



Montgomery County Conservation District

Annual Report 2016

To protect and improve the quality of life of the residents of Montgomery County and surrounding communities by providing, in cooperation with others, timely and efficient service, education and technical guidance for the wise use of our soil, water and related resources.



Montgomery County Conservation District

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Collegeville, PA 19426

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www.MontgomeryConservation.org

2016 Montgomery County Commissioners

Valerie A. Arkoosh, MD, MPH, Chair

Josh Shapiro, Vice Chair

Joseph C. Gale, Commissioner

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BOARD OF DIRECTORS

2016 Board Members

Sara Erlbaum, Chair

Monica Burcik, Vice Chair

Jim Moulton, Secretary

Valerie A. Arkoosh, MD, MPH, County Commissioner

Chris McCausland

Jim Myers

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Nominating Organizations

Bucks/Montgomery Home Builders Association

Delaware Valley Chapter, PA Society of Land Surveyors

Montgomery County Open Space Board

Montgomery County Agricultural Land Preservation Board

Montgomery County Beekeepers Association

Montgomery County Farm Bureau

Montgomery County Holstein Breeders Association

Montgomery County Pomona Grange #8

Montgomery County Association of Township Officials

Montgomery County Council, League of Women Voters

Montgomery County Young Farmer's Association

Penn State Cooperative Extension

Pennypack Ecological Restoration Trust

Perkiomen Watershed Conservancy

Valley Forge Chapter, Penn. Society of Professional Engineers

DISTRICT STAFF

Staff Members (As of January 1, 2017)

Eric Konzelmann	Interim District Manager
Karen Thompson	Administrative Assistant
Cody Schmoyer	Resource Conservationist
Jeffrey McKenna	Resource Conservationist
Cathy Leonard	Resource Conservationist
Daniel Oskiera	Resource Conservationist
Jessica Moldofsky	Agricultural Conservation Specialist
Krista Scheirer	Watershed Specialist
Gary Kulp	District Engineer

District Welcomes New Staff

The Montgomery County Conservation District welcomed a new District Engineer to their office in February. Gary Kulp has a background in stormwater management and the land development process, having worked as an engineer in southeast Pennsylvania for more than 20 years. He has earned a B.S. in Civil Engineering and a B.S. in Architectural Engineering from Drexel University, a Graduate Certificate in Urban Water Resources Design and a Master of Civil



Engineering from Villanova, and obtained his Professional Engineer license in 2002. Gary was born and raised in the area and welcomes the opportunity to help protect and restore land and water resources in Montgomery County. In his spare time, Gary enjoys a good book, camping, hiking, the shore and Phillies games.

MESSAGE FROM THE INTERIM MANAGER

A highlight of 2016 was welcoming engineer Gary Kulp, PE. to the Montgomery County Conservation District. Gary was hired as part of accepting a new delegation agreement from PA DEP to conduct technical stormwater reviews, which requires Districts to have a Professional Engineer on staff. We are very excited to have Gary as part of our team, as he brings 25 years of experience and engineering knowledge to Montgomery County. The change in delegation status under the PA DEP will allow us to fully review the technical aspects of post-construction stormwater management (PCSM) plans before making permitting decisions. This ability will undoubtedly result in better PCSM plans being submitted and approved.

Additional NPDES-related changes occurred in 2016. DEP provided Conservation Districts with several new review letter templates and updated several NPDES forms. A new EPA database requirement placed on Conservation Districts across the state by the PA DEP now requires each District to enter new NPDES permit information into EPA's Integrated Compliance Information System (ICIS). As site inspections are conducted on newly permitted sites, Districts will also be asked to enter inspection data into the ICIS database. These new requirements are expected to continually increase data entry as more permits are approved and inspections of newer permitted sites increase. This will result in the need for additional staff time entering data into the ICIS database.

Montgomery County Conservation District hosted its first MS4-related workshop in the fall of 2016. The Municipal Workshop was geared towards municipalities and their engineering consultants in relation to their stormwater permit requirements. Presenters were on hand from PA DEP, the Montgomery County Planning Commission and the Conservation District. We plan to continue to help municipalities understand their MS4 requirements and offer educational assistance in the years to come.

