



2023 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



Cheers to 40 Years!

DCVA is coming upon its 40th anniversary. Thirty-nine years ago, a group of residents wanted to clean up the trash in Darby Creek. Banding together, they sought supporters, and created what is now an influential, dedicated, and successful organization. The Annual Darby Creek clean-up is the cornerstone of our organization which brings together nearly one thousand people every year.

To commemorate our 40 years of service, DCVA is planning three events in 2024 in the south, central, and northern portions of the watershed. Our hope with these celebrations is to increase our reach to community members, grow the DCVA endowment, and identify new partnerships. It is the perfect time for these events as DCVA continues its work with Natural Lands to develop a new watershed management plan.

A major donor and a Delaware County grant fund the new watershed management plan. You will read more about the planning elements in this report, but our goal is to look at innovative ways to address downstream flooding, climate change impacts, and equity and inclusion. DCVA will seek funding sources to support the implementation of this plan, but individual supporters can make an enormous difference in grant match requirements and filling in gaps in funding.

DCVA is looking to raise an additional \$140,000 this year. This can mean 140 new members giving \$1,000 each. It could mean existing members donating at a higher level. Whatever it is, we are GRATEFUL. This may seem like a lot of money, but DCVA has grown its reach and capacity over the years from the successful clean-up of the Clearview Landfill to green infrastructure projects in Upper Darby. All this equals cleaner communities, greener spaces, and greater protections for our watershed.

Please consider how you can help. Providing a gift membership to a friend or relative is a fantastic way to grow our movement and help us reach our goal. Thank you for being a member, supporter, volunteer, and advocate. I look forward to seeing you at one of our events this year.

Hugs,
Jaclyn Rhoads



Governance Committee Report

Tim Denny • Co-chair of DCVA Governance Committee

The Governance Committee continued to work on updating our bylaws. Efforts are also underway to have the bylaws reviewed and rated by Charity Navigator or a similar agency. In addition, the committee finalized the Responsibilities of Board Members to help clarify expectations of new and veteran members of the Board of Directors.

A Conflict-of-Interest form was created for all board members to sign, to provide guidance on any financial issues that may arise. The committee was also tasked with the duties of the Nominating Committee to find new, or retain veteran, members for the Board of Directors.

39th Annual Watershed Wide Cleanup Brings Together Hundreds of Volunteers Working for Cleaner Communities

Aurora Dizel • Watershed Conservation Manager

Once again, the Darby Creek Valley Association community came out during the month of April in full force to clean up our neighborhoods and waterways. More than 500 volunteers tackled 32 clean-up sites throughout the watershed, picking up over 5.5 tons of trash, tires, shopping carts and other debris. Not to be forgotten in this extraordinary achievement is the powerful sense of connection to fellow community members and our shared environment that grows from volunteering for a cause that immediately benefits the entire community, making it a cleaner, healthier, and more beautiful place to live, work and play. We are deeply indebted to the many volunteers, sponsors, and municipalities that worked together to make this happen – we could not make this incredible impact without your dedication and support

– Thank You!



39th Annual Watershed Wide Cleanup Brings Together Hundreds of Volunteers Working for Cleaner Communities



Litter is a huge issue in urbanized areas such as ours, with single use plastics making up a large portion of trash collected. As more individuals take steps to lower their footprint and several municipalities take action through single-use plastic bag and plastic straw bans, we are given hope that our clean ups will someday become unnecessary. For now, we are incredibly grateful for the dedicated, thoughtful, caring members of the Darby Creek watershed community that do the work to beautify and protect our communities for people and wildlife. Want to get involved next year? We are always looking for more volunteer site captains, volunteers, and tips on sites that need attention. Send inquiries to Kyle at admin@dcva.org or subscribe to our monthly e-newsletter (on our website click on "Join Us" then "sign up for emails").



Report on the Darby Creek Rivers Conservation Master Plan (RCMP)

by Rick Tralies, Senior Director of Planning, Natural Lands

Rivers conservation plans are developed for watersheds across the country. These plans often contain extensive scientific and engineering analyses focused on the fate of water throughout a watershed including infiltration and surface flow. The Darby Creek Rivers Conservation Master Plan currently being devised contains a study of how residents throughout the watershed are impacted by the Darby Creek and its tributaries. While the study of the impact of flooding is an obvious and important aspect of this plan, the positive ways that people are impacted by creeks and rivers, such as by providing opportunities for fishing, kayaking, hiking, are being carefully considered. It is intended to be a useable plan for individuals, landowners, and government entities.



Plan Elements: Throughout 2023, Natural Lands staff worked with DCVA's planning Task Force to develop the plan goals, a vision, and a mission statement, to guide the early going in shaping the plan.

