

# Streamlines

Fall 2022

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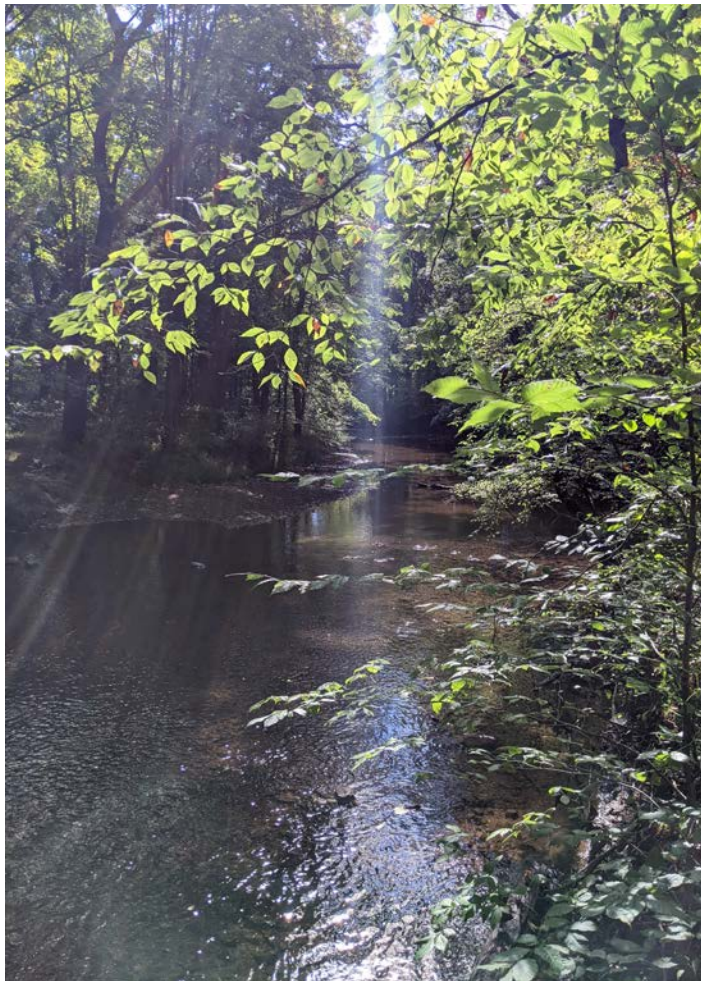
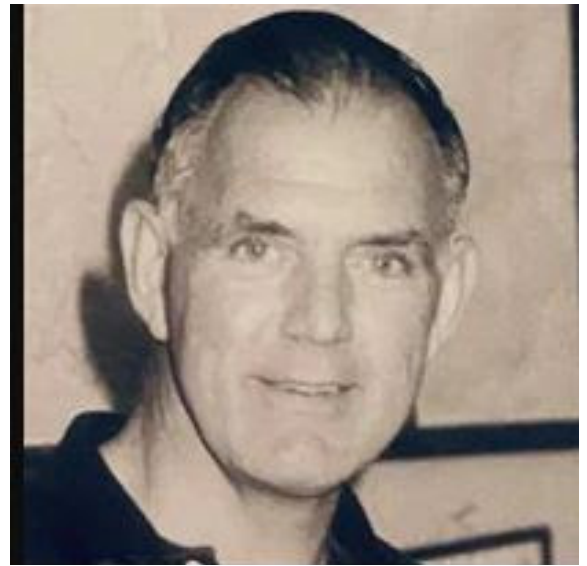


# Ralph D Heister

## *A Legacy of Science, Teaching and Advocacy*

Dr. Ralph D. Heister served as Green Valleys Board President from 1979 to 1981, taking over the leadership of the organization from founder and first Board President, Everett Rodebaugh. At the time of his election Ralph had this to say: "I am honored and delighted to serve as president of Green Valleys Association ... our first priority was to rediscover our client - the environment - and to once again become active in its defense and preservation". These are the words which set the stage for the next 40 years of Green Valleys' work, words which are as true today as they were 40 years ago.

Over the years I have met or learned of a truly impressive number of people that recall Ralph's impact on their lives. Many of these people were his students at Conestoga, where he taught for 35 years before retiring in 1998, and where his influence led to their choice of careers in the sciences, whether in the medical field or the environmental field. Students



well remember the class field trips to monitor water quality in Valley, French, Pickering, Pigeon Creeks and Stony Run, or going to township meetings to advocate for watershed protections. A superlative science teacher, he created a learning environment which included a very well equipped laboratory, extensive field research programs, and in many years produced comprehensive watershed reports. The data in those reports is invaluable today as GVWA works on establishing long terms trends for each of the local watersheds.

