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CLINTON COUNTY CONSERVATION DISTRICT 2019 ANNUAL REPORT

Spring 2020

Mission Statement: *The Conservation District provides quality leadership, education, and service for the stewardship and conservation of the county's natural resources.*

Managers Note - Mary Ann Bower, District Manager

Welcome to the Conservation District Spring Newsletter and 2019 Annual Report. 2019 marked 73 years that the Conservation District was created to provide service to County landowners with various conservation programs. 2019 marked a huge change for the Conservation District as we began our journey to purchase our building and property from the County. Our Board of Directors will soon be the proud owners of this property.

As you will see through our pages, we provide assistance to local residents and municipalities on a variety of programs that deal with soil and water conservation, environmental regulations, watershed programs, and education programs. Education has always been a major objective of the District, educating our local students and adults on environmental issues and proactive ways to conserve our natural resources. We offer workshops on erosion control, stream encroachments, manure management planning and other conservation programs. We continued to conduct agricultural compliance inspections for the Department of Environmental Protection. We continue to provide technical assistance to landowners on various agricultural issues, stream work, and earthmoving activities. Our objective remains to help landowners and operators be in compliance. Please contact us for any assistance before you begin your project, at 570-726-3798.

Tangascootack Creek, Clinton County



Article I, Section 27 of the Pennsylvania Constitution—The Environmental Rights Amendment
(May 18, 1971)

“The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and esthetic values of the environment. Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.”

Free Soil Test Kits Available!



Soil testing is a tool used to determine the fertility of soil, as well as the optimum lime and fertilizer requirements for crops. Getting a soil test can take the guesswork out of creating a healthy soil environment for crops or lawns. Soil testing also ensures that you won't spend money on fertilizers that aren't necessary or over-fertilize. Free, prepaid soil test kits are currently available at the Clinton County Conservation District Office. Your only cost is the postage. The test kit consists of a submission form, instructions on how to take a soil sample, a soil sample bag and return envelope for mailing your sample to Penn State Agricultural Analytical Services Lab. The final report includes the chemical analysis of the soil along with lime and fertilizer recommendations for the crop specified. Most properties will only require one kit, as each kit is easily capable of testing 1-2 acres. There is a limit of 6 kits per person and you must be a Clinton County resident and be testing property within the County. As a rule, most soils only require testing every 3 to 4 years. Stop by and get your free soil test kit today.

WIP'ing Pennsylvania's Water into Shape

In 2019, Pennsylvania and neighboring states began the third phase of their work to clean up the Chesapeake Bay. The U.S. Environmental Protection Agency (EPA) has assigned specific pollution reduction goals to Pennsylvania, and we have until 2025 to reach them. Pennsylvania's targets include reducing nitrogen by 34 million pounds per year, phosphorus by 7 million pounds per year and sediment (soil) by 531 million pounds per year. When it rains, these pollutants run off surfaces such as farm fields, streets, and parking lots and go right into streams and rivers. This effort, formally known as the "Phase 3 Watershed Implementation Plan," (WIP for short and pronounced whip) spells out how the state government will work in partnership with other governments and the private sector to meet our goals. Each county also has its own goal and, as part of this effort, each county must develop Countywide Action Plans (CAPs) showing how they'll reduce their share of the pollution. Clinton County is scheduled to begin its effort in 2020. It is important to note that county clean water goals do not establish any new requirement or regulatory obligation on counties. These goals are simply a way for Pennsylvania to engage with local partners on shared issues and focus resources on efforts that help Pennsylvania reach its Chesapeake Bay goals. As examples, some of the options might include environmental education, regulation and permitting, public works investments, restoration projects, and assistance to streamside property owners and farmers.

The Susquehanna River is the largest tributary to the Bay, providing half of the total freshwater flow and 90 percent of the freshwater flow to the upper Bay. Without the support of Pennsylvania, the Chesapeake Bay cannot be restored. Even more importantly, the water that feeds into the Chesapeake Bay is our local water and it is crucial that these local waters be protected and restored for use by our citizens (that's us) as they make up our drinking water and support outdoor experiences such as fishing, boating, and swimming which have both recreational benefits and support large portions of our economy.

The path to success starts at the local level, and the public –which includes farmers, developers, businesses, environmental organizations, water and wastewater utilities and civic-minded residents –is an important local voice. If you choose to get involved in this process, you will have a say in how your countywide pollution reduction goals are met. You can be part of shaping the mix of solutions that are chosen within your county. It's an opportunity for you to make a difference for your community!



Conservation District Helps Farmers During Mandatory Farm Inspections

As part of its Chesapeake Bay Program, the federal government has implemented a strategy aimed at protecting and restoring the environment in communities throughout the Bay's 64,000-square-mile watershed. This includes improving the thousands of streams, creeks and rivers that flow to the Bay. As part of this strategy, Pennsylvania and surrounding states have specific goals to reduce the amount of nitrogen, phosphorous, and sediment that is discharged into their streams and into the Chesapeake Bay. Although Pennsylvania has made progress in reducing these pollutants, achievements to date have been deemed insufficient by the Environmental Protection Agency to meet water quality expectations.

In January 2016, the Pennsylvania Department of Environmental Protection (DEP) announced a Chesapeake Bay "Reboot" strategy aimed at making even greater strides at improving water quality across the state and, ultimately, in the Chesapeake Bay. The strategy is focused on nutrient and sediment reduction and includes a goal of inspecting 10% of all agricultural operations in the Bay Watershed each year. The ultimate goal is for farmers to implement the best management practices spelled out in these plans and reduce polluted runoff, thereby keeping the valuable nutrients and sediment on the farm.

