



Beaver Tales

Summer 2022

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.

Watersheds, Floodplains, Wetlands, and Fun!

Once the spring fieldtrip season wrapped up, we were able to prepare for some major events and outreach opportunities. In late May, we kicked off our summer with 90° temperatures at Senator Vogel's Kids' Extravaganza, setting up our Mobile Education Center (MEC) with displays on water resources and wetland habitats. This was the first year for the event to return to the CCBC Dome since the Covid pandemic began, and it saw around 350 participants brave the early heat to check out all the organizations who set up displays and activities.

Our second big event of the summer had us taking the MEC to the Fayette County fairgrounds at the invitation of the Fayette County Conservation District for their "Wild About Nature" day. This was the first time Fayette CCD held the event, and it included a wide range of hands-on exhibits, displays, and activities centered around nature and agriculture. We brought our displays on wetlands, reptiles & amphibians, and Pennsylvania's geologic history. Kids looked for "fossils" in our stream table and learned about stream changes over time caused by erosion and deposition. Over 500 participants came out to the fairgrounds for the event.

Closer to home, we were once again invited to teach at the Boy Scouts' Day Camp at Camp Baker. The theme this year was Destination: High Seas, and so we brought out two stream tables and our water cycle model to show the Cub Scouts how the water we have right here in Beaver County, Pennsylvania can affect the ocean thousands of miles away. After a quick lesson on the water cycle and an introduction to erosion and deposition with the stream tables, the kids got to run their own experiments to see how different topographic features affect the flow of water across the landscape. Approximately 135 Scouts participated in the day camp this year.



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Monday - Friday
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Jones Mine Wetland

What is Jones Mine Wetland?

Constructed in 1995, Jones Mine is an aerobic wetland passive treatment system that treats a discharge from an abandoned coal mine in Patterson Township, Beaver County along State Route 51. Maintenance was performed to the passive treatment system in 2013, to excavate accumulated iron and organic matter, to remove debris, and to reinstall the sign.

How does it work?

The mine water flows into the wetland which then provides time for the metals and sediments in the water to precipitate before entering Brady Run.



Watershed Improvement

Jones mine passive treatment system discharge flows directly into Brady Run. Brady Run flows into the Beaver River which flows into the Ohio River and so on. Since watersheds are all connected, Jones Mine passive treatment improved much more than only Brady Run.



Jones mine discharged as it travels through the treatment system.



Treated water outflowing into Brady Run.

Pasture Walk at Tom Perkins' Farm

125 Perkins Lane, Fombell, PA 16123

Tuesday, August 23, 2022

6 pm—8 pm



****Featuring Russ Wilson of Wilson Land and Cattle Company ****

Speaker sponsored by Northwest Project Grass

Discuss adaptive grazing techniques to improve soil health on former strip-mined land. Starring Tom Perkins' flock of Katahdin sheep grazing on tall, mixed grass paddocks with daily rotation.

****This is a free evening event that does not require preregistration ****

Field event signs will be placed to assist in locating farm.

For more information, call Geri Montgomery, NRCS Grazing Specialist at 814-297-5267.



**United States
Department of
Agriculture**

Natural Resources Conservation Service

Persons with disabilities who require accommodations to participate in this meeting should contact Geri Montgomery at 814-297-5267

Ag Corner

Agricultural Assistance Available

The Beaver County Conservation District was originally created to help farmers. County resolution 213 in August of 1961 set up the conservation district and mentions the prevention of soil erosion and preservation of natural resources. Today the conservation district continues to support farmers as mentioned in our mission statement: The Beaver County Conservation District provides Leadership in Natural Resource Management Through Outreach, Education and Technical Assistance.

The district provides outreach and education to farmers through many events and programs. Every spring the district hosts an agricultural gathering. At this event, educational presentations are provided. Most importantly, this event provides an opportunity for fellowship among farmers and the opportunity to learn from each other. The district also hosts field days and events for farmers and other landowners.

The district provides technical assistance to farmers and other landowners. The district can help with soil testing, weed identification and pest management. The district can provide information and assistance with a variety of best management practices to optimize yields while protecting soil and water. The district also provides technical assistance for farm planning. The district provides guidance to farmers who are writing manure management or agricultural erosion and sedimentation plans. Whole farm conservation planning support is also available.

