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WELLSPRING

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



StreamWatch Schools launches across the region ...p8

Hundreds of trees planted on the Watershed Reserve ...p9

Summer Camp and Academy to expand in 2023 ...p4

The
Watershed
Institute



FROM THE EXECUTIVE DIRECTOR

Working Together for Clean Water for More Than 70 years

by Jim Waltman

Fifty years ago, many of America's rivers were open sewers for human and industrial waste. The nation was horrified in 1969 when the Cuyahoga River actually caught fire. The sight and stench of our waterways created a public outcry that helped inspire millions of Americans to take to the streets and demand action. In response to that grassroots citizen action, Congress passed the Clean Water Act in 1972 to "restore and maintain the chemical, physical, and biological integrity of our nation's waters."

The Clean Water Act and subsequent amendments ended most direct discharges of untreated sewage and industrial pollution into our water bodies, which has led to a dramatic improvement in water quality.

Unfortunately, the Act has not come close to meeting its ambitious goals for "zero discharge" of pollutants into navigable waters by 1985 and for all U.S. waters to be "fishable and swimmable" by 1983. Moreover, a pending case before the U.S. Supreme Court challenging the definition of the "waters of the United States" could result in a dramatic scaling back of the Act's reach.

Most of New Jersey's streams still fail to meet state water quality standards due in large part to polluted stormwater runoff. "Legacy" pollutants that continue to leach into our waterways from polluted sediments and riverbanks are also a serious problem in some parts of the state.

To achieve the goals of the Clean Water Act and complementary state laws, several key steps should be taken.

As we move forward and consider the future impact of the Clean Water Act, the need for regional instead of local, piecemeal solutions is essential. Water flows according to

terrain and geography, so one town's solution or problem affects neighboring localities.

First, regulations should be adjusted to acknowledge and prepare for climate change.

The largest source of water pollution today is polluted stormwater: runoff from active construction sites, pesticides, and fertilizers we spread on our lawns, leaks from failing septic

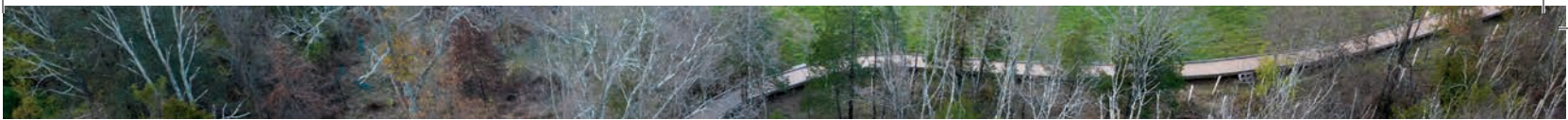


In the 1950's and '60s the Cuyahoga River in Ohio caught fire multiple times because of pollution in the water. Photo courtesy of the Cleveland Memory Project

systems and broken sewer pipes, waste from our pets, road salt we spread on our driveways, to name just some sources.

When it rains, this witches brew of pollutants washes over our lawns, driveways, parking lots, and streets into storm drains that carry the runoff directly to local streams.

The Clean Water Act and complementary state laws require that stormwater runoff from large new developments



Harmful algal blooms exploded in the Millstone River this past summer.

be mitigated, with the level of treatment based on the anticipated size and frequency of storms.

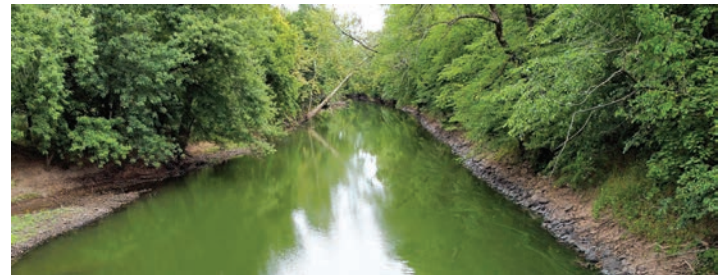
In January 2020, Governor Murphy acknowledged that our stormwater and flooding problems are getting worse and created a new initiative called NJ PACT (Protecting Against Climate Threats) to update regulations “to make our natural and built environment more resilient to the impacts of climate change.”

