



# Conservation Matters



## **Spring Thaw...**

Spring is always an exciting time of year. The temperatures start to warm and flowers bloom. The dreariness of winter fades and going outdoors is much more enjoyable.

In this edition of our newsletter, you will find our annual report for 2018. Please take the time to review the work completed in Northumberland County during 2018. You will see it was a busy year for us!

You may see our technicians out and about in the coming months as they work on field projects and start mosquito surveillance. We look forward to seeing you out and about in the warmer weather as you start your outdoor spring projects! Enjoy the warmer days.

Until summer,

*Judy Becker*

## **Spring Tree Sale Pickups**

We hope you were able to take advantage of this year's annual tree sale. If you ordered trees, you will receive notification in the mail regarding the pick up dates and directions. Pick up days will be April 24th and 25th from 7:00 am until 7:00 pm at the Rockefeller Township building, 538 Seven Points Road, Sunbury.



If you did not get the chance to place an order, you can visit us on the pick up dates to see if extras are available. We cannot take orders for extras ahead of time. We advise you get there early for extras since they tend to go quickly!

If you did place an order with us this year, we thank you for your support of our sale! This was our 49th year, and we look forward to many more to come! By the way, we would like to do something special for our 50th year. Have an idea? Email us and let us know how you think we should celebrate our 50th annual tree sale at [jbecker@nccdpa.org](mailto:jbecker@nccdpa.org)!

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*"Conservation Matters" is  
a quarterly newsletter  
published by the  
Northumberland County  
Conservation District,  
Sunbury.*

***Our Programs: Erosion and Sedimentation Control, National Pollution Discharge Elimination System (NPDES), Dam Safety and Waterway Management, Environmental Education, Chesapeake Bay Program, Dirt & Gravel Roads, Agricultural Land Preservation, Watershed Protection and Education, Mosquito-borne Disease Control***

**Visit [www.nccdpa.org](http://www.nccdpa.org) for more information. We are also on Facebook at [www.facebook.com/nccdpa](http://www.facebook.com/nccdpa).**

## UPCOMING EVENTS OF POSSIBLE INTEREST



# The Sunbury Hill Neighborhood Invites you to our 5th Annual Plant Swap! Saturday May 18th, starts promptly @ 9am @ Kiwanis Playground On Washington Ave, Sunbury ( behind hospital)

What is a plant swap? Plant swaps are a fun way to get rid of extra plants you may have (perennial divisions, extra seedlings, pack annuals, unwanted houseplants, etc.) by trading with other gardeners! You can also feel free to bring any extra fruits or vegetables to share.

The Plant Swap will be held at the **Kiwanis playground** on **May 18th at 9 A.M.**

This will be a rain or shine event.

Light refreshments will be served. For more information, contact our office 570-259-9136 or visit Sunbury Hill Neighborhood on Facebook

### TIPS FOR FIRST-TIME PLANT SWAPPERS!

- Bring a plant, get a plant. It's a great way to expand on what you already have in your garden.
- You can bring more than one plant!
- Plants should be in a container.
- Label plants as well as possible (a piece of tape or a notecard will do!)
- Bring flats, trays or a box to transport your plants to and from the swap.
- Plants should be well watered, disease-free and free of pests!
- Please **DO NOT** bring any invasive plant species.
- Dig plants up a few days in advance so that they are fully recovered prior to the swap!



A council of  Sunbury's Revitalization, Inc.

# NORTHUMBERLAND COUNTY CONSERVATION DISTRICT'S 2019 MEMBERS

## Conservation Benefactor-\$1,000:

KW Enterprises, LLC, Milton

## Friend of Conservation-\$500:

Hoffman Brothers Lumber, Richfield  
KIZ Resources, LLC, Altoona  
Trumbull Corporation, Pittsburgh

## Associate Members-\$100:

Anonymous  
Anonymous  
Anonymous  
In Memory of Marlin R. Becker  
Dan Shingara Enterprise, Inc., Paxinos  
Dave Gutelius Excavating, Inc., Mifflinburg  
Ferster Excavating, LLC, Dornsife  
First National Insurance Agency, Selingsgrove  
Glenn O. Hawbaker, Inc., Montoursville  
JD Feaster Earthworks, Inc., Selingsgrove  
Daren E. Kauffman, Dornsife  
Landpro Equipment, Watsontown  
Meckley's Limestone Products, Inc., Herndon  
Moser Seed Agency, New Columbia  
New Enterprise Stone & Lime Co., Inc., New Enterprise  
Northumberland County Anthracite Outdoor Adventure Area, Shamokin  
RJ Hoffman & Sons, Inc., Mt. Pleasant Mills

## Associate Members (continued):

Robert C. Snyder Farms, Inc.  
Rovendale Ag & Barn, Inc., Watsontown  
Eric Watson, Turbotville

## Contributing Members-\$75:

Dutch Mill Bulbs, Hershey

## Affiliate Members-\$50:

Carriage Manor Builders, Inc., Danville  
Central Builders Supply Company, Sunbury  
Fairchild Brothers, Inc., Winfield  
Mahantongo Game Farms, LLC, Dalmatia  
Dennis & Sharon Martz, Dalmatia  
Paul Q. Ross Construction, Inc., Sunbury  
Pik Rite, Inc., Lewisburg  
Sunbury Animal Hospital, Sunbury  
Turbotville National Bank, Turbotville

*The Northumberland County Conservation District Board of Directors and Staff would like to thank our 2019 members for their kind donations. We would not be able to accomplish the work we do without our members' support! For more information on becoming a member of the NCCD, visit our website at [www.nccdpa.org](http://www.nccdpa.org) or call 570-495-4665. A membership form is also available below.*

## NCCD Membership Drive Form

### Northumberland County Conservation District

#### Your Information (please print or type)

Name	
Billing address	
City	
State	
ZIP Code	
Telephone (home)	
Telephone (business)	
Fax	
E-Mail	

#### Donation Information

I (we) plan to make this contribution in the form of:  
 cash  check  credit card  other.

