



2022 Annual Report



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DCVA MISSION STATEMENT:

Darby Creek Valley Association is a nonprofit watershed organization dedicated to the protection and enhancement of the Darby Creek Watershed and its resources, including water, wildlife, historical sites, floodplains, wetlands, and riparian zones.

President's Pen

Jaclyn Rhoads, DCVA President



I am in awe every year what the DCVA volunteers, board members and staff can accomplish during the course of that year. Darby Creek Valley Association provides so many programs and services for a fraction of the cost in comparison to many non-profits. I know our members appreciate it, but it is well worth saying.

Many Accomplishments and More to Come

DCVA played a significant role in the protection of the Don Guanella School property which has come to fruition! This space will be a new county park, and every time I drive by I share in this great sense of accomplishment. Every piece of land that we can protect is helping our watershed to prevent impairments to our water quality and provide more opportunities for outdoor recreation. My hope is that DCVA can play a part in protecting additional parcels of land, and our new watershed plan will help to chart this path forward.

Due to a vision by DCVA board members, support from Natural Lands, and funding from Delaware County, the Darby Creek Watershed will have a new watershed plan. You will read more about this amazing project and process in our report, but I can't express enough how important it is to the future of the watershed.

I would be remiss if I didn't highlight our fundraising accomplishments. DCVA has grown over the years in terms of budget as well as programs. An important goal for DCVA is to offer more opportunities for community engagement, helping offset impacts felt by downstream communities, and play a part in mitigating climate change. We can only do all of this by raising more funds, so we will embark on new ways to do this in 2023.

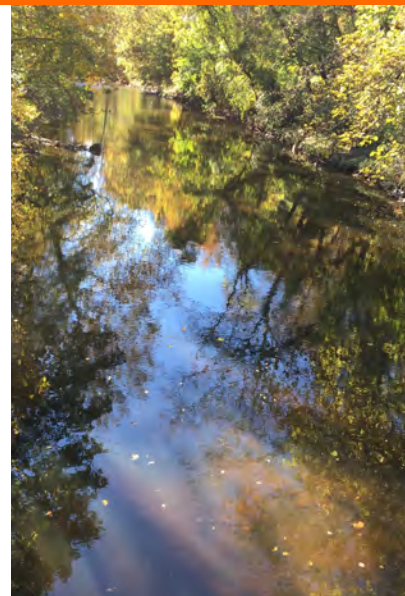
Looking forward to a fruitful 2023!

Governance Committee Report

Tim Denny • Chair of DCVA Governance Committee

The Governance Committee continues its efforts to provide clarity and transparency in our operations and by-laws. The goal of these efforts is to allow DCVA to grow and prosper in the future with clear guidelines. In 2022 a survey of the DCVA Board was conducted to help clarify the expectations and the role of board members. Also, a protocol was established for on-boarding new members including sending them a letter with contact information to help them feel informed and welcome.

Currently efforts are underway to have our by-laws reviewed by a law firm pro-bono, before submitting them to be rated by an organization like Charity Navigator. At the annual meeting we expect to have a conflict-of-interest form available for all board members to sign. The Committee is also looking at the role of the Executive Committee and will make recommendations to further define their role. In addition, the Governance Committee has been asked to take on the role of the Nominating Committee in proposing new board members.



38th Annual Watershed Wide Cleanup a Success

Aurora Dizeal • DCVA Administrative and Operations Manager

Since its founding in 1984, the Darby Creek Valley Association has been a force for making a positive impact in and around the Darby Creek watershed's 123 linear miles of streams. This year was no different as almost 600 volunteers gathered across 40 sites throughout the month of April to pick up nearly 17,000 pounds of trash and debris from our waterways. Along with too many plastic bags, plastic bottles, food wrappers, and disposable masks, some of the interesting items picked up this year were:

- Vacuum cleaner
- Many car parts
- Rug remnants
- Wood and metal fencing
- Mattress springs
- Many metal poles
- Child and adult bikes
- Water heater • Sliding board
- Shopping carts • Flower pots
- Full bottle of carpet cleaner
- Sports balls /equipment
- Large hose • Tires
- Concrete-filled bucket
- Large plastic banner



We welcomed back cleanup captains who have been volunteering for decades. We were also thrilled to bring on brand new captains and sites this year as well. We never stop being inspired by the volunteers that join us each year – this work is driven by the many dedicated, thoughtful, caring members of the Darby Creek watershed community and we are so grateful! DCVA is also indebted to community leaders, partners and sponsors – by working together we made our communities safer, cleaner, more beautiful, and more hospitable to wildlife.



Darby Creek Watershed Resilience, Management and Conservation Plan

Robin Mann • DCVA Board Member

The preparation of a Darby Creek Watershed Resilience, Management and Conservation Plan got underway in 2022. The project is funded by a generous grant from Delaware County. Natural Lands, a non-profit conservation organization based in Media, PA is working with DCVA to conduct this update of the 2002 Darby Creek Rivers Conservation Plan. This new plan will place particular emphasis on fostering greater resilience in the face of changing climate conditions and recognizing and addressing the racial and socio-economic disparities among our watershed communities and the disproportionate pollution burdens and relative lack of access to watershed resources experienced in portions of the watershed.