Ordinance Assessments: Important early work in the plan development has been studying existing municipal ordinances within the watershed. Natural Lands staff reviewed a total of 24 Zoning and Subdivision and Land Development Ordinances across 12 municipalities and shared preliminary findings with the Task Force. The features examined in the ordinances included, for example, municipal standards for limits on impervious surface, street width, parking area, and tree cutting. The results showed a wide range of ordinance qualities, from excellent to non-existent. The findings will inform further

work including writing sample ordinance sections which municipalities can use to improve their existing ordinances.

Map of Important Places: The Task Force members and the public have added to an online map, which shows 41 locations which demonstrate examples of excellent stormwater management, exciting opportunities, good ongoing work and, in some cases, lessons to be learned (<https://tinyurl.com/MapImpPlaces>). Sites on the map include locations such as parks, shopping centers, developments, new green stormwater management of parking lots, and retention and detention basins that require repair or redesign.

Site Visits: Natural Lands staff, occasionally with Task Force members, have visited many distinct sites and toured much of the watershed. A site tour in May included the northernmost to the nearly southernmost stretches of the watershed, visiting homeowner association basins, private yards, semi-public spaces like cemeteries and important public land including many parks along Darby Creek. The tour inspired creative thinking about the direction of the final plan, considering issues and opportunities present in the watershed. We found sites throughout the watershed where watershed management best practices are happening, and places where we (the public, non-profit organizations, and government entities) can make a difference.

Key Person Interviews: Thus far the team has identified approximately 25 people who could inform the project through Key Person Interviews. Key Person interviews are frequently a feature of Rivers Conservation Plans. The list includes people from across the watershed, with a range of knowledge, expertise and lived experiences. Key Person Interviews will commence in early 2024. These volunteers are all individuals who have something to contribute because of their personal experience with the watershed-positive (e.g., anglers, conservationists) or negative (e.g., flooded home), or people with expertise such as scientists or members of municipality volunteer boards. Government agency (e.g., DEP, DCNR) personnel are also interviewed.

Public Outreach: While the planned, extensive public outreach campaign has not formally begun, Natural Lands staff and task force members have had the opportunity to interact, and more importantly listen to, the public at a handful of related meetings. Natural Lands presented the project to DCVA Members at their 2023 annual meeting and collected their feedback through an online survey. DCVA members were asked about where they live, how they interact with creeks and streams, and what they

Report on the Darby Creek Rivers Conservation Master Plan (RCMP)

the single biggest issue facing the watershed. Of the 12 respondents, most thought that flooding was the biggest issue. The most common answer to how to solve the problem was green landscape improvements such as more trees and rain gardens. In November 2023, Natural Lands presented the DCVA Rivers Conservation Project at an Eastwick Friends & Neighbors Coalition meeting, which afforded an opportunity to hear firsthand, area residents' concerns and experiences with flood damage and safety.

Natural Lands has concurrently worked with Delaware County to prepare a master plan for the new county park at the former Don Guanella School site. Small Darby Creek tributaries and wetlands on the park site feed the main stem, which flows through nearby open space, separated from the park by Route 476. Public comments and other public input gathered during that project work will also inform the Darby Creek plan.

Another aspect of public engagement will be circulating a more extensive and advanced online questionnaire using SurveyMonkey, refined with the help of feedback from "mini surveys" shared with the Task Force, DCVA members and others. This survey is in development. It too will ask respondents what they believe are the big issues in the watershed. It might also focus on what issues are particular to the neighborhood in which the respondent lives.

Mapping and Data Analysis: Natural Lands has produced a variety of maps to inventory elements within the watershed, highlight watershed wide themes and inform discussions about impervious surfaces, open land, development and redevelopment, riparian buffers, land stewardship and more. The staff has also produced accompanying data related to floodplains and the quantity of buildings existing in the floodplains. This data can be used to inform many parts of the plan, potentially including recommendations related to ordinance amendments, open space conservation, riparian buffer plantings, or higher-level programs for flood buyouts and flood insurance rate abatements. It is interesting that research shows that the level of impervious surface has not increased very much over the last several decades in the Darby Creek watershed, reinforcing public perception that flooding has plagued the watershed for decades.

Precedent Studies: Natural Lands has also studied precedents in other communities, ranging from municipal enrollments in FEMA programs, green stormwater infrastructure improvements and massive rebuilding and grey water improvement projects.

Related Project: Through the Darby Creek planning work, Natural Lands has become more familiar with the watershed and gained understanding of its variety of communities. This greater understanding has enabled Natural Lands to pursue funding from the Foundation for Delaware County. That leveraged funding is enabling additional work with underserved communities in the watershed, to help them improve their ordinances and their parks to meaningfully reduce flooding, better manage stormwater and improve the quality of life.