Credit Card No. \_\_\_\_\_

Exp. Date \_\_\_\_\_

Name on Card \_\_\_\_\_

Security Code \_\_\_\_\_

#### Membership Type (please circle one)

<b>Affiliate</b>	Name in 1 NCCD newsletter.	\$50.00	<b>Friend of Conservation</b>	Business Ad in 2 NCCD newsletters.	\$500.00
<b>Contributing</b>	Name in 2 NCCD newsletters.	\$75.00	<b>Conservation Partner</b>	Business Ad in 3 NCCD newsletters.	\$750.00
<b>Associate</b>	Name in all 4 NCCD newsletters.	\$100.00	<b>Conservation Benefactor</b>	Business Ad in all 4 NCCD newsletters.	\$1,000.00

*\*All memberships will appear on our website. NCCD will contact your business with ad due dates for newsletters.*

# WARRIOR RUN WATERSHED SELECTED FOR NATIONAL WATER QUALITY INITIATIVE

by: Chantel Shambach, Watershed Specialist and Janette Leshar, NRCS District Conservationist

We are excited to announce a truly unique opportunity to improve water quality in the Warrior Run watershed. The Warrior Run basin has been selected for the National Water Quality Initiative (NWQI) program funded through the Natural Resources Conservation Service (NRCS). We will be working together with NRCS and the PA Department of Environmental Protection (DEP) to submit an implementation plan for the Warrior Run watershed

## National Water Quality Initiative (NWQI):

The purpose of NWQI is to work with producers and landowners to implement voluntary conservation practices that improve water quality in high-priority watersheds while maintaining agricultural productivity. NWQI is designed to help individual agricultural producers take action in reducing the runoff of sediment, nutrients and pathogens into waterways where water quality is a critical concern. The goal is to implement conservation practices in a concentrated area to reduce agricultural contributions to the water body impairments within these priority watersheds. NWQI was established in fiscal year 2012 as an initiative delivered jointly with state water quality agencies and the Environmental Protection Agency (EPA) to address agricultural sources of water pollution. In fiscal year 2018, watersheds were selected for a “readiness phase” and an “implementation phase.” It is required to submit a 2019 watershed assessment in order to receive implementation funds in 2020.

## Approved for NWQI readiness phase:

Lower Maiden Creek – Berks County  
Swatara Creek – Dauphin/Lebanon County  
Warrior Run – Northumberland County

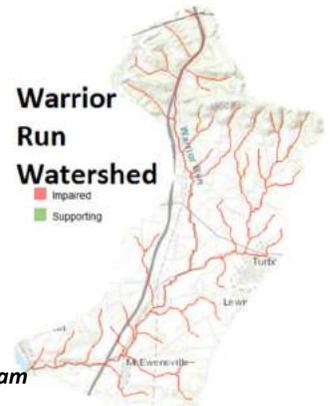
## Currently other approved NWQI watersheds:

Upper Kishacoquillas – Mifflin County  
Beaver and Upper Yellow Creeks – Bedford County

**Warrior Run watershed boundaries relative to Northumberland County**



**Warrior Run watershed stream impairment report**



The Warrior Run Watershed is the smallest watershed being considered for the readiness phase but is the second highest impacted by agriculture. Warrior Run is 21.6 square miles and is a tributary of the West Branch of the Susquehanna River. A Total Maximum Daily Load (TMDL) was established in 2013 for the whole Warrior Run basin due to siltation and organic enrichment/low dissolved oxygen concerns. The total load of sediment in Warrior Run is 13,951.62 pounds per day. A 10% reduction of this load is required to meet the TMDL as determined by the Environmental Protection Agency (EPA). The daily load of phosphorus in the stream is 11.09 pounds. A 25% reduction of phosphorus is required in order to meet the TMDL. According to the EPA, all of the streams in the watershed are impaired.

The readiness phase of the NWQI program will provide a minimum 1-year period for watershed-level assessment, on-farm planning, and educational outreach. Water studies will include biological, chemical, and siltation assessments throughout the watershed. Management practices that will be provided include, but are not limited to, assistance with conservation plan writing, riparian buffer implementation, stream bank fencing installments, cover crop utilization, improvements with manure storage, barnyards and/or grazing functions.

If you live in the Warrior Run watershed and would like more information, or if you are a producer living in the Warrior Run watershed and have questions and/or interest in implementing Best Management Practices, please feel free to contact Janette Leshar or Chantel Shambach (contact information listed below). We look forward to working with you to improve water quality in Northumberland County.

Janette Leshar, District Conservationist, USDA-NRCS, 570-415-3117, [janette.lesher@pa.usda.gov](mailto:janette.lesher@pa.usda.gov)  
Chantel Shambach, Watershed Specialist, NCCD, 570-495-4665, [cshambach@nccdpa.org](mailto:cshambach@nccdpa.org)