While awaiting the finalization of the contract with Delaware County, DCVA recruited a representative Steering Committee to collaborate with Natural Lands and oversee the planning process and coordinated with Natural Lands to convene the Steering Committee's first two meetings. The contract having been finalized late in 2022, the project pace will pick up in the coming months.

Work begun in 2022 will lay the groundwork for the planning process. To inform the process overall, preparation of a plan mission and vision statement was begun. Another important effort was initiated to review the goals of the 2002 plan to determine which remain relevant, which need to be amended or are no longer relevant, and what additions are needed. A mapping effort was initiated, and will be ongoing, to identify key locations of interest, such as problem areas with frequent flooding or sources of pollution, good examples of green stormwater infrastructure, and potential preservation opportunities. Other preparatory efforts in progress are developing a list of key persons to interview and identifying important focus group topics. Meanwhile, Natural Lands Trust has been compiling various planning documents from previous targeted work, such as municipal pollution reduction and stormwater management plans and model ordinances. An important expectation is that this new Darby Creek Watershed Plan will serve an important and broadly useful purpose to synthesize and build on earlier initiatives, identifying opportunities for coordination and developing programs to support communities in implementing solutions.

In early 2023 the Steering Committee will work with Natural Lands to bring as many voices into the process as possible by preparing a survey of watershed residents and stakeholders about how they interact with the watershed and its resources and how we can improve their experiences while protecting the watershed.



2022 Programming for Young Naturalists

Aurora Dizel • DCVA Administrative and Operations Manager

This year offered many wonderful opportunities for us to connect with the youth in our communities.

In March we teamed up with Ranger Gary and the Delco Anglers to learn about our native brook trout and help stock them in locations throughout the Ridley Creek State Park. Understanding how fish breathe dissolved oxygen through their gills was an easy lesson to learn as we hustled to put them in buckets and get them into the stream as quickly as possible, so they could breathe! It was a wonderful morning making connections to the fish in our streams and how we can make the streams healthier for them to live in (and ultimately a healthier catch for someone later!).

On a beautiful morning in April a curious group of young naturalists gathered at the Haverford Reserve to learn about the life cycle of dragonflies, search for aquatic bugs, and discover how they tell a story about water quality. We found abundant mayflies in the stream, and were even lucky enough to spot a barred owl and a few snakes along the way!



In May we gathered in the gazebo of Glenolden Park to learn about bees, butterflies, and other pollinators together before making native wildflower seed bombs to create new native plant habitats for them!



2022 Programming for Young Naturalists

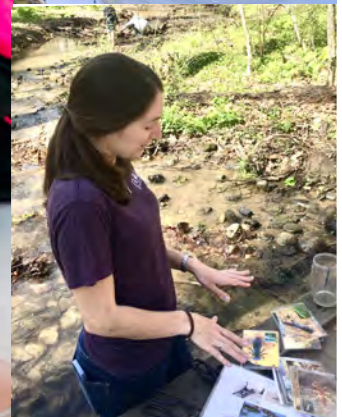
Over the summer our two Darby Creek Watershed Ambassador interns each developed and delivered their own youth programs. Marie facilitated a Stream Scavenger Hunt at Naylor's Run Park to inspire environmental curiosity and encourage children to explore the wildlife that is right here in their community. Jason led an educational program about the macroinvertebrate "bugs" living in our streams and waterways, where children took a close-up look at these critters hiding in leaf packs and learned what story they can tell us about the creek.



This year we also delivered programs to scout troops and homeschooling students that attend Cupola Academy. These groups spent a morning with us learning about water pollution and its impact on aquatic species. They worked in groups using kick nets to gather macroinvertebrate samples and assess the water quality of our site by sorting their finds and identifying them. The children found two different types of mayflies, caddisflies, crane flies, and more (with one lucky group finding a salamander in their sample!).



Looking ahead to 2023 we would love to deliver more private programs for scout or school groups! Please reach out to Aurora at admin@dcva.org to inquire about private group programs.

