

## 6th Annual CREEK FEST

12 – 4 p.m. Saturday May 3rd  
Carpenter Recreation Area  
White Clay Creek State Park

The family event of the spring! Live band, family entertainment, kids crafts, food, nature talks, live animals, local colonial history enactors, fly fishing clinics, native gardening ideas, rain barrels, FREE water bottles, and MORE. Co-sponsored with White Clay Creek State Park, United Water Delaware, Friends of White Clay Creek State Park, and Mushroom Farmers of Pennsylvania.



Tri-State Marker Hike ©G. Schraeder

## WHITE CLAY CREEK NATIONAL WILD AND SCENIC RIVER

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. In March 2013, after two years of planning, a Strategic Plan was adopted to guide the development and focus on priority issues in the White Clay Watershed for the next five years. For more information, please visit our website at [www.whiteclay.org](http://www.whiteclay.org).

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.

### White Clay Creek Wild and Scenic Steering Committee Members:

Kyle Sonnenberg, Delaware Co-Chair, Vice President White Clay Creek Watershed Association  
Phil Geoghegan, Pennsylvania Co-Chair, Franklin Township  
Don Peters, Pennsylvania Co-Chair, New Garden Township  
Linda Stapleford, WCCSP Advisory Committee  
Martha Corrozi Narvaez, University of Delaware Water Resources Agency  
Kristen Travers, Delaware Nature Society  
Douglas Janiec, CardnoENTRIX  
Ed O'Donnell, Fly Fishers  
Dorothy Miller, Coalition of Natural Stream Valleys  
Martin Wells, London Britain Land Trust  
John Theilacker, Brandywine Conservancy  
Jack Stefferud, Natural Lands Trust  
Erin Lee, Natural Lands Trust  
Jake Michael, Chester County Planning Commission  
Nick McFadden, DNREC, Division of Parks and Recreation  
Gerald Kauffman, University of Delaware Water Resources Agency  
Kevin Donnelly, New Castle Conservation District  
Aileen Parrish, London Britain Township  
Jessie Benjamin, Taproot Native Design  
Jennifer Egan, University of Delaware, Policy Fellow  
Thomas Zawislak, President White Clay Watershed Association

Shane Morgan, Management Plan Coordinator - Staff  
Julie Bell, National Park Service liaison to Wild & Scenic Watershed Steering Committee



Freshwater Mussel  
©United Water Delaware

### Upcoming Community Events 2014

#### Spring Events and Volunteer Opportunities:

- Creek Life Hike, May 3
- Rain Garden Workshop and Volunteer Planting, London Grove Township, May 17

#### Summer Workshops:

- Summer Stream Adoption Hikes

#### Fall Events:

- Christina River Basin Symposium at West Chester University
- New Garden Park Community Tree Planting

(Check website for dates and times)  
[www.whiteclay.org](http://www.whiteclay.org)



For information on all of our projects visit our website [www.whiteclay.org](http://www.whiteclay.org) or find us on [Facebook/WhiteClayWildandScenic](#) and [Twitter/WhiteClayWS](#)



# WHITE CLAY CREEK WATERSHED STEERING COMMITTEE 2013 UPDATE

## WHITE CLAY CREEK NATIONAL WILD AND SCENIC RIVER

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





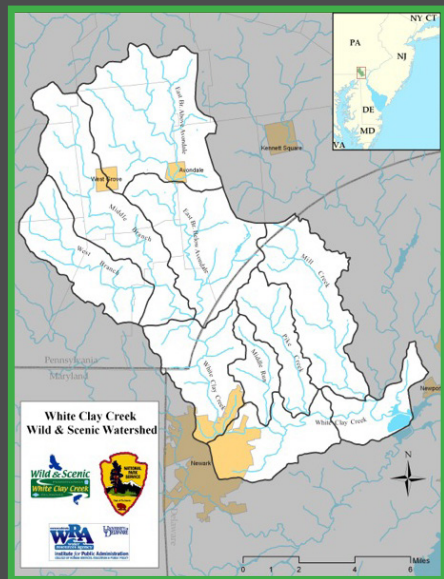


## Partnership Wild and Scenic Rivers

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 Partnership Wild and Scenic River by an Act of Congress signed into law by President Clinton in October 2000.



## WELCOME

Welcome to the *White Clay Creek Wild and Scenic Program Update*. The Watershed Steering Committee presents our 2013 accomplishments to watershed partners, legislators, and our community.