- Eric Konzelmann, Interim District Manager

Erosion and Sediment Control

Montgomery County Conservation District conducted and participated in several workshops throughout 2016, including our third Developers Workshop. PA DEP and local legal professionals were on hand to help developers understand the legal recording requirements that are now part of the NPDES permitting system. After listening to presentations and a lot of “back and forth” commentary, we all left with an increased understanding of the recording requirements and how they tie into the NPDES process. The District participated in a biannual RC&D Engineering Workshop at the Montgomery County Community College. Assistant Manager Eric Konzemann provided a presentation on Post-Construction Stormwater BMP Installation and Maintenance. The District also participated in statewide E&S training workshops, geared towards new Conservation District E&S staff.

Montgomery County Conservation District continues to see the proposed use of PA DEP’s new Slow Release Concept (SRC) BMP. The SRC is essentially a retrofit of an extended detention basin and rain garden in one BMP. Often locally referred to as the “Montgomery County BMP” due to our slow-draining clay soils, this BMP has been used on numerous sites to manage stormwater volumes and provide water quality enhancement where traditional infiltration BMPs have been prone to failure.

2016 Program Data	
Individual NPDES Permits Acknowledged	17
General NPDES Permits Acknowledged	114
Administrative Plan Reviews	330
Plan Reviews Conducted	530
Site Inspections	361
Technical Assistance Efforts Provided	22,931
Complaints Received/Responses	39
Enforcement/Compliance Actions	1
Total Project Acres	3,665
Disturbed Acres	1,539

CHAPTER 102/NPDES



An infiltration berm was constructed on a residential subdivision site. The infiltration berm functions by capturing runoff from upslope areas where it can pool and be allowed to infiltrate into the ground. The infiltration of the runoff helps to remove pollutants from runoff and restore groundwater supplies.



A small sediment trap using compost sock as an outlet was constructed on a project near Collegeville. The simple excavation and compost sock filter for overflows provided a cheap and reliable way of keeping sediment from leaving the site. A failure of the sock outlet during a severe thunderstorm showed that additional staking was necessary for this application.

WATERSHED MANAGEMENT

Healthy Watersheds, Healthy Communities

The Watershed Specialist works to protect and improve the quality and quantity of our freshwater resources through watershed assessment, planning, restoration, education and outreach. The Conservation District supports the work of nonprofit watershed organizations and provides technical assistance to public and private entities to improve our water resources. In 2016, the Watershed Specialist reached 1450 residents through outreach events, talks and workshops, and provided 78 technical assistance efforts.

Stream Cleanups

The Conservation District took part in two events during the Schuylkill Scrub, a spring cleanup initiative of the Schuylkill Action Network contributing to the Great American Cleanup of PA, sponsored by Keep Pennsylvania Beautiful.

In partnership with members of the Schuylkill Action Network, the Upper Merion Township Environmental Advisory Council, Parks and Recreation, and Farmers Market Committee, the District helped to host a successful stream cleanup in King of Prussia.

In honor of Earth Day, the Conservation District staff again took part in the Perkiomen Watershed Conservancy's annual Stream Cleanup by cleaning along a tributary to Skippack Creek in D'Lauro Preserve.



District staff leading a site for the Perkiomen Watershed Conservancy's large-scale Stream Cleanup.



Watershed Specialist Krista Scheirer and volunteers pulling a car seat out of Crow Creek during the King of Prussia Cleanup. *Photo Credit: John Weinau*

PROJECT HIGHLIGHTS

Perkiomen Township Stormwater Management

Montgomery County Conservation District worked with Perkiomen Township in 2016 to create a stormwater “treatment train” on Township property 800 feet from the Perkiomen Creek. The project decreased runoff by 25% and provides longer treatment time for improved water quality. With a 1-inch storm, the rain garden alone handles more than 8000 gallons of water!

