

# Primrose Creek Watershed Assoc.

Fall 2014



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### Quarry Ruling Issued

By Dennis Mankin, PCWA Quarry Committee Dir.

On July 31, the Pennsylvania Environmental Hearing Board (EHB) issued its decision in a suit brought by the Solebury School against New Hope Crushed Stone (NHCS) and the Department of Environmental Protection (DEP). The EHB found that continued mining operations by NHCS threaten the health and safety of all affected residents of the Township, that DEP erred in issuing its permit allowing the quarry to dig beyond 120 feet below mean sea level, and it revoked the permit. The quarry has appealed the decision, and mining operations above 120 feet continue, although the DEP did not appeal so is bound by the decision.

The case was brought by the School against DEP soon after it issued a new mining permit in July 2011, allowing NHCS to dig to 170 below mean sea level. Originally, Solebury Township and PCWA joined the suit, but settled their claims prior to the decision. In its suit, the School presented evidence showing that the mining operations were causing sinkholes to develop. The court made several significant findings of fact, based on the evidence presented, including that:

- Quarrying activities have led to a disturbance of the hydrologic balance of at least the Primrose Creek basin. Decision para. 179.
- The quarry has been since the 1990's essentially draining all of the in-basin groundwater out of the basin. Decision, para. 199.
- The quarry dewatering, which is causing the lowered groundwater table, is the cause of the sinkhole problem at the school. Decision, p. 26.
- The sinkholes will continue to propagate on and near the Solebury School campus as long as the dewatering continues. Decision, para. 222.

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*Quarry Ruling Issued con't from p 1...*

- The sinkholes will abate if the quarry closes because that would allow the water table to return to its pre-mining levels. Decision, para. 227.

In raising the issue of the hydrologic balance of the Primrose Creek as it relates to the creation of the sinkholes, the court took note that the permit allowing the quarry to pump water (issued under the National Pollution Discharge Elimination System or NPDES) was not part of this suit. It nevertheless, highlighted several issues related to that permit which could affect the determination in future permits, particularly the finding that continued operations of the quarry adversely affect the health and safety of affected residents.

In other findings of fact, the court noted that the quarry had been digging deeper than its permitted 120 feet since as early as 2008, and that the DEP did nothing about this until a complaint by the School, and then issued fines totaling a little over \$8,000. In addition, it noted that when the Corbett administration took over, the decision by the water division of the DEP to put the Primrose Creek on its list of impaired streams due in part to the mining operations was reversed, and that the action was done so at the urging of a member of the DEP's mining division, which issues the operating permits for the quarry.

Beyond its fact finding, the court strongly condemned the standard of review used by the DEP in its decision to permit the quarry to mine deeper, noting that the DEP erred when it limited its review only to the effects that the additional mining (below 120 feet) might have. Instead, the court stated:

"When considering an application for a permit review, the question is not whether the limited subject of the revision can be safely accomplished. The question is whether the project as a whole, as revised, can be safely accomplished. In this case, even without the revisions the mining is causing a serious safety hazard."

It cited an earlier decision in another case (*Tinicum Township v. DEP* 2002 EHB 822, 835) in noting that an application for a permit renewal "... does, however, require the Department to ensure that a continuation of the permitted activity is appropriate based upon up-to-date information." (Emphasis in original).

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This is the first time that any challenge to a permit issued by DEP to the quarry has been successful. The effects of the decision on continued operations of the quarry are unclear, and as noted, an appeal is pending. The full decision may be found on the Solebury Township website at

[http://www.soleburytp.org/images/pdf/Solebury\\_Opinion\\_140731.pdf](http://www.soleburytp.org/images/pdf/Solebury_Opinion_140731.pdf).

The PCWA settled its suit with the quarry in 2012, under terms requiring the quarry to perform significant restoration work on the creek, both above and below the quarry. This work requires permits through the Army Corps of Engineers, the process for which is essentially handled by the Pennsylvania DEP. The PCWA is in the process of obtaining a status report on the permit application.



