

Fall 2018 Newsletter Volume 4, Issue 4

Conservation Matters

Autumn chill...

You may notice on ongoing theme as you read some of the articles in this issue. It's been a tough summer. The seemingly unending rainfall resulted in a lot of flooding issues throughout the county. We also experienced a rapid increase in mosquitoes, especially those carrying the West Nile Virus. Our technicians were very busy answering complaints and addressing concerns. We appreciate your patience with us during this very busy time.

I am hopeful that the fall brings calmer weather with it. I'm sure many of you feel the same. The fall season does seem to bring a crisp feeling to the air. As the trees start to change and the temperature falls, I hope you get the chance to enjoy the beautiful colors we get to experience every year in northcentral Pennsylvania.

Have a great fall season!

Until winter,

Judy Becker

Agricultural Planning Reimbursement Program Extended

The PA Department of Environmental Protection has extended the Agricultural Planning Reimbursement Program for another year. This program will reimburse agricultural operators/landowners for fees they've paid to consultants to create manure management plans, nutrient management plans, and agricultural erosion and sediment control plans developed after January 1, 2017.

Reimbursement funds are allocated based on impact to the Chesapeake Bay and are available on a first come, first served basis. Agricultural operators/landowners may qualify for reimbursement for more than one plan up to a maximum amount of \$6,000 per operator/landowner.

Contact Northumberland County's program coordinator Sara Bolton, Larson Design Group, Inc. by phone at (570) 374-5700 or you can send an email to sbolton@larsondesigngroup.com for more information or to register for plan development fee reimbursement. The registration deadline is April 1, 2019.



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

<u>Our Programs</u>: 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 for more information. We are also on Facebook at www.facebook.com/nccdpa.

Soil and Water Quality Field Day

By: Judy Becker, District Manager

The NCCD, the Natural Resources Conservation Service (NRCS), and the Schuylkill County Conservation District held a joint Soil and Water Quality Field Day on August 29th at the Agricultural Research Service Lab in Klingerstown. The meeting was free for attendees. Dinner was provided by ScottDee's Catering in Hegins and meeting materials were also provided.

The Field Day was offered in two sessions: Session 1 covered new information about the Conservation Reserve Enhancement Program (CREP) and ran from 2pm until 5pm. Session 2 covered important research that occurred in the Mahantongo Creek Watershed and ran from 6pm until 9pm. Attendees had the option to sign up for one session or both. Dinner was served at 5pm in between the two sessions.

Topics for both sessions were provided by representatives of the Farm Service Agency (FSA), Pheasants Forever, the ARS Lab, Penn State University, NRCS, NCCD, and the Pennsylvania No-Till Alliance. Time was also provided for questions during both sessions. Approximately 100 people were in attendance. The



Staff from the ARS Lab provide information on research equipment currently in use at the Lab in Klingerstown.

meeting was paid for by a CREP Outreach Program Office Mini-grant Program and grant funding that was available from the Schuylkill County Conservation District.



Janette Lesher of NRCS and Ryan Cherwinski of NCCD discuss the importance of Soil Health and Cover Cropping.



Attendees were treated to a tour of research equipment at the ARS

Financial and other support for the CREP Outreach Program Office Mini-grant Program is provided by the Pennsylvania Association of Conservation Districts, Inc. through a Growing Greener Watershed Protection grant from the Pennsylvania Department of Environmental Protection and with additional support from USDA-NRCS.

You may contact us at any time by email or phone to be added to, or removed from, our mailing list. Simply call 570-495-4665 or email info@nccdpa.org. If you would rather "Go Green," email us with the words "electronic newsletter" in the subject line and we will send our newsletter to you electronically.



New Faces at the NCCD Office

By: Brandon Ball, Mosquito-borne Disease Control Program Coordinator and Tyler Mull, Mosquito-borne Disease Control Technician

My name is Brandon Ball, and I am very happy to join the Northumberland County Conservation District as the new coordinator for the Mosquito-borne Disease Control Program. Born in Bloomsburg, I am a 2018 graduate of Bloomsburg University where I studied Environmental, Geographical and Geological Sciences. I met my wife, Marcia, while we were both attending Benton Area High School. We have two daughters, Addison and Mackenzie. During my first month on the job I've been hard at work and very busy, and I am enjoying being able to serve the public. Now that I've told you a bit about myself, I'd like to give you an update on the program.

