Annual Report & Newsletter 2021

DECEMBER 30, 2021

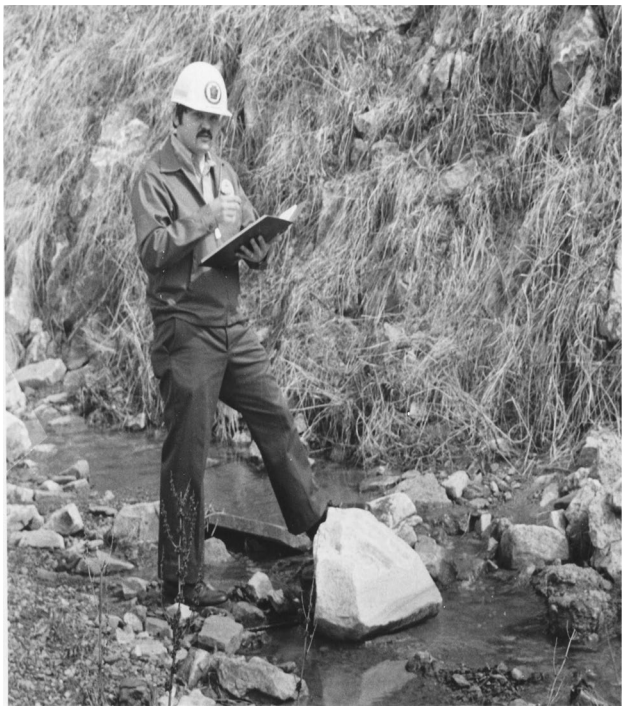
Clinton County Conservation District

Inside the Issue

"I want my children and my grandchildren to live in a world with clean air, pure drinking water, and an abundance of wildlife, so I've chosen to dedicate my life to conservation so I can make the world just a little bit better." - Bindi Irwin

In Memoriam

This issue is dedicated to Thomas Bittner for his lifetime of service to our County and our Nation. Tom was a 33-year employee of the Clinton County Conservation District - serving for 10 years as a senior resource conservationist. He also served 26 years in the Air National Guard and retired as a Senior Master Sergeant in charge of the Operations Section of the 112th Tactical Control Squadron. Additionally, Tom served as mayor of Mill Hall for 20 years, on Borough Council for 16 years and was a longtime member of the Mill Hall. Volunteer Fire Co.



The Year in Review

Dear Friends and Neighbors,

We've come to the end of another year, and what a year it was. We took time to remember our roots as the District celebrated its 75th anniversary in April. We also renamed our Learning Center in honor of long-time District Manager, Mary Ann Bower. As we took time to celebrate the past, we also looked to the future. Once again change continued to come to the District. A long-serving member of our family, Scott Koser, accepted a position with Trout Unlimited. Scott's contributions are numerous and will continue to impact the District well into the future. We wish him well as he embarks on a new phase of his career and tackles new challenges. Following Scott's departure, we reconfigured the organizational structure of the District. After more than 2 decades of service, Susie Peters stepped into the role of Deputy Manager, taking over much of the financial management of the District, and also became the County's administrator for the Agricultural Preservation Program. To better serve the farming community, we devoted two full-time positions to agriculture. We welcomed Lexie Jacobs and Samantha Zaner. Hailing from Mercer County, Lexie moved here in April, to take on the role of Agriculture Resource Conservationist. Six weeks later, she was joined by Samantha Zaner. Sam comes from the Southeast portion of the State and was working on farm-related research at Penn State before joining our team. Sam and Lexie quickly became partners in crime as they teamed up to manage the agricultural side of the District. In November, we welcomed Rachel Daley as the new Roads Program Manager. Rachel comes to us from Susquehanna University and she will also assist with the E&S and Water and Wetlands programs. In my quarter-of-a-century of conservation work, I must confess this staff is my favorite. They bring enthusiasm, passion, devotion and, yes, sometimes a bit of craziness to the office. But being on the frontlines of conservation can be a tough job with its share of challenges so, hearing the laughter and seeing the *esprit de corps* that has developed makes me feel a little better about being "the old man" in the office. Despite the challenges of being down staff and working with COVID on the landscape, the District spread its wings as we reached out to new partners. Right out of the gate, we teamed with Keystone Central's Career Technical Center students who repaired our no-till drill. Art students from both Keystone Central and Sugar Valley Rural Charter schools got busy painting amazing rain barrels. We teamed with multiple County agencies to plant a huge vegetable garden and provided the harvest to the United Way. AmeriCorps Seniors, Diakon Community Services and the Clinton County Conservation District unveiled a new 3-year partnership that will strengthen the District's ability to provide services to residents of Clinton County and will also offer local seniors the ability to help protect the county's natural resources. We even teamed with one municipality to secure a grant for relocating a frequently flooded trail at their nature park. The District also joined with the Clinton County Planning Office and jointly engaged dozens of local stakeholders to develop a Countywide Action Plan. This plan lays out how, moving forward, Clinton County will protect local lakes, streams and groundwater as well as contribute to the improvement of the Chesapeake Bay. The enacting of that plan by the Clinton County Commissioners also allowed the year to end on an incredibly high note as we received word in early-December that we had secured more than $250,000 to help local farmers manage their nutrients and protect local streams. I can't be more proud of the work this team accomplished and I'll end this message with a huge thank you to our District Board, our County Commissioners and our State Partners (DEP, PA Fish and Boat, PACD and the State Conservation Commission) for their unwavering support and also extend a thank you to all the local farmers, landowners, contractors, builders, municipalities and watershed associations who partnered with us in 2021.

