

# Streamlines

FALL 2017

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**Our Mission: to protect, preserve, and restore the natural waterways of northern Chester County. We inspire, educate, and involve our community to make a difference for this generation and for generations to come.**

Welkinweir: "where sky meets water"

Our headquarters in East Nantmeal Township is a spectacular property which showcases our organization's mission. Originally the home of founding members Everett & Grace Rodebaugh, the 197 acres of permanently preserved land feature a 55-acre arboretum, wetlands, meadows, and forest habitats. The property hosts many of our environmental education programs, along with a growing collection of sustainability demonstration projects.

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*Cover: The South Branch of the French Creek in Warwick Township. Inset: The fiery autumn colors of an East Nantmeal forest at sunset reflect in this landowner's pond.*



## FROM THE DIRECTOR

## MAKING THE LAND-WATER CONNECTION

### A Time to Give Thanks

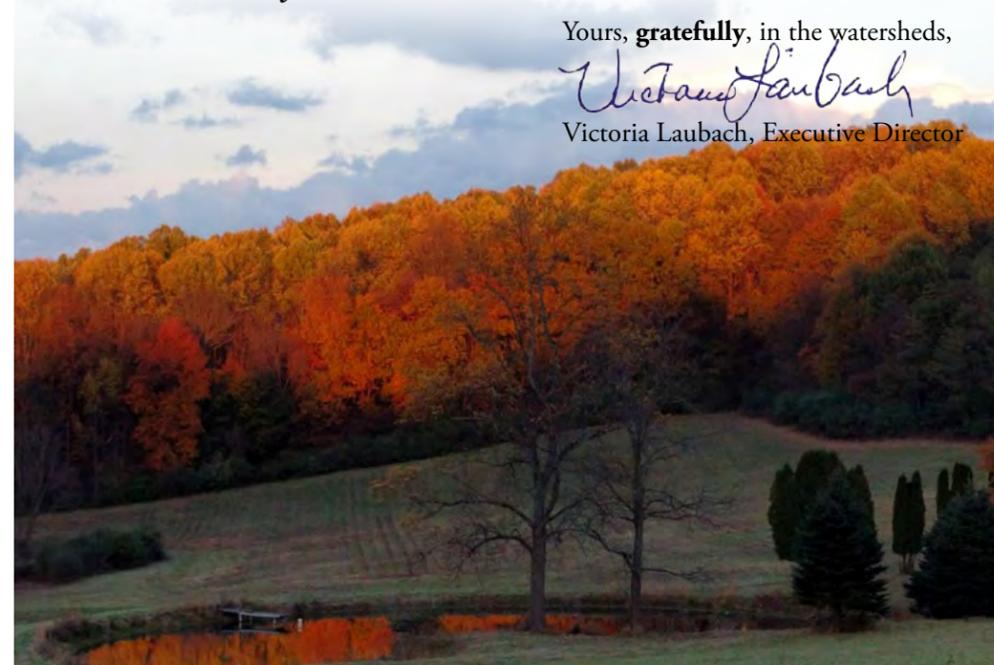
The Thanksgiving holiday is traditionally a time to give thanks, and this year more than ever it is timely that we see with fresh eyes the incredible abundance, diversity and strength in our natural ecosystems—and *give thanks for their enduring beauty.*

Much of this natural wealth would have been lost if not for the decades of tireless work by the organizations and individuals engaged in preserving, protecting and restoring all of this. From this work, we are very fortunate to live in a region rich in conserved lands, resilient ecosystems, healthy forests, and beautiful streams. *Much to be thankful for, indeed!*

And without the enduring financial support of our local community, this work could not have happened. This foresight and generosity has made all the difference. As we approach Thanksgiving, we invite you to show your gratitude for streams like the French, Pickering, Pigeon, and Valley Creeks and Stony Run by becoming a GVWA member, renewing your membership, or contributing to our **2017 Annual Appeal**, which will directly fund our work to preserve these waterways and educate & advocate for them in the community. *By doing so, we can help ensure that future generations can continue to give thanks for northern Chester County's natural wonders.*

Yours, **gratefully**, in the watersheds,

Victoria Laubach, Executive Director



### Upcoming Events

**Welkinweir Holiday  
Open House**  
**Saturday, December 9**  
**3:00-7:00 p.m.**

**WINTER IS COMING**  
Stock up on birdseed during GVWA's  
birdseed sale. Pre-order deadline is  
Nov. 17th. Order online at [www.  
greenvalleys.org/2017-birdseed-sale](http://www.greenvalleys.org/2017-birdseed-sale)

### Planning Strategies and Tools That Preserve & Enhance Community Freshwater Resources

A workshop for PA municipal Environmental Advisory Councils (EACs),  
municipal officials & consultants, and engaged citizens

**Saturday, December 2nd, 8:30 a.m. - Noon**

The Washington at Historic Yellow Springs, Chester Springs, PA

*Learn from regulatory agencies, planners, designers, and conservation organizations about techniques, strategies, and resources for preserving & protecting your community's fresh water!*

We are hosting a workshop for up to 50 participants in Historic Yellow Springs, which will explore the importance and strategies of watershed-based planning as a tool for preserving and managing community water resources-while accommodating social needs and stimulating economic and community health & well-being. The workshop is designed for Pennsylvania municipality officials, council & committee members, and consultants, but all individuals who are concerned about the smart planning of their community's fresh water resources will benefit.