Ralph received his PhD Ed in 1971. His Doctoral dissertation is entitled "A Study of the Relationship Between Chemical Water Quality and Fish and Benthic Macroinvertebrate Diversity in French Creek, Chester County, Pennsylvania". His expert knowledge of our watersheds underpinned his tireless advocacy for them. In the 1990s I recall seeing Ralph at various township meetings, reminding, as only Ralph could, elected officials of their obligations to protect the environment and our local streams. I recall his diligent work to have Valley Creek designated as Exceptional Value, followed by having the majority of French Creek designated Exceptional Value.



My personal experience with Ralph began in 1996 at Green Valleys' old headquarters in Birchrunville, during a presentation about the Sustainable Watershed Management program. Ralph was GVWA's Executive Director at the time, and we soon got to talking about Welkinweir. GVWA had long held the easement for Welkinweir, and Natural Lands was the owner, but in 1996 an exchange was in the works which would end up with Green Valleys becoming the new owner. Not too long after that I was in charge of the property's management, a role which I still enjoy these days.

Over the next few years at Welkinweir, Ralph and I worked on several projects, including the very sorely needed renovation of the barn to provide serviceable classroom space. In 2010 I became Green Valleys Executive Director. Ralph generously took on the task of filling me in on 40 years of local watershed history. There were many times that year where we would hop in my car, drive to the scene of a local watershed victory, and go over the nitty gritty details. Some of the events he related were remarkable, such as when he camped out overnight in an abandoned building in order to film tankers of spring water being hauled out in violation of a permit. During that same year we worked through some difficult Green Valleys administrative issues--issues I could not have resolved without him.



And of course his fanatical support of Penn State football – I remember many times at our events if the Nittany Lions were playing Ralph would have to be able to listen!

In 2011, the Board recognized Ralph's longtime service to Green Valleys by creating the Ralph D. Heister Award for outstanding sustained personal commitment and volunteerism. To date, those recognized for this award, which is truly earned and not given annually, are the volunteers from Valley Forge Trout Unlimited, for their multifaceted work in protecting Valley Creek, Greg Leinweber and Marty Meadows, AXA XL Global Day of Giving, for over 20 years of volunteer service in the French & Pickering Creek watersheds, and Beth Intoccia, Litter Lifters of West Vincent, as a driving force in keeping litter cleaned up from our roads, streams, and parks. They all are doing what Ralph so apply recognized: "I never fail to be impressed by the sustained interest and commitment of a few people, with the benefits of their labors enjoyed by so many."

With his passing this fall, Ralph will be missed, but never forgotten.

A handwritten signature in blue ink that reads "Victoria Laubach". The signature is written in a cursive, flowing style.

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.

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9 A.M. TO 4:30 P.M.

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ON THE COVER:  
AUTUMN COLOR AT WELKINWEIR  
VICTORIA LAUBACH



## Summer Nature Camp

With the 2022 Summer Nature Camp in our rear view mirror, and planning for 2023 underway, here is an update on the progress we are making!

GVWA's Watershed Educator, Alex Runde, is knitting STEM topics into the camp curriculum, with excellent results. For example, boat races on the Beaver Run (a classic) now include stream studies and invasive rusty crayfish removals.

In 2022, a new camp week theme was developed which focuses on weather and climate. These are favorite topics for Alex, and as it turns out, favorite topics for campers as well. Alex also added a new group, *Otters*, for ages 12-15, and developed a complete new set themes for the Otters group.

We had more guest presenters, and more field trips! There are so many opportunities to engage youth in the rich ecosystems of northern Chester County, and by bringing in specialists, or journeying to special places, we can access some of those opportunities. The presentations and off-site activities related to the theme of the week, much to the excitement of the campers and counselors.

Campers learned outdoor skills and science concepts on trips as well. The Herons and Otters Groups embarked on a trip every week, with highlights including canoeing at Marshlands, holding live animals at the Barn Nature Center, and catch and release fishing at Kurtz Fish Farm.

