

Delaware RIVERKEEPER® Network



2010 Annual Report

A Year in Review

2010 was a year of change for the Delaware River watershed. From Chris Christie's inauguration in January to the November gubernatorial elections in New York and Pennsylvania that ushered Tom Corbett into office in Pennsylvania and Mario Cuomo in New York, the political landscape changed. The ramifications of that change are still unfolding.

Despite continuing efforts to scrap the entire project, the Army Corps of Engineers' bad plan to deepen the Delaware River's main ship channel got underway in a limited way in March 2010 with dredging to deepen the shipping channel between the Delaware Memorial Bridge and the Chesapeake & Delaware Canal to a depth of 45 feet.

The threat of natural gas drilling drew closer to our River in 2010. The Department of Environmental Protection was processing permits in as little as two-minutes for those parts of Pennsylvania to our west that lie atop the Marcellus Shale. The agency issued 3,314 Marcellus Shale permits in 2010. This figure represents over half of the total number of permits issued for oil and gas wells in Pennsylvania issued in 2010, rapid growth considering the first Marcellus Shale production wells were just drilled in just 2005.

Because of the pressures of gas drilling, the Upper Delaware was named the most endangered river in the country in 2010 by American Rivers, a national river conservation organization.

Despite adopting a moratorium on gas drilling (one of the few in the country and secured largely as a result of our efforts last year) in July, the Delaware River Basin Commission released for comment just five months later, in December, draft



Delaware Riverkeeper Maya van Rossum documenting stream conditions.

Photo: F. Stine.

regulations that could open the way for natural gas drilling in the Upper Delaware if they pass.

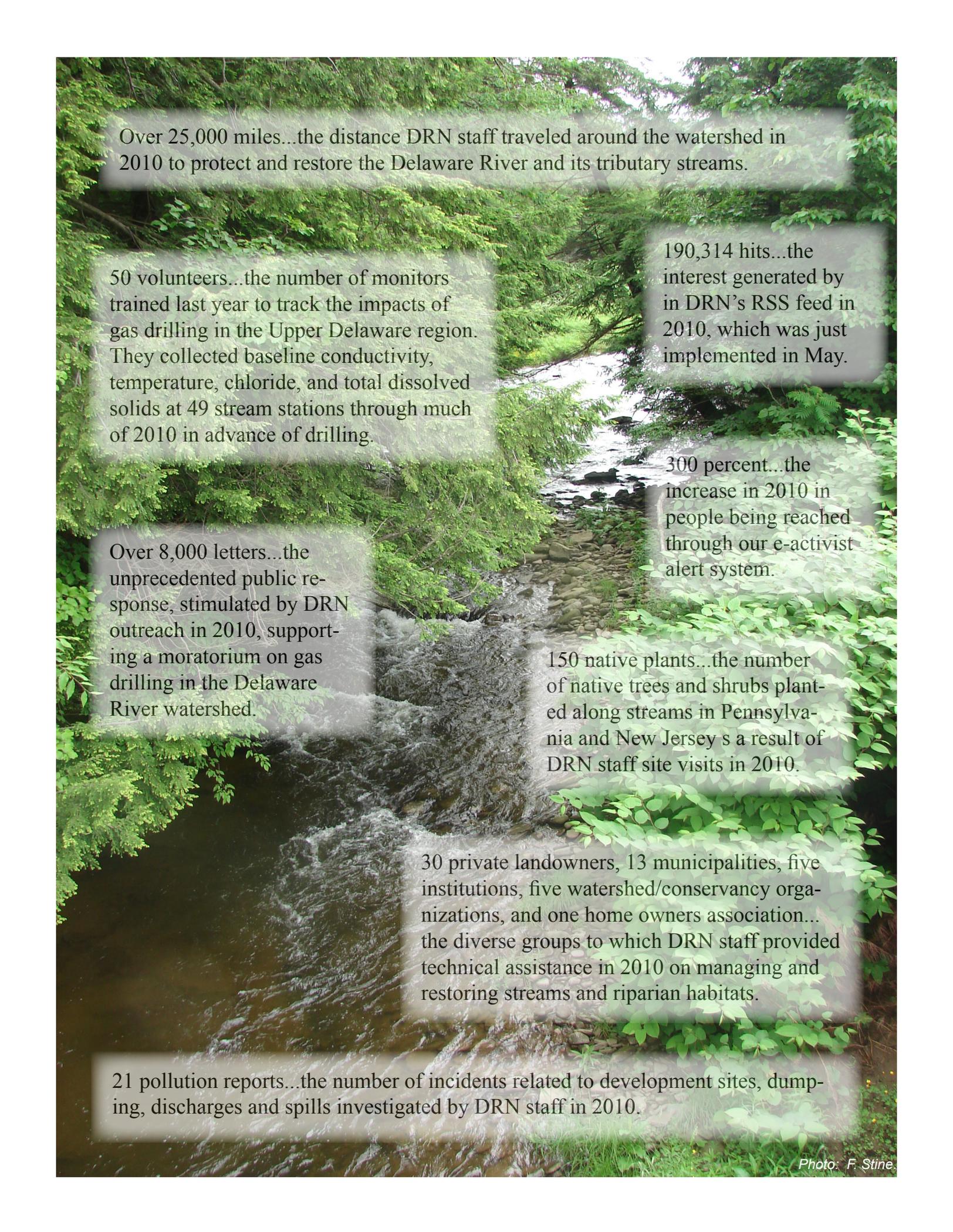
Rivers are always changing. There is a saying that you never step in the same river twice. The waters that flow by us today are not the waters that will flow by tomorrow. The volume of flow, the speed of the current, the species of fish in the stream, the plants growing along the river banks...the river accommodates changes in all of these. But some changes are too much to expect our rivers to accommodate.

