

White Clay Creek National Wild and Scenic River

Steering Committee Update 2021

Promoting clean water through outreach, restoration, and land protection.

Welcome to the White Clay Creek National Wild and Scenic River Program Update. The Watershed Steering Committee presents our 2021 accomplishments to our watershed partners, legislators, and community.

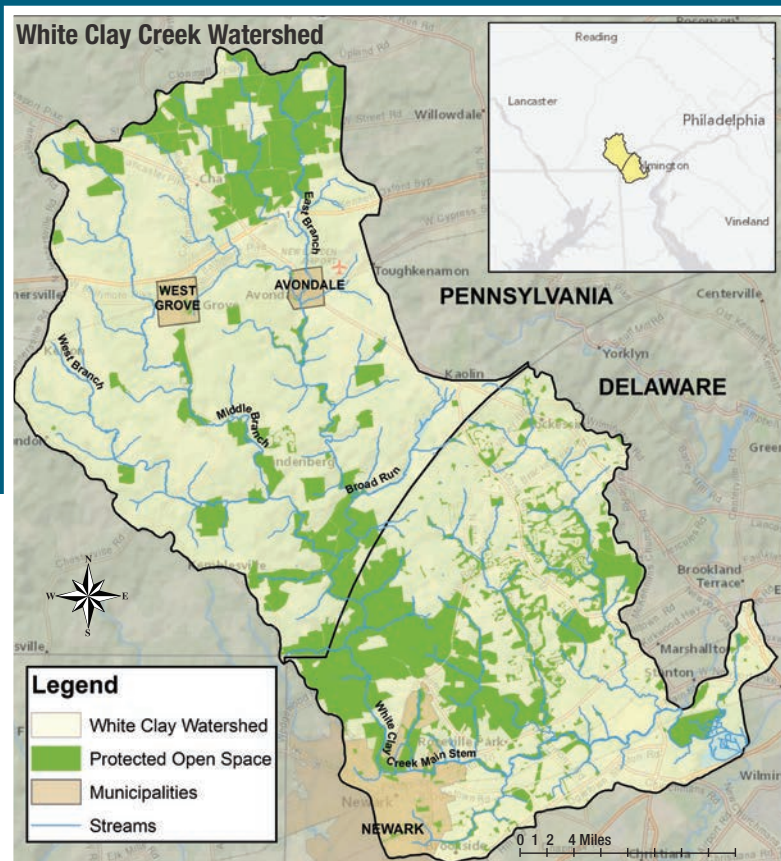
There is no doubt that climate change has intensified weather events in our region. Hurricane Ida came through last September and impacted neighboring watersheds with historic flooding. While White Clay Creek was spared the worse of it, flooding evacuations in Avondale Borough, impassable roadways, and damaged stream crossings were experienced. Annual precipitation in our area increased 11.1 inches over the past century with the wettest 12-month average (72.3") occurring during February 2018- January 2019 (National Centers for Environmental Information). Historically, our area averages 47 inches of rain per year, but the past 3 years were in excess of that average; 69.8" in 2018, 54.9" in 2019; 55.2" in 2020 (Chester County Water Conditions 2020, Chester County Water Resources Authority). Increasing development (more roads, buildings, and other impervious structures) exacerbates these storm events and impacts our daily lives.

The choices we make today, like protecting natural resources and implementing nature-based solutions to collect and treat rain water as a resource and not just a nuisance, can help mitigate these impacts. Vegetated riparian areas, such as forests, meadows, and wetlands slow down rain and allow it to infiltrate soil, filtering out pollutants while also replenishing groundwater. In a watershed where the land is 88% privately owned, partnerships with landowners and municipalities to implement practices that help to capture and filter stormwater are a priority. The Catch the Rain Program is a great example of how we work with landowners looking to control water runoff from their properties by providing them with technical assistance and monetary incentives to implement nature based practices such as rain gardens and tree plantings. These practices beautify neighborhoods while improving water quality and providing wildlife and pollinator habitat.

A few highlights from 2021 include the installation of a second demonstration rain garden in West Grove Borough. The first rain garden installed in June 2020 is located in front of the Avon Grove Library.



Avon Grove Library rain garden in spring at one year old



Partnership Wild and Scenic Rivers

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

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.

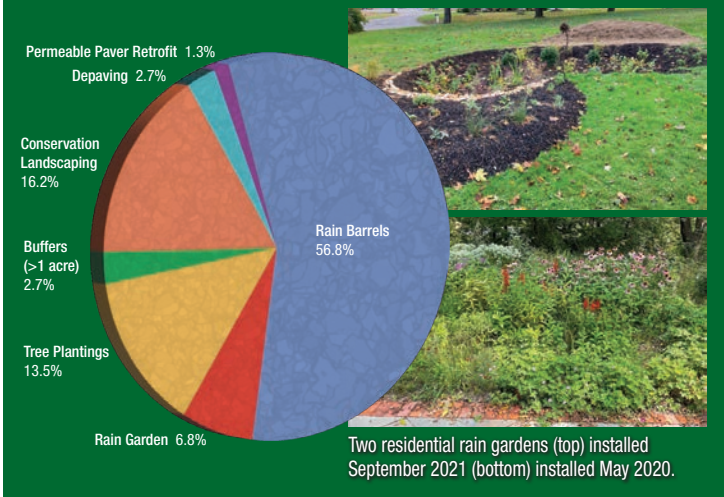
White Clay Creek was designated a National Wild and Scenic River by an Act of Congress signed into law by President Clinton in October, 2000. In 2014, nine additional stream miles were added to the original designation of 190, bringing the total miles protected under the Act to 199 miles.