Wade Jodun, District Manager

HAPPY 75th ANNIVERSARY CLINTON COUNTY CONSERVATION DISTRICT

COMMISSIONERS:
HAMILTON V. PROCTOR
FRANK A. BIRDAT
CHAUNCEY F. ROYER

CLINTON COUNTY, PENNSYLVANIA

JOHN E. HAMILTON,
CHIEF CLERK
A. H. LIPEZ, SOLICITOR

OFFICE OF
THE COUNTY COMMISSIONERS
LOCK HAVEN, PA.

April, 3rd, 1946.

Miles Horst,
Secty. Dept. Agriculture,
HARRISBURG, PA.

Dear Sir:

The County Commissioners would like to have all the information available on the Soil Conservation set-up. There is a movement to organize each county in this regard.

What do you think of soil conservation personally?

Yours very truly,

CLINTON COUNTY COMMISSIONERS,
By John E. Hamilton
Chief Clerk.

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HAMILTON V. PROCTOR
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CHAUNCEY F. ROYER

CLINTON COUNTY, PENNSYLVANIA

JOHN E. HAMILTON,
CHIEF CLERK
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OFFICE OF
THE COUNTY COMMISSIONERS
LOCK HAVEN, PA.
December 10, 1946

Mr. W. S. Hagar, Executive Secretary
State Soil Conservation District
Harrisburg
Pennsylvania

Dear Sir:-

A Board of Directors of the Clinton County Soil Conservation District has been appointed consisting of four farmers as representatives of four County Farm Organizations and one County Commissioner. The delegates appointed to the Board of Directors are as follows:-

Pomona Grange Kline Confer R.F.D. Salona, Penna. Term - 1 Year	Farm Loan Asso. Fred Monro Island Route Lock Haven, Pa. Term - 3 Years
Co-Operative Asso. Dean Grieb R.D.#1 Mill Hall, Pa. Term - 2 Years	Tobacco Growers' Asso James Baird Island Route Lock Haven, Pa. Term - 4 Years

County Commissioner - C. F. Royer.

Yours very truly,

CLINTON COUNTY COMMISSIONERS
John E. Hamilton
Chief Clerk.

Staff

Wade Jodun: District Manager
Susie Peters: Deputy Manager
Toby Boyer: Watershed Specialist
Sara Henninger: Conservationist
Rachel Daley: Conservationist
Samantha Zaner: Ag Conservationist
Alexis Jacobs: Ag Conservationist

Board of Directors

Ralph Harnisfeger: Chairperson
Charles Dotterer: Vice Chairperson
Larry Butler: Secretary / Treasurer
Angela Harding: Commissioner Director
Elam Stoltzfus, Jr: Farmer Director
Corenna Meyer: Farmer Director
James Harbach: Farmer Director
William Hunter: Farmer Director
Robert Bowman: Public Director
Ron Brungart: Associate Director
Tom Shervinskie: Associate Director
Philip Courter: Associate Director
Joe Waltz: Associate Director
Eric Lugg: Associate Director
Elisabeth Lynch: Associate Director
Stewart Ramm: Honorary Associate Director

County Commissioners

Miles Kessigner
Jeff Snyder
Angela Harding

OUR MISSION

Our mission is to strive to promote voluntary conservation and good stewardship of Clinton County's natural resources while being a leader in balancing environmental responsibility with economic opportunities.