Additional Leveraged Funding: The William Penn Foundation is currently reassessing their approach to the Delaware River Watershed. However, they intend to keep a focus on urban areas, flooding, and water quality in and near Philadelphia. Knowing about their newly aligned vision, Natural Lands requested and received an additional \$25,000 for the RCMP for use in early 2024, with more funding expected to be delivered in late 2024.



Darby Creek Community Science Monitoring Project Update

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

The Darby and Cobbs Creek watershed is a complex and fascinating ecosystem that has been heavily impacted by a long history of human activity. Since 2021, the Darby Creek Community Science Monitoring Program (DCCS) has been working to understand how land development, industry, and day-to-day human life has influenced the health of this system.

The program started with two dedicated volunteers collecting monthly water chemistry data and has grown steadily as more residents of the watershed have joined the study. Today, there are 33 active volunteers who visit 27 sites throughout Darby Creek and its tributaries, including Cobbs Creek (map 1). Volunteers visit their sites every four weeks and collect water chemistry data, including water temperature, conductivity, and chloride measurements.

Water temperature is an important water chemistry measurement because it strongly affects the amount of available oxygen in the stream. As water temperatures rise, there is less oxygen in the water, stressing wildlife.



Conductivity measures water's ability to carry an electric current and is often used to show the impact of human action on the landscape; pure water is a very poor conductor of electricity, while water with impurities or dissolved substances have higher conductivity. The more development on the landscape, the higher the conductivity in streams will become over time. In the winter, the application of road salt on driveways, roads, and sidewalks drives higher levels of conductivity in waterways - while salt is not the only driver of higher conductivity, it is the major contributor in the region. Because of this, volunteers also measure chloride levels.

Chloride is one of the ions that forms when road salt dissolves in water and consequently indicates the presence of salt in the water. Chloride most frequently enters waterways as rain or snow dissolves road salt and flows into nearby streams or ponds. The wildlife living in Darby Creek and its tributaries evolved to live in freshwater and are not adapted to withstand salty conditions.

Additionally, salt often is not filtered out at water treatment plants, so the more salt that enters streams, the more salt is in our tap water.

Volunteers measure the amount of chloride in the water alongside conductivity to see if there is a relationship between the two values. As the region is impacted by winter storms which bring snow and ice, the DCCS program will be collecting information about how road salt application to driveways, sidewalks and roads is impacting sensitive stream environments.

When all data is collected and examined, it helps to shine a light on the health and function of this amazing waterway: while there are areas that are heavily impacted by landscape development, there are also sections of stream that are highly resilient! Beyond water chemistry, volunteers have also

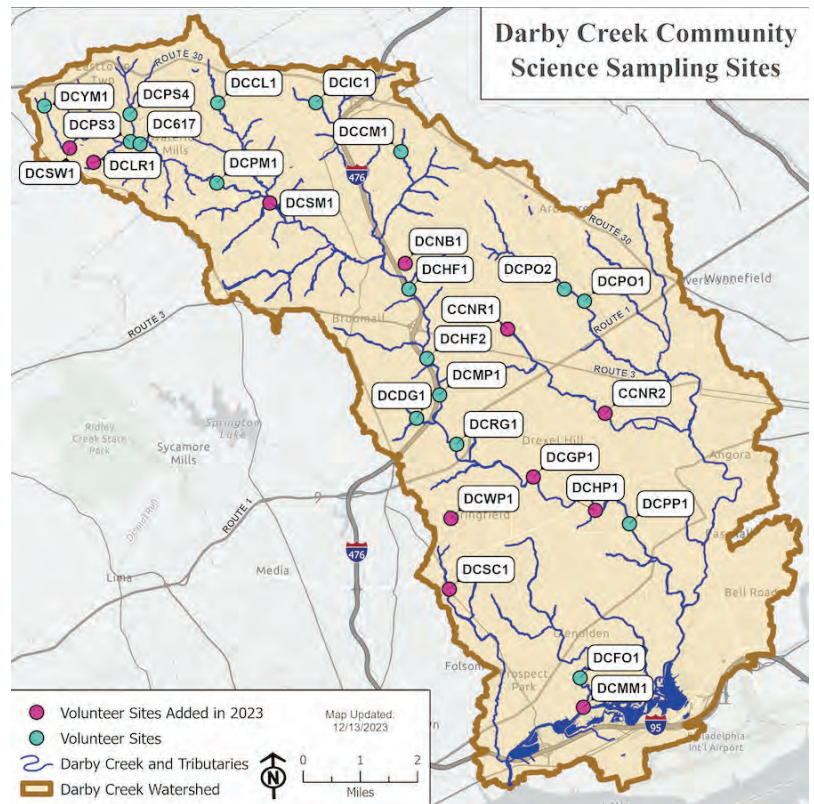


Darby Creek Community Science Monitoring Project Update

documented incredible wildlife experiences, including the discovery of freshwater mussels, encounters with beavers, and sightings of birds including eagles, herons, and waterfowl. As volunteers visit and revisit the DCCS sample sites, their connection to the waterway grows, providing an even deeper insight into a fascinating ecosystem.