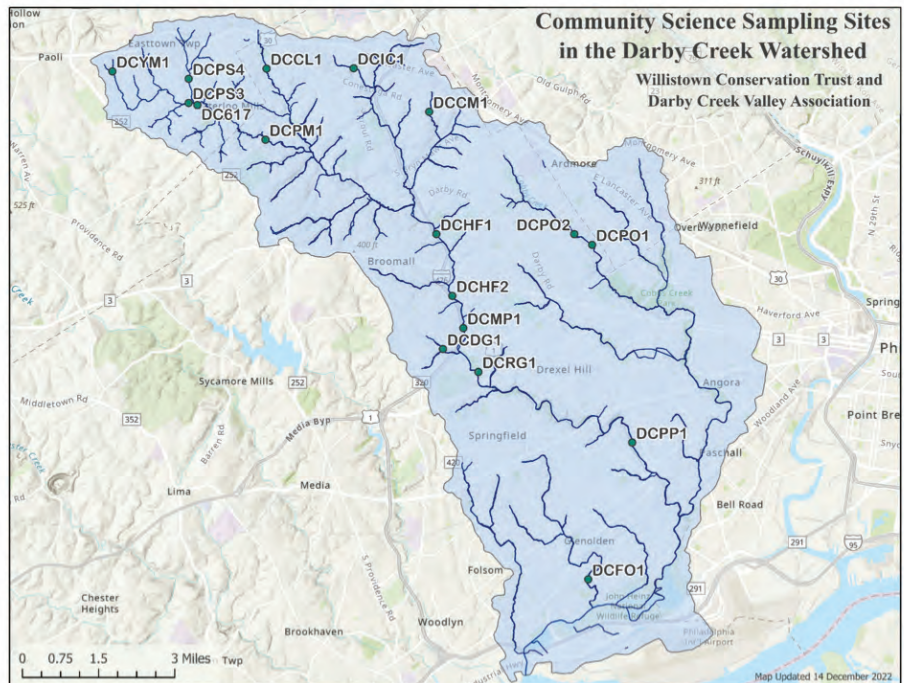


Darby Creek Community Science Monitoring Project Update

Lauren McGrath • DCVA Board Member, Willistown Conservation Trust Director of Watershed Protection

The Darby Creek Community Science Monitoring Program (DCCSMP) is a collaborative research project with the goal of better understanding water quality dynamics throughout Darby Creek. Through partnerships between Willistown Conservation Trust (WCT), Darby Creek Valley Association (DCVA), and Stroud Water Research Center, the DCCSMP was launched in March 2021. Starting with just two sample sites in the headwaters of Darby Creek, the program has since expanded to 17 monthly sampling sites and 21 volunteers across the entire watershed, including Cobbs Creek (Map 1). In addition to these sites, volunteers conducted a sampling blitz in the headwaters in November 2022, collecting samples from 19 previously unstudied sites over a few hours.

The Pennsylvania Department of Environmental Protection has determined that 99% of Pennsylvania waterways are impaired, including the Darby Creek. When a stream is designated as impaired, it means that the physical or chemical conditions of the habitat prevent the survival and reproduction of sensitive stream life. While many studies have been conducted in the lower portion of the Darby Creek, less is known about how small tributaries throughout the watershed contribute to the overall health of the creek. The long-term goal of the DCCSMP project is to use the data collected by volunteers to determine pollution hotspots, advise restoration decisions, and identify healthy sections of stream that should be celebrated and protected.



Map 1. Monthly sampling sites for the Darby Creek Community Science Monitoring Program.

Water quality impairments in Darby Creek are caused by dense concentrations of impervious surfaces throughout the watershed. An impervious surface is anything that blocks water from absorbing into the soil, such as a roof, driveway, parking lot, sidewalk, or road. During storm events, rainwater cannot seep into the ground and instead runs off into the nearest stretch of stream. Often, this stormwater becomes highly polluted as it picks up trash, road salts, fertilizers, pesticides, and other chemicals, posing a risk to water quality. Detailed monitoring data helps pinpoint areas where installing rain gardens or improving riparian buffers can best reduce stormwater runoff.

Monthly monitoring by the group of volunteers trained by DCVA and WCT is helping advance our understanding of water quality throughout Darby Creek. DCCSMP volunteers collect water quality measurements including water temperature, specific conductivity (a general indicator of pollution), stream pH, and chloride concentration (an indicator of salt pollution). In November 2022, DCVA and WCT hosted a sampling blitz to examine water quality in the headwaters (Map 2). Four volunteers collected samples from 19 new sites over two hours and met at the Upper Main Line YMCA's Artisan Village Watershed Lab to analyze the data and discuss the results.

Darby Creek Community Science Monitoring Project Update

Unlike the normal monthly sampling, which happens over the course of four days each month, the sampling blitz provided an opportunity to collect water quality data while controlling for weather conditions. Rain, heat, and other weather patterns influence water quality. Sampling in a condensed window of time minimizes the impact of these factors, instead allowing differences between sites to be identified. Many of the sampling sites were on small tributaries, enabling the study of how fine-scale differences in land use impact local water quality.