This summer, the five-county region that we monitor which includes Columbia, Montour, Northumberland, Snyder, and Union counties, has received guite a bit of precipitation. In some instances we experienced rain for several consecutive days. When this type of weather happens, the ground tends to become saturated, and many areas will hold water for longer periods of time allowing adult-female mosquitoes more habitat to lay their eggs. This has resulted in what is believed to be the most intense season on record for West Nile Virus (WNV) activity in Pennsylvania.

To date there have been 4,948 pools, or group samples, of mosquitoes that have tested positive for WNV statewide. Additionally, it has been confirmed that 70 birds have died from WNV, and there have been more than 20 confirmed human cases.



Our office continues to monitor mosquito activity in the region and address related concerns. If you have any questions or concerns regarding the Mosquito-borne Disease Control Program, you can contact me by phone at (570) 495-4665 ext. 303 or by email at bball@nccdpa.org.

> Hi! My name is Tyler Mull, and I am the new mosquito-borne disease technician with the Northumberland County Conservation District. I am a 2014 graduate of Shikellamy and a 2018 graduate from The Pennsylvania State University where I received a Bachelor's degree in Agricultural Science and a minor in Wildlife and Fisheries Science.

> Growing up in the outdoors I enjoyed the time spent with my father and grandfather hunting, fishing and trapping, as well as the countless memories we shared that I will carry with me. Developing this passion at a young age, I knew it was something I had hoped to make a career out of one day, and now this dream is beginning to come to fruition. Conserving the land and allowing future generations to enjoy the outdoors that I cherish so much is of upmost importance to me.

> I look forward to learning all I can with the District and taking full advantage of this great opportunity. Please don't hesitate to contact me if I can be of any assistance at 570-495-4665 ext. 307!



Stay up to date on our events by visiting www.nccdpa.org or www.facebook.com/nccdpa.

CENTRAL SUSQUEHANNA THRUWAY UPDATE

by: Michael McCleary, Erosion and Sediment Technician

THE NORTHERN SECTION OF THE CENTRAL SUSQUEHANNA VALLEY THRUWAY PROJECT HAS PASSED THE HALFWAY MARK. COMPLETION IS ANTICIPATED IN THE YEAR 2020.

River Bridge: Beam placement on the west side of the river is almost complete. The causeway has been moved from the West side to the east side of the river and work has begun on piers on the east shore. This work spans from the river, over the railroad, over SR 147 to the abutment east of SR 147.



Holes have been dug in the causeway, cofferdams are being installed and footers for the piers are being constructed to continue the bridge's march across the river.









CENTRAL SUSQUEHANNA THRUWAY UPDATE, continued

SR 147 has been reinforced to allow for the excavation for the construction of a pier next to the highway.





When the piers are completed, beams will be placed on top of them, and the bridge will connect to the top of the abutment which currently sits above and to the east of SR 147 in Point Township. The road surface will be backfilled to the top of the abutment, and final grading and paving will commence.





<u>Bridge over relocated Ridge Road</u>: This bridge is nearly complete. Work is progressing on the deck placement. It will then be ready for final grading, paving and seeding and mulching.







Bridge over Muddy Run: Work on this bridge has been delayed due to continuous heavy rains and the need for the embankments to be dry and stable.

CENTRAL SUSQUEHANNA THRUWAY UPDATE, continued







Acorn Road over the Thru-Way: Work on this bridge has been complete for some time. Thru-Way construction continues underneath it.

The Bridges over the Chillisquaque Creek: The northbound bridge is complete and is currently being used for both northbound and southbound traffic. The southbound bridge is being rebuilt at a higher elevation than the original bridge.







It's not too early to start thinking about our annual tree sale! Brochures for our 49th annual sale will be mailed out in early February of 2019. If you are unsure if you are on our mailing list, contact our office today! (If you receive a newsletter, that does not mean you are on our tree sale mailing list.)

NCCD RECOGNIZES AWARD WINNERS

by: Judy Becker, District Manager

The NCCD recently recognized award winners for their outstanding efforts in conservation in Northumberland County. A list of the awards and this year's recipients follow:

The Swank Outstanding Conservation Organization 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. This year's winner is Boy Scout Troop 309, housed out of Otterbein United Methodist Church in Sunbury. The troop is led by Julie Moore. The scouts from Troop 309 helped with the Sunbury Hill Neighborhood Community's cleaning and assembling of 30-plus barrels for an educational rain barrel workshop. They also helped with placing approximately 350 flags along Market and Wolverton Streets in Sunbury for the patriotic holidays. The troop volunteered to assist the Northumberland County Conservation District during their 1st tire event held on April 7th at the Anthracite Outdoor Adventure Area facility. Approximately 2,400 tires were recycled as a result of this event.