# 2018 Annual Report

# About Us...

## 2018 Directors

**Michael Hubler**  
Chairman, Public Director  
*Since 2016*

**Leon Wertz**  
Vice-Chairman, Farmer Director  
*Since 2000*

**Richard Shoch**  
Commissioner Director  
*Since 2012*

**Richard Daniels**  
Farmer Director  
*Since 2012*

**John Kopp**  
Farmer Director  
*Since 2004*

**Natalie Wertman**  
Public Director  
*Since 2018*

**Gary Truckenmiller**  
Farmer Director  
*Since 2013*

## Staff

**Judy Becker**  
District Manager

**Shirley Snyder**  
Administrative Assistant

**Chantel Shambach**  
Watershed Specialist

**Michael McCleary**  
Erosion and Sediment  
Technician

**Ryan Cherwinski**  
Agricultural Conservation  
Technician

**Brandon Ball**  
Mosquito-borne Disease  
Control Coordinator

## 2018 Associate Directors

**Dave Swank**  
*Since 1976*

**Dr. Blair Carbaugh**  
Former NCCD Board Member  
*Since 2006*

**Albert Mabus**  
Former NCCD Board Member  
*Since 2008*

**Ted Carodiskey**  
Little Shamokin Creek Watershed  
Association, Secretary  
*Since 2010*

**John Pfleegor**  
Former NCCD Board Member  
*Since 2013*

**Michael Erdley**  
Former NCCD Board Member  
*Since 2016*

**Lynn Wilson**  
*Since 2017*

**Dave Crowl**  
Former NCCD Board Member  
*Since 2017*



*Left to right: Gary Truckenmiller, Michael Hubler, Leon Wertz, Richard Daniels, John Kopp, Natalie Wertman, Richard Shoch*

## EROSION AND SEDIMENTATION CONTROL PROGRAM, by Michael McCleary

The NCCD administers the Chapter 102 Erosion Control program through a signed delegation agreement with the Department of Environmental Protection (DEP). Under Chapter 102 delegation, NCCD conducts the following program responsibilities: community outreach, permit application receipt & review, permit approval or denial, consultation, site monitoring and final inspection upon project completion. These functions require coordination with DEP, the applicants and their consultants and municipal officials.

### NPDES Permit Applications:

Approved - 12  
Major Modifications - 0  
Renewals - 3  
Withdrawn by Applicant - 0  
Terminated (Project Completed) - 4  
Under review at end of year - 0

### E&S Plan Submittals:

Approved - 11  
Courtesy Copies on File - 5  
Waiver Letters Sent - 8

Complaints Investigated: 12

Site Visits: 87

Consultations: 297

### Project Related Meetings:

- \* Pre-application Meetings - 2
- \* Pre-construction Meetings - 7
- \* Job Conferences - 5

### Multi-County Projects:

UGI Sunbury 20" Diameter Gas Pipeline  
Atlantic Sunrise/Transco 42" Diameter Gas Pipeline  
Central Susquehanna Thruway  
PPL Columbia-Danville 69kv Transmission Line Rebuild

## DAM SAFETY AND WATERWAY MANAGEMENT, by Michael McCleary

In 2018 under a Delegation of Authority Agreement with DEP pursuant to PA Code Title 25 Chapter 105 (Dam Safety and Waterway Management), the E&S Technician has processed and acknowledged registrations to use the following 27 General Permits:

- 1 – GP 01 – Fish Habitat Enhancement Structures
- 1 – GP 02 – Small Docks and Boat Launching Ramps
- 7 – GP 03 – Bank Rehabilitation, Bank Protection and Gravel Bar Removal
- 2 – GP 04 – Intake and Outfall Structures
- 6 – GP 05 – Utility Line Stream Crossings
- 1 – GP 06 – Agricultural Crossings and Ramps
- 6 – GP 07 – Minor Road Crossings
- 3 – GP 08 – Temporary Road Crossings
- 0 – GP 09 – Agricultural Activities



## DIRT AND GRAVEL/LOW VOLUME ROADS, by Michael McCleary

The E&S Technician is also responsible for managing the Dirt, Gravel and Low Volume Paved Roads Program for the Northumberland County Conservation District. In 2018, five townships submitted five projects requesting a total of \$503,441.07 in grant funds. Five townships were awarded funding for five projects. Total grant funding awarded was \$503,441.07. The townships provided \$117,207.28 in-kind contributions.

### Feature Project: South Lily Road, Shamokin Township (Low Volume Roads Project)

South Lily Road is a Low Volume Paved Road on a steep hillside.

Storm water flows from the field north & east of the road onto the road. It is then channeled down the road due to entrenchment and ditches.

Storm water flows down the road and eventually ends up in a pond on the other side of SR 61.

A proposal by the Penn State Center for Dirt, Gravel, & Low Volume Paved Roads would effectively remove approximately 2/3 of the storm water from the lower half of the road.



Flow has been cut off from an existing natural drainage swale east of the road due to development and road maintenance over the years.



# Got Trees

## Buyers of Standing Timber

10 acres or more  
Call for free appraisal  
717-694-3340

## Hoffman Brothers Lumber Inc

118 Sand Valley Rd-Richfield, PA  
Firewood  
Pick-up, Tri-axle or palletized loads

(continued on next page)

## DIRT AND GRAVEL/LOW VOLUME ROADS, cont.

**Before**



**After**



**During**



## DIRT AND GRAVEL/LOW VOLUME ROADS, cont.

**Before**



**After**



**During**



## DIRT AND GRAVEL/LOW VOLUME ROADS, cont.

**Before**



**After**



**THIS PROJECT FUNDED BY  
PENNSYLVANIA'S DIRT, GRAVEL &  
LOW VOLUME PAVED RD. PROGRAM**



**PROTECTING OUR NATURAL RESOURCES**  
FOR MORE INFORMATION CALL (570) 495-4665  
OR VISIT US ONLINE AT [WWW.NCCDPA.ORG](http://WWW.NCCDPA.ORG)

### **NCCD Quality Assurance Board**

*Michael McCleary (NCCD)*

*Michael Erdley (NCCD)*

*Janette Leshar (NRCS)*

*Jacob Bennett (Fish and Boat Commission)*

*Ted Carodiskey (NCCD/Advisory, non-voting)*

*Judy Becker (NCCD/Advisory, non-voting)*

## NUTRIENT MANAGEMENT

NCCD, under a delegation agreement with the State Conservation Commission, administered the Pennsylvania Nutrient Management Program, Act 38 (formerly Act 6 of 1993), in Northumberland County until June 30, 2018. NCCD turned the Act 38 program back over to the State Conservation Commission as of July 1, 2018.