## Ecological Research and Restoration

*"For all is like an ocean, all flows and connects; touch it in one place and it echoes at the other end of the world."*

-FYODOR DOSTOYEVSKY

Human influence in the White Clay watershed has left terrestrial and aquatic species stressed and habitats fragmented or destroyed. A goal of the Wild and Scenic Program is to aid our partners in securing grant funding to research issues and restore impairments by implementing projects supported by scientific research. During 2013, three storm water basins in the City of Newark were retrofitted to aide in water infiltration and nutrient uptake. 100 volunteers from Bank of America, DuPont, Master Gardeners, University of Delaware students, and members of the community turned out to support this project. The basins are being monitored by University of Delaware students and received the Delaware Nursery and Landscape Association award for best landscape design in the commercial category.

In addition to the basin retrofits, two (2,500 sq. ft.) grass swales in Hockessin, DE were regraded and replanted in native vegetation with the help of New Castle County employees. The plants should slow runoff from small storm events and trap sediment from entering Mill Creek. The swales were used as a teaching aide for Del Tech students learning about storm water management, and as a hands-on maintenance workshop for New Castle County Employees.

Plans are underway for the partial removal of a historic 18th century dam, Byrnes Mill Dam, along the White Clay Creek to restore the natural flow of the creek and support fish passage. Specifically, this dam is blocking the upstream movement of anadromous fish, American and hickory shad, fish that live in the ocean but spawn in freshwater streams and rivers. Intact portions of the dam will be preserved and a public education display retelling the dam's history located nearby. We continue to assist our partner, the Water Resources Agency, with this important restoration project. Once all permits

are received, construction will be scheduled for the first dam removal in the state of Delaware. There will be a day open to the public during the dam deconstruction as an opportunity to view the removal process.

Watersheds have many unsung heroes. One of those heroes is the freshwater mussel, a tiny creature with the capacity to provide significant water quality benefits. Despite their importance to natural aquatic ecosystems, they are among the most imperiled animals in both the Delaware River Basin and the nation as a whole. Once missing from a stream, it is difficult for mussels to recolonize easily because either there is no longer brood stock nearby, or dams and other obstacles to fish passage may block the natural spread of juveniles (via fish hosts) back into the stream. Their decline in (and in some cases, disappearance from) our waterways has prompted the Partnership for the Delaware Estuary to launch the Freshwater Mussel Recovery Program.

Preliminary research in White Clay Creek indicated that food and water conditions were capable of supporting mussels, yet none were found during initial surveys. Based on these findings, the Partnership placed 200-tagged mussels (*Elliptio complanata*) from the Brandywine to suitable locations in the Delaware section of White Clay Creek. The mussels are being monitored and will provide valuable insight on where and in what conditions they can survive in the White Clay, while also shedding light on how mussels respond to non-ideal conditions in post developed streams. This project was partially financed by the generous donations of Delaware residents using the White Clay Creek "tax-check off" option on the Delaware individual tax returns. This initial investment into fresh water mussel research has opened up additional research and funding opportunities for the Partnership, helping them to expand their mussel recovery efforts throughout the Delaware Basin.

## Land Preservation and Reforestation

*"A society is defined not only by what it creates, but by what it refuses to destroy."*

-JOHN SAWHILL, former president/CEO of The Nature Conservancy

Wild and Scenic Rivers funding plays a vital role in filling gaps to help preserve land in the watershed. In 2013, our funding helped ease 154 acres in London Grove Township, PA. The easement

area contains possible bog turtle habitat, 3200 feet of the Middle Branch, 100-year floodplain, wetlands, 56± acres of Cockeysville marble geology, woodlands, specimen trees, a state PNDI site, and 86± acres prime agricultural soils. Plans are moving forward to preserve an additional 34 acres of land that includes 3,000 linear feet of the Middle Branch in London Grove Township. An 11-acre parcel in London Britain Township adjacent to the White Clay Preserve along the East Branch, and a critical link in the envisioned 15 mile, bi-state, White Clay Loop Trail, was also placed under easement. Furthermore, New Garden Township received grant funding to begin clean up work and construction of a new trail head along the White Clay Loop Trail on a piece of property purchased in 2012 with the help of Wild and Scenic funds.

The single most important factor explaining variation in water quality is the percentage of tree cover in each watershed. Hence, the White Clay Creek Reforestation Plan set a goal of 40% minimum forest cover to protect our watershed health. In 2013, the last significant unforested riparian area remaining along the ecologically valuable waters of the upper East Branch had a buffer of 750 trees installed by 45 corporate and community volunteers. Another 1000 trees were planted in the Franklin Preserve with help from 65 community volunteers, Exelon and Dansko employees, the Brandywine Conservancy, and funds from a Treevitalize Grant. Lastly, to assist with future planning and maintenance of newly reforested lands, three sites were monitored for planting success. Restoring forests one acre, one tree at a time, improves habitat and water quality for generations to come.

