided to create handmade bracelets and donate all the proceeds to the Watershed. Julia raised \$60 from her jewelry sale. The Watershed is grateful for Julia's thoughtfulness and generosity and her donation awarded Julia and her parents, Katrina and Thomas Delark, a family membership.



Winter 2021–2022 Calendar

Explore some winter fun with The Watershed Institute. Join our programs and events with the whole family.

Winter Program Highlights

February 5th—Groundhog Day

February 12 and 19th—Maple Sugaring

March 5—Winter Fairy Festival

March 19—World Water Day Events

Pre-registration is required for all programs and events. Visit us online to register.

[Thewatershed.org/events](https://thewatershed.org/events)

Covid policy

All persons are required to wear a mask indoors. All participants in Watershed-sponsored indoor public programs and events aged 12+ will be required to show proof of vaccination. All visitors to the Watershed Center aged 12+ are required to be vaccinated. All participants aged 12+ in Watershed-sponsored outdoor events that include seated meals are required to show proof of vaccination. These policies are subject to revision if conditions or health agency guidance changes. Read more at bit.ly/covid_h2oshed



Alison Novobilsky records the data for the last monarch butterflies of the 2021 season that were tagged and released. This year, 25 butterflies were tagged with stickers as part of the Monarch Watch program.

Keeping water clean, safe and healthy is the heart of our mission.

We work to protect and restore our water and natural environment in central New Jersey through conservation, advocacy, science and education.

Visit us online to show your support. Stay informed, get involved, donate.

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AGES 5-18**



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