The DCCS Program is a collaborative project between Darby Creek Valley Association, Willistown Conservation Trust, and Stroud Water Research Center. Together, we are working to study, and share about, the health of this critical waterway. You can learn more about the program and the trends that we are seeing in this critical watershed at the new DCCS website: DarbyCreekCommunityScience.com

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



Upper Darby Rain Gardens in 2023

Steve Lockard, Michelle Smith, and Jamie Anderson • DCVA Board Members

During 2023 Upper Darby Rain Gardens installed seven rain gardens in the Upper Darby area. Both large and small gardens were constructed to limit stormwater runoff into the Darby Creek and Naylor's Run (a Darby tributary) watersheds.

We assessed numerous properties in the runup to the spring and fall planting seasons to determine the suitability and probably of success of a potential site. We use a rating system (or rubric) to be as objective as possible. This rubric is designed to determine which properties can remove the most stormwater from the stormwater system, as efficiently as possible. We then approach the homeowners to get their buy in and their input on exact location.

Next, we arrange a joint meeting among us, the homeowner, and a landscaper. We continue to partner with Duranti Landscaping for the heavy work of removing the turf, excavating, tilling, leveling and berming the soil around the chosen location. At some homes, Duranti has modified rain gutters and downspouts to redirect the stormwater runoff from roof areas into the rain garden.

We submit a contract to the homeowners, which states their responsibilities which include helping plant the garden, maintenance, and their share of the cost. At a design visit with the homeowner, we shape the square footage into something that is both functional and eye pleasing, and we discuss and select suitable plants based on color, blooming period, plant height and the amount of sun available at the site.

Once the landscaper completes the heavy work, we, with the sweat equity of the homeowners and other volunteers, embed the plant plugs suitable for a rain garden.



Excavation, berming and pop ups

In addition, we make continued efforts to stay in touch with previous recipients of rain gardens to solve any problems that might arise, to add replacement plugs as needed, and to visit any new rain gardens to support the homeowners. We led a walking tour of five rain gardens in Drexel Hill this past summer and intend to host additional walks this coming year.

2023 was a successful year for us. We have now installed twenty-seven rain gardens in Upper Darby. We look forward to 2024!

In some cases, the pitch or slope of the land suggests that two tiers for the rain garden with the top one filling and spilling over into a lower tier will provide the best benefit. Some photos of this type of garden are provided below



Photos of a two tiered garden with a long, large spillover



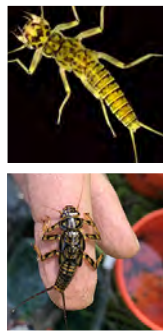
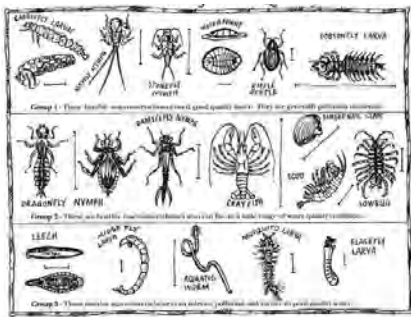
2023 Stream Watch Program Annual Report

Alan Samel • DCVA First Vice President

The Stream Watch program has two components: the spring streamside sampling and the winter Insect Identification Workshop. The output from this annual program is an assessment of water quality at each site based on the aquatic invertebrates collected and identified. The common name for the group of animals we collect is macroinvertebrates because they are relatively big (macro), and they are animals without backbones. The principal behind the assessment is that some macroinvertebrates are sensitive to poor water quality, whereas others can tolerate it. The mathematical metric calculated for the graph that accompanies this report is based on the numbers of sensitive and tolerant types. The macroinvertebrates collected include insects, worms, crustaceans (crayfish, sowbugs, and scuds), and mollusks (clams and snails). It's hard to believe that we have been doing this for over 20 years.

The annual Stream Watch stream samples were collected April 8, 2023. We took 10 samples: 2 from each of 5 sites up and down Darby Creek. This is possible due to the small army of volunteers who helped make this a great day. What a day! The stream was high and running fast. It rained hard a few days earlier. While the stream levels were lower than peak height, the Darby was still running strong. Nonetheless, we were able to take all the samples we needed! Our day started at a cool 45°F and was overcast with a little rain. Our day finished off at a little more comfortable 55°F...still overcast. Many thanks to the 7 brave and committed people who made this day a success!