The stormwater best management practices in series include:

- ◆ A retrofitted basin
- ◆ A vegetated swale
- ◆ A 3000-square-foot rain garden
- ◆ A wet swale, planted with wetland vegetation



The project was constructed by the Township Roads Crew, led by the District Watershed Specialist and Engineer. The Watershed Specialist worked with students from Perkiomen Valley High School to create the landscaping plan for the garden and to install the plantings. The students received a Schuylkill Scholastic Drinking Water Award and a Perkiomen Watershed—Kids Making a Difference Award for their efforts. Various tours of the project have been held, and the site will continue to be used to educate residents about effective stormwater management.



Financial and other support for this project was provided by the Pennsylvania Association of Conservation Districts, Inc. through a grant from the Pennsylvania Department of Environmental Protection under Section 319 of the Clean Water Act, administered by the U.S. Environmental Protection Agency. The rain garden was also awarded a grant through the PECO Green Region Open Space Program. The project was also funded by Exelon Corp. through the Schuylkill River Restoration Fund and the Delaware River Basin Commission.

PROJECT HIGHLIGHTS

Schuylkill Action Students Project

Pottsgrove High School

The Schuylkill Action Students initiative of the Schuylkill Action Network, coordinated by the Partnership for the Delaware Estuary, fosters partnerships with schools to implement innovative stormwater management practices. Since schools own a lot of streamside property, by improving their facilities, we can have a great impact on the watershed while educating students through participation in the project.

In the fall of 2016, Montgomery County Conservation District worked with the Partnership for the Delaware Estuary and Pottsgrove High School to retrofit a failing rain garden. School district staff completed construction with help from the District Watershed Specialist. Then, the Partnership for the Delaware Estuary teamed up with a science teacher to lead students in planting the garden. Funding was provided through a grant from 3M, awarded to the Partnership for the Delaware Estuary.



Photo Credit: Laura Whalen

WATERSHED MANAGEMENT

TreeVitalize Watersheds

2016 was a big year for the TreeVitalize Watersheds grant program, which seeks to restore the natural forest community, increase canopy, and enhance water quality. Montgomery County applicants received \$96,737.91 to remove invasive species and plant natives, and they contributed \$85,331.65 worth of match toward their projects.

Montgomery County Conservation District partnered to help two landowners enhance riparian buffers. We led a project on a preserved farm in Douglass Township to enhance the buffer along the headwaters of Schlegel Run, and we worked with a residential community to plant 275 trees and shrubs along a tributary to the Stony Creek.

The TreeVitalize Watersheds Grant program is managed by the PA Horticultural Society, with funding from PA DEP's Growing Greener program, as well as Aqua PA.



2016 Totals:

- 18 project sites
- 3,063 trees planted
- 2,557 volunteer hours
- 25 acres restored

Watershed Specialist Krista Scheirer leading a group from the Stony Creek Farms Community, who contributed hundreds of volunteer hours! This project was undertaken to restore failing tree canopy, protect and enhance open space, and to educate residents on the importance of native vegetation. *Photo Credit: Les Schmalbach, SCF Resident*

Conservation Planting Trailer

The tool trailer, created in partnership with the Southeast PA Resource, Conservation and Development Council, is often used in conjunction with TreeVitalize projects. In 2016, the trailer assisted eight projects in Montgomery, Chester, and Delaware counties.

AGRICULTURAL CONSERVATION

Ag/Watershed Project Spotlight

The Montgomery County Conservation District conducted a TreeVitalize Watersheds grant project on a preserved farm in Douglass Township to enhance the buffer along the headwaters of Schlegel Run, where the stream flows through a livestock pasture. The District led volunteers to plant 75 trees and shrubs that will protect water quality, stabilize the stream banks, provide wildlife habitat, and compete with invasive reed canary grass at the site. The District looks forward to working with more farm owners, as well as golf courses and other large landowners to enhance their streamsides through this grant program.



A TreeVitalize Watersheds Grant Project was conducted in October on a preserved farm in Douglass Township. 75 trees and shrubs will help to stabilize the streambank, provide native species for wildlife and pollinators, and improve water quality.