As part of this new strategy, every landowner that has livestock or allows manure on their property must have a Manure Management Plan. This applies even if you only have one horse or a few 4-H animals. Every landowner that disturbs more than 5,000 square feet of soil (1/10th an acre) for crops must have a written Agricultural Erosion and Sediment Control Plan (Ag E&S). These policies apply even if you allow your ground to be used by someone else or rent it.

In 2019, the Clinton County Conservation District (District) completed the required 50 farm inspections to verify planning compliance. District staff also provided technical assistance to 71 agricultural operations, worked with 4 local agricultural operations to complete grazing plans and assisted two farms on the construction of a cattle crossings through streams. Additionally, the District hosted a Manure Management planning workshop where farmers could develop their own plan in a group setting and, for those who decided to hire a private consultant to write their plans, the District continued to fund its plan cost reimbursement program that reimburses 75% of the cost of a plan (up to \$250).



Don't Mix Soil and Water

Should we protect our waterways and streams? Erosion is a natural process that has existed for years. But when humankind creates opportunities for accelerated erosion due to earthmoving, it can create havoc if not done correctly. You can greatly minimize the potential for accelerated erosion, by using Best Management Practices (BMPs) during the earthmoving activities that would prevent sediment from leaving the site. The most common BMPs seen at construction sites, may be black silt fence or silt sock, placed around the perimeter to keep all soil on that site. Soil is a precious commodity, and losing it is like money going down the drain. Plus displaced soil that enters our waterways, has a huge impact on aquatic life being able to reproduce. If you like to fish, kayak, hunt, swim, drink clean water, or enjoy nature; you want to keep our special protection watersheds in our County clean and able to support life.

If you are planning a construction project, contact our office so that we can provide you guidance on the right process. Some things you should consider before you undertake any earthmoving is: 1. What is the size of your project or how much land will you be disturbing?; 2. What resources are present on the property, such as streams, wetlands, or floodways? 3. How will you prevent sediment from leaving the site during construction? 4. How will you stabilize your project when construction is complete? 5. How will you handle additional stormwater created by your new project footprint? 6. Are there any agricultural related restrictions? 7. What permits or plans will be needed for your project? Planning is so important to prevent future issues from your project. The best way to plan is to make a plan drawing and note all the natural resources on your property that could be affected, and where you will place any of the BMPs especially downslope of any disturbance. Most smaller construction activities can be developed with an E&SPC (Erosion and Sediment Pollution Control) plan. Our office will be happy to assist you with the development of this plan. Once the amount of earth disturbance goes over one acre, you will be required to obtain an NPDES (National Pollutant Discharge Elimination System) Permit. These permits are more involved, because you must spell out what post construction stormwater management controls you will be placing on the property. These would be more permanent controls or facilities. It is best if you can manage your site by minimizing the amount of disturbance and stay under one acre.

Waterways and Permits

Chapter 105 regulates any impacts to streams, waterways, wetlands, and floodways. The purpose of the regulations is to protect the health, safety, welfare, and property of the people, and prevent unreasonable interference with water flow and navigation, by regulating obstructions or encroachments of waterways. All water that flows through PA streams and rivers is considered waters of the Commonwealth. People may own property along and even under a water channel or body, but the water is regulated by the State.

The best thing to do before you start a project in or along a stream or floodway, is to contact our office so that we can determine if you need a permit. Many activities require a permit such as: fish habitat enhancement structures; small docks or boat ramps; stream bank rehabilitation; intake and outfall structures; utility line stream crossings; agricultural crossings; minor road crossings; temporary road crossings; and certain agricultural activities. An activity that would not require a permit would be removal of woody debris by hand or maintaining water flow around bridges or culverts that already have a permit.

When in doubt, please contact our office.



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Conservation District Finance Report

2019

Funding Received

Clinton County Commissioners	25%
PA State Conservation Commission	15%
Chesapeake Bay Technical Assistance	7%
Watershed Specialist Program	5%
Dirt Gravel & Low Volume Roads	23%
Program Fees & Permits	5%
PUC Gas Well Fund	6%
Donations and Sales	1%
Special Project Grants	13%

Expenses

Program & Staff Expense	1%
Education & Outreach	7%
Special Projects	14%
Admin & Operations	32%
Program Costs	46%

Agriculture Preservation - Preserving Farmland in Clinton County

The Farmland Preservation program that exists in Pennsylvania is designed to assist farms to stay in agricultural production by purchasing the development rights or a conservation easement on that property. This purchase is recorded with the deed and remains with that property in perpetuity, or forever. The funds are normally a combination of State and County funds that pays the current landowner for the development assessment of their property.

Pennsylvania is a national leader in farmland preservation. In addition to saving the land necessary for food production, it has encouraged soil and water conservation, and maintained the rural heritage of communities. Since 1989, the State Farmland Preservation program has purchased easements on more than 5,675 farms statewide, permanently preserving more than 579,000 acres, with funding of more than \$1.5 billion.

An agricultural conservation easement, or a “purchase of development rights,” limit the use of farmland to agriculture production activities, while keeping the land in the landowner’s ownership and control. The easement places a permanent restrictive covenant on their land that restricts the land’s use to agricultural production by recording a Deed of Agricultural Conservation Easement. The Easement covenant remains with the tract of land even if it is sold. Farmers may apply to the County agricultural land preservation board to have one or more of their farm parcels considered for easement purchase. With farmer demand exceeding available government funding, only farms with the best soils and other key characteristics (such as stewardship practices and likelihood of development) rank high enough to receive easement purchase offers. The

program is overseen by the Pennsylvania Agricultural Department of Agriculture, Bureau of Farmland Preservation. Once enrolled in the program, the property must be inspected every two years, to ensure they are in compliance.

