

Streamlines

Spring 2026

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Volunteers and Supporters

Throughout Green Valleys' history, it has been the dedicated people providing their energy and their support to our work that has had the most impact. We began as a grassroots one hundred percent volunteer organization and remained that way for many years.

Volunteers continue to be an essential part of our organization - from serving on our Board of Directors, being on committees, being guest presenters at ECO Camp, helping out with education programs, planting trees, clearing invasive plants, collecting stream samples, organizing and running stream and road cleanups, monitoring bird nesting boxes, representing the organization at community events, maintaining trails, securing funds or making significant financial contributions, or helping with events, are among the many contributions volunteers make to the organization.



Harriet Stone at Stream Sampling



Tree Swallow Eyes Bird Box
Monitoring Volunteer

Harriet Stone was one of those volunteers who checked most of the volunteer task boxes--and did so for over fifty years. She was Executive Director of GVWA for five years during the early - mid 1970's, before moving out of area. She and her husband Larry, moved back to the area after many years residing in Virginia, and Harriet joined the GVWA Board and then served as Board President for 3 years from 2007 through 2009. She was generous with both her resources and her time.

Harriet was always up for helping out with programs for children - doing nature walks or catching macroinvertebrates in the stream. She would lead walks, monitor stream conditions, help pull together events, do mailings, sponsor camp scholarships, and so much more. She gave generously to the organization, including making a substantial gift toward the future education building - as she believed strongly that knowing and caring about nature equated with protecting nature in the future as an adult. She will be missed.

Victoria Fairbairn

Green Valleys Communications

In recent years we have diversified the media in use for communications. We now print our *Streamlines* newsletter twice a year. We also have a monthly electronic version (*e-Streamlines*) that we send out via Constant Contact. This monthly electronic version is the best way to keep current with programs and events. We also post walks and other events on the Welkinweir Meetup which you can easily sign up for at www.meetup.com. Meetup is reaching a lot of new folks and is a great resource.

If you are not receiving *e-Streamlines* in your inbox it may be that we don't have your email address (and check your spam folder). If you would like to be added to our email list (which we do not share), please contact Vicki at victoria@greenvalleys.org

For the latest of what is in bloom at Welkinweir, or any last minute program changes, follow us on Facebook (both Green Valleys Watershed Association and Welkinweir).

Upcoming Events

Guided Forest Therapy Walks with Jennifer Lopez, every second Thursday at 9 a.m. at the visitor parking area.

Open Mother's Day

The arboretum and nature preserve at Welkinweir will be open on Sunday, Mother's Day, May 10th from 11 a.m. till 3 p.m. Although most of the azaleas will be past peak (between the weeklong hot April weather which pushed things to open too early, followed by a killing frost), many trees continue to bloom, along with the rhododendrons and native azaleas, native perennials, bulbs, and other spring blossoms.

Golden Hour Bird Walk

Friday, June 12th at 6 p.m., Patty Werth, Valley Forge Audubon Society, will be leading a golden hour bird walk at Welkinweir. Birds are surprisingly active in the evening and you may even catch a glimpse of our resident beaver!



ECO Camp

Limited spaces are still available for this summer's ECO Camp. Visit <https://greenvalleys.org/summer-nature-day-camp/> for more information and to register. Be sure to check out our extended WACKY weeks camp!

Fall Pandora's Garden--New Classes Start Fall

Visit <https://pandorasgardenblog.com/>

GREEN VALLEYS WATERSHED ASSOCIATION MISSION 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.

OUR HEADQUARTERS IS LOCATED IN THE FRENCH CREEK WATERSHED IN EAST NANTMEAL TOWNSHIP AT WELKINWEIR, THE FORMER HOME OF FOUNDING MEMBERS EVERETT & GRACE RODEBAUGH. IT IS FROM HERE THAT THE ORGANIZATION FULFILLS ITS PURPOSE OF WATERSHED PROTECTION, ENVIRONMENTAL EDUCATION, AND LAND STEWARDSHIP.

