

# Beaver Tales

#### Fall 2021

#### **Beaver County Conservation District**

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#### **Mission Statement**

The Beaver County Conservation District provides leadership in natural resource management through outreach, education, and technical assistance. Debut of the Mini-Mobile Education Center (MEC)

Early in 2021, a new project was taking shape at the Beaver County Conservation District. Covid-19 had limited our outreach capabilities in 2020, and despite starting a new YouTube Channel last year, we still found ourselves wanting to expand our educational efforts to a broader audience of Beaver County's residents. As Covid continued to influence public education practices across the state, we began work on a new



outreach medium, a Mobile Education Center.

Our original intention for the Mobile Education Center, or MEC, was to convert an existing trailer into a self-guiding, interactive display on natural resources. We asked for corporate sponsors, received a budget allotment



approval from our Board of Directors, and applied for grant funding. The existing trailer had water damage in need of repair, and it also needed to be rewired for its new intended use. As winter turned into spring, district duties soon engulfed the staff in work, and we had less time to devote to this new project. The grant application was passed over in favor of other projects, preventing us from contracting out much of the repair work, but that did not stop us from moving forward with the project.

The Conservation District had a second, smaller trailer which we used at

multiple events in years past. Although it is only half the size of the initial MEC trailer, we decided to pack as much educational material as possible into this second trailer. After a couple of months of concentrated effort, the displays for the second trailer were built and installed, and the new mini-MEC had its debut showing at the Big Knob Fair. **Continued on Page 2** 

#### **Beaver County Conservation District**

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#### Debut of the Mini-MEC continued:

Many curious kids and adults visited the displays over the course of the week, exploring information on the water cycle and life of a stream, soil covers and conservation, water pollution prevention, Pennsylvania geology, wetlands, and wildlife. Brochures and flyers were available on Conservation District programs and workshops, along with information on West Nile Virus, mosquito habitat reduction, ticks, and the invasive Spotted Lanternfly.

We still have plans to build the full-sized version of our Mobile Education Center, but for now, the mini-MEC will be available for future events and use by schools, Scouts, and other groups engaging in education and outreach.



All farms tilling greater than 5,000 sq. ft. must have an erosion and sedimentation plan (Conservation Plan). All farming operations that land apply manure need to develop and implement a manure management plan. Call the Conservation District to get detailed information and support developing your plans.

### Ag Corner

### Where Does the Fertilizer Go?

When farmers put manure or commercial fertilizer on their field or a homeowner puts fertilizer on their lawn or garden; where do all the nutrients in the fertilizer go? We hope that all the nutrients which we pay for end up in the plants we fertilize, but the truth is, not all of it goes to the desired plants. Especially if too much fertilizer is placed on the field or garden.

Undesired weeds take up some of the nutrients. Some nutrients, especially nitrogen, go through several processes which make it unavailable to the plants or cause it to volatilize into the air. Soil erosion and water runoff take some nutrients out of the field. Additional nutrients may be lost to leaching through ground water. Fertilizer lost to soil erosion, runoff and leaching can end

up polluting streams. Fertilizer not used by your crop or garden is money wasted.



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When you pay for fertilizer be sure it is used by your crop and does not end up polluting the stream.

How can you reduce your costs and improve water quality?

- 1. Conduct soil testing and fertilize to the soil test for optimum yields.
- 2. Reduce erosion and runoff from your fields.
- 3. Place fertilizer in your field or garden at the right time so the crop makes maximum use of the nutrients.

Make wise fertilizer decisions to reduce your costs and improve water quality. The district can provide assistance with soil testing, erosion control and nutrient management!

### Farm Equipment for Rent

**No-till Drill For Rent:** The Beaver County Conservation District owns an 8' Truax FLEXII 812RD No-Till drill that is available for rent to interested farmers in Beaver County. The purpose of the drill rental program is to encourage and assist farmers in implementing no-till crop production systems, including cover crops, as well as promote good pasture/forage management. Reducing tillage can improve soil health and farm economics. Renting this drill provides farmers with a low-cost opportunity to try no-till planting and determine if it can be an asset to their farm management. More information is available on our website or you can contact the District's Agricultural Conservationist.



