

The President's Pen

By Jaclyn Rhoads



## **Unexpected Victory for the Watershed**



The residents of Marple Township Archdiocese surrounding the property known as Don Guanella have fought for years to protect 185 acres threatened with development. Darby Creek Valley Association, Save Marple Greenspace, Delaware RiverKeeper Network, and Clean Air Council have supported the residents in their

battle to preserve their community from further unnecessary development and traffic. The residents were awarded with a significant victory when Delaware County Council recently used the power of eminent domain to condemn the property and preserve and retain the open space on the property.

This protection is critical for maintaining the water quality in the unnamed tributary of the Whetstone Run which flows through the 185 acre Don Guanella property. Maintaining the open space will also prevent additional flooding downstream into communities that suffer the most from upstream development including Darby and Eastwick community in Philadelphia. Communities often forget about how their actions have far reaching impact.

The decision made by Delaware County Council is historical! The Council will forever be remembered for their bold and

courageous action to support the residents in Marple and further downstream. It is this type of support for the community and the environment that should be replicated far and wide. Many opportunities were presented to the Archdiocese to protect the open space, but they failed to be a leader when leadership was needed. The County Council took control before the property was gone forever.

Congrats to everyone and I encourage all of you to send a big thank you to the Council members.



Rain gardens are gardens constructed in a small depression in which water tolerant plants and shrubs are planted. These gardens are designed to temporarily hold rainwater and allow it to soak into the ground from high flow areas such as the end of a rain gutter. They help to slowly release stormwater rather than allowing it to rush into creeks and contribute to erosion and flooding. A further benefit

of rain gardens is that they are effective in removing up nutrients, chemical pollutants, and sediments from the water they trap. Rain gardens also provide habitat for pollinating insects, birds, and other animals. Some rain gardens are planted solely or mostly with native plants- so much the better. Rain gardens can be a beautiful and functional addition to both private and commercial properties. In 2020, a small group of residents led by Jamie Anderson started to install rain gardens in Upper Darby to take up rainwater and beautify the Steve Lockard and Michelle Smith eventually community. took over the leadership of the Upper Darby Rain Garden (UDRG) group, orchestrating installations in spring 2021. Rain gardens were installed on private residencies at 1032 Morgan Avenue in Drexel Hill, 1780 Greenhill Rd. in Lansdowne and 1122 Wynnbrook in Secane. Within the past nine months, the UDRG group has built seven rain gardens with funding supplied by the Darby Creek Valley Association and supplemented by the Pennsylvania Resource Council (PRC). Further, six properties have been assessed for installations in the fall; three of these properties are very good candidates for rain garden installation.



The work in Spring 2021 was made lighter by an influx of volunteers for which we are grateful. Members of the Upper Darby Tree Tenders group came out in force, as did another



fledgling rain garden group, the Tredyffrin/Easttown (TE) group. The latter organization has been learning the basics of the construction, including the stages of rain garden construction such as digging, tilling, leveling, berming, and planting plugs. They are also learning all of the before and after construction activities-including assessing properties for appropriateness, ordering plants, moving mulch and using heavy equipment (the tiller). The out-of-town volunteers from TE even experienced a heavy equipment failure as our tiller's transmission broke down. The collection of volunteers proved resourceful enough to complete the rain garden construction with a rented tiller on the last two installations. We then had to reschedule a "build", due to a heavy rain, for an evening installation. All in a day's work.



## New Statewide Watershed-Friendly Property Certification Encourages Everyone to Do Their Part

Do you have a rain garden, rain barrel, or native plants on your property? Are you conscientious about limiting pollution from herbicides, pesticides, sediment and salt/ice-melt products? Those are some of the many steps Pennsylvania residents can take towards becoming recognized in a new program launched by Penn State Extension Master Watershed Stewards and The Nurture Nature Center that designates qualifying properties as "watershed-friendly". Perhaps you are already well on your way, or maybe you have some work to do!

Do you have a rain garden, rain barrel, or native plants on your property?

Certification is as easy as completing an online application on Nurture Nature Center's website. There is a recorded webinar, additional information and resources provided throughout the process to help guide you if you have questions. If your application meets the requirements, you will receive an email with a certificate verifying that your landscape is watershed-friendly and will become eligible for a Watershed-Friendly Property yard sign. A yard sign will show your commitment to making a difference, improving the quality of water resources, and maintaining habitat for wildlife and pollinators in our watershed - and maybe just inspire your neighbors to do the same!