OPEN FOR VISITING MONDAY TO FRIDAY 9 A.M. TO 4:30 P.M.

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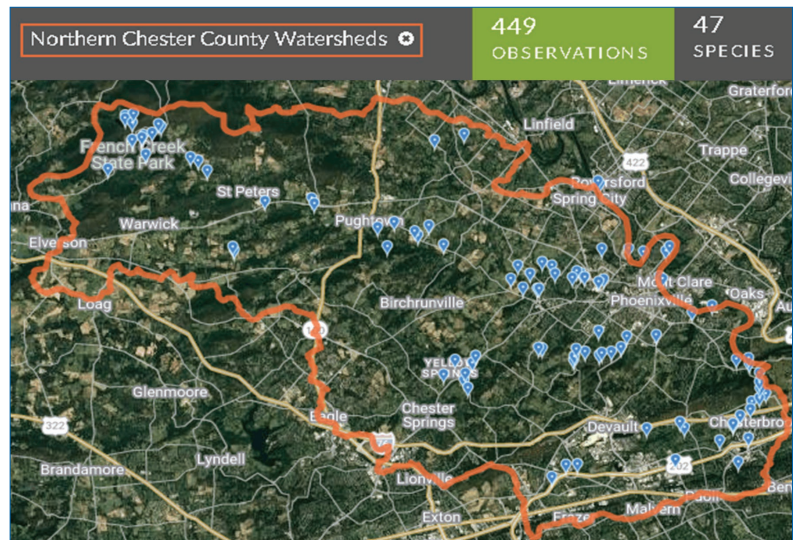
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**COVER IMAGE:
NATIVE BEE ON APPLE BLOSSOM**

Northern Chester County Watersheds --John Lisowski

With the advent of the Northern Chester County Watersheds iNaturalist project, anyone can easily access observations of the various local taxa (multiple taxonomic groups or units), e.g., insects, birds, plants and... fish! Along with fascinating photos, we can view the locations of observations, frequency of observations, and a “quality” indicator that rates the accuracy of observation’s identification. The “quality” indicator is essential for working with observations from a diverse network of people, and relies upon the quality assessment of other iNaturalist participants to verify the identification with high confidence as “research grade” or in need of further identification work. Explore all project observations here: <https://www.inaturalist.org/projects/northern-chester-county-watersheds>

Fish, of course, are of special interest as they *live in the waters* of our Northern Chester County Watersheds! Fish are arguably the most important indicator of watershed health, but fish surveys are costly and infrequent, creating a broad gap in our understanding of stream conditions. iNaturalist is filling this gap by providing an excellent platform for collecting fish observations from the public. The map to the right is showing fish observations by location.



Fish are relatively “under observed” in our iNaturalist project, e.g., compared to plants and insects,

representing less than 1% of the total number of project observations as of April 2026. However, there were 449 research grade observations recorded, representing 47 species! To receive a “research grade” rating, the following must apply: the community agrees on species-level ID or lower, i.e. when more than 2/3 of identifiers agree on a taxon at species-level; the community taxon and the observation taxon agree; or the community agrees on an ID between family and species and votes that the community taxon is as good as it can be.

Top Twenty Fish Species in Descending Order of iNaturalist Observation Count
1. Allegheny Pearl Dace
2. Brown Trout
3. Eastern Blacknose Dace
4. Bluegill
5. Largemouth Bass
6. Rainbow Trout
7. Creek Chub
8. White Sucker
9. Northern Tesselated Darter
10. Slimy Sculpin
11. Cutlip Minnow
12. Smallmouth Bass
13. Rock Bass
14. Fallfish
15. Brook Trout
16. Black Crappie
17. Pumpkinseed
18. Yellow Perch
19. Common Shiner
20. Rosyside Dace

The question of which of these species are truly “native” to our area of Southeastern Pennsylvania is a bit murky since some species may be considered native to PA but introduced in our SEPA watersheds. Some species were definitely introduced. However, the presence of minnows, darters, and sculpin on the list are a good indication of healthy streams!