**Primrose Creek Watershed Association  
Newsletter Staff**

**Jane McNeill**, (Editor)  
**Leah Hunt**, (Graphics Editor)  
**Kevin Morrissey**, (Assist. Editor)

## Letter from the Editor

By Jane McNeill

Greetings

I find myself, as a new member of the Primrose Creek Watershed Association, to be the editor of this newsletter. I am happy to perform this job, although less than a computer whiz, to say the least. I have lots of help, for which I am most grateful.

A word about this organization. I have been to two board meetings and the one thing that has struck me is the passion of each and every person on this board. They are all an inspiration and a delight to work with. It is refreshing in this day and age of apathy to come across a group of people who are so enthusiastic. I am proud and excited to be associated with Primrose Creek..

I welcome the challenges ahead and look forward to meeting more of our neighbors in the future. We also welcome new members. Let us know if you are interested.

Jane



Fresh Water Clam at the mouth of Primrose Creek

## Year in Review

By John Winterbottom, President

This year has seen many new people moving into our community and they may not be aware of the value of our watershed association, and how we work to take a leadership role in improving and protecting the quality of the Primrose Creek watershed, for present and future generations.

Our Mission is to conserve the natural resources of Solebury Township and the Primrose Creek through land and water stewardship and education.

### What is the value of a watershed association?

- \_ We encourage sustain able water use
- \_ Monitor the waterway's ecological systems
- \_ Promote polices and program to sustain groundwater quality In the Solebury/New Hope community the Primrose Creek Watershed Association fosters the interrelationships between the residents and the watershed's natural environment.

### What have we done for you to date and what is to come?

The Primrose Creek Watershed Association has

- \_ Provided educational classes on stream viability through the New Hope/Solebury High School and other local schools

- \_ Negotiated with the Pennsylvania Department of Environmental Protection and New Hope Crushed Stone, operator of the quarry. A consent order and agreement has been reached that basically provides for the return of Primrose Creek to a continuously flowing stream in the future, after the quarry is no longer functioning.

- \_ We are monitoring the Agreement to ensure that it is followed according to the law Over the years, we have made some significant steps toward returning the Primrose Creek and its surrounds to a more natural state for us and our future generations. We need your support to continue this good work.

### Help us help you.

Primrose Creek Watershed Association is an all-volunteer organization and relies heavily upon community support to continue our work. Please consider donating and/or becoming a member today. Donate online at our website: [primrosecreek.org](http://primrosecreek.org) via PayPal or call 609-841-1040 for a membership envelop.

## **PCWA Awarded 3 Grants, IBM, Verizon and Western Pennsylvania Conservancy / Dominion Foundation** **By Kevin Morrissey**

Primrose Creek Watershed Association, PCWA expanded its educational offerings for 2014 and will continue in 2015 with the award of three grants from IBM, Verizon and Western Pennsylvania Conservancy / Dominion Foundation.

John Winterbottom, PCWA president stated that "Verizon funding was used for the 2014 'We all live down Stream' class series. The support from IBM and The Western Pennsylvania Conservancy / the Dominion Foundation will be devoted to education and awareness for 2015. I would like to thank Hope Blaythorne PCWA VP for coordinating the IBM Grant, Carol Cope, PCWA Education Committee Director, for the Western Pennsylvania Conservancy / the Dominion Foundation grant and Kevin Morrissey, PCWA Funding Committee Director for working with Verizon to fund the 'We all live down Stream' class series"

The 2014 Verizon funded "We all live down Stream" class series" was a set of three classes emphasizing the importance of watersheds to the health of a community. Attendance for each class ranged from 35 to 50 middle school and high school students. Both New Hope- Solebury and Bristol school districts attended the classes.

All the classes were conducted at Bucks County Audubon Society, (BCAS) Honey Hollow Environmental Education Center in Solebury, PA. "Diane Smith, BCAS Education Director did a great job coordinating the Honey Hollow Environmental Education Center" said Kevin Morrissey.



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John Winterbottom added "Also all of us on the Primrose Creek WA Board are very appreciative to the instructors: Mark Cowell and Carol Cope from Primrose Creek Watershed Association, Mary Ellen Noon and Meghan Rogalus from Bucks County Conservation District, Ian Kindle and Sarah Berg from Delaware Canal State Park as well as Diane Smith from BCAS.