Participants will hear from 10 professionals about municipal planning case studies, funding sources, and strategies to assist EACs, staff, planners, and citizens in achieving their municipality's clean water goals. Registered landscape architects are eligible to receive CEUs through this program. The workshop will be followed by networking / Q&A. Light refreshments will be provided.

\$10 per person; additional \$25 CEU processing fee.

Register today at

[www.greenvalleys.org/event/community-water-resources](http://www.greenvalleys.org/event/community-water-resources).

Questions? Contact 610-469-4900 or [kelsey@greenvalleys.org](mailto:kelsey@greenvalleys.org).

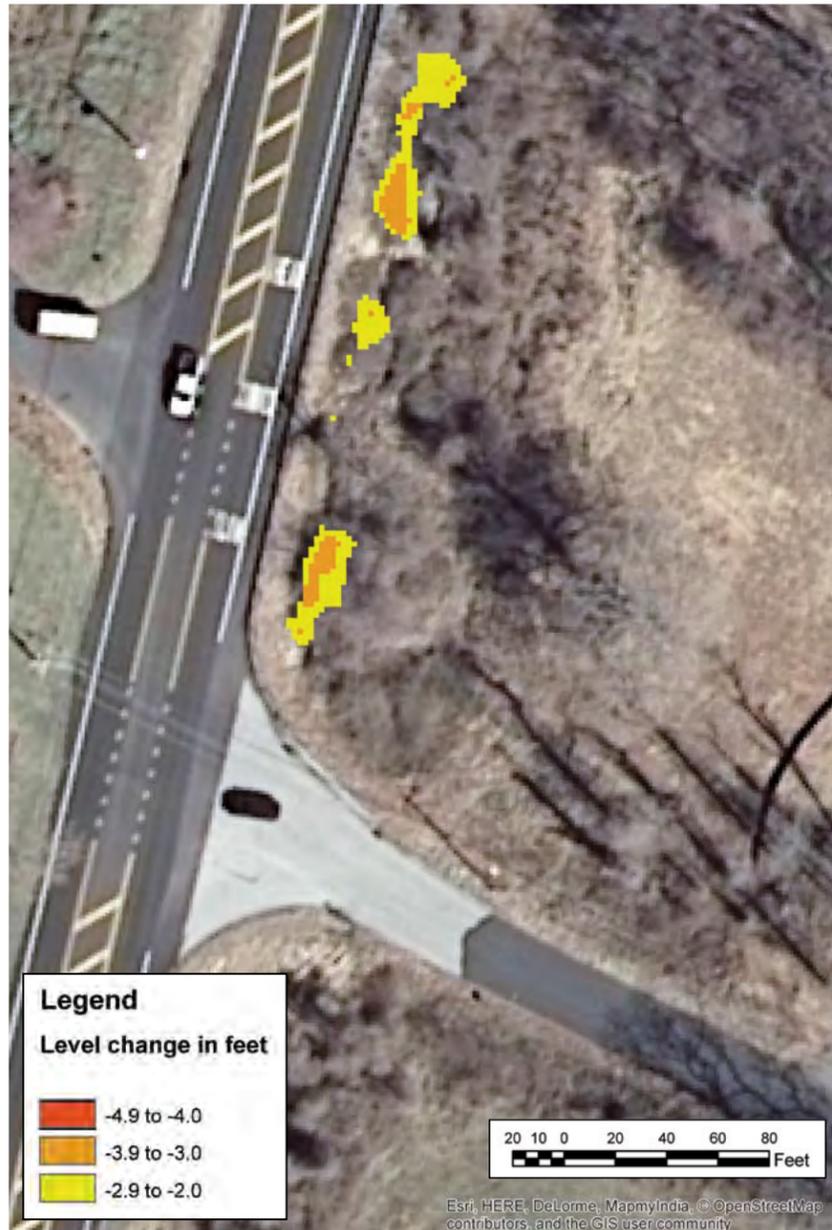


### Water Quality Paddle

We were excited to partner with the Schuylkill River Heritage Area to organize a Water Quality Paddle on the Schuylkill River this August! 12 participants, coming from different backgrounds and different levels of kayaking experience and water quality knowledge, came together to learn about the health of the Schuylkill River. Green Valleys staff, assisted by Schuylkill Water Stewards volunteer Bob Cunningham, recorded measurements of the river's dissolved oxygen, temperature, pH, and conductivity and discussed the results. *Thank you to everyone who participated in this event - we hope to repeat it soon!*

