

2014 White Clay Creek National Wild and Scenic River Steering Committee Update



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Working to promote and support the preservation, protection, and restoration of natural and cultural resources, in addition to encouraging a balance of recreational enjoyment of the White Clay Creek Watershed in Pennsylvania and Delaware.

Partnership Wild and Scenic Rivers

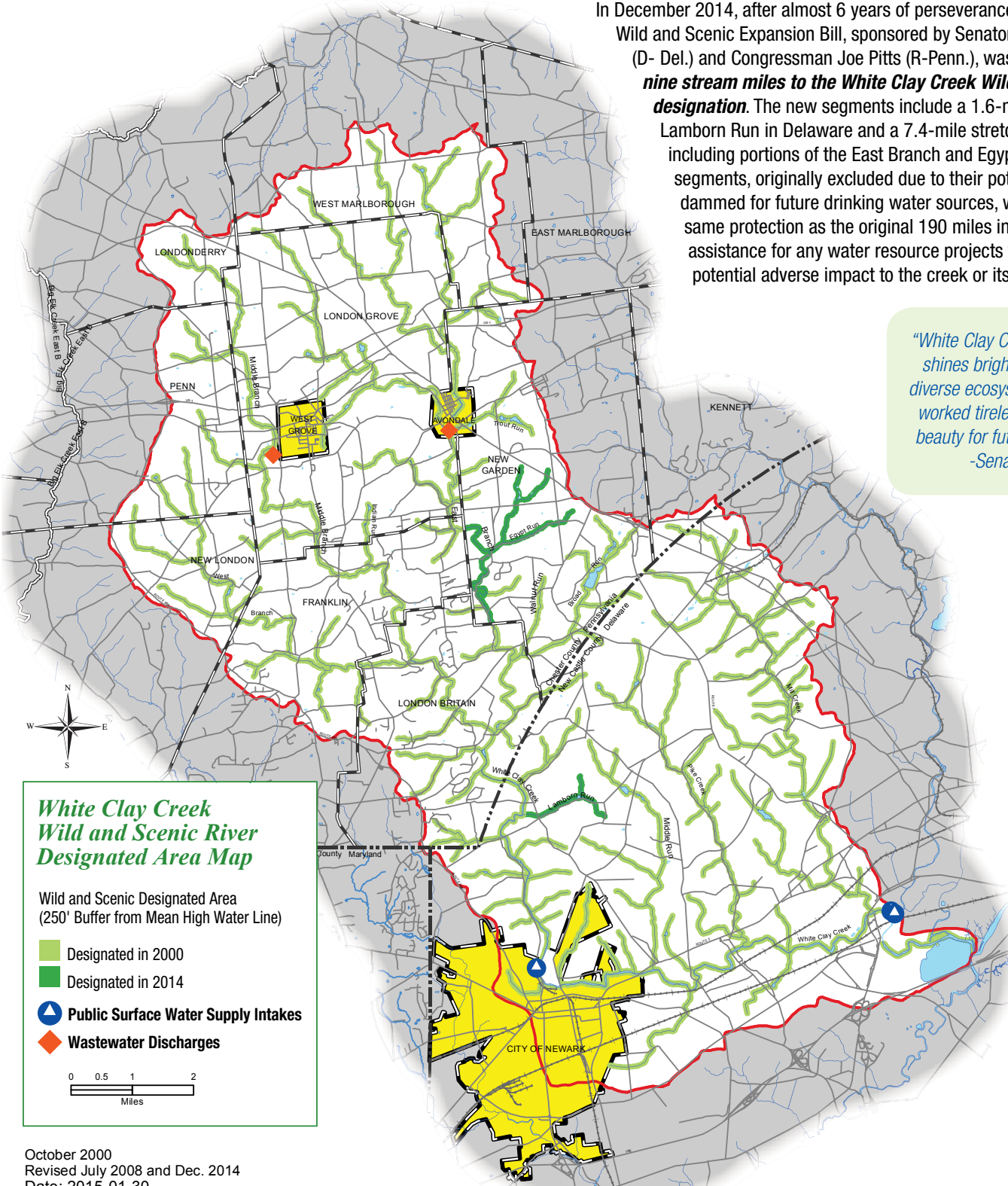
The 1968 Wild and Scenic Rivers Act calls on the nation to preserve select rivers in free-flowing condition. Rivers are chosen on the basis of outstanding values such as scenic, recreational, ecological, geologic, historic or cultural.

Most National Wild and Scenic Rivers flow through federal lands, but Partnership Rivers flow through privately held lands or lands owned by local or state governments. The National Park Service provides funds and staff assistance to communities and local and state representatives to protect and manage these rivers for the benefit and enjoyment of present and future generations.