## AGRICULTURAL LAND PRESERVATION, by Judy Becker

The NCCD coordinates the activities involved in the Agriculture Land Preservation Program for the county on behalf of the Northumberland County Agricultural Land Preservation Board. Applications are received during open application rounds, which are advertised.

Applications are ranked using a two-part Land Evaluation and Site Assessment (LESA). The LESA looks at the quality of soils/site assessment, and considers local factors that may have an impact on the current or future viability of a farm.

Once the farms are ranked and the funding is provided from the State and the County Commissioners, the land development rights are purchased from the highest-ranking farms. The total number of farm easements purchased to date in the county is 22, totaling 2,420 acres. One farm easement was approved in 2018 in Turbot Township. Currently there are 56 farms on a waiting list totaling 6,525 acres.

### **2018 Northumberland County Agricultural Land Preservation Board:**

William Geise, Chairman	Richard Daniels, Vice-Chairman	Mary Crone, Secretary/Treasurer
Benny Snyder, Township	Donald Ferster, Contractor Director	Dave Becker, At-large Member
	Tom Boop, At-large Member	

## AGRICULTURAL CONSERVATION, by Ryan Cherwinski

I began working for the conservation district the end of March 2018; in roughly a year I completed and participated in many activities. In July of 2018, NCCD began Chesapeake Bay Farm Inspections as a part of the Chesapeake Bay Reboot Strategy. The goal of these inspections is to check if farmers are in compliance with state regulations concerning Ch. 102 Agricultural Erosion and Sediment Control Plans, (Ag E&S Plan also sometimes referred to as a Conservation Plan), and Manure Management Plans (MMP). These plans form the starting point to maintain and improve local water quality throughout Northumberland County by addressing nutrient and sediment concerns.

The following activities were completed by our Agricultural Conservation Technician Since March 2018:

**Chesapeake Bay Compliance Inspections-** Between July 1, 2018 and March 15, 2019 we completed 38 of the 50 required inspections. The initial townships being inspected are Delaware, West Chillisquaque, East Cameron, and Jordan.

## AGRICULTURAL CONSERVATION, cont.

**Plan Writing Assistance-** In 2018, I assisted producers with 57 Manure Management plans and 52 Agricultural Erosion and Sedimentation plans.

**Kevin Raker Barnyard Project-** Kevin Raker's beef cattle operation is located in Sunbury, Pennsylvania. His herd includes 30 brood cows with calves, and he keeps another 30 animals to finish out at two years old. There is a bull on the farm, and all animals are kept on the operation year-round. His operation is located on 214 acres, with 203 acres utilized as cropland and 11 acres as pasture. A 106'-10 ¾" X 68' pole-type roof will be installed over an existing concrete barnyard and manure stacking area. On the other side of the head quarters, a 64' X 80' roofed barnyard will be constructed.

**Cover Crop Incentive Program-** This is a two-year program where incentive payments are made for producers implementing a multi-species cover crop in their rotation. For the 2018 growing season, we implemented 1,104.5 acres of multi-species cover crop throughout the county. Considering the difficult wet season, I am very encouraged about the potential of the 2019 season.

**NRCS Affiliate-** The District began an affiliation agreement with NRCS in July 2018 with funding from the NACD Technical Assistance Grant. I have assisted in many different capacities including: the survey & design of conservation practices and systems, construction inspections, certification of conservation practice systems, completing AgLearn requirements, and writing EQIP contracts and conservation plans. I am also pursuing my Certified Planner Designation. I assisted with the Amos Hostetler Manure Storage and Barnyard Project and the Mike Woodruff Barnyard Project.

**Plan Writing Workshops** – In a multi-county effort, we helped hold Agricultural Erosion Sedimentation Plan Writing Workshops on November 27th and December 3rd from 6-9pm. These workshops were held at the Union County government building. NCCD also received a Manure Management Mini-Grant from PACD. With that funding we held five manure management plan writing workshops for producers in Northumberland County. Four all day workshops were held in the Environmental Education center in February and March, and the fifth was held at the ARS lab in Klingerstown on March 29<sup>th</sup>.



**Soil and Water Quality Field Day-** We held a joint meeting with the Schuylkill County Conservation District and NRCS at the Agricultural Research Service Lab on August 29<sup>th</sup>. The first portion of our meeting focused on the CREP program, while the second half of the meeting focused on Agriculture in the Mahantongo Watershed and promoting soil health. Funding was provided for this meeting through a PACD CREP Mini-Grant and Schuylkill County Conservation District.

*Staff from the ARS Lab in Klingerstown provided a tour of their equipment being used for important agricultural research.*

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## AGRICULTURAL CONSERVATION, cont.

### Education Activities:

Mifflinburg High School – The entire service center provided the Mifflinburg high school students a look at what goes on in the office day to day.

Beck Elementary – Janette Leshner, NRCS DC and I presented a few soil health demonstrations to elementary students.

Line Mountain High School – Macro Invertebrate demonstration and Identification.

Milton High School- We hosted Milton High School for a tour of the offices and then went out to a recent farm project and the Little Shamokin Creek Watershed Association's pavilion.

Geisinger Storm Water Workshop – On May 10<sup>th</sup> Shirley Snyder, Administrative Assistant and I spoke at Geisinger about rain barrels and stormwater best management practices.

Milton High School Occupational Advisory Committee- I am a member of the newly formed Agricultural Education Program Committee at Milton High School.