# WATERSHED SCIENCE

## Zeroing In on Sediment Sources: LIDAR Surveys Reveal Critical Source Areas



**Above:** Comparing two LIDAR scans of the headwaters of the Beaver Run show significant elevation changes between 2008 and 2015 in certain sections - color-coding the image here shows that stormwater has eroded 3 to 4 feet of material from the Beaver Run's stream bed -- and delivering it into the stream.

A key goal of GVWA's Watershed Science program is to identify major sources of non-point source pollution. Most of the pollution loads in our watersheds come from relatively tiny areas called **Critical Source Areas (CSAs)**. CSAs occur where a combination of slope, land cover, land use and soil erodibility come together to form areas that are most vulnerable to stormwater flows, and are capable of delivering sediments and/or excessive nutrients into our streams.

Locating CSAs compares to finding proverbial needles in a haystack - because they are very small in relation to the overall watershed and because they are usually located out of sight - but new LIDAR survey data is providing an unprecedented look at some of these CSAs. LIDAR stands for **Light Detection And Ranging**. Specially equipped airplanes use low-power laser scanners to gather precise, three-dimensional information on surface features including trees, building, and the bare earth. We can identify areas of severe erosion by comparing LIDAR data collected years apart. LIDAR scans both the trees and through the trees to the ground beneath - so even features not visible in aerial photography can be monitored.

Other uses of LIDAR include measuring tree canopy height and density along stream corridors to monitor buffer condition, as well as peering into the past to see long-abandoned charcoal circles on what are now heavily wooded hillsides. --Michael Bullard, Science Coordinator

# WATERSHED RESTORATION

## Community Tree Plantings along French & Valley Creeks

Green Valleys partnered with fellow non-profits Lundale Farm and Open Lands Conservancy this October to organize tree plantings that will reforest sections of the French and Valley Creeks. On October 6 and October 22, 14 volunteers from the surrounding community planted 100 trees along a 350' section of French Creek, on land owned by Lundale Farm (*photo below*). On October 12 and October 14, 36 volunteers - including residents of Tredyffrin Township and employees of Siemens Corporation - planted 750 trees in nearly 2 acres of Open Lands Conservancy's Cedar Hollow Preserve. This planting followed the removal of invasive Common Reed (*Phragmites australis*) to improve the site's native plant diversity.

Both tree plantings will improve water quality in their respective watersheds: streamside forests or **riparian buffers** filter pollutants from precipitation and prevent streambank erosion with their extensive root systems. They also provide better habitat for wildlife both in and out of the water, from beneficial insects that will pollinate crops, to the birds and trout that draw outdoors-lovers to places like Cedar Hollow Preserve.

**We are grateful to our partners, [Lundale Farm, Inc.](#) and [Open Lands Conservancy](#); to [TreeVitalize](#) for providing funding; and to all of the volunteers who helped to improve their local watersheds. Thank you!**

**Above:** Volunteers prepare to plant trees and install biodegradable weed mats at Lundale Farm (top left) and Cedar Hollow Preserve (top right). **Middle:** The Cedar Hollow Run, a tributary to the Valley Creek, is bordered by invasive Phragmites grass in April; this was removed and replaced with native tree seedlings (bottom). All images courtesy of Margot Taylor, Restoration Coordinator.



# ENVIRONMENTAL EDUCATION

## Programming Expands within the Pottstown School District

We are excited to engage in a new partnership with the Pottstown School District, which will expand our program opportunities for the Middle School's Environmental Science Club members throughout the school year.

Through this partnership, we will lead students on educational field trips to Welkinweir to explore the pond and stream ecosystems; to Manatawny Creek to conduct a study of aquatic organisms; to the Pottstown Wastewater Treatment Plant; and to Warwick County Park to assist in the removal of the invasive Rusty Crayfish from French Creek. Lessons, activities and projects at the school will focus on birds, ecosystems, wildlife adaptations and watersheds. The partnership and school activities will be supported through a district-received grant under the Federally funded, 21st Century Community Learning Centers After School Program.

--Dawn White, Education Coordinator



**Above:** "Scarlet", the red morph Eastern Screech Owl, helped participants in this year's **Owl Prowl** programs learn about the adaptations of different owl species. Thank you to everyone who participated, and thank you to our program sponsor, WSFS Bank!