## Community Outreach and Education

Wild and Scenic Rivers funding provided several educational and outreach opportunities to increase community awareness and understanding of the outstanding resources of the White Clay Creek Valley. In 2013, the Watershed Steering Committee:

- Developed a **Watershed Passport** program for the White Clay Creek to get children and families out learning and exploring the watershed. 1000 Passports were printed for distribution at educational events.
- Supported Delaware Nature Society in creating a **Community Habitat Garden** in the Fairfield Crest Community in an effort to certify the City of Newark a National Wildlife Federation Community Habitat.
- Conducted two **Invasive Species Removal Hikes** in the White Clay Preserve focusing on the removal of garlic mustard (*Alliaria petiolata*) with a combined amount of 47 volunteers from Bank of America and University of Delaware Blue Hen Leadership Group.

- Presented a **Best Maintenance Practices Workshop** for New Castle County municipal employees and two hands-on maintenance days.

- Hosted the 5th annual **Creek Fest** with Delaware State Parks and United Water Delaware focusing on the tremendous natural, cultural, and recreational assets of the White Clay Creek Valley. Over 1000 attended, with 290 receiving water bottles provided by United Water.

- Assisted National Parks Service in hosting a **Wild & Scenic 101 Workshop** for our elected officials, government agencies, non-profits, and fellow Partnership Rivers to learn more about the Wild and Scenic Rivers legislation.

- Hosted a tour of the only certified residential **Sustainable SITES** project on the East Coast. 20 watershed residents attended the event to learn first hand what can be done on a residential scale to handle stormwater water on site.

- Assumed our first **summer intern** from California University of Pennsylvania.

- Lead two **summer stream adoption** hikes for the general public. Participants learned about stormwater management practices and conducted macro-invertebrate studies in the creek.

- Held two **public meetings** regarding the stormwater basin retrofits at the Hunt of Louviers in Newark, Delaware to inform residents about the planned storm water basin retrofits.

- Redesigned and upgraded the **White Clay Creek Wild and Scenic Website** with student and technical assistance from the University of Delaware Water Resources Agency.

- Exhibited at **Newark Community Day** with 8,000+ residents attending.

- Exhibited at the **Bank of America Environmental Expo** in May 2013.

- Reintroduced the **White Clay Creek Wild and Scenic Expansion Bill** that was unanimously passed by the Senate in Spring 2013.

## School Programs

- Awarded scholarships for two **Educational Field Trips** to Stroud Water Research Center for 44 students from Holy Angels (DE) and 27 students from Assumption BVM (PA) to attend a 4.5-hour stream study.

- Supported **Shad in Schools** fry incubation and release in White Clay Creek's main stem for two DE schools. The program reached 149 children directly through their hands-on involvement in the classroom while the program indirectly reached approximately 800 students in the participating schools.

## Recreation

- Provided comments to the proposed **Tri-state Marker Trail** in the White Clay Creek Preserve.

- Continued support of the **White Clay Trail Loop** in Chester County connecting existing trails with new pedestrian and bike trails thereby creating a recreationally important multi-jurisdictional trail in the Pennsylvania portion of the watershed that connects to Delaware trails.

## Watershed Monitoring and Projects

- Partnered with PA DEP to conduct bacterial sampling at 10 locations along the Middle Branch and East Branch in PA. 150 samples were collected and analyzed for both 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.

## 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. This year \$15,000 in open space preservation funds were leveraged against \$879,131 to place 165 acres of open space under easement.

Other donations and in-kind services to the Steering Committee in 2013 included: DNREC Community Water Quality Improvement Grant (\$75,000), DNREC 319 Funds (\$8,078), United Water Grant (\$2000), White Clay Creek Restoration Fund Contributions from Delaware tax filers (\$5,924), Delaware State Employee Charitable Contributions (\$67.28), Mushroom Farmers of Pennsylvania (\$600). As well as, 1000 hours professional assistance with land preservation, ecological restoration, reforestation planning, events, outreach, mailings, and community volunteer time valued at \$73,041. This represents a total estimated value of \$1,043,841 leveraged against \$82,000 in federal funding.

## PARTNERSHIPS - Cost-Effective, Sustainable, Catalysts

2013 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 Delaware, University of Delaware, White Clay Watershed Association, City of Newark, and Franklin, London Britain, London Grove and New Garden Townships, Chester and New Castle Counties.