When bad plans and harmful changes are proposed, someone needs to speak for the River. That's the work the Delaware Riverkeeper Network was created to do. We are the only advocacy organization working throughout the entire Delaware River watershed.

2010 was a year of change and challenges, but there were successes along the way too. This report summarizes last year's efforts to protect the waters our children and grandchildren will inherit. I am pleased to be able to share it with you.

Click on the image below to hear Delaware Riverkeeper Maya K. van Rossum's reflections on 2010.





Over 25,000 miles...the distance DRN staff traveled around the watershed in 2010 to protect and restore the Delaware River and its tributary streams.

50 volunteers...the number of monitors trained last year to track the impacts of gas drilling in the Upper Delaware region. They collected baseline conductivity, temperature, chloride, and total dissolved solids at 49 stream stations through much of 2010 in advance of drilling.

Over 8,000 letters...the unprecedented public response, stimulated by DRN outreach in 2010, supporting a moratorium on gas drilling in the Delaware River watershed.

190,314 hits...the interest generated by in DRN's RSS feed in 2010, which was just implemented in May.

300 percent...the increase in 2010 in people being reached through our e-activist alert system.

150 native plants...the number of native trees and shrubs planted along streams in Pennsylvania and New Jersey as a result of DRN staff site visits in 2010.

30 private landowners, 13 municipalities, five institutions, five watershed/conservancy organizations, and one home owners association...the diverse groups to which DRN staff provided technical assistance in 2010 on managing and restoring streams and riparian habitats.

21 pollution reports...the number of incidents related to development sites, dumping, discharges and spills investigated by DRN staff in 2010.

Working from the headwaters...