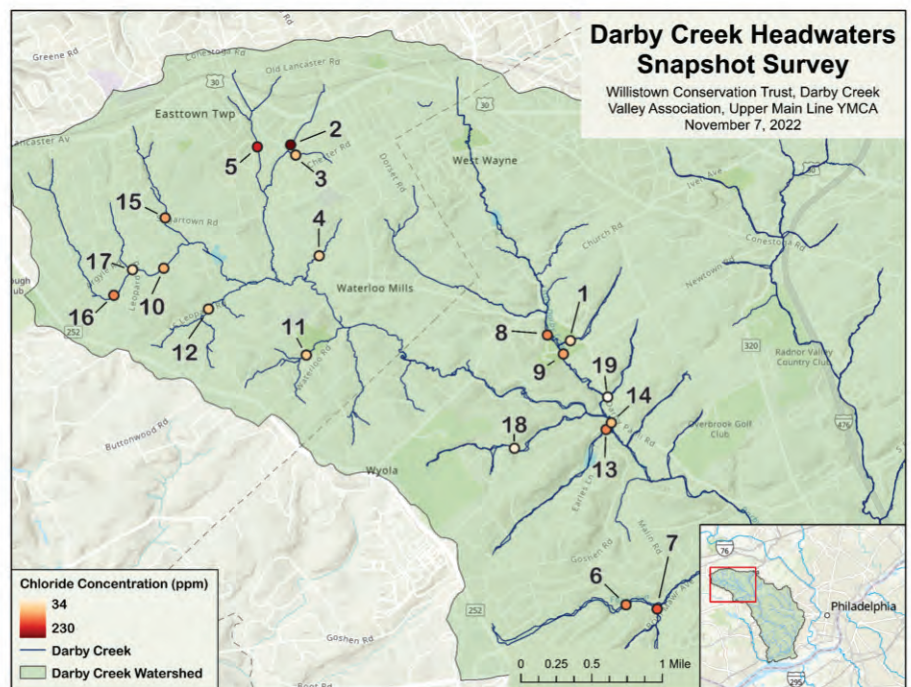
One goal of this blitz was to understand salt dynamics in headwater streams. Road salts applied in the winter flow into streams as snow and ice melt, threatening fish, insects, mussels, and other stream residents. Salt builds up in groundwater and soils over time, and sampling before winter road salt applications captures baseline concentrations that reflect long-term buildup of salts.

The sampling blitz revealed that salt pollution (as measured by chloride concentration) varies across the study area (Map 2). Chloride concentration was lowest at Site 19, located on Camp Run, a small tributary. The area that drains into Camp Run is predominantly agricultural land, with patches of limited development and forest. By contrast, chloride concentration was highest at Site 2, located on an unnamed tributary. The area that drains into Site 2 is similar to the size of the Camp Run watershed, but is highly developed. The tributary originates near a SEPTA train station and flows under Route 30, picking up salt from residential and commercial developments.

The differences in salt pollution within a small section of the Darby Creek Watershed highlight the connection between local land use and stream health. Sites that drain the highly-developed Route 30 corridor, such as Sites 2 and 5, have high chloride concentrations, while sites that drain open space, such as Sites 18 and 19, have low chloride concentrations. Protecting open space, especially in small tributaries, is crucial to maintaining and improving water quality throughout the entire watershed.

Additionally, increasing awareness of threats to water quality, such as road salt, can improve stream health. To reduce salt pollution in streams, avoid over-applying salt and sweep up salt that remains after snow and ice have melted. The salt can be reused for the next winter storm, saving money and protecting water quality!

The blitz survey would not have been possible without the support of the Upper Main Line YMCA, the fantastic volunteers who explored new sections of stream, and the partnerships with WCT and Stroud Water Research Center. If you are interested in joining the Darby Creek Community Science Monitoring Program, please contact Aurora Dizel at auroradcv@gmail.com.



Map 2. Sample sites in the headwaters of Darby Creek. Each point represents the approximate location of a sample site and is colored by the chloride concentration at that site. Low chloride concentrations are pale yellow, and high chloride concentrations are dark red. The red box in the inset indicates the sample area.

Upper Darby Rain Gardens in 2022

Stephen Lockard • DCVA Board Member



Upper Darby Rain Gardens (UD RG's) made steady progress throughout the year in 2022. Headed by Jamie Anderson, Michelle Smith and Steve Lockard (all DCVA board members) we were able to assess, design and have a private landscaper (Duranti Landscaping) do the excavation and grading to build three rain gardens in the spring and another five last fall. All of the gardens were planted by volunteers from the Upper Darby Rain Gardens volunteers and the homeowners. Most of these gardens have been built in Drexel Hill with several along Shadeland Avenue. In the past two and a half years UD Rain Gardens have now built 19 rain gardens.



The private landscaper, Duranti Landscaping, that we employ, has grown better and better at redirecting stormwater, removing sod, tilling to an appropriate depth, and constructing berms to form the bowl of each rain garden (RG). The owner, Mike Duranti, now recognizes problem areas before we point them out. He is certainly one of the premier landscapers for building RG's in the Philadelphia area.

We have currently assessed two more homes for builds this year and will continue to assess others before this coming spring. A workshop regarding rain gardens in the watershed is scheduled for early spring. In addition, we have added the building of rain garden planter boxes to our repertoire. A consortium of groups led by the Pennsylvania Resource Council (PRC), the Eastern Delaware County Stormwater Collaborative (EDCSC) and the Lower Merion Conservancy (LMC) and DCVA purchased materials, gathered them, cut, drilled and assembled over 30 planters fitted from galvanized feeding troughs. These 100 gallon tubs are an alternative to a rain garden where a rain garden is less feasible. More than 20 of these were installed by Duranti Landscaping in the Darby Creek Watershed in 2022.