OUR VISION

The Clinton County Conservation District will be the premier conservation organization regarded by all citizens as a leader in innovative stewardship of our natural resources. The District will effectively inspire and foster the application of natural resource conservation. With passion, the District will engage citizens and protect the environment for future generations while encouraging profitable business enterprises.

OUR CORE VALUES

The District operates under the philosophy that the best way to advance the cause of conservation is to educate local citizens to become better environmental stewards. By building partnerships, providing technical assistance, and sharing information, we strive to achieve environmental compliance using common sense to build a culture of responsible stewardship.

"You cannot get through a single day without having an impact on the world around you. What you do makes a difference and you have to decide what kind of a difference you want to make." **—Jane Goodall**

WHO WE ARE AND WHAT WE DO

The Clinton County Conservation District was organized 75 years ago by the County Commissioners in December 1946. We are a sub-division of state government, supported by the Clinton County and it's 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 Program***
- ***Act 38 Nutrient Management Regulations***
- ***Municipal Dirt & Gravel and Paved Low Volume Road Program***
- ***Watershed Specialist Program***
- ***Agriculture Preservation Program***

Erosion and Sediment Control / NPDES

The Clinton County Conservation District has a delegation from the PA Department of Environmental Protection to administer the Chapter 102 Erosion and Sediment Pollution control program. PA Code, Title 25, Chapter 102 and the Pennsylvania Clean Streams Law requires the implementation and maintenance of erosion and sediment control best management practices to minimize the potential for accelerated erosion and sedimentation for all earth disturbances. For disturbances involving one (1) acre or more over the life of the project, a National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges is required.

2021 Erosion & Sediment Pollution Control Accomplishments

185 Technical Assists Provided
53 Complaints Investigated
44 Plan Reviews Conducted
34 Site Inspections Conducted
8 NPDES permits reviewed
5 NPDES permits issued
3 Workshops Conducted

A HUGE FAIL: Installing Silt Fence

You see it everywhere. Black plastic affixed to wooden stakes and stretched out lining the edge of construction sites. The purpose of a silt fence is to provide a temporary barrier to retain the soil on disturbed land such as a construction site, until the activities disturbing the land are sufficiently completed to allow revegetation and permanent soil stabilization. It's one of the most commonly used erosion control Best Management Practices and, **it's almost never installed correctly.** You'll see the bottom of plastic sitting on top of the ground. You'll see broken stakes and sections that have collapsed. And, the ultimate fail: when you can see daylight under silt fence it is unable to hold stormwater or sediment...or daylight.

Here at the Conservation District, we freely admit that we are erosion and sediment control geeks. Due to this sad and incurable condition, we find ourselves compelled to shout out whenever we see poor quality BMP installations…even if our families and friends just want us to give it a break. But we just can't do that! So, let's get started. Here's how to correctly install silt fence for your next project involving earth disturbance.

STEP 1

Lay out and mark the path for your silt fence. You install silt fence in line with, not perpendicular to, the contour of your site. Install the fence below the areas you're disturbing. Avoid creating large U-shaped fenced-in low spots where rainwater and sediment could collect. You may need to stagger fence runs, arranging them in J-shaped layouts.

STEP 2

For the entire run of your fence, dig a trench at least four inches deep. A V-shaped trench is easiest if you're digging by hand, but a 4-in. x 4-in. square trench is good, too. Place the lower eight inches of fabric into the trench; most fence fabric will have a red printed line on it noting that depth. The fence stakes should be on the lower or downhill side of the trench, and the fabric in the trench will run into the uphill side.

STEP 3

As you place the fence in the trench, pound the stakes into the ground every 8 feet using a 10-lb. maul. Silt fence should stand at least 14 inches above the ground. Where two sections of silt fence meet, overlap the fence ends to cover a span of two posts.

STEP 4

Once all stakes are in place, backfill the trench and make sure the uphill side of the fence fabric is buried. Use a compactor and tamp the soil firmly over the fabric. Just make sure the stakes are solidly in the ground to keep the fence from collapsing.

