

Streamlines

SUMMER 2016

Volume 52, Issue 3

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Exploring Welkinweir's
Biodiversity

Spring Round Up of Restoration
& Education Events

New Nature Programs

Volunteers Needed: Run for
Green Valleys



GREEN VALLEYS
WATERSHED
ASSOCIATION

Protecting Northern Chester County's
Watersheds for 50 Years

GREEN VALLEYS WATERSHED ASSOCIATION at WELKINWEIR

The mission of Green Valleys Watershed Association is 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

Our headquarters in East Nantmeal Township is a spectacular property which showcases our organization's Mission. Originally the home of founding members Everett and 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.

Visiting hours on page 4.

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Cover Image:

The Midland Painted Turtle is very uncommon in Chester County. © 2007 GVWA. Photographed at Welkinweir.

FROM THE DIRECTOR: GIFT OF NATURE

Richard Louv's ground-breaking book, *Last Child in the Woods*, and the many studies that point to direct exposure to nature as essential for a child's healthy physical & emotional development have created a national movement, with increased activism and conversations across our region, state, and nation. **Green Valleys' summer nature camps offer that connection to nature for children through outdoor exploration, nature study and play.** Our founders recognized the importance of connecting youth with nature to build future stewards, combining our watershed protection work with environmental education for as long as the organization has been in existence. Today, we have board members and staff whose first connection with Green Valleys came through summer nature camp and carry on this tradition to the next generations, and generously support the scholarship fund to enable those of lesser means to experience and connect with nature. *See more about spaces still available as well as how*

you can donate to the scholarship fund below.

Children are not the only ones who need nature – the rest of us do too! From simply taking a walk, whether it's in solitude or with a group, or getting out to take photographs, to participating in a bird identification walk, to opening your windows at night to listen to the sounds of nature, we need nature. **The need for nature in our lives really hit home for us when we put up [our first nest cam](#) this spring on a Canada goose, fondly named Bernice.** Word quickly spread about this live cam and we heard from many who were hooked! The best story comes from a local hospital where the staff had the cam displayed (complete with a soundtrack of singing birds, croaking frogs, wind, rain, and the daily preening of Bernice). The hospital staff relates the patients immediately relaxed, mesmerized by the sight and sound of nature, much to the surprise of the hospital staff!

Truly, a gift of nature.



SUMMER NATURE NIGHTS: WALK ON THE "WILD SIDE" AT WELKINWEIR!

First in the series: Wednesday, July 13, 6:00-8:00 p.m. FREE.

BYO picnic dinner and enjoy the serene views of Welkinweir after hours. Join a guided walk, or take a self-guided stroll around the gardens & ponds. Summer Nature Nights series is open to all and FREE, though donations are welcome. No registration is required. Rain or shine.

Visit our online [Events Calendar](#) for more upcoming Nature Nights!

OUTDOOR ADVENTURES AWAIT AT SUMMER NATURE DAY CAMP!

Camp weeks are filling quickly - register now!

Opportunities are still available this summer for children ages 4-12 who enjoy exploring the outdoors. At Summer Nature Day Camp, your child will learn about the natural world through investigations of Welkinweir's meadows, forest, & waterways; science & art projects; and games.

Camp runs weekly, June 20-August 12, so campers can choose one or more weeks to attend. Details and registration forms can be found at greenvalleys.org/education/summer-nature-day-camp. Contact Dawn White, 610-469-8646 or dwhite@greenvalleys.org for up-to-date availability of camp weeks, as well as how to contribute to the Scholarship Fund.

RUN FOR GREEN VALLEYS: WE'RE GOING ALL-OUT IN 2017!

Race Committee forming now - seeking trail runners and other interested members

A Race Committee is forming to plan festivities for the 2017 Run for Green Valleys - we want YOU to join and help us go all out for this fundraising event!

Are you a dedicated trail runner? Have you participated in trail races in the area? Do you have ideas for a great fundraising race event? If so, Green Valleys wants your input in making 2017 and all future races spectacular! Please contact Kelsey Stanton, 610-469-4900 or kelsey@greenvalleys.org with your interest. ***We'll see you on the trails in 2017!***

WATERSHED RESTORATION

Green Valleys and our volunteers have been busy!

Whether it was planting trees to protect a local stream, conducting litter cleanups, or improving the function and appearance of stormwater basins with native plants, we have been busy this spring. Take a look at our Earth Day weekend accomplishments below! - *Kelsey Stanton*

University Naturalizes Campus Basins

On Friday, April 22, we worked to naturalize basins on Immaculata University's Malvern campus, to very positive feedback:

I am SO very pleased to report that once again it appears that we do in fact have a really great collection of undergraduate students enrolled at IU [Immaculata University]; many of whom proved today that they are eager to commit themselves to what they believe are worthy causes.