2022 Stream Watch Program Annual Report

Alan Samel • DCVA First Vice President

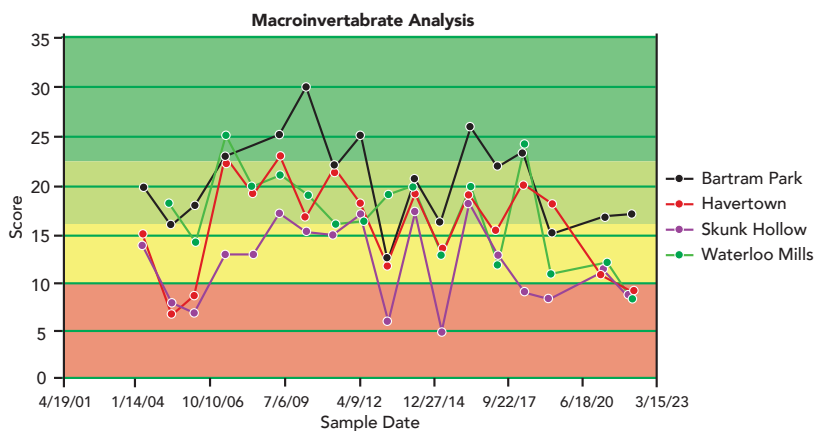


The Stream Watch Program has two components: the spring stream sampling and the winter insect identification workshop. The output from this annual program is an assessment of water quality at five sample sites throughout the watershed based on the aquatic organism collected and identified. It's hard to believe that we have been doing this for over 20 years! Covid-19 has affected everyone and everything we do. In 2022 we were able to get into the stream and take samples. At our annual insect identification Workshop, we processed samples from 2021 and 2022; Covid-19 takes center stage for this extra assignment!

The 2022 annual Stream Watch Program stream samples were collected April 9, 2022. We took 12 samples; two from each of five sites up and down Darby Creek. Thank you to the small army of volunteers who helped make this a great day. What a day! The stream was high and running fast. Really, it was too fast for sampling, but we did it anyway. Our day started at a cool 48°F and overcast and finished off at a comfortable 61°F...still overcast. Many thanks to the 12 brave and committed people who made this a success!

The insects and other macroinvertebrates that we collected provided a snapshot of the health of Darby Creek. This was the 17th year of intense sample collections and identifications. From this long-term sampling, a trend of the stream health at each site has been determined. Each year we compare our findings from the water quality determinations from the previous years. It's a way of getting the big picture from a lot of very small bugs!

The annual insect identification workshop was January 23, 2022 at the Haverford Reserve. We had a great turnout. We were able to process all the samples from the 2021 and 2022 sample dates: amazing! I would like to thank the 15-20 people of all ages who came out and helped us identify the bugs we sampled on those 2 dates. Attached is a figure depicting the water quality of each sample site over time.



The water quality results are a good news-bad news story. The good news is that three of the five sites did not show a drop in water quality. The bad news is that two of the five sites had drop in water quality. However, over the course of the entire Stream Watch program the water quality of each site has not change markedly. This is the challenge of monitoring a stream in a heavily developed suburban-urban watershed; sometimes the cause of the data change is not readily apparent. For example, the 2022 samples were taken after a heavy rainfall and the stream was still running high and fast at all sample sites. As a result, it is likely that many of the resident bugs were

washed downstream. How far downstream no one really knows, but this scouring will play a major role in a number of the samples, as we saw when looking at the samples we took on that day. Issues like rainfall are why one sample date cannot be used as an overall assessment of the water quality at a sample site. It takes a number of years and a number of data points to be able to see a trend. After almost 20 years of sampling, we have a pretty good idea of the water quality at each site where we take samples.

The upcoming stream sample date will be April 1, 2023. Stay tuned for the exact date.

We will continue to sample from our five established sites. If you are interested in getting involved with the Stream Watch Program, stream samples and/or insect identification workshop, please contact me at alan.samel@gmail.com.

Native Habitat Restoration at DCVA Folcroft Property

Gerry Krieg • DCVA Board Member

In April 2017, DCVA acquired an approximately 6 acre wooded property at the juncture of Norwood, Glenolden & Folcroft boroughs. The property lies within the boundaries of Folcroft borough and is bordered by Delmar Dr to the north, the Muckinipates Creek to the west and south, and Folcroft residences to the east. We found the area to be over-grown with invasive species. We hope to successfully restore this area to a functioning native ecosystem, which will provide multiple benefits to the water quality of Muckinapates & Darby Creeks and to the various wildlife that call this area home. Additionally, it will increase the recreational value of the area for residents and visitors to Folcroft, Norwood and other surrounding communities



Dedicated AmeriCorps volunteers lend a huge helping hand in clearing in 2019



Typical condition of an area of Folcroft property upon DCVA's acquisition.

The initial planting was situated some distance in from the road (Delmar Dr) that borders the property. Since this road is a main thoroughfare through the borough, it was decided that we might do well to transform this area next so the community can see the improvements, the beautification of this portion of their neighborhood. Jamie Anderson, a DCVA board member with extensive experience in these types of projects, has been involved from the beginning and collaborated on the design and implementation of this phase of the project as well.

We had begun clearing trash and invasive plant species, such as phragmites, Japanese knotweed and Multi-flora rose in 2019 with the help of some local volunteers and then with an energetic and committed group of AmeriCorps volunteers in April of that year. We received a TreeVitalize Watershed Grant (from PHS/PADEP) and did our first native tree planting in November of that year (again with local volunteer help).