## WATERSHED PROTECTION, by Chantel Shambach

One of the many environmental concerns that the Conservation District promotes is watershed protection. The District Watershed Specialist is dedicated in helping to preserve, restore, and educate about our natural water resources. With help from land owners, municipalities, and watershed groups throughout the county, there has been a considerable amount of projects that have been implemented in the past and more to look forward to in the future. The Watershed Specialist cooperates with numerous watershed groups, such as:

- Shamokin Creek Restoration Alliance (SCRA)
- Little Shamokin Creek Watershed Association (LSCWA)
- Chillisquaque Limestone Watershed Association
- Roaring Creek Valley Conservation Association
- Tri-Valley Watershed Association
- Mahanoy Creek Watershed Association

The following is a summary of technical assistance provided by the Watershed Specialist during 2018:

### Water Testing:

-Collected and analyzed water samples from 11 locations along Little Shamokin Creek with Little Shamokin Creek Watershed Association and DEP, March – November

### Agricultural BMP design, implementation, or maintenance:

- Little Shamokin Creek:  
Agricultural BMP design survey with NRCS surveyor, NCCD's Ag Technician, and NRCS engineer

## WATERSHED PROTECTION, cont.

### Stream and Lake Restoration BMP design, implementation, maintenance, or technical assistance:

- Little Shamokin Creek:
  - Created maps
  - Farm visit for potential future buffer plating site
  - Wrote letters to home owners requesting access to property for future stream assessments
  - Derived waypoints and survey routes, uploaded to GIS site for storage and future reference
  - Site evaluations and plan development
  - Guidance on stream stabilization and appropriate permit requirements
  - Visited damaged stormwater sites
  - Collaborated with other government entities such as Department of Environmental Protection (DEP), PA Fish and Boat Commission, municipalities, and SEDA-COG to assist with on site evaluations
  - Educated local landowners on riparian buffers, streambank fencing options, and other agricultural needs
  - Attended luncheon with PA State Representative, Lynda Schlegel, and her District Office Manager, Jeff Cole, regarding upcoming restoration events
  - Beaver Run/Little Shamokin Creek: assisted with providing technical assistance with stream bank erosion and road damage - Collaborated with DGLVR technician, Lower Augusta Township, and Trout Unlimited
- Quaker Run/Roaring Creek
  - Created bus route and station maps for future educational outreach event
  - Met with landscaper and Kulpmont Borough Councilmen for future educational outreach event
  - Met with SCRA to scout terrain at State Forest for future educational outreach event
  - Technical assistance to municipality and steps to approach bank stabilization project
- Fiddlers Run
  - Providing future flood mitigation steps and important contact information to Jordan Township
  - Site visit and technical support to land owner on channel jumping and crop field disturbance
  - Collaborated with other government entities such as Department of Environmental Protection (DEP) to assist with on site evaluations



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## WATERSHED PROTECTION, cont.

- Logan Run
  - Gave guidance to land owner regarding stormwater damage to crop field and waterway
  - Collaborated with other government entities such as Natural Resources Conservation Service (NRCS) for site assistance
- Limestone Run
  - Submitted GP1 and GP6 permits for Foreman Project
  - Collaborated with other government entities such as Columbia County Conservation District and PA Fish and Boat Commission on project design and implementation updates
- Susquehanna River Watershed
  - Provided guidance for stream bank fencing, riparian buffer, and bank erosion
- Hallowing Run
  - Provided guidance on stream relief options
  - Informed land owners of the DEP guidelines for maintaining the stream
  - Riparian buffer work proposed to land owner
  - Filled out riparian buffer planting plan and submitted to land owner for completion
  - Collaborated with other government entities such as Natural Resources Conservation Service (NRCS) for site assistance
  - Addressed pond structure & bank erosion concerns
- Muddy Run
  - Site visit to assess storm damaged banks, provide assistance, take photos, and brainstorm for future project potential at location
  - Collaborated with other government entities such as Department of Environmental Protection (DEP) and PA Fish and Boat Commission to assess photos taken
- Shamokin Creek
  - Sent thank you letters to all of those who helped with the Kulpmont field trip event
  - Plotted GPS areas of Shamokin Creek watershed with a member of SCRA to assess future planting areas
  - Assessment of areas for the grant proposal of 2019 field trip event
  - Collaborated with Kulpmont councilman, landscaper, and 2 members of Shamokin Creek Restoration Alliance
  - Visited 11 sites and discussed Acid Mine Drainage
  - Provided new land owners with informational materials, desired plants, planting zone preferences, and invasive species information
- Spring Run
  - Met with Watsonstown Borough Manager to help give streambank stabilization guidance to a property owner and the borough



*Students plant trees to expand the riparian buffer along Quaker Run during the 2018 Kulpmont Education Day event.*

## WATERSHED PROTECTION, cont.

### Training sessions attended

- Multifunctional Riparian Forest Buffer Tour at Happy Hallow Farm, hosted by DCNR, Stewartstown, PA
- Stream Maintenance & flood intervention workshop, hosted by Sullivan County Conservation District, Dushore, PA (SCCD office)
- Municipal Leaders Meeting, presented by PEMA/Municipal Leaders, Sunbury, PA
- CREP field day, presented by NRCS/NCCD/Schuylkill County Conservation District, Klingerstown, Pa
- Chapter 105 E-permitting regulated community, presented by DEP, Sunbury, PA (NCCD office)
- New Employee Orientation, presented by DEP Field Representative
- CREP Riparian Buffer Workshop, presented by Centre County Conservation District, Penn State University, Chesapeake Bay Foundation, Centre County, PA
- Annual Watershed Meeting, hosted by PACD/DEP, State College, PA
- Stream Ecology/Riparian Buffer workshop hosted and presented by Stroud Water Research Center, Avondale, PA
- Kick-off teleconference for NWQI/MRBI readiness watersheds, presented by NRCS, NRCS office, Northumberland County
- Closing the Deal workshop, hosted by PACD, Lancaster, Pa
- Stream Partnership meeting, hosted by Northcentral PA Conservancy, Union County Conservation District
- DEP Educational Grant Webinar, presented by DEP, NCCD office