Chesapeake Bay Program / Managing Farm Nutrients

The Conservation District, through delegations with the State, has over sight for both the Chesapeake Bay Farm Inspection Program and the Act 38 Nutrient Management Program. Our job under those programs is to inspect farms, investigate agriculture-related complaints and to assist farmers in implementing best management practices (BMPs) on their farms that are both economically and environmentally beneficial. For example, prudent conservation practices that keep soil and nutrients on the farm not only maintain the productivity of the farm but also protect drinking water and recreational activities such as fishing by keeping these pollutants out of our streams. Some typical BMPs include: cover crops, stream bank buffers, crop rotation, rotational grazing systems, no-till planting to improve soil health, treating barnyard runoff water and installing fencing to keep livestock out of streams.

2021 Accomplishments

Chesapeake Bay Program:

- **56 farm inspections conducted**
- **25 Manure / Nutrient planning assists**
- **10 Agricultural E&S planning assists**
- **81 Technical assists to farmers**
- **39 Complaints investigated**

Nutrient Management Program:

- **Seven (7) Act 38 Plans Approved**
- **10 complaints investigated**
- **35 Technical Assists**
- **13 Annual Status Reviews conducted**

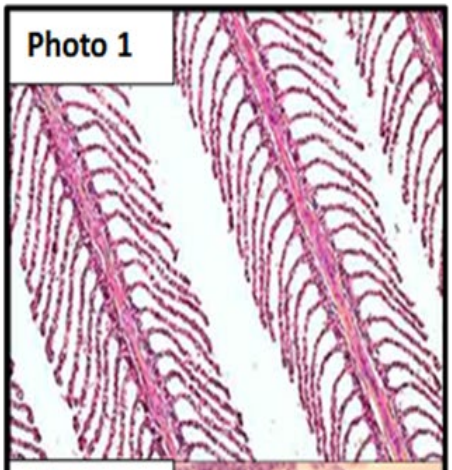
One REAP workshop held

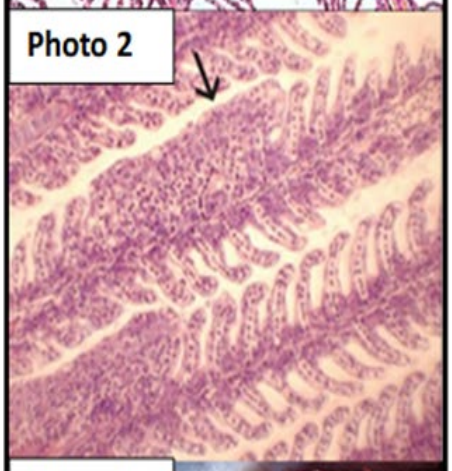
Riparian Buffers at a Glance

The word "riparian" is used to describe the area alongside a river or other body of water. A riparian buffer is a vegetated area that runs along a stream, lake, pond, or reservoir. They may consist of grasses, shrubs, trees or a mix of each. Establishing a riparian buffer can be as simple as leaving an area undisturbed or un-mowed. A buffer is considered a "forested" buffer when the permanent vegetation is predominantly native trees and shrubs and has at least 60% uniform canopy cover. The importance of these buffers cannot be understated when it comes to protecting streams.

When plants like meadow grasses and trees are allowed to grow along streams or new trees and shrubs are planted, the soil becomes more porous and allows water to soak in more easily. Riparian buffers act like sponges along a waterway, soaking in precipitation and water running off the land. They also capture sediment, nutrients, and other pollutants that are carried with the water runoff. In addition to helping absorb water and pollution, the deep roots of these plants are very good at holding streambanks in place. This further reduces water pollution by preventing the land from caving in and washing downstream. Compare how different the stream bank looks between the stream that has a riparian buffer (picture top right) and the stream that doesn't (picture center right). The bank without a buffer is collapsing and suffering heavy erosion. These buffers also slow stream water velocities to reduce flood events. Riparian buffers also provide important nesting and foraging sites for a host of migratory bird species and contribute to healthy fish habitat through shade and cool water temperatures, biotic inputs, and woody debris. The wider the riparian buffer extends from the water's edge, the more effective it is at improving water quality.

The Conservation District is looking to work with willing land owners to plant riparian buffers and help secure funds for the planting of riparian buffers. If you are interested, please contact us!