Properties must meet the state’s basic requirements for the program, listed below:

- The property must be located in a Municipality’s agriculture security area, which is comprised of at least 500 acres of viable agricultural land in one or more ownerships, within a municipality.
- The property must be at least 50 acres in size. However, parcels as small as 35 acres may be preserved (eligible in Clinton County).
- At least 50% of the property must be either harvested cropland, pasture, or grazing land, and it must contain at least 50% of soils of land capability classes I-IV, as defined by USDA-NRCS.

Clinton County accepts applications for this program every other year – odd years – with applications due by March 31st. Each county board establishes a ranking system for properties based on the state’s minimum requirements and easements are subject to approval by the state board.

The 2019 Clinton County Agriculture Board consists of seven members, Chairman Dan Chappell, Steve Bason, Mae Johnson, Jim Harbach, Chuck Bechdel, Tim Owens, and John Lucas. John Lucas will be replaced by Wade Vonada in 2020. County Administrator is Mary Ann Bower. Please contact our office at 570-726-3798, for more information.

Conservation District Partners— Natural Resources Conservation Service

USDA-Natural Resources Conservation Service (NRCS) Activities Report 2019

The following report summarizes the assistance provided to Clinton County landowners from NRCS Staff located at the Mill Hall Field Office.

NRCS continues to provide Conservation Technical Assistance to producers and landowners involved with or through various projects, Conservation District programs and grants and conservation planning while promoting soil health in order to address resource concerns on private lands.

In addition to the technical assistance, possible financial assistance is available to county landowners and farmers as a result of the Farm Bill. Specific conservation programs would include the Regional Conservation Partnership Program, Conservation Stewardship Program and Environmental Quality Incentives Program.

Specific technical assistance included:

- conservation planning, survey, design and quality assurance inspection.
- promoting, coordination and holding local Farmer Breakfast and Annual Soil Health Meetings.
- coordinating, participating in and hosting annual Local Work Group (LWG) Meeting.
- at the request of the Clinton Conservation District, NRCS staff assists with local annual tours and Dirt & Gravel Low Volume Roads Program.
- providing technical assistance and soils information for Envirothon Study Days and local Envirothon event.

Local NRCS Field Office and [Soil Science Division Staff](#) can be reached at the Mill Hall Field Office: phone 570-749-3069.

Scott Heckman—Supervisory District Conservationist
Cindy Kerstetter - Program Assistant
Lexis Ryan – Soil Conservationist
Bryan Conklin - Civil Engineering Tech
Mike McDevitt – Soil Scientist

Overall District Activities and Details



Clinton County Conservation District

73 years (1946 - 2019)

The District was organized by the County Commissioners in December 1946. We are a sub-division of state government, supported by the Clinton County Commissioners. We provide technical and educational assistance to the public on proper management of our natural resources (specifically soil & water) and interpretation of environmental related regulations. We are guided by a local Board of nine Directors nominated by local organizations. We administer the following state programs for our County:

- Ch. 102 Erosion & Sediment Pollution Control,
- NPDES National Pollutant Discharge Elimination System Permits
- Ch. 105 Stream Encroachment General Permits
- Chesapeake Bay Financial & Technical Assistance
- Act 38 Nutrient Management Regulations
- Municipal Dirt & Gravel and Paved Low Volume Road Environmental Maintenance Program
- Watershed Specialist Program
- Agriculture Preservation Program

Funding support for Conservation District programs in 2019 was provided by:

- Clinton County Commissioners, \$248,778;
- PA State Conservation Commission & DEP, \$142,897;
- Chesapeake Bay Technical Assist. Program, \$65,550;
- Watershed Specialist Program, \$57,479;
- Dirt&Gravel /Low Volume Roads Municipal Prog, \$222,843;
- Program Fees, Permits and Workshop fees, \$47,748;
- PUC Gas Well Fund, \$59,828;
- Donations and Sales, (benefits education programs) \$10,742;
- State, Federal & Other Special Project Grants, \$127,987.



Students from the 2019 Conservation Summer Camp working diligently to tie their own flies with the help of Lloyd Wilson Trout Unlimited members.



2019 Conservation Summer Camp—campers practice fishing skills at the Lamar National Fish Hatchery with local Trout Unlimited members.

Federal, State, and Other Special Project

Grant Money of \$418,367 in 2019, along with local matching funds, equals more than \$5.87 million spent on local conservation and water quality improvement projects overall in Clinton County over the last 19 years.

Tree Sales — 2019 was our 42nd Annual Tree Sale, selling a variety of trees and shrubs: evergreens, hardwoods and fruit trees. Proceeds from tree seedling sales are used to fund various educational programs, such as school booklets and field days. April is tree planting month in Pennsylvania, and for several good reasons: temperatures are usually moderate and soils are moist for ideal planting conditions. Trees provide food and homes for wildlife, and their roots hold the soil in place to reduce erosion. They also are a renewable resource that can be used to heat our homes and produce a large variety of useful products. Trees beautify our landscapes and shade our homes in the summer and shelter us from winter winds. Planting trees is an investment in the future.

Put a little life in your future, plant a tree!

Overall District Activities and Details (continued)

Roads and Ag Resource Technician Scott Koser provided the following services through the Dirt & Gravel and Paved Low Volume Roads Program for Municipalities:

- In 2019, \$283,414 was distributed for 9 road projects completed in Allison, Bald Eagle, Chapman, Crawford, Gallagher, Leidy, and Woodward Townships, which included 1.61 miles of roads being improved. The program goal is to prevent sediment from entering streams by using proper environmental maintenance techniques on critical or damaged areas of roads that can affect water quality. A total of 72.15 miles has been improved with \$1,432,321 in funds spent on 76 County Dirt & Gravel and Paved Low Volume Road projects since 1999.