### Educational trainings, lessons, presentations, and/or mass outreach activities

- Water Education Day- Groundwater table, ~150 people, Briar Lake, Columbia County
- Water Quality and Aquatic Macroinvertebrate Kick, 35 people, Himmels Church/Girl Scouts
- Sunbury Community Hillside Event-Macroinvertebrates, ~55 people, Sunbury, Pa
- NCCD Annual Board Tour, 11 people, Kulpmont, PA and Little Shamokin Creek Watershed
- News Item Article: "Students improve environment during field trip", ~ 7500 people
- DEP blog article, "Students Explore Coal Heritage and Watershed Restoration Possibilities in Northumberland County", 5,461 people
- 2018 Kulpmont Tree Planting/Field Trip, 85 students, Kulpmont, PA/Our Lady of Lourdes and Mount Carmel High School
- Water quality and Aquatic Macroinvertebrate Kick, 10 students, Susquehanna University



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Fax: 814-941-2424  
E-mail: rachel@kizresources.com

# MOSQUITO-BORNE DISEASE CONTROL, by Brandon Ball

## Mission Statement

The NCCD, in cooperation with the Pennsylvania Department of Environmental Protection (PA DEP), has implemented the Mosquito-borne Disease Control Program. Our mission is to protect the public health of residents in Columbia, Montour, Northumberland, Snyder, and Union counties by collecting field data and eliminating hosts of the West Nile and Zika viruses.

## Mosquito Surveillance

Surveillance is an essential part of the District's Integrated Mosquito Management (IMM) approach to this program. It allows us to track mosquito populations across our 5-county region, known as the Northcentral Coalition, and decide how best to utilize our resources to keep them at controllable levels. This year's surveillance began on April 1st and ended on September 26th.

Mosquito populations started to amplify in July when much of the area we serve experienced between 6" and 10" of rain in one week. When you get this much rain in such a short amount of time, the ground becomes saturated, and any additional rain readily runs off. Then, the creeks and rivers rise causing flooding. When the waters recede, many low-lying areas retain water, and these areas become breeding grounds for "floodwater" mosquitoes. Not long after the heavy rains in July, the program experienced some turnover. At this time, surveillance for Northumberland County was carried out by the District's summer intern. Vector control professionals from the Department of Environmental Protection (DEP) West Nile Virus (WNV) Control Program conducted surveillance in the other Columbia, Montour, Snyder, and Union counties. During the second week of August, our area experienced another set of heavy rains. It was also at this time that surveillance data and communications among the mosquito-borne disease control community across the entire state were negatively impacted due to a database issue. New staff was hired on August 20th, and surveillance by county personnel for all five counties resumed on September 4th. During the remainder of the 2018 season, our staff set 102 gravid traps and 32 BG Sentinel traps at locations throughout the five counties.

## Mosquito Control

We responded to over 45 complaints between August 20th and October 12th. During this time, our staff conducted 4 truck-mounted ULV sprays, 4 larval control treatments, and 1 barrier treatment, in addition to assisting vector control professionals from the DEP WNV program with several other control events.

## West Nile Virus

For 2018 West Nile Virus totals for the Northcentral Coalition, refer to figure 1 below.

2018 Reports of West Nile Virus					
County	Total Positives	Human	Avian	Mosquito	Veterinary
Columbia	31	1	1	27	2
Montour	22	1	0	20	1
Northumberland	24	1	1	17	5
Snyder	16	0	2	14	0
Union	43	0	0	36	7
<b>TOTAL</b>	<b>136</b>	<b>3</b>	<b>4</b>	<b>114</b>	<b>15</b>

Figure 1

## MOSQUITO-BORNE DISEASE CONTROL, cont.

### Zika Virus

Staff conducted surveillance for *Aedes albopictus*, known as the Asian Tiger mosquito, by setting BG Sentinel traps in closely populated areas where they have become a problem in the US. The *Aedes albopictus* mosquito is a potential vector for zika virus, as well as dengue fever, chikungunya, and yellow fever. Our team will continue to be proactive in our efforts to be on the lookout for this mosquito. There were no locally-transmitted cases of Zika Virus in the United States in 2018.

### Goals for 2010

I have established goals for the upcoming 2019 season:

1. Pre-treat established mosquito breeding sites with larvicides to minimize adult emergence.
2. Form positive working relationships with all the municipalities in the Northcentral Coalition.
3. Continue to improve upon and increase education and outreach to the public.
4. Increase analytic capabilities for the program through improved data collection.

### Tire Collection Event

On April 7, 2018, the NCCD held a tire collection event at the Anthracite Outdoor Adventure Area in Coal Township. We accepted passenger vehicle tires from residents of Northumberland County. More than 2,400 tires were collected and recycled at Mahantango Enterprises in Liverpool. Boy Scout Troop 309 from Sunbury volunteered to assist with the tire collection. The event was a joint effort between the NCCD, PA DEP, the Anthracite Outdoor Adventure Area, and Keep Pennsylvania Beautiful.