Since the property close to the road is dense with invasives, the soil somewhat rocky and the area strewn with various dumped items, including cement, we decided that a more robust approach to invasives and debris removal would be more effective. We contracted with Duranti Landscaping to bring in

We had applied for and received a second Watershed Grant for 2020 but that work was derailed by the Covid-19 pandemic, as was the work planned for 2021. Finally, with the updated Watershed Grant for 2022, we set to work tackling another portion of the property.



Partial area of the AmeriCorps cleanup crew's fantastic work

Native Habitat Restoration at DCVA Folcroft Property

heavy equipment, including a bobcat, to do the clearing. Mike Duranti has worked with Jamie and others in DCVA on many rain gardens and has become a valuable asset on these and other projects.



Dense invasive vegetation (including much multi-flora rose) along Delmar Dr, the property's northern border



The crew from Duranti Landscaping clearing out the target area of invasives using a bobcat and other tools

We were pleased with how well this approach allowed us to tackle a significantly larger area than would have been practical with volunteers and hand tools. For various reasons the planting date was pushed back until December 1st. We felt, especially given the rocky soil, that using Duranti again for the tree planting would be a wise use of resources. We ordered a mix of native trees and shrubs from Octoraro Native Plant Nurseries. We took delivery on a rainy Wednesday and The Duranti crew did the planting on Friday. Karen Wilwol, the Watershed Specialist with the Delaware County Conservation District and who helps administer the grant, inspected the area a couple weeks later and was pleased with the results.



Mike Duranti planting one of the native trees.

We have applied for the next round of TreeVitalize Watershed grants and will be looking into others as well as we look forward to continuing the work of gradually working to nudge this precious open space in southeastern Delaware County to a haven for the native flora and fauna that would like to reclaim this space as their own. We're hopeful the native hominids will be likewise appreciative.



We planted a total of 96 trees and shrubs.

Lower Darby Creek Area Superfund Site Update

Mary Rooney, P.E. President and Environmental Consultant, EnviroAce
Consultant for the US EPA Technical Assistance Grant awarded to DCVA

The purpose of the US EPA Technical Assistance Grant (TAG) is to provide for consulting services to interpret information on the hazards and clean up of the Lower Darby Creek US EPA Superfund site which principally consist of the Clearview and Folcroft Landfills.

The Lower Darby Creek Area Superfund site (LDCA) consists of four distinct works areas. Each area follows a different investigation timeline and will have different cleanup goals. Progress on each area is discussed separately below.

Clearview Landfill (Operable Unit 1 (OU1)) Construction of Landfill Cap

Clearview Landfill is farthest along the cleanup pathway of the four distinct work areas. Remedy construction work completed in 2022 included: Building Redi Rock retaining wall along eastern landfill slope parallel to Darby Creek; interim grading of 35 acres; installing Evapotranspiration Cover on 19 acres; stabilizing the east bank of Darby Creek beyond Redi Rock wall; converting a construction stormwater basin to a long-term mitigation wetlands; and installing deer fence to support tree growth/survival. An Evapotranspiration Cover (ET cover) is a deep layer of soil over the landfill that is planted with fast growing trees/shrubs. The living cover will absorb rainfall and serve as a barrier between the contaminants within the landfill and rainwater infiltration.

Darby Creek bank stabilization activities includes building of mudsills using logs imbedded into streambank to help resist bank erosion, construction of crib wall (retaining wall) along the creek, and planting of trees/shrubs on the streambank (Fig.1 and 2).

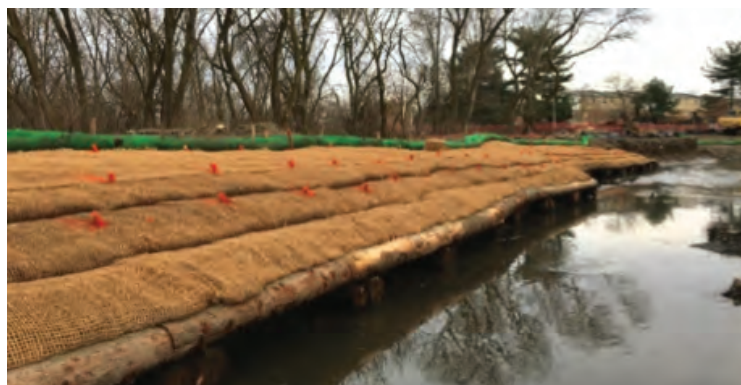


Figure 1-2. US EPA provided photo of Mudsill during its construction along Darby Creek. Figure 3. US EPA provided photo of Mudsill after restoration planting has had time to grow.

The US EPA has completed a five year review of the work done on the Clearview Landfill. Each five years the EPA evaluates if the implementation and performance of the remedy continues to be protective of human health and the environment. This is the first five-year review for the Clearview Landfill since initiation of the 2017 plan for Remedial Action. The review concluded that the remedy is under construction and in progress as planned. Reviews will continue every five years on the years ending in "2" and "7".



The review is available to public at <https://semspub.epa.gov/work/03/2335634.pdf>.