White Clay Creek was designated a National Wild and Scenic River by an Act of Congress signed into law by President Clinton in October 2000.

In December 2014, after almost 6 years of perseverance, the White Clay Wild and Scenic Expansion Bill, sponsored by Senator Chris Coons (D-Del.) and Congressman Joe Pitts (R-Penn.), was passed **adding nine stream miles to the White Clay Creek Wild and Scenic designation**. The new segments include a 1.6-mile stretch of Lamborn Run in Delaware and a 7.4-mile stretch in Pennsylvania, including portions of the East Branch and Egypt Run. Both segments, originally excluded due to their potential to be dammed for future drinking water sources, will now receive the same protection as the original 190 miles in terms of federal assistance for any water resource projects that may pose a potential adverse impact to the creek or its resources.

"White Clay Creek is a gem that shines brightly in Delaware's diverse ecosystem, and we have worked tirelessly to protect its beauty for future generations."
-Senator Coons



White Clay Creek Wild and Scenic River Designated Area Map

Wild and Scenic Designated Area
(250' Buffer from Mean High Water Line)

- Designated in 2000
- Designated in 2014
- ▲ Public Surface Water Supply Intakes
- ◆ Wastewater Discharges



October 2000
Revised July 2008 and Dec. 2014
Date: 2015-01-30

SOURCES:
Delaware Department of Transportation, Streams and Roads (1991); Pennsylvania Department of Transportation, Streams and Roads (1991); United States Department of Interior, U.S. Geological Survey, Newark East (1993); Newark West (1992); Kennett Square (1993); West Grove (1973); Coatesville (1992); Oxford (1973) Quadrangles; Chester County Planning Commission, Pennsylvania Protected Lands (1996); DNREC, City of Newark, Planning Department, Delaware Protected Lands (1996).
This map was produced by the Water Resources Agency for New Castle County under contract to the U.S. Department of Interior, National Park Service as part of the White Clay Creek Wild and Scenic River Study. This Study was authorized by the U.S. Congress by the White Clay Creek Study Act (P.L. 102-215) on December 11, 1991 which amended the Wild and Scenic Rivers Act (P.L. 90-542).
NOTE: This map is provided by the Water Resources Agency for New Castle County solely for display and reference purposes and is subject to change without notice. No claims, either real or assumed, as to the absolute accuracy or precision of any data contained herein are made by the Water Resources Agency, nor will the Water Resources Agency be held responsible for any use of this document for purposes other than which it was intended.

*“Do unto those downstream
as you would have those
upstream do unto you.”
- Wendell Berry*

Welcome

Welcome to the *White Clay Creek National Wild and Scenic River Program Update*. The Watershed Steering Committee presents our 2014 accomplishments to watershed partners, legislators, and our community.

Ecological Research and Restoration

On December 4, 2014, an interdisciplinary research team from University of Delaware (UD) worked with a contractor to breach and remove 40 feet of the historic, 237-year-old Byrnes Mill Dam located at the White Clay Creek Country Club in Delaware Park. This is the first recorded dam removal for fish passage in the State of Delaware. ***For the first time since the American Revolution fish, like the American shad, hickory shad, river herring, and striped bass, will be able to spawn and swim freely from tidewater to freshwater along the White Clay Creek in Delaware.***

The removal connects 3.5 miles of the mainstem of White Clay Creek to the tidal Christina and Delaware Rivers and is the first of seven planned dam removals along the creek between sea level and the Delaware-Pennsylvania state line. The project was led by the University of Delaware Water Resources Agency with \$190,000 in grant funding from the American Rivers-NOAA Community Based Restoration Program, National Fish and Wildlife Foundation, FishAmerica Foundation, and National Park Service. Join us as we celebrate the return of shad this spring!

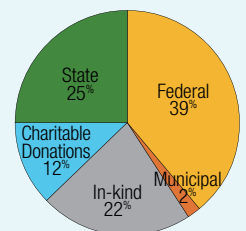
Fish aren't the only beneficiaries of dam removals. Fresh water mussels may also inadvertently be helped. Dams and other obstacles that block fish passage decrease the natural spread of juvenile mussels upstream. This year Partnership for the Delaware Estuary (PDE) reported on the first phase of research into the potential for restoring freshwater mussels (*Elliptio complanata*) to the White Clay. Since no living populations were discovered during initial surveys of the White Clay, 119 mussels from the nearby Brandywine River were transplanted to select locations within the Delaware portion of the White Clay and monitored for survivorship in 2013-2014. Results from the first year of study indicate a 68% bed retention, meaning 81 of the 119 mussels remained where they were placed and survived their first year, demonstrating that mussels have the potential to survive non-ideal conditions in post-developed streams. This is just one part of PDEs efforts to restore healthy populations of freshwater mussels throughout the Delaware Basin. The project was financed by the generous donations of Delaware residents using the White Clay Creek “tax check-off” option on the Delaware individual tax returns (White Clay Creek Restoration Fund) and additional funding for mussel restoration in northern Delaware by DNREC.