*Tires are unloaded to be recycled by Mahantango Enterprises.*



*Tires were loaded into two trailers by NCCD staff and volunteers.*

## MEETINGS/OUTREACH

**6th Annual CD Forum – March 6, 2018.** This annual event provided 2 breakouts for farmers and municipalities. Topics included Seed Treatments: What Conditions Warrant Use in Soybeans; Top Disease Issues from 2017-White Mold, Grey Leaf Spot, and More; Crop Insurance, How to Navigate Through Today's Current Ag Economic Challenges; Pollinators and Pesticide Stewardship; Pesticide Spill Protocol; and Applying for Dirt, Gravel and Low Volume Roads Project Funds. 12 vendors provided sponsorships to help fund the program and were on hand to speak to attendees. Vendors present included Crop Production Services of Bloomsburg; Channel Seed/Pine Hurst Acres of Danville; DuPont Pioneer; Kuhns Lumber of Lewisburg; AgChoice Farm Credit of Lewisburg; Rovendale Ag of Watsonstown; KW Enterprises, LLC of Milton; LB Water of Selinsgrove; Sunbury Animal Hospital; Valley Ag and Turf of Watsonstown; Larson Design Group of Selinsgrove; and Hoover Tractor of Mifflinburg. 2 Category and 2 Core credits were offered to attendees.

**48<sup>th</sup> Annual Tree Sale – Week of April 16, 2018.** This year's tree sale was another great success. We sold 12,664 trees to 180 customers.



**Susquehanna Valley High School and Middle School Envirothon – April 24 and May 8, 2018.** The annual Susquehanna Valley High School and Middle School Envirothons are a joint effort of the Columbia, Montour, Northumberland, Snyder, and Union Conservation Districts. At our High School Envirothon, held at the Shikellamy State Park Marina, Northumberland County had 14 teams. Line Mountain Team B was the winner. Our Middle School Envirothon, held at the Montour Preserve, had 9 teams.



Line Mountain's Team B: (left to right), team advisor Francine Ferster, Kylee Lerch, Chelsea Lahr, Ashlyn Walshaw, Andrew Wolfgang, and Colton Schwartz

## 2018 AWARDS

### **Swank Outstanding Conservation Organization Award**

***Winner: Boy Scout Troop 309 of Sunbury***

*About the award:* This award is sponsored annually by David and Judy Swank of Elysburg in honor of their granddaughter, Shelby Palmer. It is presented to an outstanding conservation organization which has done exceptional conservation related work in the county.

*About the winner:* Boy Scout Troop 309, housed out of Otterbein United Methodist Church in Sunbury, is led by Julie Moore. The troop was originally chartered in 1954. After a period of inactivity, the troop was restarted in 2016.

The boys from Troop 309 helped with the Sunbury Hill Neighborhood Community's cleaning and assembling of 30-plus barrels for a rain barrel workshop. They also helped with placing approximately 350 flags along Market and Wolverton Streets in Sunbury for the patriotic holidays. The troop also volunteered to help the Northumberland County Conservation District during our 1<sup>st</sup> tire event held on April 7<sup>th</sup> at the Anthracite Outdoor Adventure Facility. Approximately 2,400 tires were recycled because of this event.

### **Raymond D. and Mable E. Shaffer Scholarships**

***Winner: Baylee Hawk, Dornsife; Kaylee Lerch, Sunbury; Maggie Morgan, Sunbury***

*About the award:* The Raymond D. and Mable E. Shaffer Scholarship is provided every year by Sandra Shaffer-Mattern of Dalmatia to a Line Mountain High School senior who will attend college in the fall. It was instituted in 1996 in memory of Raymond and Mable Shaffer, who were among the founders of the Northumberland County Conservation District. Raymond was on the original steering committee and was appointed to the Board of Directors of the Conservation District in 1955.

*About the winner:* The first 2018 winner of this scholarship is Baylee Hawk of Dornsife, the daughter of Mistee and Jon Raker. Baylee's extracurricular activities include field hockey, student council secretary, Class of 2018 secretary, National Honor Society, Key Club, Future Business Leaders of America, ski club, science club, prom committee, and concert band. She has been accepted to Penn State Altoona and will major in Elementary and Early Childhood education. Her Physics teacher, Shelley L. Herb Fausey, Ph.D. stated the following, "Baylee demonstrates great critical thinking and analytical skills. Her assignments and work are organized and completed neatly. Baylee does well with independent study, as well as working in a group setting." Baylee's GPA is 96.

*About the winner:* The second 2018 winner of this scholarship is Kylee Lerch of Sunbury, the daughter of Nichole Lauver. Nichole's extracurricular activities include FFA, National Honor Society, and science club. She has applied to Wilson College. Her career plans are to work in Environmental Science. Guidance counselor, Amy Zartman, stated the following, "Kylee is an outstanding student with great potential in the science field." Kylee's GPA is a 98.

(continued on next page)

## 2018 AWARDS, cont.

### **Raymond D. and Mable E. Shaffer Scholarships (cont.)**

***Winner: Baylee Hawk, Dornsife; Kaylee Lerch, Sunbury; Maggie Morgan, Sunbury***

*About the winner:* The third 2018 winner of this scholarship is Maggie Morgan of Sunbury, the daughter of David and Mary Morgan. Maggie's extracurricular activities include the school musical, choir, district choir, district jazz, district orchestra, marching band, the National Honor Society, and campus club. She has applied to Bloomsburg University and plans to study Speech Pathology and Audiology. Her Physics teacher, Shelley L. Herb Fausey, Ph.D. stated the following, "Maggie is a respectful individual that displays a natural curiosity about how her world works. Throughout her two years in science, she has explored and investigated various concepts in the natural and physical sciences." Baylee's GPA is 98.