Lower Darby Creek Area Superfund Site Update

Folcroft Landfill and Annex (OU2)

The Folcroft Landfill investigation continues. A draft feasibility study report is expected in 2023 from group representing the Responsible Parties. No significant milestones are reportable for 2022.

Clearview Landfill Associated Groundwater (OU3)

This work area includes the contamination in groundwater, sediment, and surface water around Clearview Landfill. Two significant activities are underway: planning for a sampling event and a pilot study.

Groundwater (GW) and Surface Water (SW) Sampling Planning

The OU3 investigation identified Perfluoroalkyl substances (PFAS or 'forever chemicals') in porewater located within the creek bed sediments. These PFAS compounds are attributable at least in part to OU1 and OU3. The identification of PFAS compounds in porewater at concentrations well above the current US EPA regional screening levels shows that the site serves as a potential source for release of these contaminants to Darby and Cobbs Creeks. The US EPA proposed a sampling plan to evaluate PFAS and other chemical concentrations in Clearview Landfill groundwater and other locations at the site. The DCVA Technical Assistance Grant (TAG) Consultant, EnviroAce, LLC, worked with EPA to expand the proposed sampling locations to update contaminant concentration data for the many chemicals of concern (COC) at Clearview Landfill and within the aquatic areas potentially impacted by both Clearview and Folcroft Landfills. Sampling is expected to begin in by Spring 2023.

Planned Pilot Study to Evaluate Cleanup Technologies

EPA proposes an OU3 Interim remedy with a goal to contain OU3 COCs in shallow groundwater at the edge of the landfill waste boundary, including along the adjacent creeks. To work towards that goal the EPA plans a pilot study to assess what in-situ (in the ground) technologies could be effective in treating the multiple types of contaminants. For the test a trench will be dug near landfill edge that can intercept contaminated GW moving out from the landfill. In that trench will be placed a multi-layered barrier of materials that have been developed to absorb specific types of contaminants, reducing contaminant concentration in GW as it flows through the barriers. Data gathered from the multiyear pilot study will help in development of full-scale treatment plan.

Lower Darby Creek Aquatic Environment (OU4)

Developing Objectives for sampling and monitoring in 2023 and beyond

As part of the sampling planning work discussed for OU3, the DCVA TAG consultant encouraged EPA to begin to address the data gaps present in the OU4 impact areas. EPA plans to develop sample plans for OU4 in consultation with the DCVA TAG consultant and area stakeholders including Eastwick Community Advisory Group, Pennsylvania Department of Environmental Protection, and the John Heinz National Wildlife Refuge.



Growing Greener Grant Brings Residential Stormwater Management Improvements to the Darby Creek Watershed

Aurora Dizel • DCVA Administrative and Operations Manager

The Darby Creek Valley Association was awarded a Growing Greener grant from the Pennsylvania Department of Environmental Protection in 2019. The purpose of the project is to improve stormwater management and reduce flooding within the Darby Creek Watershed by offering free rain gardens to residents within a geographically small target area and study the impacts of the new green stormwater infrastructure. DCVA has worked hard to educate residents on how to be better land stewards and help control stormwater runoff, protect and improve biodiversity, and provide habitat for native wildlife by replacing turf grass with rain gardens. In addition, we aim to create more understanding of the bigger picture community benefits of reducing downstream flooding for our neighbors in the lower watershed who experience significant impacts from runoff that originates upstream.



Residential Rain Garden during Installation- an appropriate site is selected, prepared, and then planted

More people than ever are receptive native plant gardens, but the goal of targeting such a small area geographically and getting over half of the homeowners to accept rain gardens proved to be a major challenge, made worse by the pandemic. While our outreach is resulting in more acceptance than ever and hundreds of rain gardens have been installed in the watershed in recent years, a majority of homeowners cling to their compacted grass lawns and are reluctant to adopt native landscapes. With DEP's concurrence, we expanded the project area in 2022 and the project was able to install 27 new rain gardens at no cost to participating homeowners, houses of worship and municipalities. In addition, we provided rain barrels and downspout planters to some homeowners as well. Haverford Township provided in-kind labor and equipment for installation of data collection instruments and a large bioswale at the Haverford Reserve Park.

Volunteer helping hands from Hav-A-Rain Garden, Upper Darby Rain Gardens, Sacred Heart Academy, the Haverford School Lacrosse team and many other groups were a huge part of the success of this project. Site assessments and each garden design were completed by experienced volunteers while taking into account input from homeowners about their unique desires for their property. Once designs were finalized, professional landscapers built and shaped the gardens. Volunteers then dedicated many hours to helping plant the gardens with native plant plugs and potted shrubs. It was thanks to the work and collaboration of many that we will see more rainwater being held back from streets and stormwater drains, instead infiltrating back into the ground and replenishing groundwater. Through this grant, we also improved riparian habitat with the clearing of invasive species along a section of the Muckinipattis Creek, replacing them with 96 native trees and shrubs that will serve to better stabilize the soil, providing erosion and flood control, and provide improved wildlife habitat.



Stormwater Data Logger Installation in Haverford Target Area. The logger will measure how much stormwater is captured in this inlet.