*The camp scholarship program continues to grow. Thank you to the donors supporting this program!*

### New Offerings

The two oldest age groups were not the only ones treated to amazing trips this summer. The Turtles Group (ages 8-9) toured Lundale Farm in June and August, and hiked back to Welkinweir on the Horseshoe Trail each day. The Otters Group (ages 12-15) hiked extensively on the Horseshoe Trail, even eating lunch on the boulders in the middle of the South Branch of French Creek in July. Overnight camping was re-introduced for the Herons and Otters special weeks, with two field trips and the overnight, complete with night hike, lightly guided tent setup, and of course dinner and dessert cooked over a campfire! Summer Nature Camp received great reviews from campers and counselors alike, and it will not be long before we announce a new, unique set of weekly themes and camp openings for 2023.

Our thanks to all of the landowners who opened their properties or provided on-site instruction--Marshlands (Jim & Joan Moore), Lundale, Warwick County Park, French Creek State Park, and the Raifsniders, for their generosity in allowing us to use their property for the annual camp boat race!



Controlling Invasive Wineberries



## Twenty-Five Years At Welkinweir--Meeting our Goals

In 1997 the GVWA Board members voted affirmatively to accept title to Welkinweir. The key deciding factor was that ownership would strengthen and expand our environmental education programs.



Collecting Macroinvertebrates

The steady growth in programs over the past 25 years highlights the foresight the Board had at that time. Welkinweir, with its streams, ponds, forests, and meadows, offers an ideal experiential learning environment. We recently hosted Environmental Science students from Owen J Roberts HS and The Grayson School in Radnor for a day of pond and stream studies, learning about water quality through macroinvertebrates the students found in the stream and ponds, the wildlife that actively lives in and depends on the water, freshwater mussels and our resident beaver, along with a bit of microbiology illustrating how upstream activities might affect water quality.

Hand in hand with increasing the number and type of programs has been the growth in the facilities needed. Our next step in this long process will be the construction of the new Environmental Education Center, slated to begin this spring.

Over the year, we host many types of outdoor programs. For example adults (and children) enjoyed our annual Owl Prowl in early November. The weather was perfect and the moon bright. The Owl Prowl was led by Dawn White from Indian Run Environmental Education Center, who brought her non-releasable owls--gray and red phase screech owls, a barred owl and a barn owl! She talked about what adaptations make these nocturnal birds of prey successful, how to attract owls, and how to recognize their calls. This was followed by a moonlit walk along the ponds and wooded areas where participants were



Dawn White

treated to the sound of the beaver loudly slapping his tail on the water (indicating his displeasure at having his nightly food gathering being interrupted), a roosting red-tail hawk eerily silhouetted in a bare tree, and calls of multiple screech owls.

Since 2019, we have trained three classes of Pennsylvania Master Naturalists, and graduates from those three classes attended a potluck reunion at Welkinweir, where GVWA staff talked about volunteer opportunities in our community.

We look forward to the decades to come at our home, Welkinweir, engaging learners of all ages, with the natural beauty found in the area thanks to landowners like Everett and Grace Rodebaugh.



## *Working With Farms to Protect Our Streams*

During a year-long planning effort in 2017, with support from the William Penn Foundation, GVWA and partners in the Delaware River Watershed Initiative's Schuylkill Highlands, identified farms where the installation of Agricultural Best Management Practices (BMPs) were needed. Since then, we have been working with local farms to implement those BMPs. What are Agricultural BMPs? BMPs work to protect water quality and reduce soil and nutrient losses. They are time-tested measures that are tailored for each installation. Farmers save soil and nutrients, and streams receive less of these inputs. Facilitating the installation of Ag BMPs fits perfectly within GVWA's mission to protect and improve water quality--but there is a learning curve and having good consultants and willing farmers is essential.



Stormwater BMPs

One of the farms we are working with is Ryerss Farm for Aged Equines, founded in 1888. The country's oldest non-profit organization of its kind, Ryerss is dedicated to providing a comfortable retirement for horses. Located on nearly 400 acres in South Coventry and Warwick Townships, the farm has 330-acres under agricultural easement to protect it from further development. Ryerss also has a number of headwater tributary streams on the farm that flow into the Rock Run, an Exceptional Value tributary to the French Creek. Many local farms were located around first order streams, assuring a good water supply, and Ryerss is no exception. The Rock Run served for many years as a "reference stream" for the PA DEP's determinations for requests to re-designate streams to Exceptional Value.

