Many times it became very difficult to answer people when they asked me how things were going during 2017 at the Chester County Conservation District. Possibly, that was due to the fact that we often found ourselves questioning what kind of year it was and also because there was so much time spent in limbo with so many variables out of our control. We anxiously waited to hear about grant applications, wondering if our adopted budget was going to accurately come to fruition. We patiently waited to see what projects would go to construction after delays due to permit acquisition, landowner finances, grant delays, etc. We nervously waited for the State to adopt a budget - were programs going to be cut, reduced? We felt like we waited and wondered about one thing or another all year long.

Now, looking back on the uncertainty of 2017, by using a different lens and perspective, things can now be viewed in better focus. What I now see is that 2017 was a year not just rooted in challenges, anxiety, and being in a state of limbo, but a year of opportunity, new partners, and adjusting to a new way of doing business. For instance, as we waited for Growing Greener announcements that directly affected staff funding for technical assistance with the mushroom industry, a partner offered to partially support a position providing technical assistance for CREP to another staff member. As we saw a partnership that provided technical assistance for water infiltration projects come to an end, an opportunity presented itself to secure another contribution agreement with NRCS through NACD. With the support of several partners we were able to apply and secure a significant grant through NRCS for the Chesapeake Bay Watershed.

Ultimately, what this illustrates to me is the need for a sound budget, fiscal responsibility, good communication between the Board of Directors and staff and, most of all, the ability and willingness to be flexible and make adjustments during the year. Another lesson learned is the importance of looking at the big picture and the mission of the conservation district. It’s very easy to get anxious and concerned as you manage the peaks and valleys that transpire throughout a calendar year. Keeping your eyes on the ultimate outcome of “Conserving Soil for Clean Water” can help alleviate some of the anxiety of uncertainty.
**2017 FINANCIALS**

### Income

- **County Funding**: 253,396.00
- **State Funding**: 310,897.40
- **Federal Funding**: 210,668.46
- **State, Federal & Local Grants**: 629,969.40*
- **Other**: 121,611.38
- **Fees for Services**: 772,186.12

**TOTAL**: 2,298,728.76

*includes funds allocated for DGLVR projects in progress.*

### Expenses

- **Operations**: 1,443,855.58
- **Education**: 17,723.02
- **Grants**: 405,413.06

**TOTAL**: 1,866,991.66
Above: Heifers peer over a fence in June 2017. In the background a new watering system is being constructed to carry clean water from the farm’s springhouse to the heifer pasture for easy access. This system reduces the animals’ need to access water at the stream and prevents bank erosion. Right: A concrete waterer.

As an agricultural staff, there is one core belief that we fall back on – our purpose is to help Chester County farmers improve their farms and our shared environment. We do this by providing technical assistance, which includes planning, surveying, designing, and implementing BMPs, as well as finding funding sources to pay for the practices. As things change around us, we remind ourselves that this is our core mission: it is our responsibility to understand regulations and the programs available to farmers and to be able to communicate this information.

2017 provided new challenges for staff as program rules were updated and increased focus was placed on enforcing regulations. The most notable challenges included the need to commit funding from the EQIP and RCPP programs to actual projects and an increase in regulatory compliance activities, including the Chesapeake Bay Reboot initiative.

Despite these challenges, 2017 was a successful year for the Ag Team. Over $2 million dollars of USDA-NRCS funds were allocated using the EQIP and RCPP programs. These funds will be spent in the next few years to implement 370 BMPs. Additionally over the course of the year, 172 BMPs were implemented on farms. A number of programs were used to implement these BMPs, including EQIP, RCPP, Chesapeake Bay Special Projects, and DCED. This also includes the great work farmers are willing to accomplish at their own expense. This amount of work is a testament to both the staff who continues to work hard to help farmers and protect our environment and the agricultural community of Chester County who understand the value and importance of conservation.

The Chesapeake Bay Reboot went into full swing in 2017. The purpose of the Reboot is to bring every farmer in the watershed into compliance with regulations focused on erosion and manure handling. At the end of our first year handling this task, 104 farms were visited. Of those farms, 69% had conservation plans and 76% had manure or nutrient management plans. Farms that were found to not be in compliance were given guidance on what needed to be done to come into compliance.