The district not only supports “typical” farms, but all types of farm operations. This can include forest land, urban farms and vegetable operations just to name a few. Contact the district for technical assistance for your farm operation. The district is a tool in the toolbox for every farmer and landowner in the county. Our services are also **free**.



Farm Equipment for Rent

Great Plains 706NT No-till Drill

7ft planting width, 10 ft overall. Two seed boxes, large capacity. 4-Speed Gear Box. Adjustable depth control. 1-10 acres:\$12.00/acre. 10+ acres: \$10.00/acre. Minimum charge of \$50.00.

Stoltzfus Redhawk 40 Spreader

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. If you conduct soil testing and apply lime to soil test recommendations the cost can be reduced to \$5.00 per ton.



Fire in the Forest: A Force of Change

On November 10th 2020 a wildfire occurred on the Conservation District Environmental Center grounds. The wildfire was a disturbance to the forest. The forest affected by the wildfire will continue to exist, but will be different from adjacent areas not affected by the wildfire. The spring wildflowers still bloom and visitors still enjoy the trail in the wildfire area.

Two years later the large overstory trees remain. Most are doing fine. However, many smaller understory trees, especially beech, have been killed. The sunlight hitting the forest floor is much greater now and new plants are growing in the area. The soil was altered by the fire as the duff layer of organic matter was removed. It will take many years for the duff layer to be restored by natural processes.

Oak seedlings and sprouts responded well following the wildfire. They are fire tolerant, and that was expected. Unfortunately, the oak seedlings and sprouts are mostly gone; eaten by the large deer population in the area. Although the forest is still dominated by oak, the next generation of oak trees has been extinguished by the deer.



This resprout has been severely browsed by deer. It is one of the few remaining resprouts struggling to grow despite the high deer population.



The unburned area on the left has heavy shade and many understory trees while the burned area on the right has much more sunlight and few understory trees.

Forests change over time. The forest here at the Conservation District Environmental Center will change. Fire, flood, wind and deer are just a few of the many factors that alter the forest. Come visit the grounds and enjoy the ever-changing forest.



The fire scar on this oak tree will remain as a visible record of the wildfire for decades to come as will other changes to the forest in the wildfire area.

Important Fact!

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.

Reptiles and Amphibians of Pennsylvania with April Claus



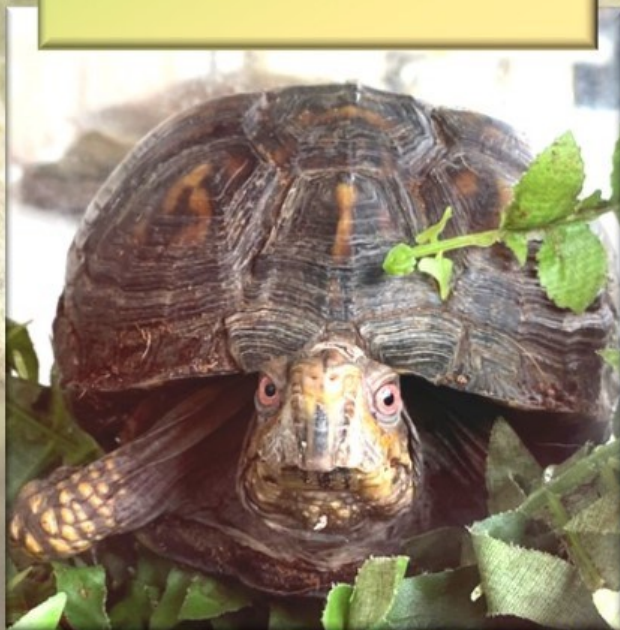
Join us for an evening of
family-friendly learning with
LIVE ANIMALS!



WHEN: Friday
September 9th, 2022
at 7:00PM

WHERE:
Beaver County
Conservation District
Classroom

156 Cowpath Road
Aliquippa, PA 15001



Fill Sites

FILL MATERIAL is used in construction or earthmoving projects to **level an area or bring an area to grade**. These projects **may involve using fill as a subbase or to fill in low-lying areas**.

The **use of CLEAN FILL does not require a permit** under the Solid Waste Management Act and the municipal or residual waste regulations.