Winterbottom commented "This has been a fortunate year for funding. However we never lose sight of how this has come about, our membership. Our members are crucial in demonstrating to our grantors and elected officials that the community cares about the natural sustainability of the community. Membership funds are a vital source of support for our programs, helping to restore and protect the watershed and lending strength to our voice as we advocate for green approaches to our community."

Carol Cope said "The PCWA Educational Committee is finalizing the 2015 education curriculum. I look forward to the new classes we will be producing for next year."

(Editor's note: the classes are described in more detail in other articles in this edition.)

## Up and Down Stream with Middle and High School Students from Upper and Lower Bucks County

By Francis Collins

PCWA is building a locally designed watershed curriculum aligned with Pennsylvania Academic Standards.

We have outreached to schools that are seeking an extension and enrichment of their science classrooms in the real world.

Students from New Hope Solebury and Bristol Boro School Districts participated in three watershed sustainability classes.

1. Understanding Our Watershed
2. We All Live Downstream
3. Macro-invertebrates as Indicators of Stream Health

The objective of this sequence of classes was for students to understand the importance of wetlands, the concept of a watershed and the vital role they have as stewards living in it.

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*Up and Down Stream ... con't from col 1...*

Big ideas included how wetlands capture, store and release water, the interconnectivity of neighboring watersheds and the impact of land use on the Primrose Creek.

Our students understand that water is a shared resource, and that a biotic index population census of aquatic macro-invertebrates is indicative of the quality of the water and health of the stream.

***Coming in the next edition of the Primrose Creek Watershed Newsletter...***

***Project Noah: Exploring and Sharing Discoveries of Wildlife in the Primrose Creek Watershed Using Your Smartphone.***

Want to sneak peak at PCWA's educational outreach to our entire community through ***Project Noah*** (**Networked Organisms and Habitat**)?

Go to <http://www.projectnoah.org> to get the basic introduction.

We will have more about our own watershed "mission" in the next edition.



## Verizon Sponsored Class Encourage Students to Explore Land Use Impacts on Water Quality

By Meghan Rogalus

On September 17, 2014 students from New Hope Solebury High School and Bristol Borough High School participated in the first of a series of water quality and watershed health educational programs. The series is available to these students thanks to a grant awarded to the Primrose Creek Watershed Association from Verizon and is being hosted by the Bucks County Audubon Society at Honey Hollow (BCAS).

Upon arriving at the Honey Hollow Education Center, the students were greeted by BCAS Education Director Diane Smith who informed them that BCAS is located in the Honey Hollow watershed, the only watershed nationwide with the distinction of having a National Historic Landmark designation. The designation recognizes the efforts of a group of 1930s-era farmers' in the watershed who voluntarily took the first cooperative, watershed-based approach to implementing conservation practices on their fields. After the introduction, students were divided into 2 groups to rotate between 2 educational sessions focused on the impacts of land use on water quality as well as the benefits of pollution mitigation measures known as 'best management practices' (BMPs).

Meghan Rogalus, Bucks County Conservation District (BCCD) Watershed Specialist, and Lauren Brousseau, BCCD Volunteer Intern, led a hands-on, interactive activity for the students utilizing an EnviroScape® watershed model, a three-dimensional representation of a generic watershed (i.e., an area of land that drains to a common body of water). Students were asked to identify different land uses on the model, including but not limited to a construction site, golf course, farm and neighborhood as well as different water pollutants that could be attributed to those land uses. Students applied dye on the model to represent the pollutants and then sprayed water on the model to see what happens when it rains – specifically how stormwater runoff carries those pollutants through the landscape and smaller tributaries in the watershed and ultimately accumulate downstream. Students were then invited to brainstorm how different BMPs such as installing silt fence at a construction site, planting riparian buffers (represented by sponges), installing fencing to prevent animal stream access as well as reducing fertilizer and pesticide use might benefit water quality.