45 students officially signed the register as they arrived to dig and plant thousands of native plants! Professor Healy deserves a very special thank you for inspiring our students to participate! Green Valleys Watershed Association staff and GreenWeaver Landscape managers were a 'blast' to work with, and made the task fun for our students.

At three different times during the day, before students could begin planting, they received a 'delightful' 20-minute field lesson on environmental conservation and proper planting techniques.

-Kerry Jones, Director of Capital Planning & Construction at IU



This project is part of our Valley Creek basin naturalization grant, funded in part by PADEP's Growing Greener, to better capture & filter stormwater runoff in the creek's headwaters and protect the creek's water quality from pollution and flooding. A sincere thank you to the students & staff of Immaculata University for bringing this project to completion.



Volunteers Clean Up French and Pickering Creeks

The hard work of 45 volunteers made a significant difference in the French & Pickering Creeks. On April 23, over 30 volunteers—our members, Phoenixville Green Team, a local Girl Scout troop, Phoenixville residents, and the Cadiant Group of Malvern—removed over 60 bags of litter from the banks of French Creek. Our members also cleaned up Pughtown Road this April.

In May, over a dozen volunteers from XL Catlin worked in teams to clean up 6.5 miles of the Pickering Creek and remove invasive plants & improve trails along the French Creek restoration site at Hollow & Pughtown Roads - and returned a lost fly fishing rod to its grateful owner in the process!

These volunteer efforts contribute to regional and state initiatives, including the Schuylkill Scrub and Keep PA Beautiful's Great American Cleanup of PA - an annual event that has removed *over 86.5 million pounds* of litter from Pennsylvania communities & greenways since its start in 2004.



West Pikeland Township & Students Expand Pine Creek's Riparian Buffer

Students from the Phoenixville Area Middle School's Environmental Awareness Club helped staff members from the West Pikeland Township Park & Recreation Board to plant trees along a tributary to the Pickering Creek at Pine Creek Park. Fifty native tree seedlings were added along the banks of Pine Creek to improve its streamside forest - this expanded riparian buffer will better cool the stream, secure the soil against erosion, and improve wildlife habitat.



WATERSHED RESTORATION



Students Receive Drinking Water Award for Green Campus Improvement

Phoenixville Area Middle School Envirothon Club students receive the Schuylkill Action Network's Drinking Water Award for their work in creating a bioswale next to the school's cafeteria. This bioswale (see our Fall 2014 edition of Streamlines for project details) will capture & filter runoff from the cafeteria's roof, helping to protect the Pickering Creek which drains the school's property.

"Green \$aves Green" Workshop a Success

In March, GVWA and its partners, the Pennsylvania Environmental Council and the Partnership for the Delaware Estuary, held a workshop in Phoenixville that introduced the benefits and successful applications of green infrastructure - manmade, stormwater infrastructure that models nature - to municipal staff, professionals in the design & engineering fields, and homeowners. The workshop, held at Franklin Commons, a mixed use facility adapted and remediated from a former industrial site, featured a tour of the facility's own innovative stormwater facilities. We would like to thank our workshop speakers for sharing their expertise: Jean Krack, Phoenixville Borough Manager; Michele Adams, Meliora Design; Tavis Dockwiler, Viridian Design Studio; and Ed Theurkauf, Theurkauf Design & Planning; and to Franklin Commons for providing venue space with beautiful, onsite examples of green stormwater infrastructure. - *Margot Taylor*



Get Outdoors Pennsylvania Helps Fund New Butterfly Program

Thanks to grant funding from Get Outdoors PA, a new Saturday nature program will debut on **June 25, 2016** (see page 7 for program details). This program will introduce community members to the butterflies in their backyards, the basics of butterfly identification, and the unique habitat needs of these special pollinators. Program attendees will then walk the meadows and gardens of Welkinweir to tally the number and variety of butterflies they see in support of population monitoring programs.

The Get Outdoors PA mini-grant is funded in part by the Pennsylvania Recreation & Park Society and a grant from the Environmental Stewardship Fund under the administration of the Pennsylvania Department of Conservation and Natural Resources, Bureau of Recreation and Conservation. - *Kelsey Stanton*



Congratulations to the 2016 SWS Volunteer Class!

Eight individuals graduated as Schuylkill Water Stewards water quality monitoring volunteers this April. They will join 30 other SWS graduates who are part of the Delaware River Watershed Initiative, monitoring water quality throughout the watersheds in northern Chester and southern Berks Counties.