Biotic Index of Water Quality



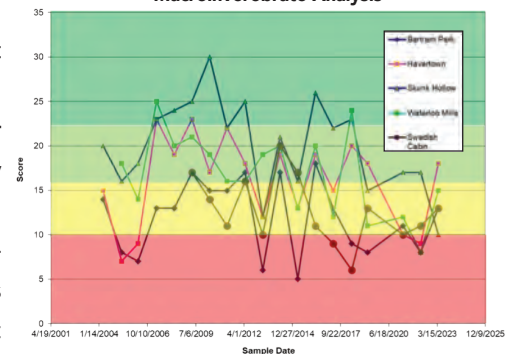
The insects and other small invertebrates we collected provided a snapshot of the health of Darby Creek. This was the 17th year of intense sample collections and identifications. From this long-term sampling, a trend of the stream health at each site has been determined. Each year we compare our findings to 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 on January 27, 2024 at the Haverford Reserve. We had a great turnout, more than 30 people! We

were able to process all the samples in record time! Using the numbers of sensitive and tolerant types that everyone identified, the metric of water quality was calculated and added to the attached graph.

The water quality results are always a good news-bad news story. The good news is that 4 of the 5 sites did not see a drop in water quality. The bad news is that 1 of the 5 sites, historically our site with the highest water quality, Skunk Hollow, saw a drop in water quality. However, over the course of the entire Stream Watch program one water quality reading from each site does not indicate that a change in water quality has really occurred. This is the challenge of monitoring a stream in a heavy suburban-urban watershed. Sometimes the cause of the data change is not readily apparent. For example, the 2023 samples were taken a short time after 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; no one really knows how far. But this scouring plays a major role in the number of samples taken, as we saw when looking at the samples, we took on that day. This is why one sample date cannot be used as an overall assessment of the water quality at the sampling point. 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. While it is concerning that the water quality reading at Skunk Hollow dropped so much, it is also nice to see the water quality readings at the other sites increase. We will know more next year...maybe.

Macroinvertebrate Analysis



The upcoming stream sample date will be in April 2024. Stay tuned for the exact date. We will continue to sample from our 5 established sites. If you are interested in being involved with the Stream Watch program; Stream Watch samples and Insect Identification Workshop, please contact me at alan.samel@gmail.com.

Highlights from Engaging Educational Programs Featuring Local Experts

Aurora Dizel • DCVA Watershed Conservation Manager

DCVA is incredibly fortunate to work with several local organizations that share our passion for environmental conservation. This past year we were so grateful to have them spend time sharing their expertise with us, so that we can be better stewards of the Darby Creek watershed and beyond.

In the spring the Delco Anglers welcomed participants in the DCVA Young Naturalists Program to learn about freshwater fish, the trout hatchery at Ridley Creek State Park, and what we can do to help protect their habitat. We had the opportunity to help stock the local creek with brook trout, Pennsylvania's only native trout.



In 2021 and 2022 DCVA joined Audubon Mid-Atlantic's efforts to restore the riparian areas along Cobbs Creek in the Whitby Meadows area through trash cleanup and native plantings, supporting an oasis for wildlife and the surrounding communities, while also supporting stormwater resiliency for Cobbs Creek. On World Migratory Bird Day 2023 we came back to celebrate our efforts and deepen our connections to its wildlife with a bird walk led by Audubon's Robin Irizarry. This was a wonderful opportunity to view and get to know the birds that call this area home.



Highlights from Engaging Educational Programs Featuring Local Experts



In June DCVA members and friends went on hike to explore trees in the woods of the former Don Guanella School property (saved from development and soon to be renamed as one of Delaware County's largest public parks) with Sam Bucciarelli from the Philadelphia Mycology Club. Sam is a land management professional with a passion for ecology, especially as it pertains to fungi and the role they play in helping our ecosystems thrive. Sam showed us that becoming more knowledgeable about trees can help us better understand what fungi we might find nearby!



In October, in anticipation of Bat Week, DCVA invited Steph Stronsick and PA Bat Rescue to share their deep knowledge of bat species, the importance of bats, their natural history and environmental impacts, and how our communities can help support their survival. We even had the chance to meet two of their non-releasable education bats!



Our hope is that bringing these programs to the DCVA community inspires each of us to connect with our local wildlife and natural environment in a variety of meaningful ways. The more we learn about our watershed, the more deeply committed we are to preserving and protecting it.

Lower Darby Creek Area (LDCA) Superfund Site 2023 Update

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

The LDCA site consists of four distinct work areas. Each area follows a different investigation timeline and has different cleanup goals. 2023 progress in each area is presented below. EnviroAce is DCVA's technical assistance grant (TAG) consultant for the Superfund cleanup.