Certification is open to all residents, schools, places of worship, municipal buildings, small businesses, and others who manage properties between 0.1 and 15 acres. If you apply and do not qualify the first time around, don't worry - you can always make changes to your property and apply again. Each and every step no matter how big or small - towards becoming certified is making a positive impact!

Visit https://nurturenaturecenter.org/programs/community/wfp-cert/ to get started.



DCVA was thrilled to be able to hold our annual spring cleanup in 2021 because the usual watershed wide cleanup was cancelled in 2020 due to the COVID-19 pandemic. While we still held smaller, local cleanups over many weekends last fall in 2020, this was our first chance to get back out for one big day of collective cleanup action all across the watershed.





There's just something wonderful about knowing that hundreds of volunteers are gathering on the same morning in April, spread across dozens of locations throughout the watershed. Every team shares the common goal of cleaner, healthier and more beautiful communities along the Darby Creek, Cobbs Creek, and the many other tributaries that make up the entire watershed.



## 37th Annual Watershed Wide Cleanup a Success



This year DCVA volunteers collected approximately 48,000 pounds (that's 24 tons) of debris from in and around our waterways - including 270 tires, construction material, metal, plastics, and innumerable single use plastics, soda bottles, cans, and food wrappers. DCVA is indebted to community volunteers, leaders, partners and sponsors; by working together throughout the watershed, a huge impact was made and we proved that when we work together, we can make a difference!







The Philadelphia Hiking Meetup leads both one-way hikes and bike rides throughout the greater Philadelphia area focusing on exploring the Darby Creek watershed. Experienced guides leads these tours of the historic and natural treasures of the watershed and the region. The Philadelphia Hiking Meetup group just finished its recent Bike Series with a July 4 bike ride to the festivities at Valley Forge National Park. A July 11 hike also occurred recently- it started in Ardmore and was lots of fun.



Future hikes - Future Headwaters to Tidewater Hikes will be announced. Please see DCVA.org & Meetup.com@phillyhikes/ for more information and to sign up for these educational and fun opportunities.

#### **Upcoming Event Schedule:**

Sunday July 25- The second summer hike is coming up on Sunday July 25 and begins at the historic Overbrook Railroad Station.

August 22- On August 22 we will resume the Headwaters to Tidewaters Hike Series which are hikes that travel in a north to south direction from the headwaters of the Darby Creek to where it meets the Delaware River. The August 22 hike will begin at the Valley Forge National Park Visitor Center. The route will take hikers across the Park and the Chester Valley Trail, then uphill out of this Great Valley.

September 12- We will explore the western headwaters of the Darby Creek starting in Berwyn on Sunday September 12. This hike will be by far the longest walk as it is over ten miles, but it takes place through some of the deepest forests and prettiest country in the Darby Creek Valley. We stop at the steep, mountain-like setting of the centuries old Swedish Log Cabin, then head into Clifton and historic Darby where the Darby Creek becomes tidal.



### **Become a Stream Smart Property!**

Property owners in the Darby and Cobbs Creek Watersheds can participate in the Stream Smart Stormwater House Call program. A partnership between DCVA, Eastern Delaware County Stormwater Collaborative and Pennsylvania Resources Council supports this program for the benefit of the community and the watershed. Stream Smart properties will receive information about stormwater pollution and a personalized stormwater audit of their property free of charge. This House call will identify changes property owners can take to reduce stormwater runoff leaving their property. Interested property owners will be assisted with guidance from the partner organizations on installing demonstration "best management practices" on their property such as rain barrels, rain gardens, reduced turf grasses and riparian plants.

The Stream Smart Stormwater House Call program creates avenues for improved stormwater management on private property in a densely urbanized watershed where large restoration projects are limited. All reaches of streams in the Darby and Cobbs Creek Watershed have been designated as impaired by the Pennsylvania Department of Environmental Protection list of integrated waters. The impairments are mostly due to stormwater related impacts and urban runoff. The watershed is heavily developed, and the lower portions of the watershed are densely urbanized. Some of the most intensely developed areas in Pennsylvania are located within the watershed, with upwards of 80% impervious cover in these locations. In this region, the average property size is .25 acres. The average impervious coverage for residential properties is 38%. That translates into 4,138 ft2 of impervious surface in need of modification to control runoff.