Looking forward, our staff will need to learn and adjust to the changes and challenges that 2018 is sure to bring. However, our goal of serving the agricultural producers of the county and protecting our shared natural resources remains the same.
Chesapeake Bay Update

2017 was a successful year for the Chesapeake Bay Program as we continued inspection visits, BMP implementation, and grant writing:

- 104 inspection visits completed
- 112 acres of contours implemented
- 5 gradient terraces installed
- 1 diversion & associated practices installed (photo right)
- 1 livestock pipeline & associated practices installed
- $303,334.99 in state funds (Chesapeake Bay Special Projects) awarded to the CCCD for 10 new projects
- $3.6 million in RCPP funds awarded for BMP implementation projects.

INSPECTION STATISTICS

31 English Farmers visited covering 72 farms
- 7 Beef
- 8 Equine
- 37 Dairy
- 13 Poultry
- 5 Crop Only
MMPs written completed on site for 18 farmers covering 29 farms

30 Amish Farmers visited covering 32 farms
- 26 Dairy
- 1 Beef/Swine
- 2 Beef
- 1 Swine
- 2 mixed operations
MMPs written completed on site for 4 farmers covering 4 farms

MANURE MANAGEMENT

In early 2017, Manure Management Workshops were held in Lower Oxford, Honey Brook, and West Vincent Townships. The workshops were directed at landowners who are producing or land applying manure. Useful information regarding regulations, required record keeping, and guidance for farmers to become compliant with the law was provided. Participants were able to work through the Manure Management Manual and had the opportunity to leave the workshop with a completed plan. In total:

- 5 workshops were held
- 14 farmers were in attendance
- 2 EPA employees were in attendance
- 12 farmers left with completed plans
- 1020.3 acres were covered in the completed plans
Mushrooms

In 1998, the year after the Pennsylvania Department of Environmental Protection developed the “Best Practices for Environmental Protection in the Mushroom Farm Community” manual (the “Mushroom Manual”), the Chester County Conservation District created the Mushroom Farm Resource Conservationist (MFRC) position to assist the mushroom farm community. The MFRC is responsible for working with all of the mushroom farmers (i.e. mushroom growers, mushroom substrate producers, and mushroom compost processors) in Chester County in an effort to bring them into compliance with the PA DEP’s regulations. The guidelines outlined in the “Mushroom Manual” provide the framework, management strategies, and associated BMPs all mushroom farmers are required to implement on their farms.

With the financial support from the PA DEP’s 2014 Growing Greener Program, the MFRC provided technical assistance to mushroom farm operators and local communities, with the following results:

- Wrote 12 and reviewed 65 Mushroom Farm Environmental Management Plans (MFEMPs)
- Conducted Farm Assessments and provided BMP Recommendations
- Provided survey, BMP design, construction oversight & quality assurance on 14 farms
- Completed wastewater sprayfield soil sampling on 8 farms
- Obtained financial assistance program (EQIP, RCPP,DCED) for 28 farms
- Accompanied PADEP on 31 Farm Inspections
- Provided Resident Complaint Response
- Assist PADEP with compliance and enforcement cases on 3 farms
- Implemented 326 BMPs resulting in the following pollutant reductions:

<table>
<thead>
<tr>
<th>N (lbs./yr.)</th>
<th>P (lbs./yr.)</th>
<th>Sediment/MC Solids (tons/yr.)</th>
<th>Wastewater (gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,222</td>
<td>698</td>
<td>33</td>
<td>5,739,902</td>
</tr>
</tbody>
</table>

Watershed Projects

It was a busy year for watershed projects at the Chester County Conservation District. With support from Stroud Water Research Center and technical assistance from the NRCS, a concentrated effort was made to implement riparian forested buffers through the Conservation Reserve Enhancement Program (CREP) of the Farm Service Agency (FSA). CREP enrolls cropland and marginal pastureland near streams that do not have existing buffers, allowing for the establishment of native trees and shrubs to improve water quality and create wildlife habitat. FSA provides cost sharing incentives from CREP, and most landowners receive funding to cover the majority of the cost of their projects. Through CREP this year, CCCD helped to plant approximately 900 trees over nine acres, install one stream crossing, and install 3800 feet of livestock fencing. Furthermore, a number of landowners have already signed up for 2018!