We are deeply grateful to the great community of people that made this project successful!

Would you like to Help DCVA?

You have the power to influence how much DCVA can make an impact in 2023 (and beyond)! We are asking our community to come together to help us continue important watershed protection work with donations of much needed tools from our Amazon wish list, or by donating funds so that we can make purchases locally. We are committed to ensuring clean water, clean air, thriving wildlife, and increased quality of life in our watershed - our shared home.

We can do this, with your help! Today - and every day - you can help DCVA by:

Purchase much needed supplies from our Amazon Wish List at www.amazon.com/hz/wishlist/ls/11IYXGZ0DRA11?ref_=wl_share

Become a Member at www.DCVA.org

Join our Perennial Club with a monthly donation, starting at just \$10/month at <https://argentasoftware.com/interfaces/dcva/frmDonationForm.aspx>

Volunteer to help with our Annual Watershed Wide Cleanup by emailing admin@dcva.org, or check our events page for volunteer opportunities year round.



Thank you DCVA Community for supporting our efforts!

On Giving Tuesday 2022 and again in 2023, DCVA reached out to our community to raise funds and supplies for continued watershed protection work in 2023. That work includes cleanups, tree plantings, rain garden installations, open space protection, and educational programs for adults and youth. Our wonderful community came through with supply donations from our Amazon Wish List.

We received: 5 bypass pruning shears, 1 short heavy-duty shovel, and 5 table lamps for our Stream Watch program! We can't wait to put these new tools to work doing great things in our watershed. Donations of supplies along with generous financial donations from our members and community throughout the year will help us continue this important work to preserve and protect our local communities - Thank you!

Our wish list will remain up all year - if you'd like to contribute supplies, you can search for Darby Creek Valley Association's Amazon wish list online, or scan this QR code with a smartphone to be taken there directly.



Statement of Financial Activities

for the Twelve Months Ending December 31, 2022

REVENUE	DUES		8,342.18
	CONTRIBUTIONS	Restricted – not including watershed wide cleanup	41,611.18
		Watershed wide cleanup	8,480.45
	GRANTS	EPA Technical Assistance Grant	24,780.00
		William Penn Foundation	18,725.79
		PA Growing Greener Grant	59,456.94*
		Pennsylvania Environmental Council- Streamsmart	912.50
	PROGRAM REVENUE	Canoe race, PEC-Streamsmart, other programs	5,051.05
	INTEREST		0.00
	TOTAL REVENUE		\$167,360.09

EXPENSES	PROGRAMS & GRANTS	Watershed wide cleanup	-5,827.06
		William Penn Foundation Grant	-35,495.66
		EPA Technical Assistance Grant	-26,320.00
		PA Growing Greener Grant	-83,373.91
		Other programs – Stream Watch, canoe race and others	-3,741.88
		Printing/postage, Valley quarterly newsletter & Annual Report	-2,973.00
	CONTRIBUTIONS		-100.00
	ADMIN/OTHER	Taxes, Professional Services	-6,670.14
		Insurance	-3,667.00
		Office supplies/expenses/ other postage/ website	-3,737.64
		Rent	-6,451.95
		Bank Adjustment	-120.00
	TOTAL EXPENSES		-\$178,478.24
NET REVENUES		-\$11,118.15	

STATEMENT OF FINANCIAL STANDING FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2022

ASSETS	ASSETS	Folcroft Property	27,725.00
		Checking	43,961.25
		Vanguard	102,121.66
		TAG	200.00
	TOTAL ASSETS		\$174,007.91
	LIABILITIES	None	0.00
NET ASSETS		\$174,007.91	

*rec'd Jan 2023

Thank You to Our Supporters in 2022

Thanks to all of our individual, municipal, and corporate donors. You make the work of DCVA possible.



Grantors & Contributors

Bryans Family Fund • The Community Foundation • GreenWatch Institute • PECO
ExtremeTerrain • William Penn Foundation • Delaware County Conservation District
PA DEP (Department of Environmental Protection) • Audubon Mid-Atlantic
Delaware County Conservation District • Marshall Hamilton Fund

Program Sponsors

Marple Township • Folcroft Borough • Springfield Township • Aldan Borough • Newtown Township
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Delaware County Conservation District • Township of Darby • Norwood Borough
Lansdowne Borough • Keep PA Beautiful • Accurate Recycling Corporation • Waste Management

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Get Involved with DCVA



Become a Perennial Club Member



Please consider joining our Perennial Club by making an automatic monthly donation - starting at just \$10 per month

Your sustainable monthly gift will play a direct role in ensuring the preservation of the Darby Creek Watershed. Help protect our waterways from pollution, preserve open space, and make our watershed more climate resilient.

Become a Member to Help Make a Difference

- \$15 - Senior/Student
- \$25 - Friend
- \$50 - Supporter
- \$100 - Patron
- \$250 - Protector
- \$500 - Steward



Young Naturalists



DARBY CREEK WATERSHED 39TH ANNUAL CLEANUP APRIL 2023

Multiple Saturdays in April
9:00 am - 12:00 noon - Locations throughout the watershed
Four Counties - 123 Linear miles of stream