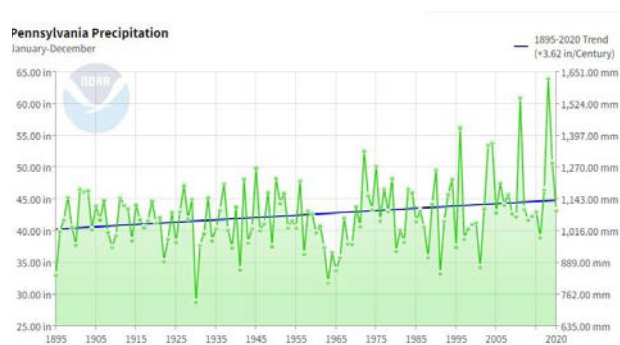
We are collaborating with the farm managers, Tim Blevins and Cory Mowrer, and our consultants, Adam Mowery and Dan Miller, of Mowery Environmental. This means spending time at the farm, evaluating and prioritizing the issues that were the greatest concern to the health of the horses, pastures, and growing fields, as well as the tributaries that flow through the farm. Two top priorities emerged that everyone agreed upon – a better way to handle the manure storage and a way to deal with the erosion from increasingly intense rains as it flows across the rolling fields.

The staff at Mowery Environmental (ME) worked closely with the farm managers and GVWA staff to update all the farm documentation, completing an Inventory and Evaluation Report and a Comprehensive Nutrient Management Plan. ME staff followed up with designs for a projects to address the areas of concern. The first was to build a concrete manure stacking pad to hold the manure, where previously it had been stored on bare ground. This was completed in the first half of 2021, followed by grassed diversions, terraces, and waterway that captures the water before it flows across the farm field then guides this water away from the manure stacking pad, through the grassed waterway where it can infiltrate back into the ground. Concrete slats allow the water to cross the gravel farm road without wash outs were added, and a rock outlet just past that allows any water that has not infiltrated to slow and percolate into the ground (see photo). These projects were funded through a National Fish and Wildlife Foundation grant GVWA secured. We also encouraged the farm to successfully apply for funding offered through the Chester County Conservation District that was used to repair and update the older Best Management Practices GVWA had installed in the early 2000's in the heavy use area. We are currently working on obtaining additional funding to implement stream crossings and more grassed waterways at the farm.



## Climate Change Brings Heavy Rains, Increased Flooding

Pennsylvania has released the draft version of the 2022 State Water Atlas. Included in this Atlas is statewide data showing the striking increase in heavy rainfall events over the past twenty five years from climate change (see figure). These heavy rains not only cause flooding but streambank erosion and increased sediments in streams. Stormwater BMPs are one way to reduce the impacts of climate change, but this work must proceed on a site by site basis. Fortunately, there are a vast number of sites where we can implement BMPs, but this will require a focused long term program to do so.



### Three B Basin at WVT

Green stormwater infrastructure (GSI) is a type of BMP which uses a nature-based solution to intercept stormwater and infiltrate it into the ground (or evaporate it back into the air). As we look to implement more GSI projects, we recently checked up on a project at West Vincent Elementary School installed in 2017. This basin which was previously just mown grass, was naturalized by GreenWeaver Landscapes using native plants, primarily flowering perennials, with a few shrubs and trees, that benefit bees, birds, and butterflies (hence 3 B) by producing nectar, seeds, and fruit. It is flourishing - colorful blossoms were buzzing with activity and birds were happily gathering seeds!



Bees, Birds and Butterflies!

### More Trees Planted at Welkinweir

Thanks to the Keystone 10 Million Trees ([www.tenmilliontrees.org](http://www.tenmilliontrees.org)) program, another 300 + trees have been planted at Welkinweir. The Keystone 10 Million Trees partnership began in 2018 with a goal of planting 10 million trees across the Commonwealth by 2025, and currently stands at 5 million trees planted. The Chester County Conservation District, a partner of Keystone 10 Million, distributed trees in the spring and fall to those who want to plant. We met with Cori Trice, Watershed Specialist at the district, to review the areas we wanted to restore trees - the length of the south-facing hillside, north of the ponds. The hillside had either very few existing trees, declining trees, or invasive plants. The new trees are a mix of native canopy trees - white oak, tulip poplar, basswood, and hickory, with an understory of persimmon, hazelnut, serviceberry, witch hazel, and blueberry! The new trees will create more forest-like conditions that will intercept and filter rainfall, protecting the water quality onsite as well as downstream. The fruits and nuts that the trees will produce will support the wildlife that call Welkinweir home. More forest means less lawn grass and the maintenance that entails as well as fewer invasive species--and more beauty to enjoy.





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  
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They are a precious resource.

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