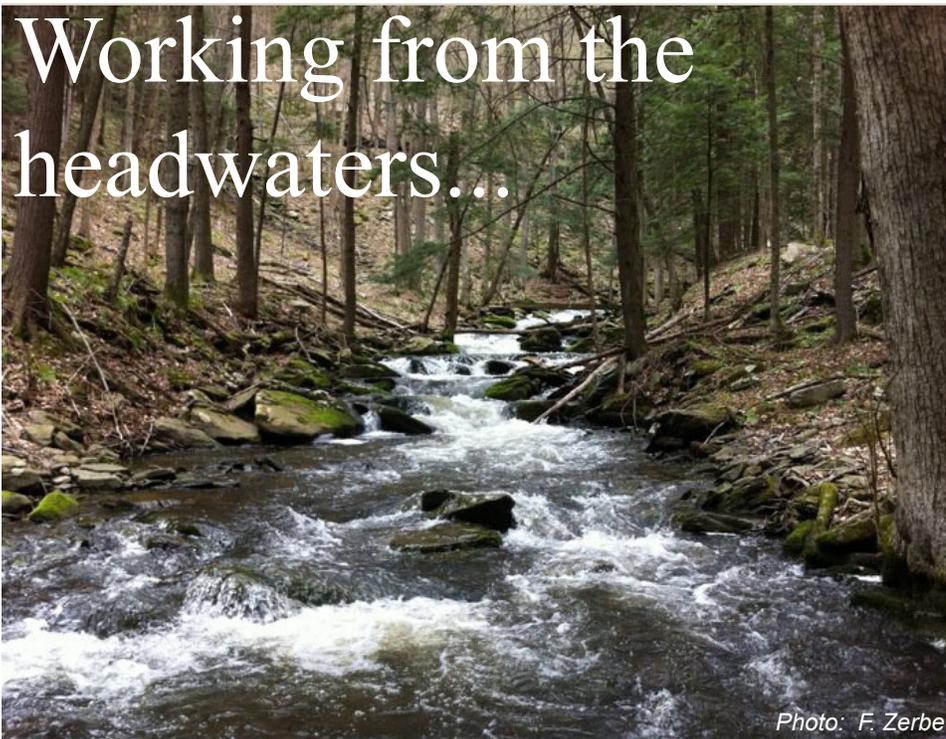


Photo: F. Zerbe

Challenging natural gas development

The current focus for unconventional gas drilling is the Marcellus Shale, which extends from West Virginia to New York. Approximately 36% of the Delaware River watershed is underlain by Marcellus Shale. It is believed that the thickest beds of shale will produce the most natural gas, and the thickest beds of Marcellus Shale are found in northeastern Pennsylvania, under the headwaters of the Delaware River.

Gas drillers have already signed leases for over 200,000 acres of land in the Upper and Middle Delaware River watershed (30,000 wells or more expected in the Delaware River watershed alone). But shale gas development doesn't just threaten the Upper Delaware, it has the potential to substantially impact both water quality and water quantity throughout the Delaware River basin.

When gas drilling emerged three years ago, many dismissed the potential risk, but DRN assessed the issue and recognized the threat. We took up the issue then and have

continued to lead advocacy against shale gas development in our region.

In February 2010, DRN was the first group on the ground in Pennsylvania to hold a training session specifically for volunteers interested in monitoring the impact of gas drilling.

DRN undertook a campaign to secure a moratorium on gas drilling in the Delaware River watershed until natural gas regulations and cumulative impact studies could be completed. We advocated through public action alerts, outreach to Delaware River Basin Commission (DRBC) policy makers and members, and through other educational efforts including speaking at 40 events. As a direct result, in May 2010, a moratorium was put in place by the DRBC as a result of a unanimous vote.

However, the moratorium did not completely stop gas drilling from taking place in our watershed. DRBC Executive Director Carol Collier allowed gas companies to drill so-called "exploratory" vertical gas wells in the basin. In July, DRN filed an appeal with the Penn-

sylvania Environmental Hearing Board challenging the Pennsylvania Department of Environmental Protection's issuance of a gas drilling permit to Newfield Appalachia PA, LLC, for an exploratory well in Damascus Township (Wayne County, PA) sited very close to the high-quality Hollister Creek and less than ½-mile from the Wild and Scenic Upper Delaware River.

We also challenged the DRBC Executive Director's decision to allow exploratory wells prior to the issuance of final DRBC regulations. For an administrative process before a hearing officer appointed by the DRBC, we commissioned eight expert reports demonstrating the myriad risks to water quality and healthy streams posed by vertical well installation even in the absence of hydraulic fracturing. At the eleventh hour, after months of preparing for a full evidentiary hearing, DRBC voted at its December 12, 2010 meeting to withdraw the referral to the hearing officer because all of the vertical wells had been completed. DRN will be continuing our legal challenge to the DRBC's unlawful actions and procedural maneuvers in federal district court in 2011.

We also challenged in federal district court the docket (permit) that the DRBC issued to Stone Energy Corporation allowing the company to withdraw 0.7 million gallons a day from the West Branch Lackawaxen, a high-quality cold-water trout stream. Even though the DRBC has not yet issued final regulations to regulate natural gas development in our basin, the DRBC allowed Stone – which had already illegally installed a gas well – to get a permit for water withdrawals to be used if and when the final regulations are approved, despite the many deficiencies in the permit application

Challenging the Delaware Deepening

In 2010, DRN continued our legal challenges to the Army Corps of Engineers' plan to dredge the main navigation channel of the River from the Bay all the way up to Philadelphia by an additional 5 to 7 feet.

As our many years of research and advocacy on this wasteful and unnecessary project have proven, the Deepening Project poses significant risks to the River's ecology, water quality, and fish and wildlife species, including the critically endangered Atlantic sturgeon and other economically and ecologically key species such as horseshoe crabs, oysters, and

red knots. Our litigation in federal court in the districts of New Jersey and Delaware resulted in adverse decisions from both judges. On behalf of our fellow plaintiffs and ourselves, DRN is preparing to file appeals of both decisions in the Third Circuit Court of Appeals in 2011.



Photo: F. Zerbe

To the Delaware Bay...

Documenting benefits of keystone species

In 2010, DRN released *River Values: The Value of a Clean and Healthy Delaware River*. This extensively researched report documents economic benefits related to jobs, property values, and tax-savings for local municipalities that result from a clean and healthy river.