Further up in the watershed, a microscopic parasite, *Cryptosporidium*, was the focus. *Cryptosporidium* causes gastroenteritis (diarrhea, vomiting, cramps) and is most commonly spread by water contaminated by human and animal feces. According to the Centers for Disease Control, it is one of the most frequent causes of waterborne disease among humans in the United States. A partnership with the Chester County Conservation District, United Water Delaware, and City of Newark resulted in installation of Best Management Practices (“BMPs”) on a local heifer farm along a small tributary to the Middle Branch in Franklin Township for the purpose of reducing *Cryptosporidium* in the water supply. The farmer installed stormwater management and erosion and sediment control practices on his farm to direct rainwater away from high use areas and manure, thereby minimizing the potential spread of *Cryptosporidium*. 1,000 feet of pasture fencing, 470 feet of stream bank fencing, 1 stream access point, and 0.6 acre of riparian forest buffer were also installed to provide added protection to the stream.

White Clay Wild and Scenic Maximizes Federal Dollars!

Like all Partnership National Wild and Scenic Rivers, we leverage National Park Service funding with in-kind contributions from state, county, local governments, partner organizations, and the community. In 2014 White Clay partners expended \$61,813 in federal funds to leverage \$146,030. In other words, for every \$1 spent in federal funding an additional \$236 was leveraged for a return on value of 236%.

A special thanks to donors of monetary assistance and in-kind services provided to the Steering Committee in 2014: NPS (\$95,000), PA DEP (\$54,630), United Water Delaware (\$9,000), White Clay Creek Restoration Fund Contributions from Delaware tax filers (\$5,995), DNREC 319 Funds (\$5,000), City of Newark (\$4,380), Mushroom Farmers of Pennsylvania (\$1000), Delaware State Employee Charitable Contributions (\$300), other smaller contributions and approximately 800 hours of professional assistance with land preservation, ecological restoration, reforestation planning, events, outreach, mailings, and community volunteer time valued at \$54,538.



FY2014 Program Assistance

Taking measurements where
the dam was breached.
© R. Sheppard

Open Space and Water Quality

What do open space preservation, habitat restoration, and public awareness all have in common? The answer is simple. They are active concepts, that when put together in practice can help sustain good water quality in our local streams and rivers. The story of the Landenberg Junction Trail Restoration project is a great example illustrating how these efforts are being implemented for the benefit of local residents and the White Clay Creek. In 2012, the Committee helped New Garden Township purchase a property along the planned route for the multi-municipal 17-mile White Clay Trail Loop. The property is located along the East Branch of the White Clay in the vicinity of present day Landenberg. Two historic rail routes, associated with nineteenth century textile mill and factory development, cut through the site.

The integrity of the historic home occupying the site was too compromised to save. The structure was removed, exposing approximately 3,500 square feet of previously impervious surface (a surface that doesn't allow water to penetrate). The barren soil where the house once stood was enriched with compost. Last September 50 volunteers planted 1,400 native wildflowers, trees, and shrubs. The new planting will benefit water quality by reducing erosion in addition to creating healthier streamside habitat. Plant materials were purchased through a grant provided by PECO's Green Region Funds to the New Garden Township Open Space Committee and supported by the Friends of New Garden Trails.

Another project located along the proposed White Clay Trail Loop took place in May. Eighty volunteers planted two existing rain basins located in Goddard Park, London Grove Township, with 5000 native plants. **Volunteers learned how the native plantings act as habitat islands for pollinators, food and cover for birds and other animals, and how once established can function to infiltrate water and uptake nutrients.** Because of the public location, the basins will serve as a demonstration to park visitors, encouraging environmental stewardship within their communities and at home. This was a bi-state, multi-entity effort with project funding awarded by DNREC "Rain Gardens for the Bay" and United Water, 52 cubic yards of leaf mulch donated by the City of Newark, and in-kind labor provided by London Grove Township Public Works Department.

