Leveraging Collaboration for Water Quality

Leveraging Collaboration for Water Quality: The Delaware River Watershed Initiative

Between 2014 and early 2025, the Delaware River Watershed Initiative (DRWI) united over 50 organizations in an unprecedented collaboration to work together across four states to protect one shared source of clean water.

For more than a century, leading conservation organizations have worked to protect and restore the Delaware River system. The DRWI aligned many of these organizations in eight focused geographies to scale up their impact and accelerate the protection of important landscapes, restore degraded areas, and adopt green infrastructure and responsible farming practices. These organizations planned targeted work together, informed by science, to maximize their impact on water quality. Results were tracked via ongoing monitoring and modeling across the basin.

The Secret Sauce: Collaboration

Collaboration was a key ingredient to the DRWI's success. With three-year seed funding from the William Penn Foundation, participating organizations invested critical time working together and with a wide range of partners, including landowners, farmers, community organizations, municipalities, and agency partners. The Foundation's ongoing funding over 11 years provided capacity for the coordination and elbow grease needed for joint outreach, project and plan development, and work together to address sticky challenges. DRWI leaders cite relationships built and knowledge shared through working together over time as an enduring benefit of the Initiative.

DRWI's Forest Protections Move the Needle on Water Quality

Land protection throughout the watershed deserves celebration. Delaware River Watershed Protection Fund grantees permanently conserved 21,000 forested acres across New Jersey, New York, and Pennsylvania, which led to:

- Measurable water quality impacts, including reductions in pollutants and the filtration and reduction of about 1,680 pounds of nitrogen annually.
- Avoidance of an estimated $57 million in total stormwater capital costs and $6 million in annual maintenance costs for projected development—more than three times the cost of the land protection itself.

In May 2024, the Open Space Institute published the report Protecting Forests for Clean Water, which focused on the benefits of the forest protection program on water quality.

Science partners within the Initiative who played a key role in developing new novel modeling methods to assess the contributions of land protection to clean water include: the Stroud Water Research Center, the Academy of Natural Sciences, and Shippensburg University

"While we know forest protection supports clean water, we need the data that makes that case clear to decision makers," said Abby Weinberg, OSI's Senior Director of Research. "Thanks to the creativity of our scientific partners, we were able to develop new approaches and recommendations that allow water utilities, land protection leaders, and agencies to connect the dots between forest protection and clean water, opening the door for greater collaboration and impact across sectors."

An Early Win

Early and immediate collaboration within the DRWI and with agency partners in the region raised significant resources to support landowners to make improvements that also improve water quality.

Through a $13M award from the USDA's Natural Resources Conservation Services (NRCS) to the National Fish and Wildlife Foundation (NFWF), conservation partners leveraged additional resources to enhance RCPP's on-the-ground impact.*

RCPP enabled NRCS and North Jersey RC&D to focus heavily on soil health with the NJ Highlands Ag Implementation Partnership. Cover cropping and soil health practices were effective from both the staff and producer's viewpoint. RCPP funding was integral in swaying producers' decisions to adopt cover crops on their farms, many for the first time.

The funds also supported on-the-ground conservation projects and enhanced essential capacity and expertise available to landowners in Chester and Berks County Conservation Districts (Pennsylvania) and the Cape Atlantic Soil Conservation District (New Jersey).

The projects built on existing and new relationships with cooperators and tapped the skills and abilities of all involved while highlighting great interest and demand for working together. The RCPP built enduring relationships and capacity that spurred learning and more seamless, ongoing collaboration in the agricultural space that continues to this day.

Significant RCPP Project Contributions:

- $4,937,122: NFWF contributions (through Delaware River Restoration Fund)
- $414,348: Leverage (state, local, and private funding)
- $5,616,192 in financial assistance $13,517,891 in technical assistance
- $586,434 in administrative support
- $25,071,987: Total contribution

Residents Mobilize to Dedicate $10M to Land Conservation

Carbon County, Pennsylvania residents overwhelmingly passed a $10M bond referendum for land conservation in November 2022 – with the highest level of support of any such measure in the country that year (83%). Development pressures in this rural county threatened the county's natural lands, working farms, and water quality the leaders hoped to protect.

With DRWI funding, Audubon Mid-Atlantic, Natural Lands, and Wildlands Conservancy leaders built relationships with the county's Planning & Development Office and the Chamber & Economic Development Corporation. With local leaders, the groups launched a Carbon County Return on Environment study that paved the way for the referendum and other efforts.

Funding from the William Penn Foundation also supported zoning workshops, updated zoning ordinances requested by seven municipalities, and native plantings in an underserved borough. The partners also worked with the Chamber's Economic Development Director to form a Nature and Commerce Committee, a diverse group of residents who promoted conservation-oriented programs, plans, and policies that help grow the local Carbon County economy.