In addition to putting a price on benefits that result from riparian buffers, effective stormwater management, floodplain protection, forested open space, recreation, *River Values* documents economic benefits derived from keystone Delaware Bay species like horseshoe crabs as well as the potential benefits that could result from restored populations of species like Atlantic sturgeon.

Many of the species are threatened by the proposed Delaware Deepening. *River Values* documents how that bad project --which has repeatedly been shown to be a waste of taxpayer dollars--puts also at risk other sectors of the local economy that rely on healthy populations of aquatic species that call the Delaware River and Bay home.

- The Delaware Bay's annual migratory bird and horseshoe crab phenomenon provides \$34 million in economic benefits to the region each year.
- Horseshoe crabs, because of a substance found only in their blood which cannot be derived synthetically, support a biomedical industry valued at over \$150 million annually.
- In 1890, when the industry was operating full-bore, the East Coast sturgeon catch was valued at \$16.4 million. If available today, this harvest would be worth over \$422 million a year to the region.
- Trout fishing in the Upper Delaware resulted in \$17.69 million in local business revenue in a single year, revenue that supported 348 jobs, provided \$3.65 million in wages and \$719,350 in local taxes.

Studying stormwater

DRN also released in 2010 the results of a three-year study of stormwater titled *New Jersey Stormwater Implementation: A Case Study*.

This report documents a large and growing municipality's ill-informed efforts or purposeful neglect to adhere not only to state stormwater rules but also to their own stormwater ordinances. The study further illustrates the New Jersey Department of Environmental Protection's inability or unwillingness to enforce rules on the municipality. The agency relied on self-reporting by the municipality which ultimately resulted in an increase in localized and downstream flooding as well as increased infrastructure maintenance costs.

This report was released as the new governor was calling to have all municipalities in the state take over site responsibilities for stormwater permits. The recommendations and the methodology makes this study replicable in other watersheds.

And on the tributaries in between.

Making a difference on locals streams

DRN works with private citizens, watershed groups, community organizations and municipalities to empower local efforts to protect and restore the streams that feed the Delaware River. In 2010, these efforts included organizing the 13th Schuylkill Watershed Congress which featured 28 concurrent and six poster sessions covering a broad range of watershed topics. Registration totaled 223 with participants and presenters drawn from throughout the Schuylkill Watershed, across Pennsylvania and from as far away as Flemington, New Jersey; Wilmington, Delaware; Baltimore, Maryland; and Annandale, Virginia.

DRN also continued to act as a service provider for Pennsylvania's Consortium for Scientific Assistance to Watersheds (C-SAW) Program in 2010 through which we assisted over 20 local watershed groups, environmental advisory councils and community groups. Through this important technical assistance program, DRN provided over 800 individuals with training in watershed concepts to better protect the streams that run through their communities.

Building on DRN's 2009 *West Branch Crum Creek Coldwater Conservation Plan*, we continued water quality monitoring efforts and worked with Chester-Ridley-Crum Watersheds Association and watershed landowners to initiate



Photo: E. Gutzler

the plan's priority recommendations. DRN staff presented plan findings and streamside best management practices at two public meetings attended by over 125 Crum Creek streamside landowners. DRN also provided site visits for 19 private landowners and 2 institutions assessing existing conditions and documenting restoration opportunities. DRN provided conceptual restoration designs, planting plans, and invasive vegetation management plans for over 93 acres of riparian habitat and 2.5 miles along Exceptional Value and High Quality reaches of Crum Creek (Chester and Delaware counties, Pennsylvania). As a result seven properties planted native riparian buffers in 2010. DRN's Crum Creek work will continue in 2011.

DRN mapped non-native invasive plants found within Bristol Marsh's forested buffer to be incorporated into a management and restoration plan. In June 2010, DRN staff led 18 community volunteers in the removal of non-native invasive plants from prioritized areas of the Marsh (Bucks County, Pennsylvania).