Lisa Blazure, Agricultural Resource Conservationist, Scott Koser, Ag & Roads Resource Technician, and Jacob Wenrich, Resource Technician provided the following in 2019:

- Chesapeake Bay Program: Assisted 22 farmers with Manure Management and Agricultural Erosion & Sediment Pollution Control plan development; Provided technical assistance to 49 people; Conducted 51 farm inspections to verify planning compliance; Worked with local agricultural operations to complete 4 grazing plans, and construction of 2 cattle crossings through streams. We also planned breakfast meetings and spoke at workshops where information on maintaining Soil Health was presented to a total of more than 300 people.
- No-Till Drill: Our drill & Inter-seeder were made available to 26 local farmers with 385.5 acres planted for soil conservation and cover crops.
- Nutrient Management (Act 38) Program: We conducted 22 Nutrient Management Plan farm visits, reviewed & approved 20 Nutrient Management Plans and undertook 14 annual farm status reviews. We also provided technical assistance and conducted investigations for 71 contacts and provided 65 soil test kits to 31 landowners.

Watershed Specialist and Education Coordinator Toby Boyer conducted the following watershed restoration and education activities in 2019:

- Completed water chemistry and biological monitoring in Fishing Creek, Sandy Run, Tangascootack Creek, and Cook's Run to assess improvements in those streams from recent projects completed by the CCCD and its partners.
- Assisted the Sugar Valley and Kettle Creek watershed associations with several grants and programs to restore/enhance Clinton County streams.
- Assisted with or organized the following county wide Environmental Educational events: 6th Grade Conservation Field Days, Conservation Summer Day Camp, County Poster Contest, CMHS Water Quality Days, Little Pine State Park Field Days, Project WET Workshops, Wildlife Leadership Academy, and the Envirothon.
- Provided stream restoration and watershed related technical assistance to landowners and agencies across the County.



Resource Conservationist Mary Ellen Stern and Resource Technician Jacob Wenrich conducted the following Technical Activities in 2019:

- 73 Erosion & Sediment Pollution Control (E&SPC) plans reviewed with 457 acres disturbed, which included:
 - 36 Residential Projects
 - 12 Government Projects—PADOT, State, Municipal, Water, Sewer
 - 14 Commercial/Industrial/Gas Related, Subdivision or Other Projects
 - 6 Agricultural Projects & 1 Timber Harvest
- 18 National Pollutant Discharge Elimination System (NPDES) or ESCGP Permits under review—13 NPDES permits issued
- 22 Stream Encroachment General Permits Acknowledged
- 64 Earthmoving Inspections
- 124 Complaints Investigated
- 716 Technical Assistance Services Provided
- **Total: 903** individuals were provided technical assistance, training, or services on earthmoving or stream related activities.

Tangascootack Creek

Tangascootack Creek flows through the mountains just northwest of Lock Haven in Clinton County. The name “Tangascootack” is a Native American term meaning “little swamp creek”. “Scootack”, as many locals call it, is a tributary to the West Branch of the Susquehanna River and is 36.5 square miles in size. It consists of both a North and South Fork that join together just a few miles upstream of the confluence with the West Branch. Despite being part of the same watershed, the two forks of Scootack are quite different. Though they carry similar habitat, water temperature, and are both completely forested, they differ chemically, biologically, and visually. The South Fork of Scootack shares a historical significance with hundreds of other streams across Pennsylvania; it suffers from the effects of Abandoned Mine Drainage (AMD). Miles of stream are covered in a rust orange color. This precipitate is the result of iron that has dropped out of solution from the chemical reaction of the mine water with oxygen. The mining industries from PA’s rich mining history left some devastating consequences to local waterways. The water in the South Fork of Scootack was not suitable for aquatic life that thrived before the mining industry had settled in. In contrast, an effort by the Local Chapter of Trout Unlimited succeeded in preventing mining activities in the North Fork, which still today has a thriving population of aquatic life, including native Brook Trout.

Mining in the Tangascootack Creek Watershed is thought to have begun as early as the 1840’s. More recently though, strip mining in the South Fork watershed occurred around the 1950’s through the 1980’s. Coal mining was essential in the United States for production, transportation, energy, etc. Pennsylvania was a huge producer for the nation and at one point provided 25 percent of the coal for the United States. Many families relied on the business that mining companies brought to the area. They provided jobs and a means of income. From the start of the mining in the early 1800’s, seven small coal and clay mining towns were developed in the Tangascootack Creek Watershed. The towns prospered while the mining took place, but most never lasted more than 20 years and were abandoned. By 1990, all mining in the watershed had ceased. The landscape once rich in business was reduced to clear cut strips of ground amongst the PA hardwoods. The remains and refuse from the mining activities now pollutes the rainwater and groundwater that feeds the South Fork. When water comes into contact with these old mine spoils and refuse piles, it picks up metals and becomes very acidic. This often lowers pH into the 3’s and 4’s. The contamination leads to the death of the macroinvertebrate community, as well as the fish population in the stream.



Pictured Above: Crews work together to conduct macroinvertebrate, fisheries, and water quality surveys in the Tangascootack Creek Watershed.