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

Clearview Landfill is the work area of the Lower Darby Creek Superfund Site that is farthest along the cleanup pathway. 2023 progress includes:

- Installed landfill gas vents
- Continued stabilization of western bank of Darby Creek
- Completion of landfill cap and recreation path paving
- Drone flights for aerial survey of vegetation and to locate erosion
- City of Philadelphia proposed temporary flood barrier evaluation

Streambank stabilization and final site restoration work will continue into 2024. EPA plans to hold a completion ceremony in May 2024. Right are two EPA provided slides showing the location and look of the recreational Path between 80th and 84th Streets. The path consists of 2,400 linear feet of a 12 feet wide path with lighting (in 2024) and benches.



The evapotranspiration cover (ET cover) includes 27 landfill gas vents. These are vertical, capped pipes extending through the landfill cover and connected to stone filled borings in landfill. Vent systems will collect any accumulating landfill gases and dissipate them.



EPA evaluated the potential impacts to the Clearview Landfill of three proposed temporary flood barrier locations being evaluated by the City of Philadelphia. The EPA model indicated that one alignment showed potential success at protecting Eastwick from larger storm ("100-year") flooding.

Clearview Landfill Associated Groundwater (OU3)

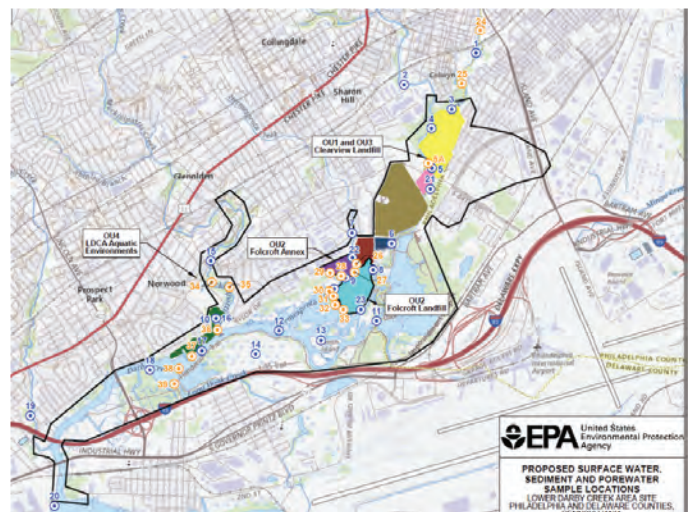
This work area includes contamination in groundwater, sediment, and surface water around Clearview Landfill. Two significant activities are underway: sampling events and a pilot study.

Lower Darby Creek Area (LDCA) Superfund Site 2023 Update

Groundwater (GW) and Surface Water (SW) Sampling

The OU3 Remedial Investigation identified perfluoroalkyl substances (PFAS or 'forever chemicals') in porewater located within creek bed sediments. These PFAS compounds are attributable at least in part to the Clearview Landfill. The identification of PFAS compounds in porewater, at concentrations well above the current EPA Regional Screening Levels, identifies the Clearview Landfill as a potential source releasing these contaminants to Darby and Cobbs Creeks. EPA has conducted sampling to evaluate PFAS and other chemical concentrations in Clearview Groundwater and other locations at the site. Three rounds of Groundwater data were collected. The sampling focused on a PFAS plume in ground and surface water. EPA finetuned sampling locations, based on higher concentrations of PFAS compounds near Folcroft Landfill and nearby tributaries.

It is known that Clearview Landfill is a source of PFAS. At least one additional source, not related to Clearview Landfill, is likely, as there is a significant increase in PFAS chemicals found between Hermesprota and the marsh. There is another smaller increase located on Muckinpattis Creek. The sources have not been identified, but there are several areas that are planned for investigation. EPA collected samples to evaluate downstream PFAS's. A technical memo will be prepared once all data is collected and analyzed. 2023 Sampling locations are shown to the right.



OU-3 Pilot Study to Evaluate Cleanup Technologies

EPA seeks to develop a Clearview Landfill groundwater "Interim Remedy" with a goal to contain OU3 Contaminants in the shallow groundwater at the edge of the landfill waste boundary. To work towards that goal, the EPA has begun a pilot project to assess what in-situ (in the ground) technologies could be effective in treating the multiple types of contaminants.

The pilot testing, which includes a lab evaluation of technologies (design phase), is in progress. The build phase (planned for 2025) will involve digging a trench near the landfill edge that can intercept a portion of the contaminated groundwater moving out from the landfill. A multi layered barrier of materials that have been targeted to the site's specific chemicals will be positioned in that trench. Each material would absorb, bind, or degrade specific types of contaminants. The combination of materials should reduce contaminant concentrations in groundwater as it flows through the barrier.

Data gathered from the multiyear pilot study will help assess which materials work well and will be the basis for development of full-scale treatment plan. EPA is teaming with experts from USGS, Stevens Institute of Technology, New Jersey Institute of Technology (NJIT), and eMinus to evaluate treatment technologies. EPA is also conducting groundwater modelling of Clearview Landfill area to establish potential location to install the future reactive barrier.