Throughout 2021, we also completed 21 site visits with personalized reports, 18 rain barrel installations, 1 residential rain garden installation, 6 conservation landscapes, and one de-paving project, all in cooperation with private residential property owners.



Harmony Park rain garden performing after first big rain event

Catch the Rain Program Popular Practices



Addressing flooding on a larger scale is also a priority. In 2021 two grant proposals were awarded funding to identify projects to mitigate flooding in Avondale Borough. Avondale Borough contains just 0.5 square miles, or 0.5% of the entire watershed, yet a third of it lies in the 1% flood event hazard zone. Residents here disproportionately bear the impacts of climate change. Over the next two years we will be conducting a watershed assessment and restoration plan for the twelve-square-mile drainage basin above the borough to identify restoration and stormwater management projects that promote increased flood storage and improved habitat for fish and wildlife. This plan will allow multiple municipalities and conservation organizations to collaborate on projects that address the issues of climate resiliency and inequity.

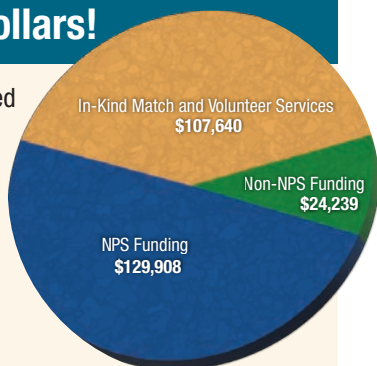
In conjunction with the watershed assessment and restoration plan, we plan to engage the community directly for their feedback. By centering community members' needs and experiences and developing a shared understanding of how climate change impacts them we hope to identifying more equitable climate resilience strategies within the

White Clay Wild and Scenic Maximizes Federal Dollars!

In 2021 White Clay partners leveraged \$129,908 in federal funds with \$131,879 cash and in-kind services. In other words, every dollar of National Park Service funding spent was leveraged with an additional dollar of outside match and volunteer services.

A special thanks to the following donors of monetary assistance provided to the Steering Committee

in 2021: National Park Service (\$165,000), National Park Foundation (\$75,000), University of Delaware (\$11,600), Public Contributions (\$11,315), Dockstader Foundation (\$7,500), Stroud Water Research Center (\$6,925), Christina Watersheds Municipal Partnership (\$6,000), and approximately 1200 hours of volunteer time valued at \$35,749!



2021 Program Assistance

borough that provide multiple benefits to those most directly impacted by flooding. The primary output from this community led research will be a green stormwater infrastructure plan for the borough that incorporates community needs and wants, as well as the implementation of one of the identified projects.

Another example of an effective partnership that illustrates how private landowners, local government and conservation groups can work together to meet multiple needs involves a streamside buffer planting on 5.5 acres of protected land. Riparian buffers are a low cost stormwater management strategy supported by PA DEP. Thus, by leveraging municipal, state and federal funds to support this project, the municipality will gain credits towards their stormwater management plan at a much lower cost, while the landowner and the watershed will reap the benefits of improved habitat and water quality.



Extreme weather events interactive display at the Penn Family Festival ©Tara Muenz

Finally, we partnered with Stroud Water Research Center to provide educational opportunities throughout the watershed focusing on climate change literacy and watershed stewardship. All activities include learning about historical and present interrelationships between humans and the local White Clay Creek Watershed through watershed education, recreation, and stewardship. Events will feature exploration of local waterways by canoe, angling, or streamside, highlighting the importance of our local waterways, and how personal choices impact the watershed. Participants will gain awareness of the impacts of their choices contributing to climate change and strategies to become better stewards of their local White Clay Creek Watershed. This work is being supported by a National Park Service Challenge Cost Share Grant.

All of the aforementioned activities help alleviate the impacts of climate change, and provide environmental and habitat benefits, as well as often overlooked health benefits. In a time when people are craving the outdoors, nature based projects and activities reconnect residents to their local environment. Green spaces, like gardens, parks, and preserves, support mental and physical health, as well as providing safe gathering and recreating space during stressful times. We hope you take the time to get outside and enjoy the many opportunities the White Clay Creek watershed offers to get out into nature, relax, and recharge.