**Stoltzfus Redhawk 40 Spreader For Rent:** The Conservation District has recently purchased a Stoltzfus Redhawk 40 Spreader for use by Beaver County farmers. This is a 4 ton spreader (5 ton with installed extensions). It can be rented for \$6.00 per ton to spread your ag lime. Lime is used to adjust the ph. of your soil. Proper ph. can improve soil fertility and provide optimum yields. If you conduct soil testing and apply lime to soil test recommendations the cost can be reduced to \$5.00 per ton. Rental requirements are similar to the requirements for our existing no-till drill rental program. Please check the details on our website or contact the district for more information.

### Tick Talk!

Summer is winding down and the fall season is a great time to get out and enjoy nature. Although the temperatures are getting cooler and the days are getting shorter, ticks and mosquitoes are still out there, and precautions are still needed during outdoor activities.

Remember to wear EPA registered insect repellent and protect your skin by wearing a long-sleeved shirt and long pants while outdoors.

Remember to do a tick check on yourself and your pets after enjoying outdoor activities.

Ticks are small and easy to miss. When doing tick checks on yourself, be sure to check the following areas:

- Around hairline and ears
- Under arms
- In the belly button
- Around the waist area
- Behind the knees

When checking pets:

- Under the collar
- Around the ears and eyes
- Under the front and back legs
- Between the toes
- Around the tail



To remove a tick, grasp it at the head firmly with a pair of tweezers and pull straight out. Make sure you remove the head. Wash the area with soap and water or alcohol. Dispose of tick by placing in a sealed plastic bag or flushing it down the toilet. If you develop a rash or fever within a few weeks after removing the tick, see your doctor.



## There are different tick species found in our area and here are a few that are common in Beaver County.

The Blacklegged Tick (Ixodes scapularis) is found in the Eastern United States.



It is a hard bodied tick and adults are approximately 3 mm in length.

- It has a two-year life cycle (approximately).
- It has 4 life stages egg, larva, nymph, and adult. The larva, nymph, and adult stages take a bloodmeal.
- Ticks can stay attached to a host for several days while taking a bloodmeal.
- Preferred hosts are the White-footed mouse (Peromyscus leucopus) and the White-tailed deer (Odocoileus virginianus) but they enjoy humans too!
- Adults are active in the spring and fall.
- Nymphs and larva are active early and late summer.
- Nymph and adult ticks can transmit diseases including Lyme Disease.

The American Dog Tick (Dermacentor variabilis) is found east of the Rocky Mountains.



- It is a hard bodied tick and adults are approximately 5 mm in length.
- It has a two-year life cycle (approximately).
- It has 4 life stages egg, larva, nymph, and adult. The larva, nymph, and adult stages take a bloodmeal.
- Preferred hosts are dogs, hence the name dog tick.
- Females are identified by their large off-white scutum (the hard shield like structure on the back of the body).
- Nymph and adult ticks can transmit diseases including Tularemia and Rocky Mountain Spotted Fever.

### Stormwater Help for Homeowners Workshop



This year BCCD was able to host an in person rain barrel workshop. Susan Boser from Penn State Extension presented a PowerPoint program focusing on watersheds, nonpoint source pollution, and stormwater best management practices. Hannah Ward, BCCD's watershed specialist presented a video on how to build a rain barrel and explained the tools needed. Participants received a rain barrel, rain barrel kit, and informational flyers.

After the rain barrel workshop participants commented that they are going to make changes to their property to reduce stormwater run off. They will install the rain barrel using the materials and knowledge that they received at the workshop, implement a rain garden or buffer on their property, or implement some best management practices that were discussed. Overall we had a great turnout for the workshop and hope to have more participation in the future.

### Dirt Gravel and Low Volume Roads 2021 Project Showcase



<u>Mack Hollow Road, Hanover Township</u> Hanover Township completed a dirt and gravel road project on Mack Hollow Road. It included the installation of underdrain and inlet boxes that have proper end walls and stabilization. Pictured above is the underdrain that was installed.

Powell Road, New Sewickley Township New Sewickley Township completed a low volume roads project on Powell Road. It included the stabilization of a land slide and the installation of inlet boxes that have proper headwalls/end walls and underdrain. Pictured to the right is a head wall that was installed to stabilize the bank around the new inlet box. Network Aug 6, 2021 at 9:06:20 AM EDT Accal Aug 6, 2021 at 9:06:20 AM EDT N 40° 49' 58.825", W 80° 26' 13.133" 114 138 Echo Valley Rd Dartington PA 16115



Echo Valley Road, Darlington Township Darlington Township completed a low volume roads project on Echo Valley Road. It included the installation of underdrain and inlet boxes with proper stabilization and end walls. Pictured above is the outlet of one of the crosspipes with a proper end wall.