CCCD worked on additional buffer plantings through the TreeVitalize Watersheds Grant Program of the Pennsylvania Horticultural Society. TreeVitalize has successfully supported buffer plantings in Chester County and the overall southeastern PA region for a number of years, and this trend continued in 2017. Seven projects were funded and completed in Chester County, resulting in the planting of over 2,000 trees.

Other noteworthy efforts included continuing work on two stream restorations funded by the DEP Growing Greener program and carrying out environmental education activities throughout the year. We’re doing our best to improve water quality and stream habitat throughout the county, and we’re especially thankful for the assistance, support, and hard work contributed by our partners. Hopefully 2018 is even more fruitful!

Conservation District staff take a quick break to pose while helping to plant a CREP buffer.
This year has been one for the record books. Using NRCS funding, District staff assisted in implementing Best Management Practices (BMPs) and developing contracts that will provide funding for 370 BMPs on totaling around $2 million dollars. These farm properties include dairy, mushroom, beef, equine, crop, vegetable, and orchard operations.

Conservation plans and NRCS contracts for five mushroom farm projects, two beef farms, one dairy, and one equine operation were written. Practices to be installed include:

- stream crossings
- animal trails and walkways
- water access
- liquid manure storage
- waste stacking pads
- heavy use area protection for barnyards
- diversions
- roof runoff structures
- drop boxes to divert upslope clean water
- terraces
- waterways
- vegetated treatment areas
- forested riparian buffers
- fencing
- and many more practices for fresh water protection from soil and nutrient runoff.

Technical assistance site visits include completing the implementation of the previous year’s contracts by installing many of the same practices mentioned above; most notably, a final 2.7 acres of forested riparian buffer was completed on an equine farm project on a tributary of the White Clay Creek that completed a successful farm transformation.

As a team we have completed many visits for conservation plan information gathering. Inventory and evaluation visits and surveys, and design and layout discussions with the land owner, operator, and engineering staff help facilitate decisions for contract implementation and accurate contract writing.

A grass waterway in the process of being installed as part of an EQIP contract.

RCPP-Regional Conservation Partnership Program

The Chester County Conservation District, in coordination with its partners, has conducted a comprehensive on-the-ground effort to promote and implement the Regional Conservation Partnership Program (RCPP). The program has provided a number of opportunities for BMP implementation. These efforts in the past year alone have resulted in numerous conservation practices being installed as well as setting up leads for future high quality conservation work. The work this year has resulted in 15 contracted projects totaling $1,312,493 on 570 acres in Chester County. This work includes ten waste storage facilities, 8,352 feet of riparian and animal exclusion fencing, 51,985 square feet of heavy use area protection, four stream crossings, and over 100 acres of nutrient management planning in high priority Red Clay Creek, White Clay Creek, and the Brandywine Creek watersheds.
2017 was a year that saw the Chester County Dirt and Gravel Low Volume Road Program approve three new projects for a total grant allowance of $345,959.75.

- Newlin Township - Beagle Club Road: A dirt and gravel road project with a nearby tributary to the Brandywine, which included ditch, stormwater, and road bank improvements, road base improved and stabilized, and two improved pipe crossings. Water Quality to the Lower West Branch of the Brandywine will be greatly improved. Grant allowance - $125,509.00
- Upper Oxford Township – Rattlesnake Run Road: A low volume road project with a nearby tributary to Rattlesnake Run that includes ditch, off right-of-way, and stormwater improvements, road banks stabilized, and stream crossing enhancements that will greatly benefit water quality and prevent future stream scour and bank erosion. Ditch improvements will feed the adjacent wetlands. Grant allowance - $18,235.75
- West Marlborough Township – Runnymede Road: A low volume road project near a tributary to Doe Run that includes stormwater improvements and a stream crossing improvement in the form of a new arch culvert pipe and concrete walls to replace the failing pipe that is currently degrading Doe Run and compromising the integrity of Runnymede Road. Grant allowance - $202,215.00

In addition to the above approved projects, there are 5 projects from 2016 grants that have started, and there are several projects being prepared for submission for approval in 2018. In 2017 we have seen several new municipalities jump on board the program in an effort to keep their streams clean.
Erosion and Sediment Pollution Control Program

Every facet of an Urban Team members’ job is related directly to The Conservation District’s mission statement of “Conserving Soil for Clean Water”.