The Environmental Educator of the Year award honors a teacher who demonstrates leadership in environmental education through their class work and involvement in community activities. This year's winner is Brandy Fessler, a 6th grade teacher at Shikellamy Middle School. Ms. Fessler's environmental activities and accomplishments are numerous, including: Earth Day commercials created by her students highlighting the 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. A pollinator garden was created with milkweed, butterfly bushes, and other native pollinator plants in a



NCCD Public Director, Natalie Wertman, far left, presents Boy Scout Troop 309 with the 2018 Swank Outstanding Conservation Organization of the Year award. From left are Wertman, Julie Moore, troop leader; Zachary Moore, Jayden Dietrich, Tyler Tegge, Ryan Aikey, and Trey Rising. Not pictured: William Lieby, Colby Stamm.

garden bed that was once only ornamental at the middle school. 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. Her students also collect coins to symbolically adopt an endangered species from the World Wildlife Fund. They've adopted a pygmy marmoset, an orangutan, a

sea turtle, and a panda.



NCCD District Manager, Judy Becker, right, presents Brandy Fessler with the 2018 Environmental Educator of the Year award.

As a personal quest to use less paper and as a member of the school's technology team, Ms. Fessler converted her lessons to digital format to reduce the amount of paper waste in her classes. By creating digital portfolios of her students' work, they've used very little paper, and she reminds her students of this fact almost daily. Ms. Fessler states her goal is to promote a love of learning, a love of sciences, and a love of caring for the natural world. In response to receiving the award, she stated, "This award and the work of the NCCD reflects my passion; inspiring a love of environmental science in my students. The true reward is the joy my students bring to me as they get excited about nature and conservation. Watching them discover the world around them gives me hope for a healthy environment for their future."

The following annual scholarships were also awarded: The Don Cotner Sr. Memorial Scholarship was awarded to Audra Fisher of Watsontown. The Raymond D. and Mable E. Shaffer Scholarship was awarded to Baylee Hawk of Dornsife, Kylee Lerch of Sunbury, and Maggie Morgan of Sunbury.

The Conservation District Patch was awarded to Chris Fisher of Troop 415 in Middleburg.

SAVE THE BAY, PLANT A BUFFER

by: Chantel Shambach, Watershed Specialist

Riparian buffers are one of the best practices that can be put in place to help the quality of the stream. They serve multiple purposes for farmers, restore water quality, and provide for the local ecosystem. When installed and maintained properly, buffers can be useful for pollinators, the stabilization of stream banks, fish and wildlife, and the filtration of nutrients.



What is a riparian buffer? Also known as a "buffer strip," it's a vegetated area near a stream, usually forested, which helps shade and protect the stream from the impact of adjacent land uses.

Buffer strips are established using various zones, most commonly three zones. Zone one is the unmanaged-undisturbed woody zone. This area should be at least 15 feet wide, is the closest to the stream or waterbody, and is planted with native species of water-tolerant trees and large shrubs with little or no harvesting. In some cases, zone one is already well established naturally. This zone's main purpose is to provide streambank stabilization, leaf litter inputs to the stream, and helps shade the waterbody.

Detritus created by maturing trees is eaten by macroinvertebrates in the stream, which are in turn eaten by fish. The shade from the overhead canopy also helps maintain lower water temperatures; vital to fish habitat. The selection of large tree species creates deep, extensive roots that hold onto the bank, helping prevent soil erosion and sedimentation into the channel.

Zone two is part of the managed forest, ranging from 20-60 ft from the landward edge of zone one. Zone two consists predominantly of smaller, faster growing, native, shade-tolerant tree and shrub species. The main job of this area is relying on

the plants' root biomass to intercept and filter nutrients and other pollutants from adjacent land uses. Nutrients like phosphorus and nitrogen are captured in the roots where the plants will use them for themselves instead of allowing them to be wasted into the stream. Because of this, bacteria and plants can become partners, in a sense, because the captured nitrogen allows facultative anaerobic bacteria to respirate through denitrification.

The third and final zone is the zone farthest from the stream and closest to land use areas, houses, crops or pastureland. This buffer zone should be planted with native grasses, wildflowers, or other herbaceous plants and range 15-60 feet wide. This area is used to reduce fast-moving water runoff and promote infiltration. Under certain conditions, controlled grazing or hay production can be permitted in Zone 3.