Tangascootack Creek—Good News

The Clinton County Conservation District and its partners have worked extensively in this watershed to repair the damage that had been done to the stream. Hours upon hours of work related to gathering funding, site construction and maintenance, and long-term monitoring have been put forth for the benefit of Scootack. The Conservation District has been involved with over \$940,000 of investment toward six passive treatment systems in the watershed since 1998. These systems work every single day to neutralize the acidic water making its way to the creek. Simply put, when the polluted water intakes into these treatment systems, it meets a bed of limestone or a pond that holds a limestone bed covered with mushroom compost. When the water comes into contact with these materials, a chemical reaction takes place because of the high pH of the limestone and the low pH of the polluted water. This process allows the water to increase its pH, and once the water comes into contact with oxygen, the metals also drop out of the solution. Therefore, water that runs through the treatment systems is cleaned before entering back into the creek. The Conservation District put the first treatment system on the South Fork of Scootack in 1998. Since then, five additional treatment systems (two on the South Fork and three on Muddy Run which is a badly affected tributary to the South Fork), have been constructed. Data such as water chemistry, macroinvertebrate counts, and fish population surveys have been completed by multiple agencies to assess the effectiveness of those systems. Through a Technical Assistance Grant (TAG) with Trout Unlimited, the Conservation District found promising results from the chemical and biological monitoring that took place from 2011 to the present. The organizations worked together to monitor sites along the South Fork and Muddy Run and determined that important macroinvertebrate taxa such as mayflies, stoneflies, and caddisflies were returning the stream. Native Brook Trout began using the main stem and South Fork of Tangascootack where they had been pushed out before from poor water quality. The water chemistry was showing that the pH of the stream was rising back to normal levels and metals were settling out in the treatment systems and wetlands rather than in the streams.

In November 2019, a long awaited outcome was made official by the Pennsylvania Department of Environmental Protection (PA DEP). **The lower 1.73 miles of Tangascootack Creek was taken off of the impaired streams list**, from where Bird Run enters to the confluence with the West Branch of the Susquehanna River. This is a huge milestone for the Clinton County Conservation District and all partners involved in this colossal effort. Upstream portions of the watershed will be assessed in the future to determine whether they have made enough improvement to be taken off the impaired waters list.



Pictured Above: A native Brook Trout caught during 2019 electrofishing surveys on the South Fork Tangascootack Creek.

Good News! Lower 1.73 Miles of Tangascootack Creek was removed from the Impaired Streams List by DEP in 2019.

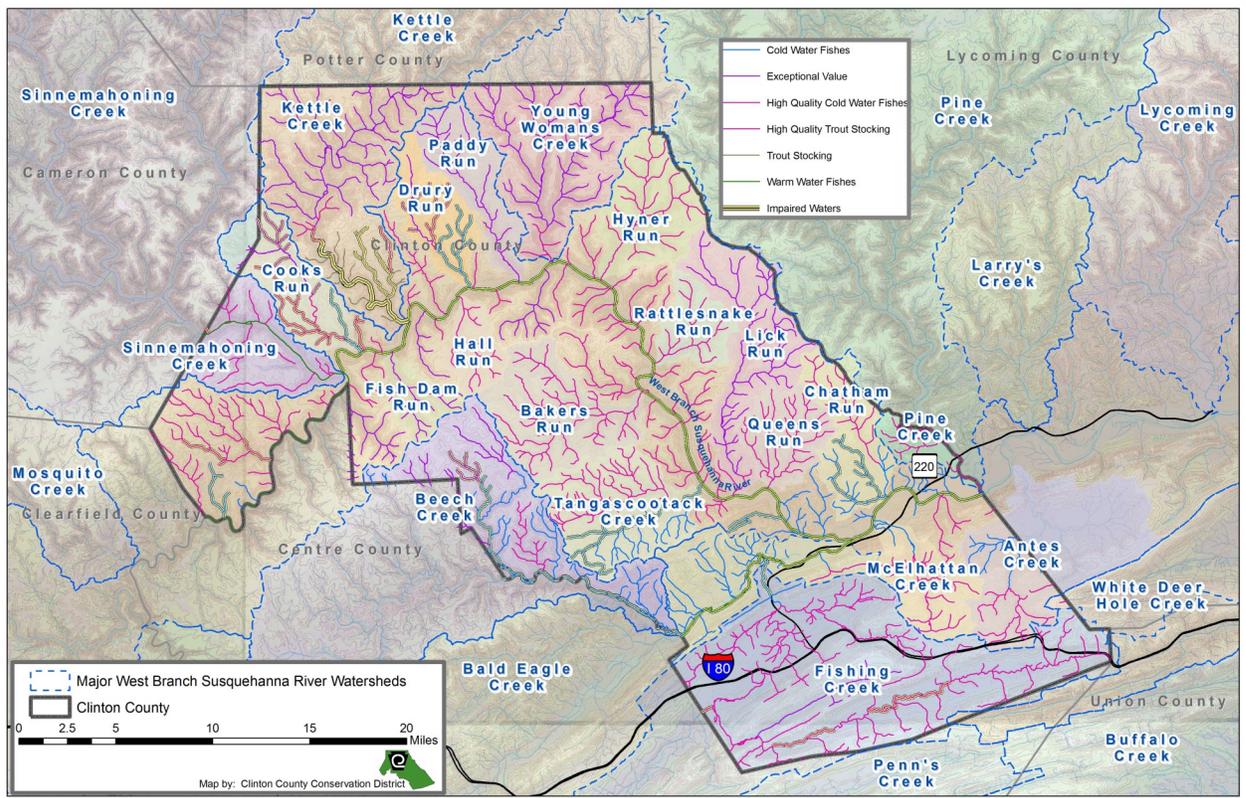
Pictured Right: Maintenance being done on MR2, one of six passive treatment systems that the Conservation District monitors in the Scootack Watershed.