The Urban Team, through review, inspection, complaint response, and education emphasizes that the end result will be to protect our water. They accomplish this through a delegation agreement with the PA Department of Environmental Protection (DEP). The Urban team reviews Erosion and Sediment (E&S) and Post Construction Stormwater Pollution Control Plans (PCSM), inspects earth disturbance sites, responds to E & S related complaints, and provides public outreach through engineer meetings, preconstruction meetings, information and educational workshops, flyers, and articles.

Chester County Conservation District seeks voluntary compliance from land owners and developers to comply with the regulations as set forth by the DEP. The Urban team reviews NPDES plans to keep the waters clean within each watershed. We also inspect active earth disturbance sites to ensure that approved plans are followed and that Best Management Practices (BMPs) are implemented in the field.
Urban Team Statistics

Preconstruction/Engineer Meetings: 437
General NPDES Permits Issued: 39
Individual NPDES Applications: 52

Total Site Inspections: 763
Complaints Investigated: 72
Permits Terminated: 48

Total Project Acres = 3133

Infiltration Bed
Rock Filter
The role of the district engineer is to provide expertise in the Conservation District’s post-construction stormwater management and water resources engineering programs. 2017 was a busy year with well over 200 NPDES reviews conducted – completeness reviews, technical reviews, and reviews of minor revisions or corrective action plans (which are submitted when there are design changes during construction). In addition to plan reviews, the district engineer participated in nearly 200 meetings for NPDES permitting. These meetings, especially the pre-application meetings, help to inform the regulated community of the NPDES permit requirements, help keep them up to date on the latest DEP and CCCD policies, and give the District, the design engineer, and the developer opportunities to discuss the site design and any project constraints in a casual face-to-face setting at various stages of the design process.

In addition to the NPDES program and the technical assistance provided to the District, the district engineer also takes full advantage of the opportunity to inform and engage the community on various water resources topics. Presentations were given at Green Valleys Watershed Association’s Community Water Planning Workshop on the connection between soils and freshwater resources and to the regulated community on implementation of rain gardens and on compliance related issues. Also a Stormwater BMP tour was given by district staff to West Chester University students as part of their stormwater management class.

This is the 30th year that the Chester County Conservation District and the Chester County Facilities and Parks conducted the Chester County Envirothon. This annual environmental and educational event drew students in grades 3 – 12 from public, private, parochial, and home schools throughout the county. These five-student teams studied all year long to compete in Aquatics, Forestry, Soils, Outdoor Safety, Wildlife, and the Current Issue of Agricultural Soils and Water Conservation Stewardship.

The two day Chester County Envirothon competition was held on Wednesday, May 3 and Thursday, May 4, 2017 at the Chester County Hibernia Park. Ten high schools (with 14 teams), twelve middle schools (with 24 teams), and seventeen elementary schools (with 38 teams) competed in this year’s Envirothon totaling more than 435 students from across the county. Because of the generous support of our sponsors, students received an Envirothon tee shirt and winning teams received prizes and trophies. The Senior winning team had expenses paid for the Pennsylvania State Envirothon.
2017 Envirothon Champions
Oxford Team A

Front Row (left to right): Brandon Tomasulo, Andrew Stefanowsky, Sarah Buckley, Luke Winand, Josh Graff

Back Row (left to right): Erica Masusock and Fran Iacobucci of Francis and Raymond Iacobucci Builders and Developers; Chris Della Penna of Della Penna Engineering, Inc.; Matt Wayman of DL Howell & Associates, Inc./Howell Kline Surveying, LLC; Haley Randolph of CEDARVILLE Engineering Group, LLC; Amanda Albano, Justin Brewer and Joe Russella of DL Howell & Associates, Inc./Howell Kline Surveying, LLC; Nancy Dore and Dorothy Von Gerbig of AAUW Chester County Harriet Jarosh Environmental Education Fund