In December, as part of the NJPACT Initiative, NJDEP proposed new rules that would require stormwater systems to be designed to handle today's larger storms and the even larger storms projected for 2100. The agency also proposed redefining flood plains to better reflect current conditions, a step that should result in less new development in flood-prone areas.

You still have an opportunity to comment on these proposed measures dubbed the Inland Flood Protection Rule. The comment period is open until Feb. 3, 2023. If adopted these rules will, at best, start to apply sometime in the second quarter of 2023.

A second critical step is to improve the integration of the Clean Water Act's various provisions. The law does many things. NJDEP, with help from organizations like The Watershed Institute, is required to monitor our waterways for pollution and every two years, the agency publishes a list of “impaired” waters that don't meet clean water standards.

Plans to address such “impairments” must be developed. The plans, called Total Maximum Daily Loads (TMDL), determine how much ongoing pollution must be reduced for an impaired waterbody to meet the clean water standard. Pollutant load reductions are then allocated across various parties.



Harmful Algal Blooms (HABs) have been impacting lakes and ponds throughout New Jersey for years and the Watershed team has deployed floating wetlands in a few locations to try to combat this growing problem.

A separate provision in the law requires entities that discharge pollutants into waterways to secure permits that include permit conditions. Towns must receive a permit called a Municipal Separate Storm Sewer Permit (MS4) since they are responsible for approving and managing land development that creates stormwater runoff.

But all too often the MS4 permits are issued without requiring the towns to have a plan to implement the pollution reductions called for in TMDLS. In other words, the towns receive permits authorizing them to add to the water pollution problem without requiring them to address the problem.

The Watershed Institute and colleague organizations have been pressing this inadequate point for years, going as far as to sue NJDEP over its MS4 program a few years ago. Recently, NJDEP has issued a new MS4 permit that will finally require towns to create Watershed Improvement Plans to clean up water pollution and implement the reductions called for in TMDLS. We look forward to working with various towns to implement the new requirement.

The Clean Water Act's basic structure and provisions provide the tools to address the remaining water pollution problems in New Jersey if they are aggressively implemented, enforced, and funded, and if the two recommendations described above are adopted.

Submit your comments by Feb. 3 supporting the Inland Flood Protection Rule!

<https://dep.nj.gov/inland-flood-protection-rule/>



EDUCATING THROUGH CAMP

Summer Programs Continue to Grow Thanks to You

From splashing in the Stony Brook and hiking to Big Boulder, campers at last summer's Watershed Nature Camp learned about protecting water and the natural environment. The camp attracted the highest enrollment



One of the camp field trips in 2022 was canoeing on the D&R Canal near Griggstown

of campers in its history, including the greatest number of campers from the Greater Trenton area who attended Watershed Nature Camp for free, thanks to generous donors like you. Plans are for this cherished program to continue to grow in 2023.

"Our camp staff was pretty amazing last summer," said Jessica McDermott, the Watershed's Camp Director. "There was a dedication, enthusiasm, and passion that traveled through



Campers enjoy s'mores one day at camp last summer.

the staff, both old and new." Last year's camp had a record ten counselors who were former campers, CITs, or Watershed Academy participants.

The feedback from the camp surveys was strong and helpful, including an appreciation for the Watershed's support.

Wanda Webster Stansbury, Executive Director of the Center for Child and Family Achievement who facilitated some of the Trenton camp scholarships, wrote about one parent's reaction when she learned that scholarships to attend camp for free included transportation and lunches.

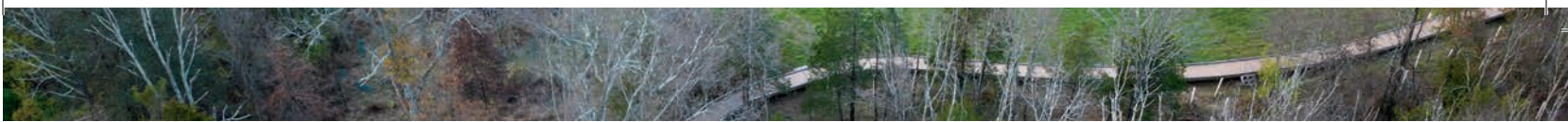
"The lady started crying and said she was thinking about how she didn't have any money for lunch every day!" Wanda said. "Thank you...this camp is having a powerful impact on children and families."