If this region experiences an average rainfall of 42 inches or 310.35 gallons of run off this program has the potential to divert 13,034 gallons of run off per property!

#### These small, feasible efforts will have a big impact for years to come!

Visit www.streamsmarthousecalls.org for more information and to register for the Stream Smart House Call program.

## **Going Green at McCall Golf Course**

The Darby Creek Valley Association has been working with McCall Golf Course (located in the Highland Park section of Upper Darby) since 2014 on improving the health of two unnamed tributaries of Cobbs Creek that run through the property. Due to the location of the tributaries at the bottom of the property, rain events result in runoff from neighboring urbanized areas and the turf grass draining directly into the streams. The majority of the property is mowed turf grass, with few trees and a small naturalized area. In recent years DCVA has worked with the golf course to educate staff on how to be better land stewards and help control stormwater runoff, protect and improve biodiversity, and provide habitat for native wildlife. The past year has brought new and exciting developments as construction and planting of a new rain garden located at the entrance of the club was completed. Plantings took place in March and June, and included a wonderful array of native plants such as asters, irises, swamp rose, swamp milkweed, witch hazel, lowbush blueberries, a pawpaw tree and more. Not only that, but this spring DCVA was awarded funding for a reforestation project that will break ground in the fall!

The reforestation project will focus on two sections of the 77-acre property that are not part of the fairways. The first area is a 1.6-acre section directly above the tributary in-between the fairways. The natural area will be expanded down to the tributary to create a biodiverse riparian buffer consisting of a combination of trees, shrubs, and upland meadow herbaceous flowering mix. Signs will also be placed on both sides to educate golfers in the importance of the planting. The second area will be the reforestation of approximately three quarters of an acre, planted with native trees and shrubs, with the desired effect of controlling sheet flow from urbanized development behind the golf course, and minimize sheet flow across the greens to the tributary.

Cobbs Creek is a highly impaired stream, so we are especially excited to make a positive impact in this area with the addition of 100 native trees, 20 shrubs, and flowering meadow seed. This work is made possible thanks to a great ongoing partnership with McCall's staff, countless hours of work by Derron LaBrake, site prep by the golf course maintenance crew, continued collaboration with volunteers from Penn State Master Watershed Stewards, funding from TreeVitalize, and of course the ongoing generosity of our members.





# **OPINION: Ecological Services and Biodiversity Considerations for Urban Landscape Design**

by Carl Dupoldt

Almost 80 % of Europeans live in cities and urban areas. Some researchers hypothesize that 75% of the world population will live in cities by 2050 (reviewed in Haase et al., 2014 DOI 10.1007/s13280-014-0503-1). Urban development has replaced natural landscapes, sacrificing biodiversity and the ecological services of those landscapes. Urban heat islands are caused by replacing vegetation that reflects heat with impervious surfaces that absorb heat. Impervious surfaces also cause excess storm water runoff and far less natural infiltration of rainfall into the soil leading to erosion of waterways and flooding of communities. Replacement of natural landscapes with urban development reduces habitats for native communities; once flourishing natural communities may disappear entirely from the area. More "Green Infrastructure" is needed in urban landscapes to enhance biodiversity and long term sustainability of natural species.

Investing in restoring and protecting natural communities and ecosystem services by building green infrastructure in cities is not only ecologically and socially desirable. It is also very often economically viable, even under prevailing economic models, provided that the multiple services and all their associated benefits for the large number of beneficiaries in cities are properly quantified and recognized. Such information is essential to include in decision-making processes related to land use and management in urban landscapes, and to help guide urban and landscape planners, architects, restoration practitioners, and public policy makers, as well as private and institutional stakeholders.



For example, research is required to determine which natural lands are essential to survival of specific plant and animal communities, how large an area must be preserved, and the connections that are required to other similar habitats. This information can lead to smarter placement of future urban development. Current urban centers should also be modified to be more environmentally friendly. The Philadelphia Green City Clean Waters program tries to mimic the natural water cycle by building green infastructures (e.g. rain gardens) that allow urban stormwater to return to the ground and be filtered there before reaching waterways. You can learn more by investigating the resources listed.