The TAG and community members asked EPA to provide a technical advisor to assist with review of the pilot project and other specific tasks. This advisor will come on board in 2024.

Continues on page16

Lower Darby Creek Area (LDCA) Superfund Site 2023 Update

Continued from page 15

Folcroft Landfill and Annex (OU2)

The Folcroft Landfill investigation is being led by the group representing the potentially responsible parties (PRPs). EPA has reviewed a feasibility study (FS) report prepared by the PRPs. The FS report evaluates alternative remedial activities for the Folcroft Landfill. The landfill contamination will be addressed with a landfill cover and streambank stabilization. Several groundwater treatment alternatives addressing a specific area were reviewed. Technologies reviewed include chemical oxidation and enhanced bioremediation. The groundwater would be either treated in place or via a pumping and treatment system. The PRPs also evaluated "monitored natural attenuation" meaning no enhanced treatment and relying on natural processes, such as microbial degradation, to reduce contaminant concentrations over time.

Comments from EPA are expected soon.

Lower Darby Creek Aquatic Environment (OU4)

As part of the sampling planning work discussed for OU3, the DCVA TAG encouraged EPA to begin to address the data gaps present in the OU4 impact areas. EPA is conducting long-term monitoring and is reviewing a flood sediment transport model to aid in evaluation contaminate deposition.

A Big Thank You!

Thank You to Dick Carroll

A big thank you to Dick Carroll, DCVA member since 1995, and DCVA treasurer from 2002 until 2023. Dick's financial management has been a fantastic asset to the organization. For several years, Dick served as treasurer of both DCVA and the Friends of the Heinz's Refuge. As seen in the photo on the right, Dick has also been active in other DCVA programs as well. We thank Dick as he retires from his position as treasurer, and hope that as he enjoys relinquishing that responsibility, that he will continue to remain an engaged member of DCVA.

Again, Thank you!



Photo of Jan and John Haigis, Robin Mann and Dick Carroll at the canoe and kayak race.

Meet our Administrative Team



Aurora Dizel - Watershed Conservation Manager

Aurora began volunteering with DCVA's Stream Watch in 2017 to learn more about the role aquatic insects played in telling the story of our local water quality. It wasn't long before she began sharing her passion for environmental education by serving as DCVA's volunteer Youth Education Coordinator, developing and leading nature-based programs for children. In February 2020 Aurora joined DCVA's staff, first as an Administrative Specialist providing administrative and program support, then taking on additional responsibilities as Administrative and Operations Manager in 2021. During this time, she also completed the Penn State Extension Master Watershed Steward training program. Beginning in 2024 Aurora's new role with DCVA will be Watershed Conservation Manager, with a focus on managing our Community Science, StreamSmart, and educational programs. In her free time Aurora enjoys reading, gardening, volunteering with her children's schools, and going on outdoor adventures with her husband and two daughters.

Prior to working with DCVA, Aurora served 4 years on Haverford Township's Environmental Advisory Committee and was the lead facilitator of several environmental education programs, including a weekly 4-hour nature immersion program for homeschooling youth aged 4-10, and preschool-aged programs for Haverford Township and the Creative Clubhouse. Prior to having children and shifting gears into environmental work, she spent six years working in Corporate Banking at PNC Bank. Aurora has a B.S. in Finance and minor in Economics from the University of Pittsburgh. She has been finding refuge in nature since following her grandmother around her gardens as a little girl.

Kyle Gaumann - Operations Manager

Meet Kyle Gaumann, a dedicated community advocate and nature enthusiast who has always had a strong desire to serve in the communities where he lives. Kyle is making a difference as the Volunteer and Event Coordinator for Haverford Township Parks and Recreation, and he's a valuable member of the Upper Darby Environmental Advisory Committee.

Originally from Havertown, Pennsylvania, Kyle now resides in Upper Darby, bringing a local touch to his community involvement. A graduate of Temple University, he combines education with hands-on experience, actively contributing to the growth and welfare of the community.

Outside of his community roles, Kyle finds joy in diverse interests. Whether immersed in a good book, exploring nature through hiking, or experimenting in the kitchen, he brings his passion for a sustainable lifestyle to life. Engaging in projects like tree planting and trash pickups, Kyle is not just a resident; he's dedicated to shaping the positive evolution of his community.



Jack McCausland - Outreach Associate



Jack joined the Darby Creek Valley Association in August of this year after previously having worked at the Pinelands Preservation Alliance in the role of Water Outreach Specialist. Jack attended Drexel University and graduated with a major in International Business and a minor in Environmental Studies, having completed a five-year program with 18 months of professional work experience. During that time, Jack discovered a love for the natural world through frequent excursions in Philadelphia's Fairmount Park and decided to pursue a career in protecting the earth's natural resources. Jack is looking forward to planning the 40th Anniversary events for DCVA as well as the annual watershed clean up in the Spring of 2024. When not busy at work, Jack can be found biking, running, or hiking in nature. He is also an avid photographer and traveler. Welcome to Jack!!