What's the Fuss Over Sediment – from the Fish's Point of View

What's wrong with a little mud in the stream? Doesn't it all just wash away or settle out anyway? I hear it every day. But long before becoming the Conservation District's manager, I was a fish biologist for the U.S. Fish and Wildlife Service. Bottom line: sediment in water kills fish. When sediment gets into water it can abrade and clog fish gills. Photo 1 (right) shows what a normal fish gill looks like under a microscope. Those little "fingers" are called lamellae. It might help to think of them as lung tissue that help fish breath. The more exposed fingers, the better a fish breathes. Photo 2 shows what gills look like after being damaged by sediment. They are swollen and clubbed. That means a lot less surface to absorb oxygen. That's not good if you are a fish. Fish need great amounts of oxygen, but damage to their gills makes it hard for them to get it. Damage to fish gills and can also increase the rate of disease in fish. Just like any open wound, damaged gills become a focus for disease-causing bacteria. Photo 3 shows healthy fish gills. Photo 4 shows damaged gills that are covered in filamentous bacteria. Also, as these sediments settle out, they can negatively impact populations of aquatic invertebrates on which fish feed. However, the greatest adverse impact of sedimentation is on incubating eggs and larval fish. Sedimentation can smother incubating embryos and emergent fry in redds. Fine sediment deposits may also seal rubble and gravel substrates, decreasing spawning area, egg survival, emergence of fry, and hiding cover for fingerlings.

Eutrophication and it's Link to Manure

Did you know that every landowner that has livestock or allows manure to be spread on their property must have a Manure Management Plan? This applies even if you only have one horse or a few 4-H animals. These plans must be current, accurate and implemented for you to be in compliance with the Pennsylvania Clean Streams Law. You might ask, a manure plan for one horse? Yes. But that's because one horse produces 11 tons of manure a year. One of the primary reasons we manage manure is to safeguard our water. Not only does it contain pathogens (e. coli, Salmonella, Giardia, Coliform) that can create human health issues if it reaches drinking water, but also, if manure reaches streams and lakes, it can be deadly to fish and other aquatic life. Manure contains nutrients vital to plant growth (nitrogen and phosphorous) which makes it a great fertilizer for crops. Those same nutrients, however, can also cause plant growth in water. The enrichment of water with nitrogen and phosphorus nutrients (known as eutrophication) can cause dense plant and algal growth in water. When this bloom of algae dies off, it depletes oxygen in the water necessary for fish, plants and other aquatic life. If the dissolved oxygen touches chronic low levels, the plant and animal species living underwater can suffocate. Algal blooms are also very toxic. When water reaches anaerobic conditions, it triggers the boost of toxic bacteria. Sufficed to say – all big issues if you're a fish, crayfish or other critter that lives in water. When properly managed, manure is a vital fertilizer for agricultural crops. When poorly managed, it can be deadly. That's why manure management plans are required.