**Oxford Area High School Team A** was awarded the overall Champion of the 30th Chester County Envirothon on Thursday, May 4, 2017 at Hibernia County Park. Along with nine other high school teams, they were tested on five environmental stations and became this year’s overall winner! This year the scores were close and **Oxford A** won the overall competition by achieving the highest average. The second place overall winner, **Downingtown East A** team had the highest scores in the Aquatics and tied in the Soils stations. The third place overall winner was **Great Valley A**. Team **Bayard Rustin A** scored the highest in Forestry and the Current Issue stations and **Downingtown East B** team had the highest scores in Wildlife and tied in the Soils station.

**Seniors – Grades 9-12**
First Place - Oxford Area High School A
Second Place - Downingtown East A
Third Place - Great Valley A

**Middle School – Grades 6-8**
First Place - West Fallowfield Christian School A
Second Place - West Fallowfield Christian School B
Third Place - Hopewell A

**Elementary – Grades 3-5  Station Winners**
Aquatics - Nottingham C
Wildlife - Nottingham B
Forestry - Nottingham C
Outdoor Safety - Sugartown C
Current Issue - (tie) Hopewell B, Nottingham B, Nottingham C, Pocopson C, West Vincent B
Maureen Ford retired from the Chester County Conservation District in 2017 after 14 years of dedicated service. Maureen arrived at the Conservation District with a wealth of experience in fundraising and with organizational skills second to none. Maureen was instrumental in a relatively smooth transition from an in-house database to a County supported database that came with a huge learning curve. Just a few short years later she was also very helpful in transitioning to our current cloud-based database. Maureen also played a very important role in supporting the Chester County Envirothon. Her previous fundraising skills made her a natural fit to take on the role of ensuring the Envirothon was adequately funded. Maureen volunteered for many roles in her years at the Conservation District, including Pocopson Christmas coordinator, fire warden, and wellness coordinator to name a few. You could always count on Maureen for her honest opinion whenever requested, and we will always remember Maureen’s “gentle reminders.” Maureen dove right into retirement with trips to Hawaii; Ocean City, Maryland; and a James Taylor concert. In addition, she plans to escape the cold northern winters as a Florida snowbird. Everyone on the Board of Directors and Conservation District Staff says, “Thank you and enjoy your well-deserved retirement, Maureen!”

Zak Krone graduated from the University of Virginia with a B.A. in English and Music Theory. Zak is currently settling into his new role of providing administrative assistance to the Urban Team. Prior to working at the District he was employed as a bus driver, pizza chef, roofer, luggage truck driver, piano tutor, barista, ice cream maker, touring musician, session drummer, and radio programming director. He is thankful for the new opportunity at the District and lives in Philadelphia with his rescued pit bull, “Diva.”

Christian E. Strohmaier, Managing Director
Tammy Cairns, Publications Coordinator
Molly Degeer, PE, District Engineer
Maureen Ford, Administrative Assistant (retired)
Annette Ives, Assistant Administrator
Zak Krone, Administrative Assistant (new hire)
Tim Steinhofer, Conservation Program Representative
Zack Stepan, Watershed Coordinator

Dan Miloser, Agricultural Team Leader
Laurell Bostdorf, Agricultural Resource Conservationist
Benjamin Drover, Agricultural Resource Conservationist
Jeff Griffiths, Agricultural Resource Conservationist
Pam King, Agricultural Resource Conservationist
Paige LaDuca, Agricultural Resource Conservationist
Corinne Trice, Agricultural Resource Conservationist
Michael Zuk, Agricultural Resource Conservationist

Gaye Lynn Criswell, Urban Team Leader
Jim Demchak, Urban Resource Conservationist
Donna Leddy, NPDES Permit Coordinator
Gordon Roscovich, Urban Resource Conservationist
Joe Sofranke, Urban Resource Conservationist
Shana Stephens, Urban Resource Conservationist

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