CLEAN FILL is material separate from other waste such as uncontaminated soil, rock, stone, gravel, brick and block, concrete and used asphalt. Clean fill can also be waste from land clearing, grubbing and excavation, including trees, brush, stumps and vegetative material under *25 Pa. Code §271.101(b)(3) and §287.101(b)(6)*.

The **use of CLEAN FILL may require SEPARATE** pertinent documents or DEP permits under Chapter 102/105 requirements:

- ✓ Placement of clean fill **IN or ON waters (floodway) of the Commonwealth**, *25. Pa. Code § 105.3*
- ✓ Placement of clean fill that is **LESS than 5,000 sq. ft.** should implement erosion & sediment controls to minimize accelerated erosion from EARTH DISTURBANCE ACTIVITIES *25 Pa. Code § 102.4*
 - EARTH DISTURBANCE ACTIVITIES *25. Pa. Code § 102.1*, A construction or other human activity which disturbs the surface of the land, including...the **moving, depositing, stockpiling, or storing of soil, rock, or earth materials**
- ✓ Placement of clean fill that is **5,000 sq. ft. or greater**, should have a prepared Erosion & Sediment Pollution Control plan available on-site and implemented, *25 Pa. Code § 102.4*
- ✓ Placement of clean fill that will reach **ONE ACRE or more** requires an NPDES permit for stormwater discharges associated with construction activities, *25 Pa. Code § 102.5*

Any other material not identified as CLEAN FILL, contact DEP SWRO-Waste Program for applicable permits, 412-442-4000.



Contact Beaver County Conservation District (724-378-1701) for questions on obtaining appropriate Chapter 102/105 permits or required documents for receiving clean fill material.

Other references: PA DEP Management of Fill Policy

Vector-borne Disease Control Program

Summer is here and the Beaver County Conservation District's Vector-borne Disease Control Program is ready for another summer of mosquitoes.

Mosquito larval surveillance began in April and adult mosquito trapping began in May. We will continue mosquito surveillance trapping through October. The program employs several traps to collect many species of mosquitoes in differing habitats at locations throughout the county. Some examples of our traps are...



Gravid Trap



BG Sentinel Trap

Mosquitoes are collected to be tested for Vector-borne diseases including West Nile Virus and all of our traps are clearly marked with identification labels designating West Nile Virus Surveillance.

The hot, unpredictable weather of summertime is always a great time to check your property for any possible breeding areas and remove any containers or items that can hold water for longer periods of time. Mosquitoes love stagnant, organic water for laying eggs (tires are a great example of a prime mosquito breeding container). Summer is the perfect time for mosquito larvae to wiggle. Mosquito egg rafts and larvae are small and sometimes missed by the naked eye. There are many different species of mosquitoes with varying types of eggs and egg rafts. Here are some examples of egg rafts and larvae of the Culex species...



Egg Rafts in Tire Rut



Courtesy of Pestworld.org

(magnified) Egg Raft

Culex species lay eggs in a grouping of many individual eggs together forming a raft-like structure. A single raft can contain 100 to 300 eggs. Most eggs hatch within 48 hours. Once the larvae hatch out, there are 4 stages of larval growth called “instars”. The first instar larvae are extremely small and grow with each instar stage. It takes approximately a week for larvae to molt through the four instars and become a pupae. 4th instar Culex larvae are approximately ½ inch long.



Larval Dipping Sample



(magnified) Larvae

Culex larvae will wiggle in the water then rise to the surface to breathe through a siphon located at the tip of the abdomen, as pictured above. Nearing the end of the 4th instar, the larvae stop feeding and molt into a pupae.

It takes approximately 2-3 days for pupae to molt into an adult mosquito.



Mosquito Pupae



Adult Culex Mosquito

That's why it is so important to remove stagnant standing water. For areas that can't be drained or removed, there are products available at local retail stores to treat standing water containing larvae. Products that contain Bti (*Bacillus thuringiensis israelensis*) are bacteria based and are safe for children, pets, and plants. Always read the label and follow the directions before using any product.

So, the next time you check containers and standing water around your yard, keep an eye out for mosquitoes and remember to Dump it! Drain it! Treat it!

Have a Safe Summer!