AGRICULTURAL CONSERVATION

Nutrient Management/Manure Management

Montgomery County Conservation District is a delegated authority for agricultural based programs. These programs are implemented through education and outreach, technical assistance, and voluntary compliance efforts. The Conservation District is delegated the Nutrient Management/Manure Management Program through the State Conservation Commission (SCC) and the PA DEP. These regulations are found under Chapter 83 and 91- Title 25 of the PA Code. The Agriculture Conservation Technical Assistance Program is delegated through the SCC and PA Department of Agriculture, where regulatory requirements are found under Chapter 102.4a- Title 25 of the PA Code.

Farmer Workshop

Montgomery County Conservation District partnered with Penn State Cooperative Extension to host a Manure Management Plan Writing Workshop in February.

The workshop provided farmers- primarily equine owners- with improved pasture and manure management strategies, as well as information regarding manure management and agricultural erosion and sediment control regulations.



Agricultural Conservation Specialist Jessica Moldofsky presenting to a group of local farmers.

DIRT, GRAVEL & LOW VOLUME ROADS PROGRAM

Dirt, Gravel & Low Volume Road Maintenance Program

PA's Dirt Gravel and Low Volume Roads (DGLVR) Program provides local road-owning entities with grant funding for road and environmental improvements on unpaved and low volume paved roads (500 or fewer cars per day).

The Montgomery County Conservation District administers and implements the program at the county level with assistance from a Quality Assurance Board (QAB) that acts in an advisory capacity to the Conservation District Board of Directors.

Montgomery County had its most productive year to date in the program in 2016!

Six low volume road projects were successfully completed, and two additional projects are under contract. Two gravel road projects were successfully completed and another is under contract.

Municipalities involved in 2016 include: Salford Township, Marlborough Township, Borough of Telford, Schwenksville Borough, and Upper Frederick Township.



This project on Webber Rd. in Salford Township provided grant funding to improve an eroding swale, which was contributing sediment to the adjacent East Branch of the Perkiomen Creek.

DIRT, GRAVEL & LOW VOLUME ROADS PROGRAM



This low volume road project in Schwenksville Borough provided grant funding to implement porous pavement and drainage improvements on three alleys to reduce erosion, improve the road surface, and manage stormwater.



This gravel road project in Marlborough Township provided grant funding to improve the road base and install drainage improvements to Lake Skymount Drive, reducing sediment inputs to the adjacent Lake Skymount, which feeds the Ridge Valley Creek.

OTHER PROGRAMS

Biosolids

In 2008, Montgomery County Conservation District signed a delegation agreement with PA DEP to provide local field support to the Biosolids program. The District is sent 24-hour notices of intent to spread biosolids for beneficial use on mainly agriculture operations. This agreement was signed at the end of 2007, with inspections starting during the 2009 crop season. The utilization of these products has decreased somewhat, but the concern over the Biosolids program continues to be voiced by agriculture producers, municipalities, and the general public.

Gypsy Moth Control

The Pennsylvania Department of Conservation and Natural Resources (DCNR) Bureau of Forest Pest Management, in conjunction with the USDA Forest Service and various county or municipal cooperators, annually conducts an aerial spray program for the suppression of the gypsy moth on private, forested residential lands. The program also provides for the suppression of the gypsy moth and other forest insect pests on publicly owned and forest stewardship lands.

The overall objective of the program is to protect certain forested residential, forested recreational, and other high-use or high-value forested areas from serious damage by limiting tree defoliation caused by the gypsy moth to less than 30 percent on 80 percent or more of the highly favored trees. Eradication of the forest pests in any part of the Commonwealth is not economically or environmentally feasible and is not the goal of the program.

Montgomery County annually monitors for the gypsy moth in known areas of past infestation and responds to complaints from residents regarding gypsy moths. In 2016, the Conservation District had no gypsy moth complaints, and no signs of the gypsy moth were observed.

EDUCATION & OUTREACH

Envirothon

Montgomery County's Envirothon was held at Lower Perkiomen Valley Park on April 27, May 4, and May 11. The current topic for 2016 was invasive species. At the high school event, 15 teams participated, and Perkiomen Valley High School came out on top and went on to compete at the PA Envirothon.