### **Don Cotner, Sr. Memorial Scholarship**

***Winner: Audra Fisher, Watsonstown***

*About the award:* We are proud to present this scholarship for a tenth year, which is sponsored by Don Cotner, Jr. in memory of his father. The award is given to a senior pursuing a degree in agriculture or an environmentally related field in the fall 2018 semester. Don Cotner, Sr. was a director for the Northumberland County Conservation District from 1960-1979. Cotner Farms began implementing a soil conservation program in the mid-1930s and has been actively conducting and promoting soil conservation practices ever since. In 1936, Cotner Farms became one of the first farms in central Pennsylvania to implement 'contour' farming. In recognition of over 50 years of practicing soil conservation, Don Cotner Sr. was named Pennsylvania Conservation Farmer of the Year in 1988. Mr. Cotner was a top ten finalist for the National Conservation Farmer that same year. Soil conservation continues at Cotner Farms today. All acreage is still farmed using no-till methods, cover crops are planted each fall, and diversion ditches, waterways, and terraces are maintained and improved upon annually. Employees of the farm routinely participate in soil conservation meetings and panels which provide information to legislators.

*About the winner:* Our tenth annual award winner of this scholarship is Audra Fisher, a 2018 graduate of Warrior Run High School. She is the daughter of David and Janet Fisher. Audra has been accepted to the College of Agricultural Sciences at Penn State University Park for the fall of 2018. Her career plans include pursuing a degree in Animal Science, attending a college of veterinary medicine, and eventually returning to the area to practice large animal medicine. Audra extracurricular activities include horseback riding, Principal's Cabinet, Treasurer of the National Honor Society, and she volunteers at her church. Her Advanced Placement Biology teacher, Brad Peace, stated the following about Audra, "Audra has a reputation for being an outstanding student – I can now see how she earned that description. Her motivation, intellect, maturity and work ethic go together to make her one of the top students that I have had in the past twenty years of teaching." Audra's cumulative GPA is 102, and she is 2<sup>nd</sup> out of 122 in her senior class.

### **Conservation District Patch**

***Winner: Chris Fisher of Middleburg (Troop 415; Leader: Brian Beward)***

*About the award:* Boy scouts and girl scouts are eligible to receive the Conservation District Patch by earning at least three scout merit badges in conservation. In addition, they must participate in one or more conservation projects, such as tree planting, recycling, wildlife management, litter removal, etc.

## 2018 AWARDS, cont.

### Conservation District Patch (cont.)

*Winner: Chris Fisher of Middleburg (Troop 415; Leader: Brian Beward)*

*About the winner:* Chris Fisher earned the Farm Mechanics, Weather, and Environmental Science badges. He participated in litter removal for his scouting conservation project. In May of 2018, Chris and his troop helped clean up Route 522, from the Mid-West School District office building to the Kreamer Livestock Auction. They collected 27 bags of trash as a troop.

### Environmental Educator of the Year

*Winner: Brandy Fessler, Shikellamy Middle School, 6<sup>th</sup> Grade*

*About the award:* The Northumberland County Conservation District honors a teacher who demonstrates leadership in environmental education through their class work and involvement in community activities.

*About the winner:* Brandy Fessler is a 6<sup>th</sup> grade teacher at Shikellamy Middle School.

Ms. Fessler's environmental education activities and accomplishments during the past three years include:

**Earth Day Commercials:** Her students created commercials for Earth Day highlighting dangers to local ecosystems such as the use of Styrofoam, clear-cutting, agricultural and roadway runoff, and plastic and other debris entering the local waterways. They've offered simple solutions using the book "50 Ways Kids Can Save the Earth" as a resource.

**Pollinator Garden Project:** A pollinator garden was created with milkweed, butterfly bushes, and other native pollinator plants in a garden bed at the middle school that was once just ornamental. The students plant, weed and tend the garden after careful studying and planning. They sent their creation to the Daily Item to promote butterfly garden creation among the valley. A photo and short article were published for Earth Week.

**Owl Pellets:** Each year, in order to stress the interaction among living things, her students study, dissect, organize, chart, graph, and display owl pellet findings. They discuss and research the environmental effects of unbalanced predator-prey relationships in local ecosystems and in those of the world.

**Biome Projects:** After detailed research of biomes and interconnectivity between humans, biotic and abiotic factors in a biome, her students create biome projects with informational posters used to teach the school about our precious natural world.

**Endangered Species Adoption:** Each year her students collect coins to symbolically adopt an endangered species from the World Wildlife Fund. They've adopted a pygmy marmoset, orangutan, sea turtle, and panda.

**Daily Instruction:** In her daily instruction of life science, she always relates their curriculum to the world around them. They have a hands-on exploration nearly every day, and they always meet at the end of class to connect their learning to their world.



**Northumberland County  
Conservation District**  
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**Northumberland County  
Conservation District**

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*The NCCD, formed in 1943 under the Conservation District Law, is a subdivision of state government and is one of 66 Conservation Districts throughout the state of Pennsylvania. The purpose of the Conservation District is to promote protection, maintenance, improvement, and wise use of the land, water, and other natural resources.*

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## **Directors**

Mike Hubler: Chairman, Public	Mike Erdley: Associate
Leon Wertz: Vice-Chairman, Farmer	Dave Crowl: Associate
Richard Shoch: Commissioner	Blair Carbaugh: Associate
Gary Truckenmiller: Farmer	Albert Mabus: Associate
John Kopp: Farmer	John Pflieger: Associate
Natalie Wertman: Public	Ted Carodiskey: Associate
Rich Daniels: Farmer	Lynn Wilson: Associate

## **Staff**

Judy Becker: District Manager, AgLand Preservation, Editor  
Shirley Snyder: Administrative Assistant  
Chantel Shambach: Watershed Specialist  
Michael McCleary: Erosion & Sediment Technician, Dirt & Gravel Roads  
Ryan Cherwinski: Agricultural Conservation Technician  
Brandon Ball: Mosquito-borne Disease Control

**NCCD Board of Directors Upcoming Meetings:  
May 2, June 6, July 11 at 7:00pm; all held at the NCCD EE Center**