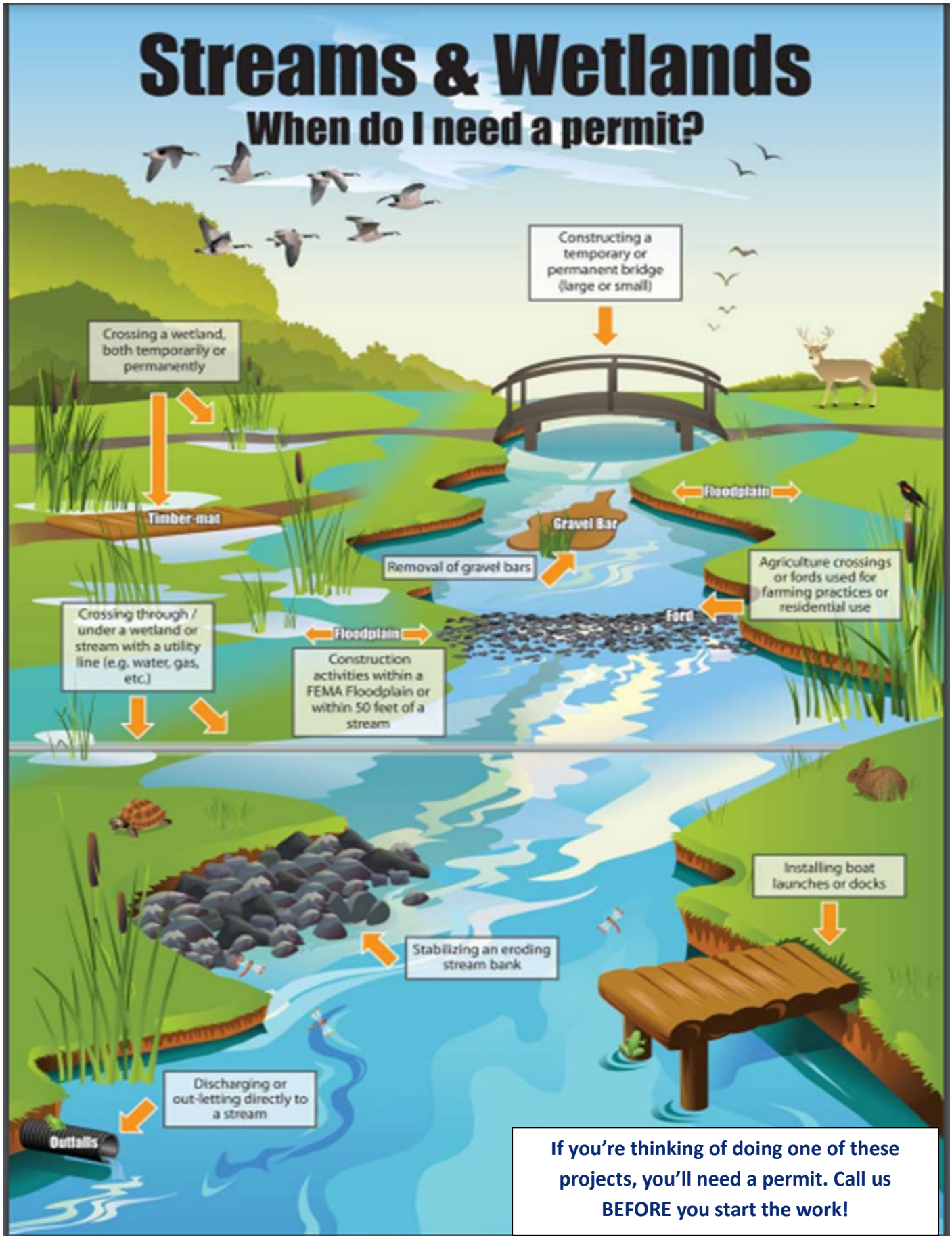
Chapter 105: Water and Wetlands

Regulations with PA Code, Title 25, Chapter 105 (Chapter 105), were created to protect the health, safety, welfare and property of the people; and to protect natural resources, water quality and the carrying capacity of watercourses. Clinton County Conservation District is delegated responsibility for some aspects of the Chapter 105 program. District staff can review and issue General Permits, inspect permitted sites, investigate complaints, and provide regulatory and permitting assistance.

Digging in or near a stream or wetland, installing culverts in a stream or wetland, placing fill or rock on a stream bank all require permits under State Law. The next page contains more examples of projects that require permits BEFORE you start work.

2021 Watercourse and Wetlands Accomplishments

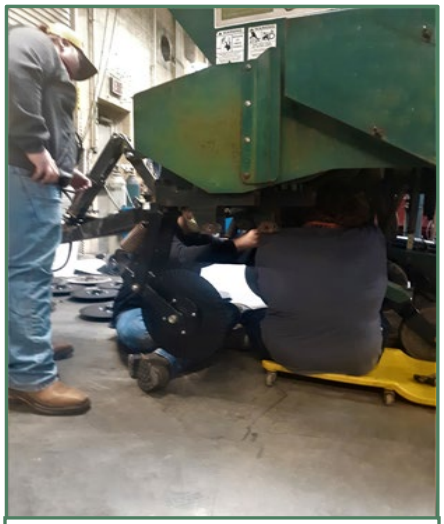
118 Technical Assists Provided
26 Complaints Investigated
24 Permits Reviews
17 Permits Acknowledged
14 Site Inspections Conducted
2 Workshops Conducted


Streams & Wetlands
When do I need a permit?
Constructing a temporary or permanent bridge (large or small)
Crossing a wetland, both temporarily or permanently
Timber-mat
Floodplain
Gravel Bar
Removal of gravel bars
Agriculture crossings or fords used for farming practices or residential use
Ford
Crossing through / under a wetland or stream with a utility line (e.g. water, gas, etc.)
Floodplain
Construction activities within a FEMA Floodplain or within 50 feet of a stream
Installing boat launches or docks
Stabilizing an eroding stream bank
Discharging or out-letting directly to a stream
Outfalls
If you're thinking of doing one of these projects, you'll need a permit. Call us BEFORE you start the work!