The partners' efforts resulted in a success none could achieve alone. The County Commissioners hired the Trust for Public Land to conduct a feasibility study and assist with a vigorous and thorough grassroots campaign. The results benefit the economy, will potentially double by leveraging match funding, and create a conservation program that preserves open space, clean water, and wildlife habitat.

DRWI policy and planning efforts impact water quality long-term. In New Jersey, educating and building relationships with municipal officials resulted in improved ordinances, policies, and plans, including state rules that reduce and manage stormwater run-off and the development of impervious cover assessment action plans.

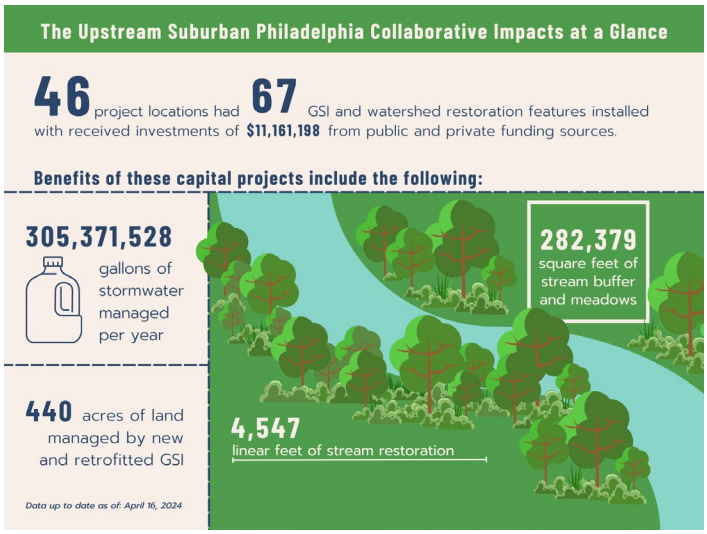
Cross-Basin Collaboration to Address Stormwater and Stream Health

To address the impacts of stormwater and stream degradation, DRWI partners focused on implementing green stormwater infrastructure and stream restoration projects while also working to increase funding and improve policies and ordinances.

Spotlight on Philadelphia:

In five watershed areas upstream of Philadelphia, the work of eight non-profits and two universities over the life of the DRWI shows the impact of efforts to slow (or reverse) long term trends in stream degradation. Nearly all reaches of waterways in the area are on Pennsylvania's list of impaired streams due primarily to urban stormwater runoff and secondarily to excessive sediment and nutrient pollution.
Collaborating with 42 municipalities was a priority. Municipal partners achieved multiple benefits, such as cost efficiencies, compliance with MS4 pollution reduction plans, and the beautification of public open spaces.

This short video highlights the community benefits of the Tookany-Tacony Frankford Watershed Partnership's efforts to engage community members to enjoy and protect the environment through numerous events in Tacony Creek Park, including volunteer activities, educational programs, and resources offered in multiple languages.



"We came into our careers and from the beginning experienced that we are partners, not competitors - we work together. To work at a watershed scale, you need different partners of different sizes across the watershed, and we achieved that through collaboration."
- Kate Raman, Natural Lands

Using Data to Measure Impact and Target Work

Science and scientific approaches to water quality informed the wpork. An innovative combination of modeling, monitoring, and community science provided by the Academy of Natural Sciences, Stroud Water Research Center and many non-profit partners and universities in the Initiative assessed the effectiveness of water quality protection and restoration efforts. This Pollution Assessment report by LimnoTech, The Academy of Natural Sciences at Drexel University, and Stroud Water Research Center quantifies DRWI's progress toward improving water quality.

Building Conservation Capacity - Using the Keys to Collaboration

Throughout the Watershed, a fabric of connections and prior work provided a foundation for the Initiative. With collaboration as a central strategy, partners in eight geographies had resources to work with each other over a long time period in new and different ways. They also had a platform and resources to work with a wide variety of other partners - farmers and agricultural producers, private and public landowners, community groups, municipal officials, regional, state, and national agencies, and schools and universities, to name a few.

Leadership for Collaboration

Working in partnership requires a different mindset and approaches that rely less on hierarchy and position and more on methods that support working across institutional boundaries with partners with different backgrounds, priorities, and approaches. Using two of the Institute for Conservation Leadership's (ICL) Keys for Collaboration, the following highlights show how DRWI leaders stepped into collaboration to have a greater impact on water quality.

1. Prioritize Relationships between Group Members

"Collaboration happens at the speed of trust" is a frequent refrain. What does it look like in practice? Through the DRWI, leaders from organizations in each geography met regularly to plan and coordinate projects, develop multi-year group plans, and make decisions about how to focus resources amidst competing priorities and interests. They also broke bread together, made personal connections, shared lessons learned, and worked through tough problems.