Proven Conservation Benefits

- An acre of buffer adjacent to cropland holds back 2.5 tons of soil, 6.4 pounds of nitrogen, and 1.1 pounds of phosphorus in runoff
- In 2014, CRP lowered greenhouse gas emissions by the equivalent of 43 million metric tons of CO2 the same benefits as taking nearly 8 million cars off the road for a year

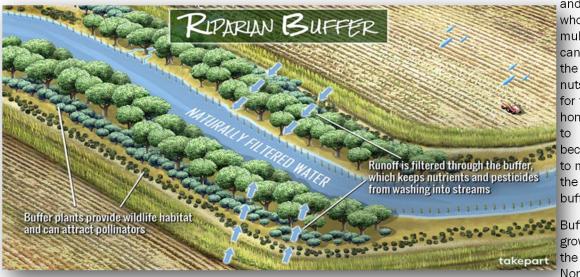
Pollinators and wildlife directly benefit from this zone because they are provided with access to the wildflowers and habitat.

For farmers that participate in the Conservation Reserve Enhancement Program (CREP) there are benefits to your rental payments for having a riparian buffer in the continuous sign-up, CP-22. For more information on the CP-22 please visit https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/
FactSheets/2015/CRPProgramsandInitiatives/

<u>Practice CP22 Riparian Buffer.pdf</u> or call your local Farm Service Agency (570-415-3119).

SAVE THE BAY, PLANT A BUFFER, continued

A newly initiated buffer concept is the use of multi-functional riparian buffers. Farmers benefit from these buffers more than the others. While other buffers help farmers in the sense of preventing ground depletion and protection of equipment (since buffers create a known boundary to help keep farm machinery away from steep banks), multi-functional buffers do that and more. These buffers are installed very similarly to the other buffer strips, but the plants chosen are of the edible



and floral sort. Farmers who decide to integrate multi-functional buffers can harvest and sell the berries, fruit and nuts. It is also common for farmers to introduce honey bee hive boxes to their property because of the access to more floral options in the multi-functional buffers.

Buffer strips are of growing importance to the state and to Northumberland

County. The district is proud to announce their involvement with up and coming plantings of riparian buffers in the near future. It is important to keep in mind that we all live downstream, and together we can make a difference by forming an alliance between farmers and plant existence.

2018 BOARD TOUR

by: Judy Becker, District Manager

On September 6, 2018, we held our annual Board Tour, which gives us the opportunity to highlight our most recent projects. Although some poor weather kept us on the bus for a large part of the tour, it was still an educational day for everyone in attendance.



Ryan Cherwinski, District Agricultural Conservation Technician discusses an upcoming extensive farm project that will be installed in 2019 just outside of Sunbury. The project will include the installation of several best management practices to improve water quality.



Chantel Shambach, District Watershed Specialist highlights an area in Kulpmont Borough that will be the location of a water quality educational day for local students this fall.

FULL PIT?

by: Pamela Richardson, USDA-NRCS Engineering Technician

The weather certainly has been trying this year. Those with liquid manure storage pits have been faced with the challenges of emptying this fall. With above normal rainfall, pits have filled up well before their time. Saturated fields have compounded this, with farmers being hesitant to take spreading equipment out in less-than ideal conditions. Now many are facing a partially emptied pit going into winter.

As per PA Clean Streams Law (25 PA Code, Chpt 101 (1977), manure storages NEVER should have a manure level less than six inches from the top (twelve inches if an earthen lagoon) (91.36(a)(6 ii)). If yours is approaching this level, you need to take action.

With every long-term manure storage design (and Nutrient Management Plan) there is an Emergency Contingency Plan. Now is the time to get your paperwork out and refresh your memory. Your Contingency Plan will outline what action you are supposed to take should you need to empty your storage outside of normal hauling schedules. Each strategy is different, custom written for your operation. Examples include: intercepting manure, before it goes to the storage to daily haul or field



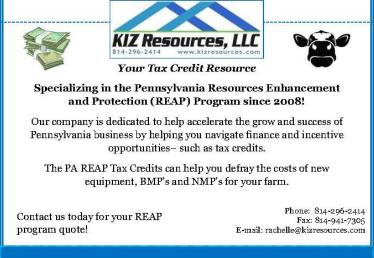
stockpile; sacrificing a field to spread manure; or indicating on which fields winter spreading would be permitted.

The *PA Clean Streams Law* does not prohibit winter manure spreading (91.36(b)(1 ii)). However, it does require the following restrictions to manure spreading any time that the ground is <u>frozen</u>, <u>snow covered</u> and/or <u>saturated</u>.