"Amazing. Easily the best camp around. We love it."

— TOM GRIFFITH

The Watershed Academy for High School Students held five weeklong hands-on sessions in 2022, including a successful collaboration with Princeton University's High Meadows Environmental Institute. Thirty-three students spent time on a variety of projects. They explored streams, designed eco-friendly houses, and designed storm water management solutions. Students in our Climate and Water week visited several of Princeton University's labs, they saw how scientists are engineering sustainable concrete and modeling groundwater pollution. They marveled at a supercomputer



Science Director Steve Tuorto shows Watershed Academy students various green infrastructure projects in Hopewell Twp.

*“Warm, focus on nature,
educational.”*

— GRACE WUERTZ



Watershed Academy students make a model of a home with different examples of green infrastructure.

and learned how researchers are using machine learning to plan for a better future.

Two high school students in our Advocacy Academy, Viktoria and Daniel Leopold, made a presentation about



Singing camp songs at campfire circle and visiting Sourland Mountain last summer.



Playing in the Stony Brook is part of camp that everyone enjoys.

flooding to the Mayor of Montgomery Township and members of the town's Environmental Commission. They included images they photographed the day after Tropical Storm Ida, as well as maps they developed in the Academy.

One participant in the Water and Climate Academy said, "The Academy will benefit me in the future, as I now know more about hydrology and how rising sea levels are affecting global communities. This can be applied in college and my career."

**2023 Summer Camp and Academy
Registration Opens Feb. 6 for Members.**

Learn More at thewatershed.org/camp
and thewatershed.org/academy

CREATING COMMUNITY

Your Support Fuels Increased Outreach in Trenton

The Watershed Institute has expanded its Trenton-based efforts, expanding our programming for the city's schools, connecting with youth leadership programs, and offering more activities in the community.



The Watershed welcomed groups from Trenton to explore the Reserve.

The goal is to create stronger relationships that will strengthen community ties between the Watershed and Trenton schools, community organizations, and civic groups.

In late summer, visitors from the East Trenton Collaborative hiked along the boardwalks and Watershed Reserve, toured the Kate Gorrie Butterfly House, and caught monarchs and other butterflies on the property. Along with deepening the connection between the organizations, a goal was to increase the local buzz about the Watershed and thank ETC for its collaboration.

“It was our pleasure to host the ETC community after they showed us Trentonian hospitality within the East Trenton neighborhood,” said Kendra McKoy, the Watershed’s Delaware River Advocate. “We look forward to deepening our relationship with the city of Trenton and the people who love it.”

Trenton residents Mafanta Swaray and Edgar Rivera led several ETC guests on a butterfly-catching adventure around the Watershed Center.



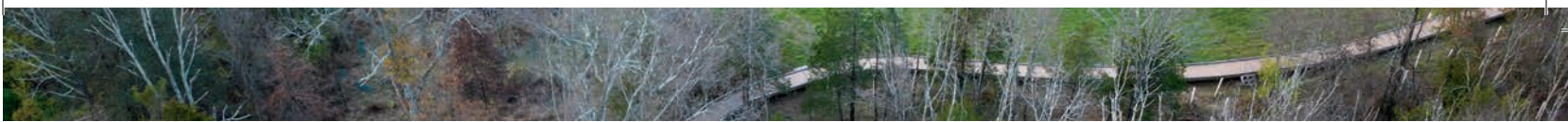
At Trenton River Days, visitors were able to make fish print bandanas as part of the activities.

Both served as Summer Fellows at The Watershed Institute for two summers as part of a program funded by the Alliance for Watershed Education of the Delaware River (AWE), a network of 23 education centers located near the Delaware River. The two created a pop-up butterfly house at the Mercer County Boys and Girls Club as their capstone AWE project.



Sophie Glovier leads a tour of the Reserve with a group from the East Trenton Collaborative.

In another collaboration the Watershed and partner organizations organized a celebration of the Delaware River in Trenton at Trenton River Days. More than 500 attendees learned about water quality and natural history at the Watershed’s displays, touched tiny fish who were swimming in a wading pool, created art prints of critters, went on a canoe trip, and otherwise celebrated the history, culture, and heritage of the Delaware River.



Steve Tuorto helps Trenton River Days visitors at the touch-a-fish tank.