Statement of Financial Activities

for the Twelve Months Ending December 31, 2023

REVENUE	DUES		\$5808.67
	CONTRIBUTIONS	Not including watershed wide cleanup	\$21,875.66
		Watershed wide cleanup	\$5829.40
	GRANTS	William Penn Foundation	\$19,160.78
			18,725.79
		Restricted Grants	\$102,656.94
		Pennsylvania Environmental Council- Streamsmart	\$4,192.39
	PROGRAM REVENUE	Canoe race, PEC-Streamsmart, other programs	\$1710.41
	INTEREST		0.00
TOTAL REVENUE		\$161,234.25	

EXPENSES	PROGRAMS & GRANTS	Watershed wide cleanup	\$2,382.00
		William Penn Foundation Grant	\$25,628.66
		EPA Technical Assistance Grant	\$7,548.00
		PA Growing Greener Grant	\$42,923.01
		Canoe Race	\$60.00
		Printing/postage, Valley quarterly newsletter & Annual Report	\$2,698.00
		Pennsylvania Environmental Council- Streamsmart	\$559.72
	CONTRIBUTIONS		\$250.00
	ADMIN/OTHER	Taxes, Professional Services	\$14,178.36
		Insurance	\$4,603.00
		Office supplies/expenses/ other postage/ website	\$6421.23
		Rent	\$6,565.67
		Bank Adjustment	\$519.94
TOTAL EXPENSES		\$138,609.79	
NET REVENUES		\$22,624.46	

STATEMENT OF FINANCIAL STANDING FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2023

ASSETS	Folcroft Property	-----
	Checking	\$18,585.00
	Vanguard	\$165,881.00
	TAG	200.00
	TOTAL ASSETS	\$184,666.00
	LIABILITIES	None
NET ASSETS		\$184,666.00

Thank You to Our Supporters in 2023

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

Granting Agencies

Bryans Family Fund
Delaware County Conservation District
Hiller Giving Fund
Keep PA Beautiful
National Fish and Wildlife Foundation
PA DEP Growing Greener
Pennsylvania Horticultural Society (PHS) - TreeVitalize
The Community's Foundation
William Penn Foundation

Clean up Sponsors

Aldan Borough
Aqua / The Essential Foundation
Darby Borough
Delaware County Conservation District
Eastern Delaware County Stormwater Collaborative
Easttown Township
Folcroft Borough
Glenolden Borough
Haverford Township
Keep PA Beautiful
Lansdowne Borough
Marple Township
Newtown Township
Norwood Borough
Radnor Township
Sierra Club
Township of Darby
Upper Darby Township
Visit Delco
Waste Management
Yeadon Borough

Thank You to the Donors to The Darby Creek Valley Association 2023

Amanda Hankerson • AmazonSmile • Barbara Yiengst • Billie Butler • Bob and Kate Goddard Doms • Bright Funds • Charles J Cella
Crum Creek Neighbors • David Lunden • David Nichols • Debbie Tascone • Francis DeRoos • Glenn Elliott • Gregory Vitali • Harry Kalish
Heather Hill • Jack Harrington • Joanne Delia • Kathleen Cannon • Kevin Dougherty • Kyra Raphaelidis • Maureen McMahon • Michelle Smith
Mike Brenner • Pascale Davidson • Rafael Khachaturian • Rosemary Hamm • S. Clarkson • Susan Lea • Tim Denny • John Ferr • Sarah Ryan

Thank You to the Members of The Darby Creek Valley Association 2023

Aileen McHugh	Carol Armstrong	David Eldredge	Jacqueline Salmon	Kristin Scott	Matt Morse	Paula Richards	Ron MacGillivray	Tim Devaney
Alan Samel	Carol Brandt	David Lunden	James Watts	Lauren Braun	Melisa Romano	Peter Leahy	Rosemary Kesling	Tom Hamilton
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Cara Rash	David Bennett	Harry Kalish	Kathleen Mahoney	Mary Rooney	Pam Kosty	Rob Trumbull	Thomas Little	
Carl DuPoldt	David Cohen	Helen Marcarelli	Kathryn Goddard Doms	Mary Sandone	Paul Schmidt	Rocco Masticolo	Tilo Stahl	

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.

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.



Get Involved with DCVA

Would you like to Help DCVA?

You have the power to influence how much DCVA can make an impact in 2024 (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.



Become a Member to Help Make a Difference

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



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.

to donate, join, or sign up for the cleanup please go to www.dcva.org

Naturalists



DARBY CREEK WATERSHED 40TH ANNUAL CLEANUP APRIL 2024

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