General Information

The Clinton County Conservation District was created in 1946 to serve the residents of Clinton County and offer various natural resource programs. We are able to do this through the guidance of a 9 member Board of Directors with local control, and through partnerships with various agencies, including USDA Natural Resource Conservation Service, PA Fish & Boat Commission, PA Department of Environmental Protection, US Army Corps of Engineers, PA Bureau of Forestry, and many other County, State, Federal, and local agencies.

The Conservation District holds a variety of educational programs throughout the year. Pictures below are from the Conservation Summer Camp, County Envirothon, and Sixth Grade Conservation Field Days.



Watersheds of Clinton County and their designations

Conservation District Staff and Directors



2019 District Directors, left to right Sitting: Commissioner Paul Conklin, Bill Hunter, Charlie Dotterer (Chair), Coreena Meyer, Jim Harbach, Associate Ron Brungart Standing: Paul Courter, Ralph Harnishfeger (Vice-Chair), Larry Butler (Treasurer), Associate Elam Stoltzfus, Associate Phil Courter, and Rob Bowman



A huge thank you to Paul Courter who served on our Board for 27 years. He is shown to the left being presented with a Certificate of Recognition by the Clinton County Commissioners—Left to Right, Paul Conklin, Paul Courter, Pete Smeltz, and Jeff Snyder.

The Conservation District is a subdivision of State Government created to administer various programs to conserve soil, water, and natural resources in our county. Our District is guided by a Board of nine Directors, who make decisions on various programs that the staff conducts. Associate Directors do not vote but are involved in the discussions with voting Directors, who serve on committees and are involved in other activities that may involve representing the District. Our Board of Directors are very active and dedicated to our mission.



District Staff (2019)

- Mary Ann Bower, District Manager
- Mary Ellen Stern, Resource Conservationist
- Jake Wenrich, Resource Technician
- Toby Boyer, Watershed Specialist/Education Coordinator
- Scott Koser, Ag and Roads Resource Technician
- Lisa Blazure, Agricultural Resource Conservationist
- Susie Peters, Program Assistant/Board Recording Secretary



Conservation District Staff, Left to Right: Jake Wenrich, Lisa Blazure, Mary Ellen Stern, Mary Ann Bower, Scott Koser, Susie Peters, and Toby Boyer

Farm City Family Festival Awards

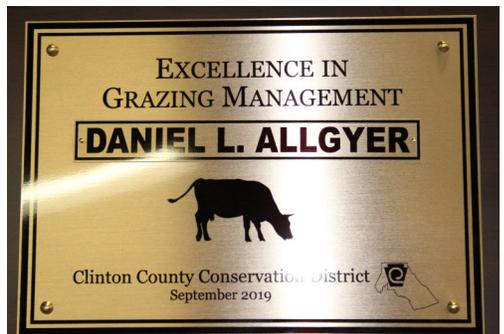
The Farm-City Family Festival is held on the fourth Saturday in September at the Clinton County Fairgrounds. We celebrate the important relationship between the Farm and City to continue to feed our country. One of the numerous events during this day is the recognition of outstanding farm families and local businesses in the community. At our event held on September 21 2019, we recognized the following:

Family Farm of the Year – J Fred Munro Farm. Originally started by J. Fred Munro in the early 1920's. It has been owned by 3 generations. Currently, 4 family member are still involved with the farm: Alfred and Wanda Munro and Scott and Lisa Munro. They also have 1 full time employee. There are approximately 1,400 acres and the main crops are: Corn, Soybeans, and Winter Wheat. When J. Fred Munro started the farm, he had some animals, raised various vegetables, tobacco(the barn still stands today), had a milk route (we still have a collection of bottles from his route), and raised seed corn). Alfred raised potatoes for 52 years. He also raised grain crops, sweet corn, various vegetables, and grew seed corn for Doeblers for 35 years. His wife Wanda was also an integral part of the operation as she managed the financial end of the farm in addition to helping with the harvest of potatoes. Scott started on the farm in 1992 and in the 90's began transitioning to no till farming. Scott raised seed corn for Doeblers for 15 years in addition to detasseling seed corn from the time he was 12 years old for Alfred. Scott also raised various vegetable crops and currently raises corn, soybeans, and winter wheat. For the last 15 years Scott has started to use cover crops on the farm. Currently about 75% of the farm is in cover crops over the winter and the farm is a no till operation (with a few exceptions). Scott's wife Lisa is also involved in the farm. She currently manages the finances on the farm including payroll, bookkeeping, and tax preparation. Our one current employee Leroy Paulhamus has been with us for over 30 years and in is an important part of the day to day operations. He does anything we need around the farm including planting and running the grain center and maintains all of the equipment to keep things running smoothly.

Business Family of the Year – Miller Brothers Auto Sales Originally started in 1980 by Grant Miller. Miller Brothers Auto Sales has been owned by 3 generations. There are currently 4 family still working for them. Miller Brothers Auto Sales offers: used car sales, service, body shop repair and reconditioning.