One of the most frequently observed species in the Northern Chester County Watersheds project is the Brown Trout, *Salmo trutta*, which has a native range in Europe, northern Africa, and western Asia and was introduced in the USA in the 1880s. They are a favorite of fly fishermen as they are wily and challenging!

As usual, considering the data from our iNaturalist project leads to more questions such as “how can we get more fish observations in iNaturalist?” A systematic biodiversity study of the fishes of our Northern Chester County Watersheds would certainly make an interesting research project!

Bee Research --Matthew Donahue

Welkinweir is an oasis for bees, but it doesn't need any beekeepers or produce any honey. Rather, it is home to many of Pennsylvania's 400+ species of native, wild bees. I study how bees will be able to adapt to environmental changes as part of my doctoral research in the Department of Ecology and Evolutionary Biology at the University of Connecticut.

My research focuses on four species that live at Welkinweir: Carlin's mining bee (*Andrena carlini*), the smooth-faced mining bee (*Andrena miserabilis*), eastern carpenter bees (*Xylocopa virginica*), and small spurred carpenter bees (*Ceratina calcarata*). These species vary in size from a grain of rice to a grape. They live differently too. Mining bees live solitary lives (no hives or colonies!) in holes they dig in the ground, and carpenter bees live in small communities in wood or stems.



Small Carpenter Bee *Ceratina*

I believe the differences between these species will change how we should protect them, particularly in cities. To study this issue, I am collecting bees from Welkinweir and other sites nearby, including Crow's Nest Preserve and Rock Hollow Woods Environmental Learning Center, as well as from sites in Philadelphia, New York City, and Boston. After collecting the bees, I take them back to the lab to sequence their DNA.



Cellophane Bee Leaving Nest

I measure two characteristics of bee populations with their DNA: population structure and genetic diversity. Population structure shows how different populations are from each other, and I can use it to estimate how well bees are able to move between habitats. Genetic diversity measures how many different types of each gene there are in a population of bees. Ideally, each species in Welkinweir will have lots of genetic diversity, because that would give natural selection a lot of material to work with.

I am collecting bees from Welkinweir this spring and summer, and I will begin my genetic analysis this fall. The bees living in the arboretum change with these seasons, so they provide lots of excitement the entire growing season. In March and April, you can find hundreds of pencil-sized holes in the dirt at the bottom of the hill below the Estate House. These are the nests of unequal cellophane bees (*Colletes inaequalis*)! You will see the males flying like helicopters around the nests to search for mates. In early May, look at the maple tree to the southeast of the row of apple trees to find hundreds of neighborly mining bees (*Andrena vicina*) gathering pollen. In the summer, you can find dozens of metallic blue small carpenter bees (*Ceratina*) visiting the hyssops in the garden beds. With a microscope, you can even see the larvae of parasitic blister beetles hitching a ride on them!

My research at Welkinweir will directly inform the long-term conservation of wild, native bees. Yet the most rewarding part of my work as a Ph.D. student is having the opportunity to be fascinated by these beautiful creatures. The next time you're at Welkinweir, remember to look for bees! You can learn more about my research on Instagram @urban.beevolution.

Watershed Champions

Kudos to Beth Intoccia and her many volunteers for making remarkable gains in addressing a key watershed challenge--litter in our waterways and roadways.

Litter is not just unsightly, it is a major source of plastics in our waterways. Once in the water, plastics travel to the ocean, eventually ending up along shorelines and out to sea, where it is contaminating the entire marine food chain, including the seafood we consume.