#### **Resources:**

Ecosystem Services in Urban Landscapes: Practical Applications and Governance Implications https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3989513/

Creating the Sustainable Urban Landscape https://www.youtube.com/watch?v=0NXW9QAVSE4

Green Infrastructure - Sustainable Landscapes | Swedish EPA https://www.youtube.com/watch?v=QBjNAuB2kRk

2020 Soil Health Conference Keynote Speaker: Dr. Christine Jones, P.H.D. Soil Biochemistry https://www.youtube.com/watch?v=V4uVKIGBk2s

Valuation of Ecosystem Services: Classes of Values https://www.youtube.com/watch?v=q8AZHtF2f50

Ecosystem services: Biodiversity and nature provide countless benefits for humans https://www.youtube.com/watch?v=YbyxzGbYQBc

# Streambank Restoration & Green Stormwater Infrastructure at Drexel Gardens Park in Upper Darby Township

by Jamie Anderson

The Pennsylvania Resources Council in partnership with the Eastern Delaware County Stormwater Collaborative (EDCSC) with support from Upper Darby Township Parks and Public Works Department, DCVA, and the Upper Darby Tree Tenders recently completed a 450 linear foot restoration of a portion of the streambanks of Naylor's Run as it flows through Drexel Gardens Park. Additionally, two bio swales were installed, one that takes runoff from Bond Ave, and the second that takes runoff from the northern alley of Bond Ave.



# Once the banks were regraded and stabilized, a native mix of trees and shrubs were planted.

The portion of the banks that were stabilized had been suffering from severe erosion and were nearly vertical prior to stabilization. The banks were regraded to create a gentle slope that reduces pressure on the banks during storms (high discharge events) reducing erosive forces. Once the banks were regraded and stabilized, a native mix of trees and shrubs were planted. This vegetation will create long term stabilization as well as shade the stream to moderate temperatures in the summer months.



# Streambank Restoration & Green Stormwater Infrastructure at Drexel Gardens Park in Upper Darby Township

The bio swales are also planted with native vegetation, a mix of shrubs, small trees and herbaceous flowering plants. They will slow, filter and infiltrate stormwater as it moves through them. Further, the native plants will provide habitat for native fauna and support local pollinators.

The National Fish and Wildlife Foundation (NFWF) Delaware River Conservation Fund and the TreeVitalize Program funded the projects through a grant. Each project is a part of the joint pollution reduction plan between nine municipal members of the EDCSC and will work to reduce sediment pollution to the Naylor's Run. Projects such as these are vital to restoring the health of Darby Creek and its tributaries.



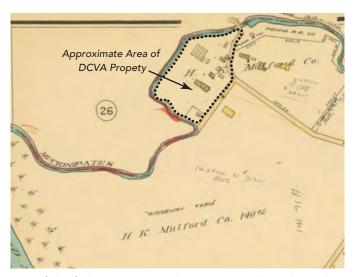


#### Part 2: Late 19th Century to Present

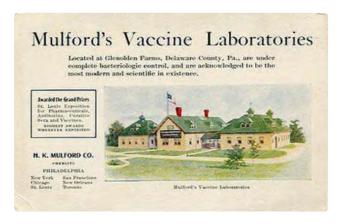
In April 2017, the Darby Creek Valley Association (DCVA) acquired an approximately 6 acre wooded property at the juncture of Norwood, Glenolden & Folcroft boroughs. The property, which lies within the boundaries of Folcroft borough is overgrown with invasive plant species. DCVA is working to restore this area by removing these invasives and re-establishing the native flora. This is the second of a two-part look at the history of the property and the surrounding area.

The first part of this article covered the Leni-Lenape tenure upon the land through the development of it primarily through the establishment of a Saw and Grist Mill along the Muckinipates Creek. This mill burned down in 1896, which opened the door for the next chapter in this area's history.

In the 1880's Henry Kendall Mulford, a graduate of the Philadelphia College of Pharmacy, began a manufacturing chemist shop in Philadelphia. In 1894 this pharmaceutical firm, the H. K. Mulford Co., opened a biological laboratory in the southern end of Glenolden for the production of a breakthrough antitoxin for diphtheria. By 1898 the company had also introduced a smallpox vaccine. Within a few years the company had added parts of Ridgeway Farm, Glenolden Farm and the old mill site, which extended their holdings to over 200 acres. Much of that land was in present day Folcroft, including the DCVA-held property. This meadowland, along the banks of the Muckinipates Creek, was used for grazing by the horses and cows needed to produce the smallpox and diphtheria toxins and serums.