OUTREACH AND EDUCATION

Watershed Specialist, Toby Boyer, talking macroinvertebrates at Millbrook Plaza anniversary

Future teachers participating in a Project Wet workshop that talks about teaching science in the classroom



Keystone Central Career Technical Education Students build workforce skills by repairing our No-Till drill.

Conservation Summer Camp students learned about butterflies from Rick Mikula.

Students at Central Mountain High School and Sugar Valley Rural Charter School painting rain barrels purchased by the District

Staff planted native plant (milkweed, bee balm, Joe Pye Weed) gardens at the District office and Woolrich Park.

Photo to Left: Team Tsuga Canadensis from Sugar Valley Rural Charter School took first place in the 2021 Clinton County Envirothon. Team members are left to right: Taylor Geiswite, Blaine Walizer, Cheyenne Holdren, McKenna Fox, Ella Rossman

OUTREACH AND EDUCATION

Students from the Reach Out Mentoring Program planted, harvested, then decorated pumpkins from the District's garden.

District Resource Conservationist, Sara Henninger , presenting at an E&S planning, wetlands and waterways encroach workshop for municipalities.

Students dissecting owl pellets with Watershed Specialist, Toby Boyer.

Local farmers attending our REAP workshop

With the help of multiple County agencies, the District planted a huge vegetable garden.

All vegetables grown in the garden were given to the United Way

Left to Right are the award-winning posters from the District's 2021 Poster Contest: Adriana Serafini (2nd-3rd grade), Millicent Steves (4th – 6th grade) , Macy Plowman (7th – 9th grade) and Deborah Andrus (10th-12th grade) . Posters are being held by Toby Boyer (Watershed Specialist), Joe Waltz (Associate Board Member), Ralph Harnisfeger (Board President) and Lin Greenway (DCNR Forester).

Watershed Specialist, Toby Boyer, PRESENTING AT {PA Brookies and PA Bass Camp, hosted by Wildlife Leadership Academy

Learning Center Renamed

In July 2021, The District renamed its Learning Center after former District Manager, Mary Ann Bower. Mary Ann started her career with the Conservation District in December of 1986 and was named District Manager in 1997. A post she held until December 2020. Mary Ann's commitment to environmental education and programs like the Envirothon have reached almost every student in Clinton County for the past 35 years. The renaming was celebrated at our annual picnic. Joining Mary Ann at the celebration are our Board of Directors (top right).

***"IN THE END WE WILL CONSERVE ONLY WHAT WE LOVE; WE WILL LOVE ONLY WHAT WE UNDERSTAND AND WE WILL UNDERSTAND ONLY WHAT WE ARE TAUGHT*" - BABE DIOUM**

DIRT, GRAVEL AND LOW VOLUME ROADS PROGRAM

The District's Dirt Gravel and Low Volume Roads (DGLVR) Program provides local road-owning entities with grant funding for road and environmental improvements on unpaved and low-volume paved roads. In 2021, $225,792 was distributed to six (6) road projects in Lamar, West Keating, Woodward and Bald Eagle Townships as well as Mill Hall Borough. Pictured above is Driving Surface Aggregate (DSA) being applied on Sand Rock Road in West Keating. If you want your municipality to be eligible to receive tens-of-thousands of DGLVR funds, all you need to do is attend a, free, a two day "Environmentally Sensitive Maintenance" training. Call the District for more information.

Farmland Preservation in Clinton County

The Program's purpose is to protect viable agricultural lands by acquiring agricultural conservation easements which prevent the development or improvement of the land for any purpose other than agriculture. The program encourages landowners to make a long-term commitment to agriculture by offering them financial incentives and security of land use. In Clinton County, the average price per acre paid for easements is approximately $2,000 per acre plus administrative costs. In 2021, sixty (60) acres of easement were purchased for preservation. For more information, call Susie Peters at 570-726-3798 ext. 3800

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District Staff
Wade Jodun, District Manager
Susie Peters, Deputy Manager
Toby Boyer, Watershed Specialist/ Education
Sara Henninger, Resource Conservationist
Rachel Dayley, Resource Conservationist/ Roads
Alexis Jacobs, Agricultural Resource Conservationist
Samantha Zaner, Agricultural Resource Conservationist

We're on the Web!
https://www.clintoncountypa.com/departments/conservation-district

Would you like to receive your newsletter either via email or see it posted on our Website?
We are looking to save costs, so we would be glad to send you the next newsletter via email or notify you when it is posted on our website. If you are interested please email our office. Thank you for helping us stay green!