Watershed staff also worked with the Environmental Youth Leaders program in Trenton, a weekly after-school internship that ran from September to June for juniors and seniors attending greater Trenton high schools. The students received training in water conservation, stormwater management, advocacy, and career skills. This youth leadership venture was done in tandem with the Mercer County Park Commission and the non-profit Isles.

In May, River-Friendly Coordinator Olivia Spildooren organized the Trenton Community Day and Watershed Stream Cleanup, working alongside Trenton nonprofits and community centers. The cleanup was centered at George Page Park along Assunpink Creek.

“A Trenton resident suggested we make the cleanup connected to a block party to get more people interested and use it as a time to educate people who were curious about their local Assunpink Creek—and thus the Community Day was created,” Olivia said.



Students from Trenton participate in a STEM activity at the Watershed.



For the second year, the Watershed offered canoeing in a pond at Trenton River Days making it accessible to people of all ages.

The Watershed resumed its pre-pandemic visits with school groups with vigor. There were 13 separate visits by students from Trenton schools, including 160 students from Grace Dunn Middle School and Rivera Middle School who worked in teams to design ways for American Shad to navigate around dams.

Another 160 students from Trenton Central High School and Trenton Ninth Grade Academy participated in a hybrid program in early and mid-May. In the first part, they watched a video in their classrooms of Watershed staff demonstrating water quality monitoring at Assunpink Creek at Mill Hill Park in Trenton. In the second part, they conducted monitoring themselves during a subsequent field trip to the Watershed.

“These efforts to work more closely with youth in Trenton this summer, both at our center and within their community, are important to us because they’re the starting point of relationships that we hope to grow with these community organizations and schools,” said Watershed Educator Stephanie Silva.



Record numbers of people visited Trenton River Days in 2022.

MONITORING OUR WATER

StreamWatch Schools Launches With Pilot Classes

While hiking to the Stony Brook this past fall, a group of students from the Painted Oak Nature School are surrounded by the sound of shuffling leaves as they enter the forest. As they approach the brook, ten-year-old Ryan sees crystal clear water and exclaims, “no turbidity!” His exclamation, rivaling that of any discovery, has set the focus.



Students from Painted Oak Nature School have started testing water on the Stony Brook near their school.

Painted Oak Nature School is one of several pilot schools participating in StreamWatch Schools, a new initiative of The Watershed Institute that is inspiring students to explore their streams and collect water quality data. Guided by Watershed scientists and educators, the pilot classrooms are engaging in grade-appropriate activities, sharing their techniques and discoveries with each other. They are wading through the processes of science—asking questions, planning investigations, interpreting data, constructing explanations, and designing solutions.

The Watershed Institute has launched StreamWatch Schools to celebrate and complement our StreamWatch community-based science program. For more than thirty years, StreamWatch volunteers have collected stream data throughout our region.

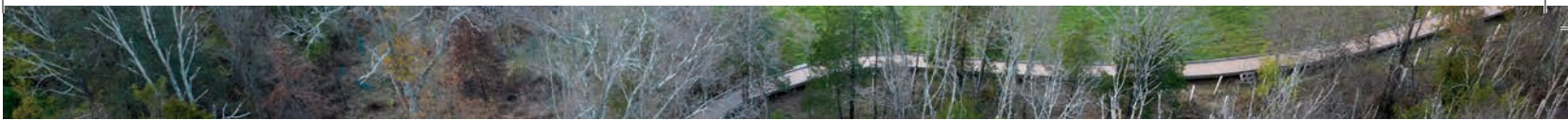
Teachers from the pilot schools participated in an intensive, weeklong StreamWatch Schools Academy in August, to prepare them for creating and documenting ways of investigating local waterways. This fall's activities included:

- Students from the independent Peddie School in Highstown examined Rocky Brook that flows through campus. Junior Joel Boden, who participated in the summer Watershed Academy for High School students the past two summers, and others are eager to gather data and improve water quality.
- Tina Overman, STEM Specialist at Bear Tavern School, examined a small tributary of Jacobs Creek near this Hopewell Valley elementary school with her fifth-grade students.
- Kindergarten students at Alexander School in Hamilton examined Pond Run, right behind the school.

The Watershed will expand this pilot group as we proceed through the school year and will conduct another StreamWatch School Academy next summer. Please stay tuned for updates and more information.