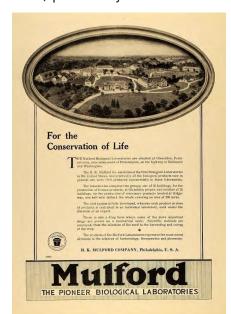
Section of Atlas of Delaware County, Pennsylvania, 1929 - created by Frank H. M. Klinge



Postcard of the H. K. Mulford main Vaccine Laboratories campus located at the southeast corner of Chester Pike and South Ave

In addition to the farm animals, H.K. Mulford wrote that the company also "established a drug farm at Glenolden for cultivating medicinal plants, and for increasing the yield of active principles and securing more uniform activity. For the past six years we have successfully grown digitalis, belladonna, cannabis, and hydrastis. These cultivated drugs are of the highest quality medicinally."[1] In addition to the marijuana cultivation it is believed the company experimented with opiate production.

The following is the copy from an advertisement (reproduced below) published by H. K. Mulford in 1921:





Antique Bottle of one of Mulford's many medication products.

"The Mulford Biological Laboratories are situated in Glenolden, Pennsylvania, nine miles south of Philadelphia, on the highway to Baltimore and Washington. The H. K. Mulford Co. established the first Biological Laboratories in the United States, and practically all the biological products now in general use were first produced commercially in these laboratories. The laboratories comprise two groups, one of 32 buildings, for the production of human products, at Glenolden proper, and another of 25 buildings, for the production of veterinary products located at Ridgeway, one-half mile distant, the whole covering an area of 200 acres.

The unit system is fully developed, whereby each product or class of products is restricted to an individual laboratory, each under the direction of an expert.

There is also a drug farm where some of the most important drugs are grown on a commercial scale. Scientific methods are employed, from the selection of the seed to the harvesting and curing of the crop. The products of the Mulford Laboratories represent the most recent advances in the sciences of bacteriology, therapeutics and pharmacy."



The main campus of the Mulford Biological Laboratories was at the site of the former California Apartments (now Contemporary Village Apartments) at Chester Pike and South Avenue. The company boasted roughly 1,000 employees at its peak in 1920, which including physicians, pharmacists, chemists, veterinarians and others. This at a time when the Glenolden's population was only 1,944! Many of those residents were hired by H. K. Mulford and the company maintained a reputation as being a good corporate citizen.

In 1929, the Maryland firm of Sharpe & Dohme bought out H.K. Mulford. They incorporated under the name of Sharpe & Dohme Inc. and the company continued the original work in medical research and experimentation and made many important medical discoveries now in general use. They created an influenza vaccine for the Armed Forces and a drug, thibenzole, used to de-worm livestock.

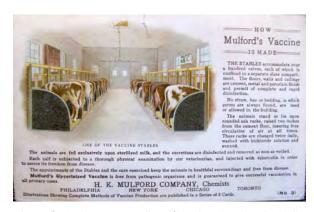
1. 1917 American Druggist and Pharmaceutical Record

Much of the information in this article was obtained from: O'Neill, Robert F. (27 Dec 1992). "Recalling The Heyday Of Pioneering Drug Firm The H. K. Mulford Co. Of Glenolden Produced A Breakthrough Diphtheria Antitoxin". philly.com. The Philadelphia Inquirer.

Below are two postcards the H.K. Mulford Co. published in a series of 8 cards with illustrations and text showing the complete methods of Vaccine Production.



Animals being inspected and prepared to be injected with tuberculin.



Calves confined in their separate stalls and fed exclusively with sterilized milk to assure freedom from infection.

In 1953, Sharpe & Dohme merged with Merck & Co. to form Merck, Sharpe & Dohme. By 1957 the merged company had sold off most of its holdings in Glenolden.

The Property records show that a Norcroft Corp had held the land DCVA now has title to since 1964. The land has not really been maintained much since then. Although there are many areas of invasive plants dominating the landscape, there is a real diversity of woodland, vernal pools, meadow and creek side habitat. The area holds much promise of being restored to a beautiful natural resource for the flora, for the fauna and for the community.

This celluloid button advertises his Mulford's "aseptic shield" that protected the open sore caused by a smallpox vaccination.



# **Welcome to Aurora Dizel - DCVA's New Administrative and Operations Manager**

The Darby Creek Valley Association is pleased to have Aurora Dizel play a larger role in DCVA Administration as Administrative and Operations Manager.