(group photo credit *Debbie Beer, Natural Lands Trust*)

Partners in Restoration

Last July marked the release of [*The Beaver Restoration Guidebook: Working with Beaver to Restore Streams, Wetlands, and Floodplains*](#), prepared by the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, Portland State University, and the U.S. Forest Service to provide a “practical synthesis of the best available science for using beaver to improve ecosystem functions”. I mention this guidebook not only for the thorough presentation of how to incorporate beaver into restoration efforts, but also for the excellent overview on the benefits of beaver in watersheds - particularly in light of our ongoing experiment of co-existing with a beaver colony here at Welkinweir.



had worked to remove. Stormwater is a major stressor on our streams and beaver activity “generally reduces peak flows and spreads flows out over longer time periods,” which can also reduce sediment and erosion.

Observing the upstream work of our beaver colony, there are now numerous ponds (*center*) which we anticipate will bring an expansion of habitat area and complexity. For example, a number of trees are currently inundated; these can create ideal habitat (standing timber in beaver wetlands) for the red-headed woodpecker (*inset*), a “magnificent species which has declined severely in the past half-century because of habitat loss and changes to its food supply” (allaboutbirds.org).

First, a bit of beaver ecology: beaver prefer small- to medium-sized low gradient streams (<6% slope) or lakes (ponds), wetlands, other water bodies where water can be retained and habitat (for the beaver) can be improved. They need areas that provide vegetation for food and material for lodge & dam construction. They have found these conditions ideal at Welkinweir, and this spring moved further upstream into former pond areas that time and stormwater

According to the guidebook, “beaver have the ability to improve the water quality of streams by reducing suspended sediments in the water column, moderating stream temperatures, improving nutrient cycling, and removing and storing contaminants”. So our co-existence experiment continues, and we look forward to see what positive impacts nature’s engineer will have on our watershed.
-Victoria Laubach

Thank you for making Mother’s Day Tea a success!

A perfect day was in store for our guests as they arrived at the estate house for Mother’s Day Tea, surrounded by a profusion of azaleas in the gardens. An elegant brunch with farmhouse cheeses, tarts, and salads, followed by scrumptious desserts, was paired with delicious hot & iced teas. After dining with family on the terrace, guests toured the gardens and learned about the estate’s 250+ year history.

This event is an important annual fundraiser that supports preservation of the house & grounds at Welkinweir, and horticultural internships. We are grateful to everyone who enjoyed a lovely afternoon while contributing to Welkinweir’s future; in particular, we would like to thank First Niagara Bank; Jeffrey A. Miller Catering; Party Center; Winsome Tea Co.; Owen J. Roberts High School students; and the Varga family.



Visiting Welkinweir

The grounds are open to visitors during regular business hours (**Monday-Friday, 9 a.m. to 4:30 p.m.**). The estate house is open during special events (see calendar), or for group tours which may be scheduled in advance. Dogs are allowed, but we ask that owners respect fellow visitors and wildlife by keeping them on a leash and cleaning up after them so that our policy of allowing dogs can continue. We often have special programs or events on weekends, and we ask GVWA members who want to visit then, to call during business hours to inquire. **We offer Saturday morning walks (see calendar) that are open to all**, and we encourage visitors to the property at this time.



Headwaters Streams Mapping Project

Headwaters streams and wetlands are critically important resources in our watersheds. Headwaters streams (also known as first order streams) make up more than 90% of stream miles, and at least 60% of streams' annual flow originates in them. In aggregate, the health of these tiny streams and associated wetlands strongly influences the overall health of our watersheds.

With funding from the William Penn Foundation, we are completing high-resolution mapping of the headwaters streams in the Schuylkill Highlands Cluster within the Delaware River Watershed Initiative. These maps will assist in prioritizing land conservation projects, and also support the detailed assessment of each of these headwaters streams. - *Max Black & Mike Bullard*

Biodiversity Monitoring at Welkinweir

Welkinweir is a property with abundant wildlife, both flora and fauna, that has endless potential for research in the fields of biology and ecology. In order to begin this research, we are starting a system of monitoring for species diversity to be implemented across the property:

Trail Cameras - Our growing system of trail cams is improving our knowledge of the abundance of many of the common bird & mammal species that visit the property, as well as documenting some less common species - like a flock of common merganser caught on camera this February.

Nest Cameras - This spring, we deployed our first nest camera. This technology allowed us to live-stream video of a nesting Canada goose to many viewers. Having 24/7 imagery gives us permanent records of the real-life interactions between organisms that would not normally be observed. Now, we are currently working on extending WiFi coverage to more remote parts of the property.

Biodiversity Apps - Online applications have allowed a huge audience to gain access to biodiversity data collected around the world by citizen scientists, including data collected here at Welkinweir. We submit data using a variety of apps (including [eBird](#), [PA Mammal Atlas](#), and [PA Amphibian & Reptile Survey](#)), growing databases and acting as a form of outreach to the community. Engaging the community, after all, is one of the primary purposes for monitoring the biodiversity in the first place.