Jeff Hoagland works with fifth-grade students from Bear Tavern Elementary School at a small tributary near Jacobs Creek on macroinvertebrate identification.



CONSERVATION CONTINUES

Native Plants Added to Reserve

With an estimated one million trees devoured by the invasive emerald ash borer in the Sourlands, The Watershed Institute teamed up with Sourland Conservancy, corporate volunteers, and donors to plant about 1,500 trees on the Watershed Reserve last summer and fall.



This past fall students from the first-year orientation group at Princeton University planted hundreds of trees and shrubs in a new grove.

With assistance from Bloomberg, BMS, and Johnson & Johnson volunteers, the Watershed is doing its part by removing privet, honeysuckle, multiflora rose, and other invasives from a section of the Reserve. Saplings were planted next, including hundreds added by interns from the Sourland Conservancy, which donated the trees and plant protection.

Earlier in the fall, a first-year orientation group from Princeton University planted 600 native trees and shrubs, helping create a new patch of young forest. Together, they also helped restore an area of the meadow so it may eventually grow into a forest. Together, they pulled out invasive species with the goal of creating a habitat where local wildlife may thrive.

Those efforts complemented a restoration project funded by the Xerces Society that now flanks the Kate Gorrie Butterfly House. Here 600 native plants have been added by two groups of



volunteers, Watershed staff, and two summer interns from Princeton University's High Meadows Environmental Institute. These plants will offer vital nectar for pollinators and insects alike.

More native plants were added in late fall to some of 40 Adopt-A-Plot areas, where volunteers and families have weeded and planted additional natives to keep the invasive plants in check.

"We're so grateful for our donors, volunteers, and interns for their efforts," said Allison Jackson, the Watershed's Stewardship Coordinator. "We want to increase the native plant palette to benefit wildlife, decrease stormwater runoff, and mitigate the impacts of climate change."



Watershed interns, staff and volunteers planted 600 native plants around the Kate Gorrie Butterfly House, providing food for pollinators.

CELEBRATING OUR ROOTS

Remembering Watershed Institute Friends

This past year, the Watershed lost two very dear friends. The Rev. David McAlpin Jr., and Anna Drago contributed significantly to the organization as members of the Watershed's Board of Trustees, Advisory Board, FEST celebrations and in countless other ways.



The Rev. David McAlpin Jr.

McAlpin was a dedicated conservationist and philanthropist who helped shape the Watershed during pivotal years. He served for many years on the Watershed's Board of Trustees, including several years as Chair, followed by several decades on the Watershed's Advisory Board.



The Drago family and friends were at FEST this fall to help us remember her and her legacy.

David was a gentle soul with a passion for environmental protection and social justice. At our 2019 annual meeting, to help commemorate the Watershed's 70th Anniversary, we announced the naming of the McAlpin Library to honor David and his father, David Hunter McAlpin. “

At this year's FEST, held on October 1st, we paid tribute to Anna Drago, who had been a Watershed friend since the 1980s and who chaired the FEST many times. Anna's family and close friends were present to honor her memory. Anna was born in Rome, Italy. She was educated in Rome and in New York City, notably at Sarah Lawrence College and Marymount College.



Lori Citrone and Meg Gorrie on the FEST stage this year looking up at a photo of Anna Drago from a past FEST.

Anna was a generous and devoted patron of environmental causes and the arts. A portrait of Anna will hang in the Watershed Center as a tribute to her years of service.



Winter 2022–23 Calendar

Grab a hat, boots and your jacket for winter adventures at the Watershed!
And don't forget the sixth annual Watershed Conference on Feb. 10 & 17th!

Winter Programs

Jan 25 – Environmental Justice Movement in NJ
Jan 28 – Groundhog Day Celebration
Feb 2, 9, 16, 23 – Eco-Poetry with Winifred Spar
Feb 25 – Maple Sugaring
March 4 – Winter Fairy Festival

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

thewatershed.org/events

Covid policy

Masks are currently optional for all people 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



Visitors young and old had a great time exploring Gorrie Hall during the holiday open house in December. The holiday tree scavenger hunt is always a highlight!

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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Working together to address flooding
and improve water quality

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10am – 5pm

Hybrid options
available

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