"Water is the most critical resource of our lifetime and our children's lifetime. The health of our waters is the principal measure of how we live on the land."
- Luna Leopold

Land Preservation and Reforestation

Wild and Scenic Rivers funding plays a vital role in filling gaps to help preserve land in the watershed. This funding is especially critical in the beginning stages of land preservation projects. In 2014, Wild and Scenic Rivers funding helped with landowner outreach on 8 potential trail and conservation easement projects located in London Grove, Franklin, and New Garden townships. **Since 2000, we have preserved just under 2,000 acres of open space and installed approximately 24 acres of streamside forest buffer.**

Streamside reforestation is one of the most effective water quality protection methods; trees are cost efficient and provide a high degree of protection. Forests filter sediments and pollutants, reduce stormwater volumes, increase groundwater infiltration, and provide wildlife habitat. The newest science indicates that forested riparian buffers are powerful processors of nutrient pollutants, cleaning water far downstream of the forest. Our partner, Brandywine Conservancy, was awarded William Penn funding to develop and promote a model riparian buffer ordinance for use by Pennsylvania townships to protect and restore their waterways. The model riparian buffer ordinance was presented to over ten Pennsylvania townships, among them London Grove and New Garden, both in the White Clay watershed. These townships will receive a forested buffer gap analysis, review of their existing riparian buffer protections, and custom ordinance language to incorporate features of the new model ordinance. These features involve protections against streamside earth disturbance, specific language for steep slope and wetland reforestation and protections, and recommended buffer widths for impaired waterways (those not meeting state water quality standards) and non-impaired waterways. The program is free of cost to the two townships and we hope to see it replicated throughout the watershed.



Volunteers planting a rain basin at Goddard Park.
© North Creek Nurseries

Upcoming Community Events 2015

© Shane Morgan



7th Annual

Creek Fest

Saturday May 2nd
12:00 – 4:00 p.m.

Carpenter Recreation Area, White Clay Creek State Park

The family event of the spring! Tom Petty tribute band, family entertainment, kids crafts, food, nature hikes, live animals, local colonial history re-enactors, fly fishing clinics, native gardening ideas, rain barrels, FREE water bottles, and MORE.

Co-hosted with White Clay Creek State Park, National Park Service and United Water.

Community Outreach

- Helped launch the New Garden Township e-newsletter and contributed quarterly articles on watershed related topics directly reaching 410 Township residents.
- Co-hosted two gatherings of 20+ stakeholders interested in coordinating on a public outreach campaign for the entire Christina Basin, a 565 square mile, bi-state watershed that includes the White Clay.
- Co-produced the first video in a series entitled Christina Connections: Where does your water shed?
- Supported Delaware Nature Society in its efforts to certify the City of Newark as a Community Wildlife Habitat, the 78th city in the U.S. to be certified and the 2nd in the state of Delaware.
- Presented 'Vegetated Solutions to Stormwater Management' at London Grove Township to 15 attendees comprised of public works employees, local builders, landscape contractors and homeowner association representatives.
- Completed a three year site cleanup in White Clay Creek State Park. This year 31 volunteers removed 8.4 tons of trash bringing the 3 year total to 16.5 tons!
- Hosted our largest public outreach event, the 6th annual Creek Fest, with Delaware State Parks and United Water. Over 1,300 people attended, with 400 receiving free water bottles provided by United Water.
- Presented on the Wild and Scenic Program to 80 watershed residents in New Garden Township.
- Designed interpretive watershed signage installed at the new Curtis Mill Park in Newark, DE.
- Showcased 2 restoration sites in the White Clay to 42 attendees on the Annual Christina Basin Restoration Bus Tour.
- Presented 'Developing a Landscape Ethic' to 15 attendees in collaboration with Chester County's first Community Read featuring *A Sand County Almanac* by Aldo Leopold.
- Exhibited at Newark Community Day with 8,000+ residents attending.
- Exhibited at New Garden Township Tercentennial Celebration to 250+ residents.

Spring Events:

- April 18 **White Clay Cleanup and Earth Day Planting**
- May 2 **Pre-Creek Fest Stream Study**
- June 6 **Tristate Marker Trail Dedication**
- TBD **New Garden Park Riparian Buffer Planting**
- TBD **Landenberg Junction Trail Grand Opening**

Fall Events:

White Clay Watershed Association Annual Meeting
Celebrating 50 years!

- Exhibited at the White Clay Watershed Association Annual Meeting to over 80+ attendees.
- Increased our social media presence via WordPress, Facebook, Twitter, and Flickr with an average annual reach of 34,000.