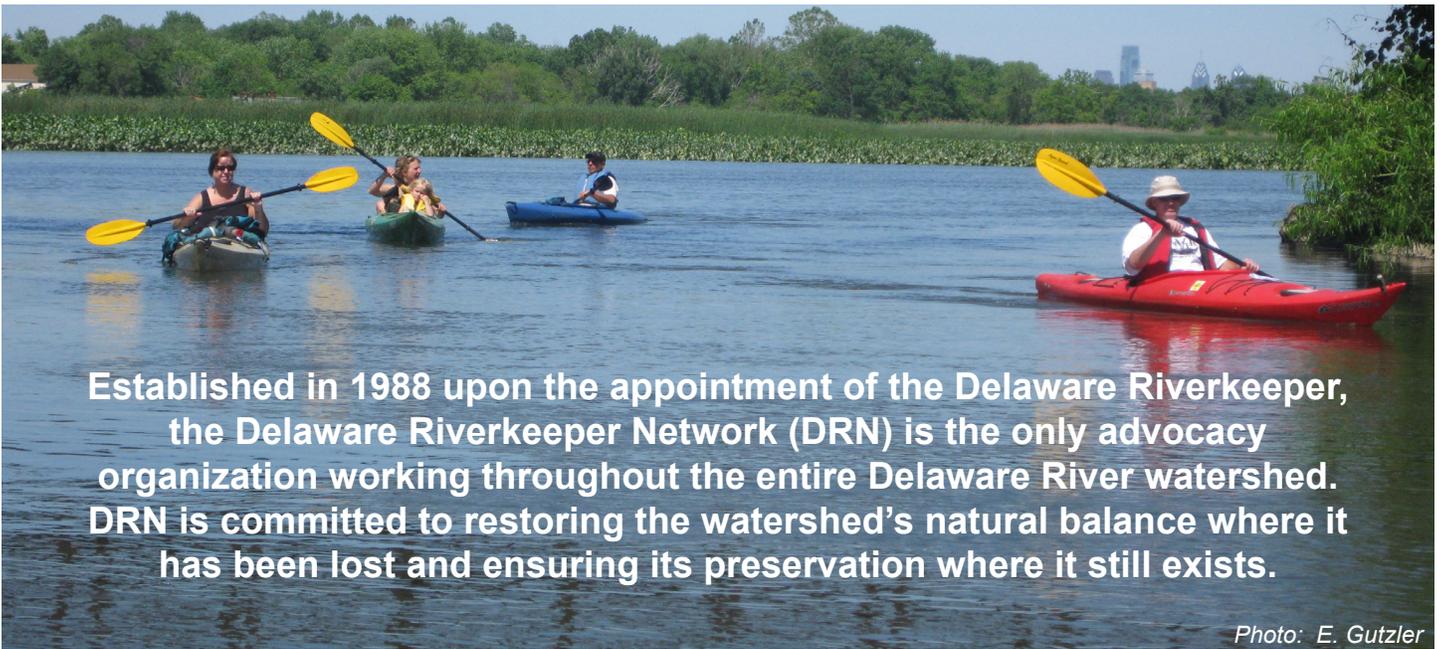
In September 2010, DRN, along with 47 volunteers and assistance from Camden County and the U.S. Fish and Wildlife Service, manually removed non-native invasive plants and planted 96 native trees and shrubs along Cooper River Park. This effort restored one-acre of riparian wetland habitat. Native plantings were selected to add beauty throughout the seasons along the adjacent recreational trail as well as provide habitat for wildlife, and complement constructed stormwater management features.

DRN work on our Saddler's Run project (Camden County, New Jersey) continued in 2010. This state-funded project is designed to manage stormwater which contributes to ongoing degradation of Saddler's Woods' first order streams. Work in 2010 included completion of draft designs and presentation to the community. This project will be constructed in 2011.

In 2010, DRN also completed a geomorphic assessment of 1,000 linear feet of Swamp Creek (Bucks County, Pennsylvania) near the Erwinna Covered Bridge to characterize existing channel, sediment, and flow characteristics and to identify restoration opportunities. This project is ongoing and will culminate on implementation of a multi-objective restoration project which stabilizes eroding banks, enhances in-stream habitat, and establishes a diverse riparian buffer.



Photo: F. Zerbe



Established in 1988 upon the appointment of the Delaware Riverkeeper, the Delaware Riverkeeper Network (DRN) is the only advocacy organization working throughout the entire Delaware River watershed. DRN is committed to restoring the watershed's natural balance where it has been lost and ensuring its preservation where it still exists.

Photo: E. Gutzler

Our Programs

ADVOCACY - Securing stronger regulations to protect the Delaware River and tributary streams and defeating bad projects that would harm our waters.

AWARENESS - Providing tools and training to help private citizens take action on behalf of their local streams.

HABITAT RESTORATION - Restoring native plant communities, increasing wildlife habitat value, improving stream function and transport, and encouraging infiltration of stormwater.

RIVER RESOURCES LAW CLINIC - Building strong cases that protect the River and set precedent for its future protection.

RIVER TECH - Sharing its technical expertise with watershed groups, other conservation groups, agencies, and municipalities.

WATER WATCH - Mobilizing a network of trained citizens who serve as on-the-ground investigators for the Delaware River and its tributary streams.



Photo: F. Zerbe



Photo: J. Zenes

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Photo: W. Rininsland