Panoramic view of the Middle Branch in Banffshire Preserve ©Shane Morgan

Land Preservation

- Planned for future trail alignments in the White Clay Watershed.
- Provided land stewardship services at multiple watershed locations to protect and promote the establishment of streamside buffers and other stormwater best management practices.
- Identified opportunities to support land preservation efforts throughout the watershed.
- Supported the easement and acquisition of two properties totaling 112 acres in New Garden Township, and a conservation easement on a 15 acre property in Franklin Township, and the appraisal of 12.6 acres in London Britain Township.

Community Outreach & School Programs

- Hosted two workshops with the Christina Watersheds Partnership: A Stormwater Management Workshop for Homeowners Associations and Property Managers, and a Roadside Best Management Practices Tour and Workshop for Public Works and Municipal Staff.
- Produced content for the whiteclay.org website, municipal newsletters, Chester County Press, and social media outlets.
- Facilitated the collaboration of municipalities, government agencies and other stakeholders to restore and protect the water quality of streams in the White Clay Creek watershed as part of the Christina Watersheds Municipal Partnership.
- Hosted a live stake demonstration and installation with volunteers at the Judge Morris Estate in White Clay Creek State Park.
- Attended multiple municipal meetings to reintroduce the Wild and Scenic Program, discuss potential projects, and provide comment on proposed development projects.
- Presented at the White Clay Creek Preserve Master Plan Public Meeting.
- Presented at the Annual Chester County Watersheds Roundtable.
- Provided an interactive exhibit on climate change and stormwater impacts at the Penn Family Festival.
- Supported the development of a virtual watershed tour with assistance from University of Delaware



Kelley Dinsmore and Shane Morgan conducting a stream walk in city of Newark.

Watershed Monitoring and Projects

- Monitored 30 sites to analyze fecal indicator bacteria concentrations.
- Managed six remote stream sensors to gather continuous data on conductivity, temperature, depth and turbidity.
- Conducted monthly analysis of nutrients and chlorides at six monitoring locations.
- Submitted water quality data to both DNREC and PADEP.
- Provided support to a citizen scientist to build and troubleshoot a remote sediment sampler in the field.
- Provided year-long field experience to two graduate students at the University of Delaware, and two undergraduate students through summer internships supported by Stroud.
- Visited and assessed ten field sites for their scenic value and cultural importance with a team of trained volunteers.
- Provided support for additional dam removals in Delaware.
- Assisted National Parks Service with monitoring development proposals and permit applications for potential impacts to the White Clay Creek and its tributaries as designated streams within the National Wild & Scenic Rivers System.



Citizen scientist, Rob Tuttle troubleshooting a DIY remote sediment sampler.



A team of volunteers assessing the scenic value of a site in the White Clay Creek Preserve.



White Clay Creek Fest

14th Annual

This year's event will be **LIVE**
Saturday, May 7th • Noon-4pm

White Clay Creek State Park Carpenter Recreation Area

Celebrate your local Wild and Scenic River at the Annual White Clay Creek Fest! Explore new hiking trails, visit with local organizations and learn about our natural, recreational, and historic and cultural resources, try your hand at fly fishing and MORE. The first 250 attendees will receive a FREE reusable water bottle commemorating Creek Fest courtesy of SUEZ.

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 position 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 which enabled the watershed to achieve its federal designation as a Wild and Scenic River. The Wild and Scenic Rivers Program supports projects that protect the watershed through community outreach and education, open space preservation, restoration, and research.

White Clay Creek Wild and Scenic Steering Committee Members:

Ed O'Donnell, Delaware Co-Chair, Fly Fishers
Don Peters, Pennsylvania Co-Chair, New Garden Township
David Hawk, Treasurer, White Clay Watershed Association (WCWA)
Thomas Zawislak, President, WCWA
Martha Narvaez, University of Delaware Water Resources Center
Kristen Travers, Delaware Nature Society/WCWA
Douglas Janiec, Sovereign Consulting Inc./WCWA
John Goodall, Brandywine Conservancy
Kate Raman, Natural Lands
Rachael Griffith, Chester County Planning Commission
Rick Mickowski, New Castle County Conservation District
Aileen Parrish, London Britain Township
April Schmitt, London Britain Land Trust, Friends of White Clay Creek Preserve (PA)
Jennifer Egan, University of Maryland Environmental Finance Center/WCWA
Cori Trice, Chester County Conservation District
Kelley Dinsmore, City of Newark
Tracy Surles, New Castle County Special Services
Laura Lee, White Clay Creek State Park
Melinda Daniels, Stroud Water Research Center

Shane Morgan, Management Plan Coordinator - Staff
Sarah Bursky, National Park Service, Wild and Scenic Rivers Program, Mid-Atlantic Region

For information
on all of our
projects and
upcoming events:



www.whiteclay.org



WhiteClayWildandScenic



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Cover photo of the Shirley Russell Bridge ©Shane Morgan



WHITE CLAY CREEK
National Wild & Scenic River

Ours to Enjoy. Ours to Protect.

PO Box 10, Landenberg, PA 19350



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