### A Field Guide for NPDES, Permits, Erosion Control, and Post Construction Stormwater Management

#### What Are NPDES Permits?

National Pollutant Discharge Elimination System (NPDES) Permits address water pollution by regulating point sources that discharge pollutants to waters of the United States.

Federal regulations require NPDES permit coverage for all earth disturbance activities of one acre or greater.

NPDES Permits have permit conditions.

### Who Needs to Comply with Permit Conditions?

Operators need to comply with permit conditions. Operators are anyone who:

- Has the ability to modify Erosion & Sediment Control (E&S) Plans, Post-Construction stormwater Management (PCSM) Plans, or site specifications with the approval of the local conservation district and municipality.
- Has oversight of earth disturbance activity on a project site.
- Has day-to-day operational control over earth disturbance activity on a job site.



This can include, but is not limited to:

- Engineers
- Contractors
- Laborers

Operators are required to ensure all on site staff involved in earthmoving are trained in E&S and PCSM measures.

### When Are You Responsible for Permit Conditions?

- When working on a site which has a proposed earth disturbance of one acre or more.
- Any earth working operator who will work on an NPDES permitted site needs to become a co-permittee.
- Once activities are complete and final stabilization has occurred, operators may be released from permit responsibilities by using the co-permittee liability release form.
- Operators are relieved from permit responsibilities after submitting the co-permittee liability release form to the local conservation district and receiving acknowledgement.



Filter Socks - Should be installed prior to any earth disturbance.



**Stabilization** - Areas should be stabilized once they achieve final grade or if they are idle for longer than 4 days.

This information came from a brochure that was created by the Pennsylvania Association of Conservation Districts, Inc. The information in the brochure was provided by Kelly McLaughlin–Allegheny County Conservation District, Mary Ann Naugle– Franklin County Conservation District, and Karl Kerchner–Lebanon County Conservation District. It was funded through a grant from PA DEP and made possible through the cooperation from the PACD and Pennsylvania's conservation districts. **P A G E 7** 



### MOBILE EDUCATION ON:

- The Water Cycle
- Erosion & Deposition in Streams
- Soil and Sediment Pollution
- Wetlands, Wildlife, and Plants
- Reptiles and Amphibians
- Pennsylvania's Geologic History
- Conservation District Services

Available for schools, youth organizations, workshops, and community events.

Contact the Conservation District about scheduling a visit for your event or facility!



### **Congratulating Georgia Miller on Her Retirement**

On September 10<sup>th</sup>, 2021, the Beaver County Conservation District held a staff picnic at our office, celebrating the retirement of our long-time Finance Administrator, Georgia Miller. In addition to board members and staff, friends, family, and associated colleagues also joined us for the send-off.

Georgia has served the District for more than 14 years, first as a volunteer and then as a full-time employee. She has conducted the financial works for various projects and annual programs over the years as well as taken care of the day-to-day and week-to-week needs of our office. She has also served as our Right-To-Know Officer, attended the annual gypsy moth meetings, acted as administrator for the West Nile Virus



Program grant, and helped coordinate a chapter of the Senior Environmental Corps started in Beaver County.

Outside of the typical works on the Conservation District, Georgia has a love for crafting, gardening, travel, and baseball. For many years, she has been the crafter/vendor coordinator for the Beaver County



Maple Syrup Festival and ran the finances for this two-day event. Her plans now that she has retired include making use of her weaving loom and spinning wheel, traveling the country with her husband (including spending time in Florida for the Pirates' Spring Training), and raising their new puppy, Max.

We wish her the best in her retirement! She has more than earned all the fun and relaxation she has ahead, and we trust that she will continue to stir up the right kind of trouble along the way!

Thanks for all you've done!

### Fire in the Forrest...The Forest Responds

On November 10, 2020 a wildfire occurred on the conservation district grounds. The exact cause is still undetermined. Even today, 10 months later, you can see blackened logs and stumps along the trail through the wildfire area.

How did the forest respond to this wildfire? The forest has changed in response to this disturbance. It is still a forest and, in many ways, the same. The large overstory trees are still mostly there. These large trees are what most people see, so the forest looks the same. With a closer look, many changes can be seen.