At the middle school event, 20 teams competed to show off their knowledge on invasive species management. Arcola Intermediate School took home the first-place banner. The students also took part in a National Geographic BioBlitz, which is an attempt to record all the living species within a designated area. This was a highlight of the event, as the students got to use GPS units to capture photos of species and learn about biodiversity.

A total of 115 students attended the elementary school event and enjoyed an environmental field day of activities. Students at all three events took home reusable cinch bags to remind them of the importance of sustainability.



Students using a GPS camera unit to record species during the BioBlitz (left), and the winning high school team (right).

Photo Credit: Jen Isett

The events were supported by representatives from PA Fish & Boat Commission; PA Game Commission; DCNR Bureau of Forestry; PA DEP; Montgomery County Planning Commission, Health Department, and Department of Parks, Trails and Historic Sites; Penn State Extension; Elmwood Park Zoo; and the Alliance for Geographic Education. Funding for the events was provided through a mini-grant from PA Envirothon, as well as private donations.

Schuylkill Street Art Contest

The Conservation District worked with the Schuylkill Action Network to host the Montgomery County portion of the Schuylkill Street Art Contest, which engaged students from grades 6-12 in the issue of stormwater pollution. Students designed artwork that could be featured around a storm drain and would spread a clean water message.

Montgomery County's competition had more than 100 entries, and the winning design was installed around storm drains in Norristown and King of Prussia. The top three artists also received prizes. Due to its success, we plan to hold this contest again next year.



Montgomery County's winning artist, Kristin Olinger (then an eighth-grade student at Phil-Mont Christian Academy), posing with her storm drain mural in Norristown. Her original artwork is pictured on the left.

Photo Credit: Virginia Vassalotti

EDUCATION & OUTREACH

Master Watershed Stewards

Montgomery County Conservation District worked with Penn State Extension and a host of local conservation partners to train a second class of Master Watershed Stewards. The volunteer training program was created to help build the capacity of local watershed groups and others to carry out their missions and protect our waterways. Master Watershed Stewards receive extensive training on watershed stewardship and then put their expertise to use implementing projects to enhance and restore water quality. Master Watershed Stewards are leaders, educators, coordinators, and mentors.



Golf Course Conservation Outreach

The Montgomery County Conservation District, through a PACD Non-Point Source Pollution Prevention mini-grant, conducted outreach to golf courses this year to promote sustainable maintenance practices of turf grass and riparian areas on golf courses.

Outreach included creation of a digital resource center on the District's website, creation and distribution of a hard-copy educational Golf Course Conservation pamphlet and a Golf Course Conservation presentation at the Eastern PA Turfgrass Conference held in Valley Forge on January 5, 2017.

A digital version of the Golf Course Conservation brochure is available for statewide use. To request the digital brochure, please contact Jessica Moldofsky at jmoldofsky@montgomeryconservation.org.



THE GREEN:
Golf Course Conservation

Golf course owners and superintendents know the difficulties of keeping up with the damage from flooding, stormwater runoff, and erosion.

Fortunately, there are conservation practices that can reduce this maintenance while improving the health of the streams that provide our drinking water, wildlife habitat, and the scenery that makes Pennsylvania a golfer's destination.

With over 800 golf courses in Pennsylvania, and many miles of stream flowing through them, there are numerous opportunities to protect and conserve water resources.

**PACD**
PENNSYLVANIA ASSOCIATION OF
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Come Get...

“The Dirt”

... on Conservation

In 2016, Montgomery County Conservation District created a semi-annual newsletter to be a local resource for conservation information. The publication is meant to be a catch-all for conservation tips and resources that everyone in Montgomery County can use to improve their impact on the local environment. Our newsletter features program updates, stewardship information, “species spotlights,” guest articles, and “quick and dirty” conservation tips. Currently, we have more than 700 people on our distribution list, and new people can subscribe right from our website.

"A true conservationist is a man who knows that the world is not given by his fathers, but borrowed from his children."

- John James Audubon