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Verizon Sponsored... *con't from col 1...*

Students once again used the model to observe the potential of these practices to mitigate water pollution.

Mary Ellen Noonan, BCCD Environmental Educator, led the groups through an inquiry-based, role-playing activity called Watershed Decisions, developed by Penn State Cooperative Extension. Students broke into small groups and assumed the role of new members of a community watershed association. First, they examined simulated water samples and identified potential sources of the pollutants in their watershed based on information about different land users in their community. Each group was then tasked with creating a plan for improving conditions in their watershed with a fixed implementation budget. They were advised of the cost of each BMP and prioritized plans to make the biggest positive impact for water quality in their watershed within their means. The students then presented their watershed improvement plans to the larger group. A wide range of thoughtful proposals were developed by the teams; hopefully empowering some of these teens to become active members of their local watershed associations in the near future!

*The Bucks County Conservation District mission is to provide for the wise use, management and development of the county's soil, water and related natural resources. This is accomplished with the cooperation of public agencies, private groups and individuals.*



## **Delaware Canal State Park teaches PCWA Fall “Intro to Watersheds” Class**

**By Sarah Berg & Ian Kindle**

Once again we appreciated being invited this fall by Primrose Creek Watershed Association, (PCWA) to conduct The Bureau of State Parks' Watershed program at Honey Hollow. We believe working with local organizations like PCWA enable state agencies like Delaware Canal State Park to share knowledge of sustainability topics.

Attendees to this class included students from New Hope-Solebury High School . This class covered just about everything you wanted to know about water. The special properties of water, the hydrology cycle, water quality, and the critters that inhabit the water are all covered in this hands-on interactive program. Students were also introduced to the simple, yet scientific methods of monitoring the health of a water source

Watershed Education is an educational program for students and teachers in grades 6-12. It promotes classroom and field research, hands-on ecological investigations, networking, partnerships, stewardship and community service in an effort to produce environmentally literate citizens.

The Bureau of State Parks' Watershed Education is an educational, action-oriented, multi-disciplinary curriculum and program that promotes investigation, research and decision-making skills. Watershed Education is designed to serve Pennsylvania teachers and students on the topic of watershed education, comply with the watershed-based management directive of the Department of Environmental Protection, and address the proposed Environment and Ecology standards from the Pennsylvania Department of Education.

Watershed Education was designed with assistance and input from these agencies as well as numerous educational professionals to ensure educational and scientific soundness and compliance with all state laws and regulations. Watershed Education takes a comprehensive approach to learning about a natural resource. Instead of focusing on monitoring a waterway, it allows students to look at all factors, past and present, human and non-human, which affect the entire watershed.

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*Delaware Canal State Park ... con't from col 1...*

Ian Kindle joined the Delaware Canal education team in 2006. He is a member of the Environmental Advisory Council of the city of Easton. He loves to share his passions for the outdoors with people of all ages.

Sarah Berg has been with the Pennsylvania Department of Conservation and Natural Resources since 2007. She has worked as a state park educator at Evansburg State Park and Delaware Canal State Park.

### **Update-Consent Order: PCWA/PennFuture and NHCS quarry/DEP**

Last year, Primrose Creek Watershed Assoc and . the organization's legal representative PennFuture signed an agreement with New Hope Crushed Stone quarry and the PA DEP to start the process of restoring the Primrose Creek. The consent order resolves an appeal filed by PCWA and PennFuture that contested PaDEP's issuance of a permit revision in 2011 allowing NHCS to dig to a deeper level at its quarry in Solebury Township.

The Consent Order and Agreement requires NHCS to conduct stabilization work that will address the following concerns:

-“to limit further erosion and minimize potential health and safety risks.”,p3

-“... facilitate the expected restoration of stream flow through the area in the future when groundwater elevations have recovered after the end of active mining.”,p3

-“...provide aquatic habitat suitable for the Trout Stocking, Migratory Fishes (TSF, MF) designated use when groundwater elevations have recovered after the end of active mining.”,p4

While the restoration plan was sent to the Army Corp of Engineers for approval, we believe it has been returned to the DEP for implementation. We are working with the DEP to move the process from planning to determine the next steps required to implement the consent decree.