Biodiversity Walks - Another key source of outreach to the community has been bird & wildflower (and now butterfly) walks led at Welkinweir. Not only does this connect to the use of biodiversity apps (checklists of birds observed are submitted to eBird), but it is also a direct way of educating others about the local flora & fauna with which they may otherwise not have any interaction. - *Eric Hughes, Welkinweir intern.*

Eric has helped Welkinweir achieve several new certifications in recognition of its crucial wildlife habitat, including Penn State Cooperative Extension Pollinator Friendly Garden Certification; MonarchWatch Monarch Waystation; North American Butterfly Association Certified Butterfly Garden and Habitat, and Audubon Pennsylvania-registered Bird Habitat. He also helps lead Saturday Bird Walks.

The image above shows a first order stream that GVWA's mapping project identified. This stream was documented on an 1873 map (top, with blue arrow), but is not found on current GIS mapping products available today.



We have observed at least two pairs of nesting Louisiana Waterthrush utilizing the new wetlands created by the beaver (p. 4).



ENVIRONMENTAL EDUCATION

Highlights of Spring Programs



Left to right: A leucistic (a pale coloration of a normally dark bird, resulting from a genetic mutation that prevents pigments from depositing normally on feathers) Red-Tailed Hawk from Great Valley Nature Center was a favorite at the Birds of Prey Community Program; 6th grade science students at Phoenixville Area Middle School learn about animal adaptations; Little Sprouts Library Nature Class; and Little Wonders & Kinder Nature Classes try out their wings.



Left to right: Students from Owen J. Roberts' new Environmental Awareness Club sample stream insects in French Creek; 4th graders from Elizabeth B. Barth Elementary School explore Welkinweir's stream during a field trip; and the After School Nature Explorers Club at OJR learns about habitat through group activities.



Left to right: Students with Phoenixville's Environmental Awareness Club conduct macroinvertebrate studies in the Pickering Creek; 2nd grade students at Barth Elementary's After School Nature Explorer's Club play a nature game (L), and inspect moss under a microscope (R); OJR After School Nature Explorers Club participants examine a groundhog pelt.

THANK YOU!

Thank you to Bear Scouts from Pack 104 who helped trim one mile of trails!



Community Nature Programs Calendar

JUNE - AUGUST 2016

PENN LIBERTY BANK COMMUNITY PROGRAM SERIES

Perfect for individuals and families with children ages 5 and older. Refreshments are provided. Fees per person, per program: **GVWA Members \$6; Nonmembers \$8.** Advanced registration is required by the Thursday prior to each program.

Fireflies! at Welkinweir

Thursday, July 7 and Friday, July 8 7:30-9:00 p.m.

Discover the amazing lives of “lightning bugs” as we play a game to uncover the mystery of how and why fireflies light up, study the insects themselves, and make a “firefly” to take home!

Fireflies! program is the same on both days - please indicate which day you would like to attend when registering.

CHILDREN’S PROGRAMS RETURN THIS FALL!

Little Wonders & Kinder Nature Classes at Welkinweir, and Little Sprouts Library Nature Classes, will return in October! Please check our Education Events Calendar in August for details.



LITTLE SPROUTS LIBRARY NATURE CLASS

Pond Discovery at the Henrietta Hankin Library

Tuesday, July 12 10:30-11:15 a.m.

Children ages 3, 4 and 5 and their caregivers can learn about the living waters of a pond through story, interactive demonstrations, animal artifacts, and a take-home craft. *FREE.*

Advanced, online registration via the Library is required. Visit <http://www.ccls.org> and click on **“Find an Event”**.



Butterfly Walk and ID at Welkinweir

Saturday, June 25 9:00-11:30 a.m.

Learn how to identify some of the common butterflies of our region, as well as how to attract and support them in your own garden. After a brief presentation, we will conduct a butterfly count among the meadows of Welkinweir. Participants will receive a butterfly field guide to help them identify winged visitors to their own yards. Fees per person: GVWA Members \$6; Nonmembers \$8. Contact kelsey@greenvalleys.org to register.

Please join us!

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

Name _____

Address _____

City, State, Zip _____

I would prefer to pay with: Check (*payable to GVWA*)

Visa MasterCard Discover American Express

Credit Card # _____

Exp. ___/___ CID _____ Phone* _____

Email address* _____

**Phone & email needed to process credit card payments. We do not share your information with other charitable organizations.*

Detach this form and mail with payment to:

**Green Valleys Watershed Association
1368 Prizer Road, Pottstown, PA 19465**

Online membership also available at www.greenvalleys.org

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.

Please notify me of GVWA volunteer opportunities:

Email: _____