Alfred and Scott Munro with Fair Queen Haili Frank presented the Farm Family of the Year Award



The 2019 Excellence in Grazing Management Award for Daniel Allgyer



Conservation District Board Chair Charlie Dotterer with Fair Queen Haili Frank



Farm-City Family Festival
 A special day for the Clinton County Conservation District and its sponsors, volunteers and participants for making the 13th annual FARM CITY FAMILY FESTIVAL a great success!
 Held September 21, 2019
 10000 WESTERN AVENUE, FARMVILLE, NY 13320

Thank you to the following sponsors for your support:

SPONSORS:

- Alfred and Wanda Munro
- Al Howard Tire
- ARC Environmental
- Baker Tilly Vintner Release
- Bill's Veterinary Center, P.C.
- Sal's & Service
- Central PA Auto Auction, Inc.
- Cooper, Ryan, Welch & Hooper
- Dan J. Wheeler Personal Home Health Transfer
- E.J. Ryan Optical, Inc.
- Kelley Creek Inn
- Lock Haven Woods
- Mill Hill Signs and Designs
- Miller Brothers Auto Sales
- Perkins Property B & B
- Price Cook Township
- James & Stewart Farms
- Supperstone Transit Co.
- Wagner Township Landfill
- Woods' Super-Cuts (Farmville)
- Woodward-Thompson

CONGRATULATIONS:
 FARM FAMILY OF THE YEAR – Alfred and Scott Munro, Miller Farms
 EXCELLENCE IN GRAZING MANAGEMENT – Daniel L. Allgyer
 BUSINESS FAMILY OF THE YEAR – Miller Brothers Auto Sales & Service

Sponsored by:
 Clinton County Conservation District
 Clinton County Chamber of Commerce
 Clinton County Fair Association
 National Resources Conservation Service



2019 Education Activities, Scholarships, and Awards

Clinton County Envirothon

2019 (34th) County Envirothon was held in May at the Southern Clinton County Sportsmen Club. Thank you to the partnering agencies who assist us with the testing—DCNR, PA Fish & Boat Commission, PA Game Commission, and USDA Natural Resources Conservation Service. The winning team was “Tsuga Canadensis” from Sugar Valley Rural Charter School, with advisors Robbie Weaver & Chuck Bechdel, who competed at the 36th Annual State Envirothon at University of Pittsburgh at Johnstown. The first, second, and third place County team members each received a monetary award—Congratulations!

Rich Ramm Memorial Scholarship

A scholarship fund to honor a local farmer, Rich Ramm, was established by the Conservation District to recognize a Clinton County graduating senior or present full-time college student who is enrolled in an accredited program in the field of agriculture. In 2019, the \$1,700 scholarship was awarded in half to Jacob Jeffries of Loganton, and in half to Elliot Probst of Renovo. Jacob is a graduate of Sugar Valley Rural Charter School who is attending Penn State University majoring in Forest Technology. Elliot was the valedictorian of the Bucktail class of 2019, and plans to study veterinary and biomedical science at Penn State University. Applications are due this year on May 3rd.

Max Bossert Awards

Each year the District recognizes a student from each high school in Clinton County for their interest in conservation, based on activities in and out of school. In 2019, the recipients were Bucktail High School—Tanner Riggle; Central Mountain High School—Lance Bowman; and Sugar Valley Rural Charter School—McKenna Fox. Max Bossert served as a local legislator and Conservation District Board Director.

Environmental or Outdoor Field School Sponsorship

The Clinton County Conservation District offers a sponsorship each year for one high school student to attend one of several environmental schools or academies of their choice. The sponsorship covers most of the cost of registration to attend an environmental school or academy including the Penn State Conservation Leadership School, the Pennsylvania Rivers Conservation & Fly Fishing Youth Camp, and several Wildlife Leadership Academy programs. In 2019, the Conservation District awarded the sponsorship to Kyle Stahl, who chose to attend the Wildlife Leadership Academy.

Sixth Grade Conservation Field Days

The 2019 Sixth Grade Conservation Field Days were held at the Clinton County Fairgrounds on September 18th and 19th. The Conservation District has been hosting this environmental education program for Clinton County sixth graders for over 30 years. More than 380 students attended to see presentations by the Department of Conservation and Natural Resources, Wayne Township Landfill, the Department of Environmental Protection, the PA Game Commission, Centre Wildlife Care, Penn State Extension, and the National Resources Conservation Service. Thank you to all the presenters and staff that assisted in making the 2019 Sixth Grade Conservation Field Days so successful.

Conservation Summer Day Camp

2019 marked the 28th annual Conservation Summer Day Camp, with 30 campers participating. The camper's favorite activities during the week included a field trip to the US Fish and Wildlife Service Lamar Hatchery for fishing, and a field trip to Penns Cave and Wildlife Park. In addition, students got to tour the Tylersville State Fish Hatchery which was another favorite.

The camp was made possible by grants and donations from the Clinton County Community Foundation, Dominion Foundation, Central PA Auto Auction, Beiters, Croda, Coploff, Ryan, Welch, and Houser, First Citizen's Bank, Jersey Shore State Bank, Lloyd Wilson Chapter of TU, Love Disposal, First Quality Tissue, JEB Environmental, Woodlands Bank, Woolrich, Ms. Paula Bell, and Murray Motors. Support for the camp was also provided by the PA Fish and Boat Commission, NRCS, Cedar Run Environmental, the US Fish and Wildlife Service, Lock Haven University, Centre Wildlife Care, the PA Game Commission, DCNR, Reptiland, Donna Dorey, and Larry Butler.



Considerations for Stream Crossings

The frequency and intensity of rainfall in Pennsylvania and Clinton County in recent years has caused many stream crossing problems with landowners and municipalities. Stream crossings are generally meant to include pipes or small bridges under driveways and roads that convey water under the driving surface. It is important to keep in mind that constructing or changing these crossings requires a permit! This is because the work is being done within a stream.

Regardless of whether it is on private property, a permit is required. Please contact our office for more assistance with this.

Often, problems arise with these crossings because they are undersized and not stable. Because of their instability, they are a potential source of sediment pollution to the stream and a big frustration for the owners when problems occur like “blow outs” during a high water event. Stream crossings are expensive and those installing the structures sometimes believe they are saving money by making them as small as they need to be; but this comes with some consequence to long term cost and the health of the stream.