To learn more about Primrose Creek WA, the appeal, readers may visit the organization's websites <http://primrosecreek.org> , or call (609)-841-1040.

## Green Lawns Don't Make For "Green" Yards

### Adapted from a post at DELAWARE RIVER VOICE, the blog of Maya van Rossum, the Delaware Riverkeeper

All across the country, as communities have expanded and new developments have been built, the amount of land covered with a green grass carpet has grown. We have lost the native vegetation, trees and shrubs in particular, that should be present on our landscapes. As we have lost our native trees and shrubs, we have seen floodwaters rising, streambanks eroding, drinking wells running dry and water quality declining. There is a direct connection between the loss of native vegetation across our communities and what is happening to our local streams and those that live downstream.

When vegetated with native trees and shrubs, when covered in a blanket of decaying leaves, needles and wood, the land acts as a sponge. Rainwater percolates into the soil, filtering down to the water table below to re-supply the aquifers that provide our drinking water. Rainwater also provides base flow to our streams, creeks and rivers. The landscape, in this natural state, is alive with life — birds sing in the trees, squirrels dance across the ground, bugs revel in the earth. Our lives are richer and our water flows free and clean.



The source for this article is from the following [http://www.delawariverkeeper.org/resources/Factsheets/DRNFactsheet\\_OnGreenYards.pdf](http://www.delawariverkeeper.org/resources/Factsheets/DRNFactsheet_OnGreenYards.pdf)

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## Green Lawns Don't ... con't from col 1...

Not all vegetation is created equal, however. Lands vegetated only with grass cannot perform the functions of the natural landscape. Lawns don't act as sponges. Lawn mowers, heavy use and foot traffic all cause soil compaction which limits infiltration. Lawns established as part of a development have soils compacted intentionally for site engineering and construction purposes. As a result, lawns more closely resemble impervious surfaces. Like sidewalks and roadways, lawns shed rain during a storm event rather than allowing it to infiltrate.

We can also have an impact with how we manage our own lands, public and private.

- Start by re-vegetating little used grassy areas. Plant native plants. Add a garden. Consider adding a perimeter of native trees, shrubs, and flowering plants. Doing so not only beautifies our gardens, increases the value of our homes, provides shading to cool homes in the warm summer months reducing cooling costs, and provides a visual and noise buffer that can enhance our quality of life, but it provides flood and pollution prevention and protection to our downstream neighbors.
- We should all advocate that the towns we live in and the schools in our communities use these same practices.
- For those of us who have streams in our yards, it is vitally important that we take on the added obligation of protecting and/or putting in place wide vegetated buffers filled with native trees, shrubs and plants that will prevent streamside erosion, help reduce flood flows and peaks, and can help filter out pollution found in the creek.