Litter Lifters Along Rt 100 and French Creek

Litter Lifters — Cleanup Events by Geography

Region	Events	Bags	Tires	Miles	Vols	Hours	Value @\$25/hr
WV / Rt 401 Corridor	43	1,392+	50	39.4	557	1,436	\$45,512
S. Coventry / Rt 100	8	380	9	9.0	123	366	\$11,650
Phoenixville / French Creek	12	526+	109	4.6	212	649	\$20,525
Coatesville / Rt 82	11	1,074	44	5.0	286	991	\$34,950
Uwchlan / E. Whiteland	9	210	0	1.0	67	166	\$6,688
Schuylkill River	1	7.4 tons	80	—	115	345	\$12,375
Out of County / Regional	7	30+	5	—	253	976	\$26,325
Other / Mixed	3	78	2	1.5	18	44	\$1,662
Total	94	3,690+	299	60.5	1,631	4,972	\$159,687

+ includes additional bulk/tonnage entries not converted to bags. Value excludes equipment-cleaning hours.

Many thanks to all of the volunteers who give their time to this vital enterprise, and to the police departments--state and local--for providing traffic safety around these events. Want to get involved?

litterliftersofwestvincent@gmail.com

Silencing Science at the Federal Government

For most of the past 60 years, science has been the essential foundation of the federal policies, regulations and laws that protect our health and our environment from pollution. This science is now being sidelined at the federal level. Some notable actions of recent months are:

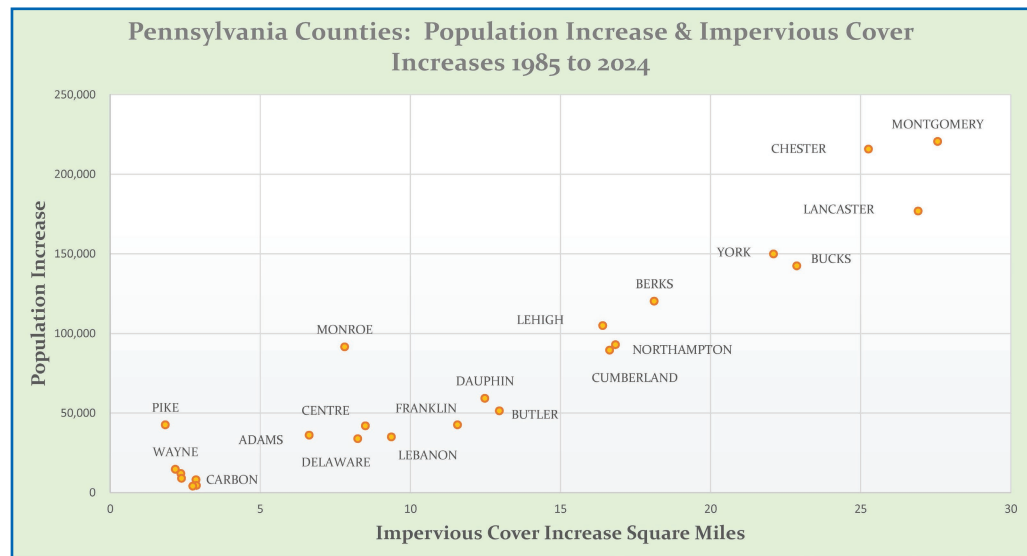
- EPA rescinds 2009 greenhouse-gas finding underpinning all federal climate regulation.
- 68 coal plants exempted from mercury and arsenic limits via email; rule faces full repeal.
- EPA dissolves its 50-year research office; replacement omits the word “research.”
- Environmental justice offices closed across all ten EPA regions.
- EPA stops counting lives saved by pollution rules; still counts industry costs.
- \$7.5 billion in clean energy projects cancelled via social media.
- Rule to save 1,000+ miners from black lung shelved as cases surge.
- CDC’s chronic disease center eliminated: cancer, diabetes, heart disease programs gone.
- CDC’s lead-poisoning team dismantled mid-investigation of 500 children poisoned by applesauce.
- NIOSH loses 85% of staff; respirator certification disrupted, firefighter cancer registry halted.
- NOAA ends its 45-year disaster-cost database.
- NOAA’s climate research division proposed for elimination.
- PFAS protections dropped for four of six “forever chemicals”; remaining two delayed two years.
- U.S. withdraws from the World Health Organization.
- 57 of 77 Forest Service research stations ordered closed across 31 states as fire season approaches.
- EPA’s proposed 2027 budget: minus 52%, lowest since 1985.