The relationships and trust built with colleagues through the DRWI make it easier to work together in the future and are regularly cited by watershed leaders as a top benefit of the Initiative and will continue to impact conservation into the future.

2. Develop a Unique Collaboration Culture

One leader likened collaboration to learning to dance together and the DRWI as providing the dance floor and support for a lot of dancing.

The partners in all eight geographies developed their own meeting and work patterns. NFWF's popular annual Ag Forums fostered a culture of sharing and learning across the states, resulting in improved practices, policies, and work with landowners and other partners. The spirit of shared learning and problem solving in the ag space continues today.

In partner dancing, sometimes you step on each other's toes. When many partners work at a watershed scale to do complex work, there will be struggles and conflict. With group leadership and coordination from within each geography and facilitation and capacity building support from ICL, each group and leadership team created effective ways to work together.

What's next?

The full legacy of the DRWI is yet to be written. The fabric of conservation leadership is strengthened in the region as members have changed professional roles; they carry with them their relationships and the professional capacity they've developed. They know people, organizations, and agencies to solve problems with, tap expertise, and work together.

Within geographies, a number of ongoing formal and informal partnerships and collaborations have formed to continue and adapt their work in different ways.

DRWI by the Numbers

The enormous impact of investment in the region, including over $155 million by the William Penn Foundation, can be seen through on-the-ground projects, water quality impacts, funds leveraged, policy changes and public programs that lead to longer term impact and investment, and conservation capacity built throughout the region.

Delaware River Restoration Fund, administered by the National Fish and Wildlife Foundation Over $19.5M, funded:

- 108 projects, leveraging $28.9M in conservation resources
- Stewardship of working lands and agricultural conservation; restoration of wetlands, floodplains, and stream corridors; and promoting adoption of green infrastructure in urban and suburban landscapes.
- The 2016 Delaware River Basin Conservation Act established the Delaware Watershed Conservation Fund. Administered by NFWF, the Fund continues to provide grants to partners to support conservation priorities.

Delaware River Watershed Protection Fund, administered by the Open Space Institute Over $15.7M funded:

- 85 projects, leveraging $72.2M in conservation resources
- Preservation of nearly 30,000 acres of land, with 5000 more approved and pending
- Protection of 136 miles of forested stream banks, 14,400 acres of headwaters, 9,200 acres of stream buffers, and 4,200 acres of wetlands
- Distributed 22 Transaction Grants totaling over $186,000 to jumpstart conservation
- Catalyst Grants to integrate water quality science into strategic conservation and forest management plans
- 20 grants totaling $424,510 supporting the development of 32 plans in 4 states

Additional Sources of Funding

Many other foundations, federal and state agencies, companies, universities, non-profits, and individual donors provided funding to support the projects and overall work completed through the DRWI.

DRWI Participating Organizations

The Academy of Natural Sciences of Drexel University
American Littoral Society
Association of New Jersey Environmental Commissions (ANJEC)
Audubon Pennsylvania
Berks Nature
Brandywine Conservancy
Brandywine Red Clay Alliance
Brodhead Watershed Association
Center for Watershed Protection
Conservation Voters of Pennsylvania
Darby Creek Valley Association
Delaware Highlands Conservancy
Eastern Delaware County Stormwater Collaborative
East Stroudsburg University
French and Pickering Creeks Conservation Trust
Friends of Poquessing Watershed
Green Valleys Watershed Association
Hunterdon Land Trust
Institute for Conservation Leadership
Lower Merion Conservancy
Musconetcong Watershed Association
Natural Lands
National Fish and Wildlife Foundation
New Jersey Audubon
New Jersey Conservation Foundation
New Jersey Highlands Coalition
North Jersey RC&D
North Pocono CARE
Open Space Institute
Orange County Land Trust
Pennsylvania Environmental Council
Pennsylvania Resources Council
Partnership for the Delaware Estuary
Pennypack Ecological Restoration Trust
Pinchot Institute
Pinelands Preservation Alliance
Pocono Heritage Land Trust
Resource Media
Rutgers University
South Jersey Land and Water Trust
Stroud Water Research Center
Temple University
The Land Conservancy of New Jersey
The League of Conservation Voters New Jersey
The Nature Conservancy New Jersey
The Nature Conservancy Pennsylvania/Delaware
The Trust for Public Land
Tookany Tacony-Frankford Watershed Partnership (TTF)
Trout Unlimited
Villanova University
Wallkill River Watershed Management Group
Stroud Water Research Center
University of Delaware
Wildlands Conservancy
Wissahickon Trails