### Welcome New Instructors!

We are excited to welcome these instructors to our education staff:



**Katie Grubb** has been hired as our Part-Time, Environmental Education Instructor. Katie is a familiar face to many children, as she served as our Education Intern this past spring and summer. In her new role, Katie teaches groups of 2nd grade students in the seasonal, after school Nature Explorers Clubs at Pottstown and Owen J. Roberts elementary schools. Katie will also assist in preparing and leading programs for visiting school groups and for Summer Nature Day Camps. Katie earned her Bachelor's degree from Bloomsburg University this past spring in Environmental, Geographical & Geological Sciences. Katie also has four years' experience working in a child care center, and currently still works there part time as a teaching assistant. Katie enjoys hiking and snow-

boarding in her free time.



**Connie Nye** will lead the after school environmental club for 6th and 7th graders at Phoenixville Area and Owen J. Roberts Middle Schools this spring. Connie lives in Downingtown and has been working with children for 35 years in environmental, science, and outdoor education. As the sole proprietor of SWEET (Sweet Water Education Events and Training) and an outdoor educator specializing in watershed education, she has created and run programs for all age levels from elementary school aged children to high school students and teachers. During the summer, Connie guides canoe adventures on the Brandywine and works with summer camp kids, staff, and leaders-in-training. Connie

has two grown daughters and spends much of her free time outdoors.



**Melanie Magolan** is our seasonal instructor, leading groups students involved in the after school Nature Explorers Clubs at Franklin Elementary and Pottstown Middle Schools, as well as assisting with programs for Pottstown Middle School's Environmental Science Club. Melanie earned her Bachelor of Arts at Hampshire College in 2010. Her self-designed course of study focused on alternative education, anthropology and creative writing. She served as an educator and office administrator at Great Valley Nature Center for 8 years before traveling to Scotland to complete her Master's degree in Archaeology.

# WELKINWEIR

## Making Connections

Welkinweir is home to a steadily increasing number of meetings, retreats, mini-conferences, and educational programs. These small events align well with GVWA's stewardship mission, featuring a wide range of conservation and education topics. Just recently, for example, we hosted the Pennsylvania-New Jersey Chapter of The American Chestnut Foundation (TACF), West Chester University's Education Foundation, Pennsylvania Master Naturalist's Annual Meeting, and students participating in the *Schuylkill Acts & Impacts: An Expedition to Inspire Watershed Action*. Common to all of these events is the direct engagement between the visitors and the rich diversity of Welkinweir's nature sanctuary.



Planting nearly 100 native trees on the north side of the main pond was the afternoon activity for the West Chester University Education Foundation's summer retreat. Protected from hungry deer and rodents by plastic tree tubes, these trees will eventually mature and re-forest the banks of the pond. Even now they add color, structure, and wildlife habitat to the existing meadow, like the one from Griffith Farm pictured **above**.

Connecting visitors with nature and with restoration & education initiatives magnifies the efforts of hardworking people to restore the biodiversity of northern Chester County and beyond. We are enthusiastic about our role in making these connections. --Victoria Laubach, Executive Director



**Above:** Students participating in the **Schuylkill Acts & Impacts: An Expedition to Inspire Watershed Action** expedition make their mid-week stop in Chester County, where the theme is land preservation's positive impacts on water quality.

The favorite topics for this year's group included learning about the American Beaver (*Castor canadensis*), which was all but extirpated from our region, but is now making a strong comeback; freshwater mussels, one of the most endangered groups of animals in the world; and the American Chestnut (*Castanea dentata*). These forest giants played an outsized role both economically and environmentally throughout the eastern United States; but because of an invasive disease called the chestnut blight, they are now nearly wiped out across their range. Fortunately there are individuals and organizations working together successfully to bring back the chestnut-just as there are for the beaver and for freshwater mussels.

The health of our watersheds has been our focus for over 50 years.

Green Valleys Watershed Association is located in northern Chester County, Pennsylvania, where our scenic watersheds are comprised primarily of Exceptional Value (EV) and High Quality (HQ) waters. These streams are in the top tier in Pennsylvania. They are a precious resource.



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Your membership is an investment in clean water and healthy watersheds, for now and for future generations.

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*Dues and contributions are tax-deductible. Green Valleys is a registered charitable organization. Copies of registration/financial information is available by calling 1-800-732-0999. Registration does not imply endorsement.*

**MEMBERSHIP** includes newsletter subscription, notice of special events and programs, and reduced rate to special programs, workshops, and Summer Nature Day Camp.

**Membership levels (please check one):**

- Individual.....\$45
- Family.....\$60
- Naturalist.....\$100
- Environmentalist.....\$250
- Protector.....\$500
- Preservationist.....\$750
- Steward.....\$1,000

- I am a:  New Member  Renewing Member
- I am interested in including GVWA in my legacy planning.
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