The public is not well-served by this systemic muting of the federal science programs. The health of our people and of our environment are literally of paramount importance, and far outweigh the short-term thinking behind these cancellations of essential national policy.

Construction, Impervious Cover and Population

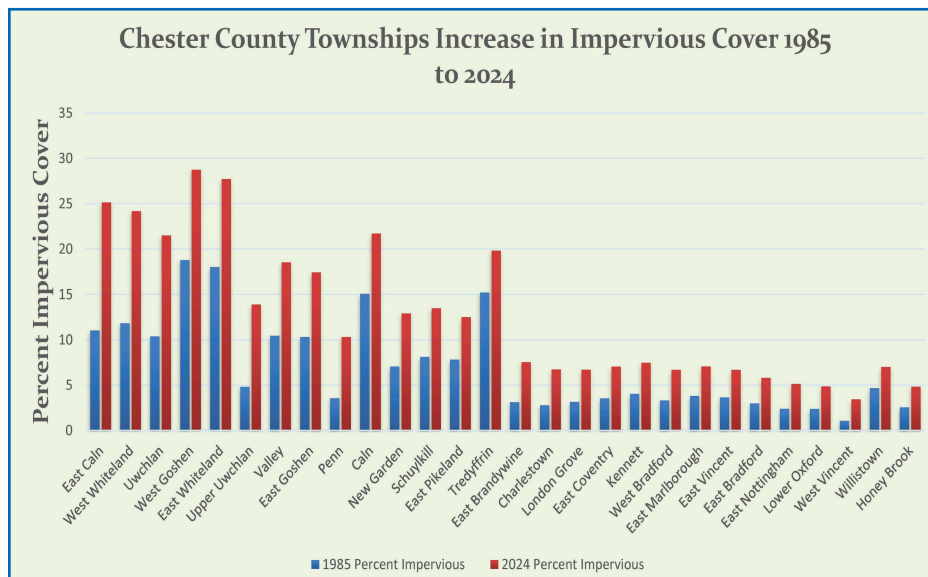
It never seems to stop. Data centers, trucking centers, highway expansions and housing developments of all kinds proliferating without pause. For those of us living in northern Chester County for any length of time, this constant conversion of field and forest into developed lands is alarming and highly unpleasant. Naturally, we would like to know--how does the extent of land conversion in Chester County stack up against other counties in Pennsylvania? Now, with recently available satellite data products for impervious cover going back to 1985, we can get that answer.

Over the past 40 years, Chester County and Montgomery County are essentially tied for first place in terms of new impervious cover and population growth in Pennsylvania. Land conversion in Chester County has seen the addition of 25 square miles of impervious cover—over 3% of the entire county—since 1985.



The situation within Chester County at the township level continues this theme of unbalanced impacts, with much greater amounts of land conversion and new population occurring in some townships, and other townships showing relatively little change. In particular, the townships north and east of Exton have been heavily impacted, including many first and second order Exceptional Value (EV) and High Quality (HQ) watersheds.

One of the key decisions for a monitoring program is--what should we monitor? Water quality data is important, of course, but if we are to be effective, we need to understand what is driving the changes (good or bad) of our stream ecosystems.



Given the extraordinary levels of natural lands loss in local townships, it is essential that the pattern and extent of land conversion in our watersheds be studied and included our monitoring program. To this end, monitoring products focusing on impervious cover and census block level data are in progress. These products will be delivered within the framework of GVWA's high resolution watershed model.

*THE HEALTH OF OUR WATERSHEDS
HAS BEEN OUR FOCUS FOR OVER 60
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.*

JOIN US!

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

Membership levels:

- 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

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 any other 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/support

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.