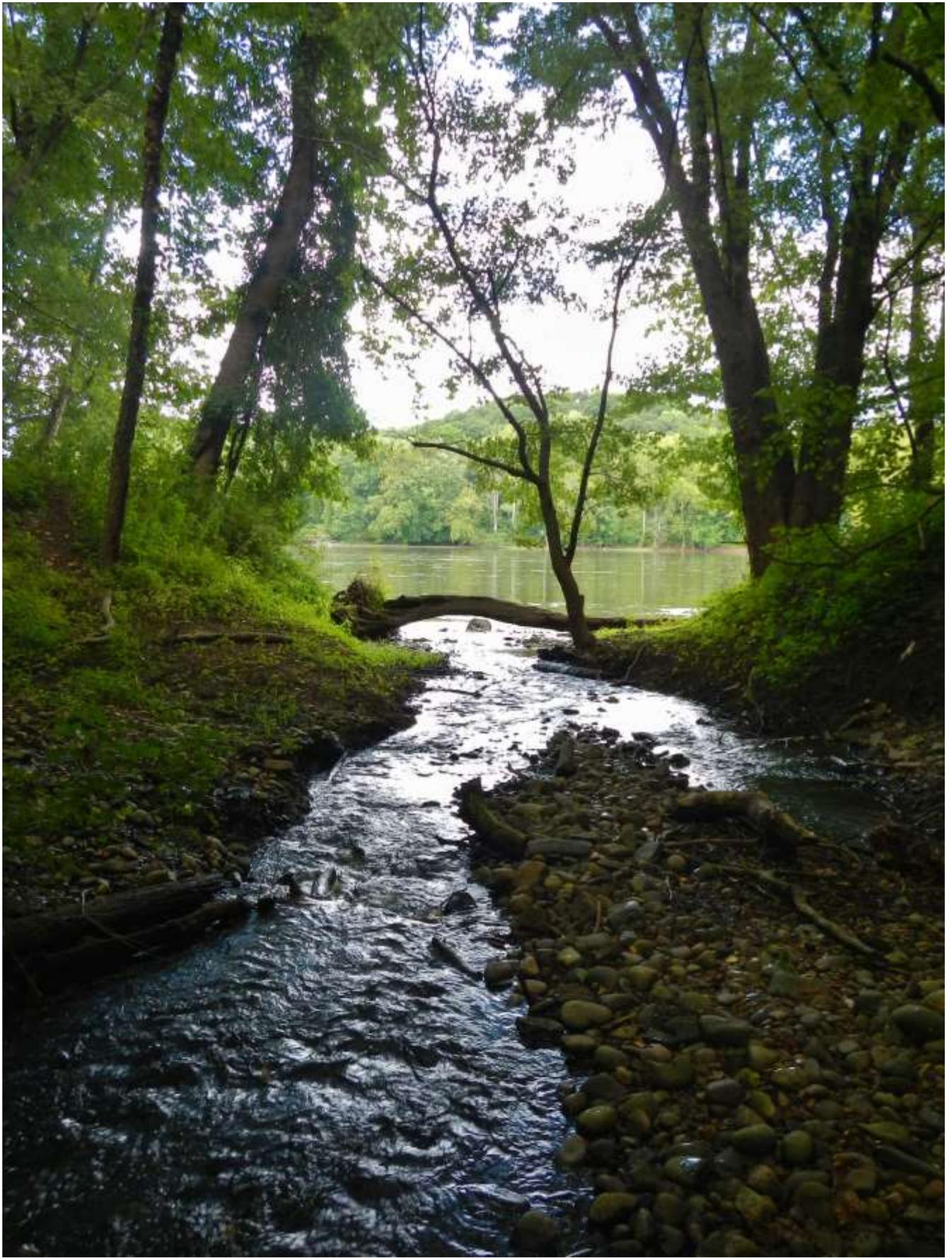
Through simple landscaping practices we can improve local water quality, contribute to flood relief for downstream communities, provide habitat for birds and wildlife, bring privacy and peace to our own back yards while still allowing for the lawns many people so love to mow.

Learn more about Delaware River Keepers through the following site:

<http://www.delawariverkeeper.org/>

**A Random Walk through Primrose Watershed**  
**By Leah Hunt, PCWA Graphics Editor**  
(go to [primrosecreek.org](http://primrosecreek.org) to see more photos from Leah Hunt)





## Primrose Creek Watershed Association

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### Join Us!

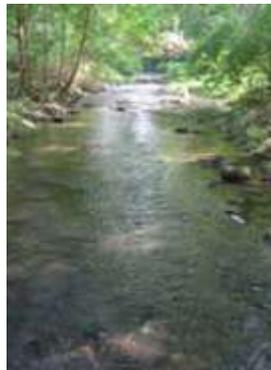
Primrose Creek Watershed Association is an expanding organization concerned with the conservation and restoration of the natural beauty of the general Primrose Creek Watershed area.

Primrose Creek Watershed is located in the middle of Solebury Township, Bucks County, southeastern Pennsylvania.

If you believe in our goals, please consider volunteering a little bit of your time to participate in one of our projects.

**There are a variety of opportunities to assist, learn and enjoy.**

To obtain more details, email [primrosecreek@gmail.com](mailto:primrosecreek@gmail.com) or call (609)-841-1040



### Primrose Creek Watershed Association Board of Directors.

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