Aurora Dizel has been working with DCVA for many months, and we are pleased to announce that she is going to be taking on more responsibilities with our organization.

## Here is what Aurora says about herself and her love of nature:



I have worked for DCVA for the past 16 months providing administrative and program support, in addition to serving for two and a half years as DCVA's Youth Education Coordinator. I just completed the Penn State Extension Master Watershed Steward Training in Spring 2021. My first experiences with DCVA were participating in the annual Stream Watch programs, collecting and counting macroinvertebrates - such fun! Prior to working with DCVA, I was the lead developer and facilitator of several environmental education programs, including a weekly 4-hour environmental education and nature immersion program for homeschooling youth between the ages of 4-10, and multiple preschool-aged programs. I have served two 2-year terms on Haverford Township's Environmental Advisory Committee. Prior to having children and shifting gears into environmental work, I spent 6 years working in Corporate Banking at PNC Bank. I have a B.S. in Finance and minor in Economics from the University of Pittsburgh. In college, I spent a semester in Rome, Italy (and desperately want to refresh my Italian language skills again!). I have been finding refuge in nature since following my grandmother around her gardens as a little girl. I am very excited to grow in my role working for DCVA!

In February and March of 2021 DCVA set out to connect more directly with communities throughout the Darby Creek watershed in a series of seven virtual "town hall"-style meetings to understand better the environmental concerns of residents and the municipal leaders in their communities. One thing we heard was a desire for a model ordinance resource to help facilitate conversations on incorporating greener practices into municipal codes around stormwater, trees, chloride, and more. Thanks to this suggestion, DCVA has launched a model ordinance page on our website that we hope you can use to promote the changes you want to see in your neighborhood. Bringing these examples of ordinances to your local EAC meetings or Municipal Council could be a great way to start! Updates are being made regularly as we come across new helpful ordinances and resolutions, and we'd love to hear from you if you have additional resources that would be helpful to share. Find the page by selecting "Model Ordinances" from the left-hand menu at DCVA.org.

#### JOIN THE DARBY CREEK VALLEY ASSOCIATION TODAY!

The Darby Creek Valley Association (DCVA) is dedicated to the protection and enhancement of all of the watershed's resources, including water, wildlife, historical sites, and the floodplains. The organizations immediate goals are to prevent all forms of pollution in the Darby Creek and its tributaries, to prohibit dumping and construction on the floodplain and to expand our educational programs for all residents within the watershed. It Also seeks to improve water quality and maintain a debris-free stream through clean-ups and public education. DCVA works to preserve historic properties, such as the Swedish Cabin and the Blue Bell Inn. The Association would like to set aside the more than 30 miles of valley for use as a greenway for all residents to enjoy. We need your support. Help us continue to protect the environment for ourselves and our children.

We invite you to fill in the form below, check member category, and mail form with your check to: Darby Creek Valley Association, PO Box 732, Drexel Hill, PA 19026 or join at www.dcva.org

Name:	Date	Date:	
Address:	City:	State:	
Phone Number:	Email Address:		
DCVA is a 501(c)(3) Non-Profit Organization – All Donations are tax deductible to the fullest extent of the law.			
\$15 Senior/Student Membership \$25 Frie	end Membership \$50 Supporter Membersh	ip \$100 Patron Membership	
\$250 Protector Membership	\$500 Steward Membership	\$1000 Guardian Sponsorship	
\$2500 Conservationist Sponsorship	\$5000 Preservationist Sponsorship	\$10,000 Super Hero Sponsor	

The Valley is the quarterly publication of the Darby Creek Valley Association. Send your articles to Kathryn Goddard Doms Editor kgoddard@ursinus.edu

Production management and design by Gerry Krieg and Carol Coster

DCVA Board meetings... one Tuesday evening a month...TBA

Tree Care 101- Virtual Presentation August 10th 6-7 PM. Register at DCVA.org

Tree Care 101- Haverford CREC August 17th 6-7:30 PM. Register at DCVA.org

Story Time by the Creek- Lansdowne, PA August 24th 10-11 AM. Register at DCVA.org

DCVA Annual Canoe Race- Ridley Marina, September 19th 11 AM. Register at DCVA.org

7th Annual EAC Summit- October 20th 6:00-8:30 PM. Register at DCVA.org

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