The wildfire removed most of the soil organic layer. The "duff" layer on the forest floor was mostly incinerated. This has caused the soils to hold less water and to dry out more. Nutrient cycling has been



This trout lily survived the fire and bloomed this spring. Note the bare soil which lost the organic layer of decomposing vegetation to the fire.



altered. With reduced water holding capacity and a change in nutrient cycling the living part of the soil, the soil biology, has changed. Because some trees and shrubs were damaged or killed, more sunlight now hits the forest floor. The process of developing a new duff layer has begun. Over the years the forest will continue to develop a new duff layer as leaves, twigs and other organic materials build up and start to decompose on the forest floor.

The wildfire area contains many spring wildflowers. They were mostly unharmed as they were dormant at the time of the fire. This spring there were some changes in the abundance of wildflowers, but the wildflowers were still beautiful! In future years the

spring wildflowers will continue to be a wonderful part of this forest.

The small trees and shrubs received the most visible changes. A look at the bark of many of the smaller beech trees shows that the fire cooked the inner bark and boiled the sap causing the bark to peel. Many of these smaller beech, which are not fire resistant, are now dead. Smaller maple trees also did not fair well. Small oak trees were top killed. These oak trees have strong root systems and have regrown well in response to the fire.

With increased sunlight and growing space, the small oak trees will respond by increasing root reserves. If another fire, windstorm or other disturbance should occur, the oak saplings will be ready to become the next canopy trees in our dynamic forest ecosystem.



#### Pennsylvania Game Commission Urban Wildlife Kit: Mammals

#### Available to borrow from Beaver County Conservation District

**Kit includes:** 12 pelts, 3 skulls, 8 scat casts, 8 track casts, teachers' guide, students' guide, wildlife notes, and inventory guide binder.



Phone: (724) 378-1701

Email: beavercounty.conservationdistrict@bccdpa.us



### What Watershed do you Live in?

Have you ever wondered what watershed you live in or how healthy the streams around your house are? The United States Environmental Protection Agency has an online program called "How's My Waterway". It is as easy as typing in your address or using your location and clicking "Go". Once you click go, you are

shown a map of your watershed and all of the streams that are in the watershed. You also receive information about each stream. This information includes if the streams are impaired, if you should swim in the stream, information about aquatic life, monitoring efforts, identified issues, restoration activities, protection, etc. There is a lot of useful and interesting information the website for your exploration! Check it out by visiting https://mywaterway.epa.gov/



### **Guidelines to Maintaining Streams in Your Community**



Proceed—These actions do not required DEP notification, pre-approval, or permits:

- Removing non-native (manmade) material, such as littler and construction debris, from the stream, banks, and riparian areas
- Removing wood debris, such as trees, logs, or bush, from the stream while you are standing in the stream (this includes the use of hand-held equipment)
- Removing woody debris from the stream while you are standing on the bank (this includes the use of heavy equipment, so long as it remains on the bank and is "picking out" the material and not digging into the streambed)
- Chaining or winching large woody debris and dragging it from the streambank
- Cutting trees off at the stump (keeping the stumps helps stabilize the bank)
- Cleaning out culverts
- Removing gravel and flood debris from around bridges and culverts according to the terms of your permit (contact DEP or you County Conservation District to review your permit conditions)
- Planting trees and other plants on streambanks and in riparian areas, especially native species
- Adopting or implementing stormwater management ordinances and best management practices
- Crossing the stream to access your property immediately after a flood emergency (but only if conditions are safe)

### Yellow Light-Slow Down!

Contact DEP—These actions likely require DEP notification, verbal pre-approval, emergency permits, or other permits. For projects that pose an imminent threat to life property, or the environment, such as permissions are usually readily obtained.

Call DEP before you begin:

- Rebuilding roads and bridges across streams
- Streambank stabilization project
- Armoring streambanks with an engineered riprap design in emergency situations
- Removing gravel bars from the stream channel using heavy equipment (gravel must be safely relocated out of the floodplain to an upland area that is not a wetland)
- Repairing a bridge or culvert

Removing a bridge or culvert in danger of failure, or in partial or complete collapse (if a bridge or culvert is no longer serviceable, it can be considered debris and removed

### Red Light—Stop!

Contact DEP—These actions definitely require permits, if allowed at all, and may require involvement of the U.S. Army Corps of Engineers or other agencies.

Call DEP before you begin:

- Redirecting the flow of the stream by reshaping gravel bars, or moving gravel to the streambank
- Armoring streambanks with concrete, construction debris, or other impervious materials
- Moving (relocating) a stream
- Dredging streams
- Creating Dikes
- Damming streams
- Building a new bridge or culvert

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