The stream will show symptoms if the structure is undersized. If the existing structure in the stream is narrower than the active stream channel, the

stream channel is wider on the downstream end of the structure from “blowing out”, or there is a small island of gravel that splits the channel just upstream of the structure, then the structure may be undersized.

Gravel often deposits upstream of a crossing when the velocity of the stream slows down at a constricted inlet. Stream material like gravel that would normally move through the system instead drops out and builds at the inlet. Another symptom and big problem for the stream is when the outlet of the crossing such as a culvert pipe is perched above the water causing a waterfall or cascade into the stream. Crossings are not usually installed this way, it happens over time. This happens when the undersized crossing scours the stream at the outlet causing sedimentation, a drop in elevation, and a blockage for fish passage. Fish and other aquatic life cannot swim up the cascade or waterfall to get upstream, disconnecting them from potential feeding and spawning habitat.

One method to consider when installing or fixing a stream crossing is what the stream’s “bankfull width” is. This is the width of the channel at bankfull elevation. Bankfull elevation can be determined using some common indicators. For starters, look for a change in bank slope. Bankfull

flows are often associated with benches or the top of the streambank before it reaches the floodplain. This is the width of the channel during a roughly 1.5 to 2 year storm, not a flood. Look for areas up and down the stream bank where the particle size changes. Streams drop sediment when they start accessing their floodplain. A change in particle size along the bank from gravelly to silty or sandy can be clues to bankfull width. Another clue is changes in vegetation as you move up the bank. Where the stream actively scours and forms usually has less permanent vegetation.

Bankfull widths are wider than the normal flow channel but when a crossing is designed to accommodate bankfull flow, there is much less maintenance for the owner and much less impact to the stream.

An example of a properly constructed stream crossing at bankfull width is described below. Determining bankfull width and designing stream crossings takes expertise, and in some cases professional engineers. If you are experiencing problems with your crossing, reading this article will not make you an expert in fixing or designing it, but hopefully provides some considerations. Remember that your Conservation District is here to help further with this topic if needed, so let us know.

BEFORE: Harbaugh Road in Greene Township. Undersized failing culvert with no passage for aquatic life (fish, amphibians, macroinvertebrates). Culvert caused severe erosion at the outlet and was a complete barrier for fish migration in a Class A trout fishery.



AFTER: An aluminum arch structure with a full plate bottom was constructed at “bankfull” width of the stream (9’) in order to accommodate high flows and restore the stream corridor.



CALENDAR OF EVENTS

Conservation Summer Day Camp

Clinton County students who have completed grades 4 through 6 can participate in hands-on activities that deal with environmental topics such as forestry, aquatics, soils, and wildlife.

DATE: Tentatively scheduled the week of July 27th or August 3rd

LOCATION: TBD

Decision to be made based on COVID-19 situation.

Clinton County Farm City Family Festival

Vendors, Games, Contests, Awards, Family Fun to celebrate the relationship of Farm and City.

DATE: Saturday, September 19th, 2020

LOCATION: Clinton County Fairgrounds

More Information will be available later in the year.

Don't Till It... Drill It!

It was once believed the best way to keep soil healthy was to till it. Unfortunately, tilling soil is one of the biggest contributors to its degradation. Today, only half of the topsoil and organic matter early pioneers found when they broke the sod in the mid-1800s remains. The earth continues to lose roughly 23 billion tons of fertile soil every year. At this rate, all fertile soil will be gone within 150 years, unless farmers convert to practices that restore and build soil organic matter, an essential component of soil fertility.

Soil is teeming with billions of bacteria, fungi, and other microbes that form an ecosystem that provide nutrients for plant growth, absorb and hold rainwater for use during dryer periods, filter and buffer potential pollutants from leaving our fields and support crop growth. Healthy soil allows a cropping system to run smoothly. In contrast, unhealthy soil has an ecosystem that is out of balance and lacks key organisms or the food these organisms need. This results in

problems such as low crop yield, increased runoff, soil moisture deficits, pest and disease problems, and nutrient deficiencies. Improving soil health is crucial to long-term agricultural productivity.

There are a number of practices that can help rebuild and reinvigorate soil. Many farmers are transitioning to no-till farming to counteract the decades of damage. No-till farming involves planting the seed directly into the soil without plowing, tilling or disking. There are a number of benefits to this type of farming. It saves the farmer time and fuel costs by not having to make so many passes across the field. No-till practices also allow the soil structure to stay intact and protects the soil by leaving crop residue on the soil surface. Improved soil structure and cover increase the soil's ability to absorb and infiltrate water, which in turn reduces soil erosion and runoff and prevents pollution from entering nearby water sources.

The Clinton County Conservation District has both a no-till drill and an InterSeeder available for rent. In 2019, these were made available to 26 local farmers who used them on 385.5 acres. Our 7' Sukup no-till drill is a 12-row unit with approximately 7" row spacing. It has two hoppers for planting both small and large size seed. It has a Honda motor with a self-contained hydraulic system.

The District also rents an InterSeeder. This machine can either be used as a 10' no-till drill or it can establish cover crops between rows of standing corn, soybeans, sunflowers or any other crop planted at a 30" spacing including vegetables. It interseeds four 30" rows at a time.



Rental Rates:

-\$10 per acre:

(< 10 acres)

OR

-\$8 per acre:

(> 10 acres)

Clinton County Conservation District
45 Cooperation Lane
Mill Hall, PA 17751-9543

Non-Profit Organization
Lock Haven, PA
Permit No.99

Return Service Requested



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our website. If you are

interested please email

our office. Thank you

for helping us stay

green!



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We're on the Web!

http://www.clintoncountypa.com/departments/conservation_district