- 1. Only spread on fields with 25% residue or a living plant cover.
- 2. 5000 gallons/acre maximum rate
- 3. No application on slopes steeper than 15%
- 4. 100' setback from any above ground agricultural surface inlets, streams and ponds

Manure storages are valuable tools to help you manage manure. Some years are just trickier than others. If you are faced with a full storage and would like advice on what to do, please call the Northumberland County Conservation District (570-495-4665) or the Natural Resources Conservation Service (570-286-7114) offices.





PLAN WRITING WORKSHOPS ANNOUNCEMENT

by: Ryan Cherwinski, Agricultural Conservation Technician

As some of you may have heard, the Northumberland County Conservation District (NCCD) started administering Chesapeake Bay Agricultural Inspections on July 1st of this year. Inspections primarily focus on whether farmers have required plans that are up to date and available for each parcel of land farmed. The plans we are looking for when we visit is a Manure Management plan (MMP) and an Agricultural Erosion and Sedimentation plan (Ag E&S). Since July 1st we have completed thirteen farm visits, and the majority had some type of MMP and/or Ag E&S plan. We are still focusing on Delaware, East Cameron, Jordan, and West Chillisquaque townships for the 2018-2019 fiscal year. If you live in one of these townships, you may be randomly selected for a Bay inspection during this time period. We encourage you to reach out to the District and schedule an inspection. The Conservation District provides free technical assistance to those interested in developing the required plans.

One reason you are seeing such an interest in compliance is Pennsylvania is the largest contributor of nutrient laden water to the Bay, and recently it was reported that we have fallen short of our nutrient control goal. Per the Environmental Protection Agency (EPA), "Pennsylvania needs to reduce the amount of nitrogen reaching the Bay by 34 million pounds by 2025 — almost 70 percent of the total reductions needed from the entire watershed." If we can focus on protecting our local watersheds, I strongly believe we will make a positive impact on the Chesapeake Bay. Since there is immense pressure on farmers for statewide compliance, we want to offer as many opportunities to assist you as possible. In the coming months we will be hosting a few workshops focusing on the Chesapeake Bay Agricultural Inspections. Join us at our first Agricultural Erosion and Sedimentation Plan Writing Workshop. We will be joining Union, Snyder and Montour Counties in hosting a FREE two-evening workshop! The workshops are intended for farmers, consultants, and others in the agricultural field who are interested in developing Ag E&S plans. The workshops will also focus on the revised Manure Management Manual. The workshops will take place at the Union County Government Center located at 55 N 15th St, Lewisburg, PA 17837, on November 27th and December 3rd from 6pm-9pm. Space is limited, so reserve a seat quickly! To reserve a seat, or for more information, please contact Agricultural Conservation Technician Ryan Cherwinski at (570) 495-4665 X 304 or recherwinski@nccdpa.org.

DISASTER ASSISTANCE-EMERGENCY CONSERVATION PROGRAM

by: Ryan Cherwinski, Agricultural Conservation Technician

Each year it seems we have seasons that are more catastrophic than the last. This was definitely the case this spring and summer. We couldn't seem to catch a break, whether it was the wet spring or the torrential rains this summer. In many places we have already received 10-15 inches of rainfall, above the year-to-date average. At its worst, we had

fifteen inches dumped on us in a four-day span. Since then we have talked with many producers who have fallen victim to the flooding, erosion and crop damage. If you happen to be one of the many who were affected by this event, there is disaster assistance available. That assistance comes through the Emergency Conservation Program (ECP) which provides funding and technical assistance to producers to rehabilitate farmland damaged by natural disasters. Some approved land uses include: commercial farming, ranching and orchard operations, tree plantations and nursery stock, and conservation structures. The Farm Service Agency (FSA) administers the ECP and will ultimately determine the land's eligibility. If your land qualifies, a few eligible farmland restoration practices include debris removal from crop and pasture land, grading and shaping cropland (i.e. repairing gullies), restoring fences throughout the farm, and restoring conservation structures (i.e. waterways). However, conservation problems existing before the disaster event are ineligible for ECP assistance. If you have questions or want more information, please contact Jackie Yurchak, Program Technician at the Northumberland County FSA at (570) 286-7114 ext. 3119 or Jacquelyn. Yurchak@pa.usda.gov.

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Northumberland County Conservation District

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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Michael McCleary: Erosion & Sediment Technician, Dirt & Gravel Roads
Ryan Cherwinski: Agricultural Conservation Technician
Brandon Ball: Mosquito-borne Disease Control Coordinator
Tyler Mull: Mosquito-borne Disease Control Technician
NCCD Board of Directors Upcoming Meetings:
October 4, November 1 at 7:00pm; December 6 at 12:30pm;
all held at the NCCD EE Center