School Programs

- Awarded scholarships for two Educational Field Trips to Stroud Water Research Center for 52 students from Holy Angels School (DE) and 14 students from Maclary Elementary (DE).
- Supported Shad in Schools fry incubation and release in White Clay Creek's mainstem for two DE schools. The program reached approximately 150 children directly through their hands-on involvement in the classroom and indirectly reached approximately 800 students in the two participating schools.
- Supported a new education program, based on the White Clay Passport, for 19 homeschool students (ages 6-12) at White Clay Creek State Park.
- Provided a hands-on learning component to a class of 50 University of Delaware undergraduates enrolled in Conservation of Natural Resources (GEO 235).
- Provided relevant field experience in environmental science to a West Chester University sophomore via our summer intern program.

Watershed Monitoring and Projects

- Partnered with PA DEP to conduct bacterial sampling at 10 locations along the West, Middle, and East Branches in PA. Approximately 150 samples were collected and analyzed for fecal coliform and E. coli.
- Assisted the National Park Service in monitoring development proposals and permit applications for potential impacts to White Clay Creek and its tributaries as designated streams within the National Wild & Scenic Rivers System.
- Awarded \$53,030 in PA DEP Growing Greener Funding for the New Garden Park Riparian Buffer Project to be completed by 2017.
- Provided comment to the regulatory agencies involved with permitting the proposed Broad Run well in New Garden Township.

White Clay Creek Wild and Scenic Steering Committee Members:

Kyle Sonnenberg, *Delaware Co-Chair, Vice President White Clay Creek Watershed Association (WCWA)*

Phil Geoghegan, *Pennsylvania Co-Chair, Franklin Township*

Don Peters, *Pennsylvania Co-Chair, New Garden Township*

Linda Stapleford, *WCCSP Advisory Committee/WCWA*

Martha Corrozi Narvaez, *University of Delaware Water Resources Agency*

Kristen Travers, *Delaware Nature Society/WCWA*

Douglas Janiec, *Sovereign Consulting Inc./WCWA*

Ed O'Donnell, *Fly Fishers*

Dorothy Miller, *Coalition of Natural Stream Valleys/WCWA*

Martin Wells, *London Britain Land Trust/WCWA*

John Theilacker, *Brandywine Conservancy*

Beth Burnam, *Brandywine Conservancy*

Erin McCormick, *Natural Lands Trust*

Jake Michael, *Chester County Planning Commission*

Nick McFadden, *DNREC, Division of Parks and Recreation*

Susan Staats, *DNREC, Division of Parks and Recreation*

Gerald Kauffman, *University of Delaware Water Resources Agency*

Rick Mickowski, *New Castle Conservation District*

Aileen Parrish, *London Britain Township*

April Schmitt, *Friends of Pennsylvania White Clay Creek Preserve*

Jennifer Egan, *University of Delaware, Policy Fellow*

Thomas Zawislak, *President White Clay Watershed Association*

David Hawk, *Treasurer White Clay Watershed Association*

Shane Morgan, *Management Plan Coordinator - Staff*

Julie Bell, *River Manager, National Park Service liaison to Wild & Scenic Watershed Steering Committee*

The Watershed Steering Committee, with our local and state partners, is charged with promoting the long-term protection of the White Clay Creek watershed and its resources in Pennsylvania and Delaware through the implementation of the Watershed Management Plan. The Management Plan Coordinator was added in 2002 to assist the Committee in project and administrative duties.

The White Clay Creek watershed contains some significant natural areas and outstanding values through which the watershed achieved its federal designation. The Wild and Scenic Rivers Program supported projects that protect this jewel through community outreach and education, open space preservation, restoration, and research.



Three boys fishing.
© I. Bellafiore



WHITE CLAY CREEK National Wild & Scenic River

Ours to Enjoy. Ours to Protect.

182 Sawmill Road, Landenberg, PA 19350



For information on all of
our projects and upcoming
events visit our website
www.whiteclay.org



WhiteClayWildandScenic




WhiteClayWS



WhiteClayWS

Check out our photos on Flickr!

Funding for this publication provided by the National Park Service.

 Printed on 10% Recycled Paper

PARTNERSHIPS - Cost-Effective, Sustainable, Catalysts

2014 Partners: Brandywine Conservancy, Coalition for Natural Stream Valleys, Chester and New Castle County Conservation Districts, Delaware Department of Natural Resources & Environmental Control, Delaware Nature Society, Friends of White Clay Creek Preserve, Friends of White Clay Creek State Park, Natural Lands Trust, Partnership for the Delaware Estuary, Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Department of Environmental Protection, Stroud Water Research Center, United Water, University of Delaware, White Clay Watershed Association, Chester and New Castle Counties, City of Newark, and Franklin, London Britain, London Grove and New Garden Townships.