Agricultural Conservation Assistance Program (ACAP)

ACAP is a new program that provides financial and technical assistance for the implementation of best management practices on agricultural operations throughout Pennsylvania. ACAP is administered by the State Conservation Commission and delegated to participating conservation districts for local project implementation. **CCCD has been awarded over $5 million for BMP implementation projects over the next three years, and will pay up to 90% of project costs** (or 90% of the difference remaining after payment from another grant award or NRCS contract).

**How to apply:**
- Contact CCCD for an application
- **Have plans and projects designs ready, if possible**
- Schedule a site visit with CCCD staff
- Projects will be ranked and selected for contracting on a quarterly basis
- 2023 application deadlines are: March 31st, June 30th, September 30th and December 31st
- Contact: Dan Miloser (dmiloser@chesco.org or 610-455-1380)

**Eligible projects:**
- Circular Manure Storages (pictured above)
- Manure Stack Pads
- Terraces & Waterways (pictured left)
- Heavy Use Area Protection & Curbing
- Animals Trails & Walkways
- Streambank Fencing & Tree Plantings
- ...and more!
Livestock Stream Crossing

One of the beautiful qualities of Chester County is the over 2,300 miles of streams that flow through the area. Because of the abundance of streams and tributaries, many animal operations have water flowing through their farms and pastures. Without a stabilized crossing to access both sides of the stream, animal traffic can erode streambanks and create heavy use areas that negatively affect water quality with sedimentation and nutrient runoff. The best way to protect these critical areas are with stabilized stream crossings constructed with stone or concrete slats. On the right are before and after photos of a stream crossing recently constructed with CAP funds that improves where cattle access both sides of the pasture.

Know Before You Dig

As spring construction season picks up it is important to follow safe digging practices. If you are installing a fence, digging for a new mailbox post, excavating for a patio or other project, it is important to know what is below. By law in Pennsylvania, if you disturb the ground with powered equipment, you are required to notify the underground utility company of your intent to do so. This can be done by calling PA One Call at 8-1-1 or 1-800-242-1776. PA One Call will then notify nearby utility companies of your intent to dig, and the utility companies will mark their underground lines with colored flags, paint, or chalk. As a rule of thumb, if you are planning to dig on a Saturday or Sunday, call PA One Call on the Monday or Tuesday prior. This service is free to homeowners.

Down
1. Mushrooms are not a type of plant, but a ___
3. Mushrooms are grown in substrate and after they are removed, this material is left (It’s great for your garden!)
5. A root-like structure containing a network of threads
7. The most popular variety of mushroom grown in PA, the White ___

Across
2. This genus of mushroom includes over 400 edible and inedible species
4. The local term for a mushroom house, shortened form a “Pennsylvania ___” (hint: think two)
6. The stage in which fully grown mushrooms are picked
8. One critical ingredient in mushroom growing is this nutrient-rich product (byproduct of horses, cows, and chickens)
Manure Stacking

Animal owners, from the two-horse hobby owners to the large dairy/swine/poultry operations all have one thing in common: all animals generate manure, whether in the barn or in the pasture, it’s something all animals do-do, and fairly regularly. Do-do is not a typo.

Manure accumulates in animal housing areas and other confinement areas, such as the barnyard. Generated manure that is collected from housing and other areas needs to be stored somewhere until it can be exported or land applied. Manure should be stored in a manner where it will not contribute to degradation of surface or groundwater.

A common method of storing solid manure is by stacking. Manure is considered solid when it can be stacked at least four feet high. Manure from some animals may be liquid by nature but when combined with bedding materials can be solid enough to stack.

Manure stacking management and locations must always consider potential connections to clean water sources. When stacking manure, the following management practices are not only necessary to prevent issues with nutrient runoff, but are required by Pennsylvania’s Manure Management Regulations:

- Both permanent and temporary stacking areas must be located at least 100 feet away from streams, lakes, ponds, open sinkholes, and any public or private drinking water wells. The farther, the better. Manure cannot be stacked in any area of water conveyance (swales, ditches, gullies).
  - Manure never goes where the water flows.
- Manure should be stacked on an improved pad. A properly constructed pad made impervious with concrete, asphalt, or packed earth/stone, prevents leaching of stack pad nutrients into the soil and potentially groundwater below. A properly improved pad may be used as a permanent storage location.
- Minimize area that contributes runoff from the stacking location. Keep stacking locations high and dry, as close to the top of hill as possible. Be aware and considerate of roof runoff downspouts and runoff from impervious areas.
  - If manure is not stacked on an improved pad, the stack must be rotated to different locations on an annual basis and must be covered if in place longer than 120 days. Rotating keeps from dosing the same area with nutrients, creating a “hot spot” that can affect ground water. Covering serves the same purpose of preventing additional clean water from being added to the stack, thus preventing the same volume of contaminated water capable of leaching or running off.
- Manure should be stacked on less than 8% slopes.
  - The flatter the better. Steeper slopes allow for more runoff more quickly, with less opportunity for infiltration and uptake of nutrients.

Following these practices when stacking manure or planning a permanent location for stacking can greatly reduce the chance of a connection between a nutrient pollution source and our shared clean water resources.

Do you need assistance in identifying and addressing concerns with your stacking? Contact your local Conservation District or NRCS today for help achieving your manure management goals for cleaner water!
Chester County had a stream protection project located in Downingtown, PA, that broke ground in January 2023! The project was completed with assistance from the Emergency Watershed Protection (EWP) Program. The EWP Program, administered by USDA’s Natural Resources Conservation Service (NRCS), is made available to local state and/or county sponsors. The program allows a sponsor to take emergency measures when a natural occurrence causes a sudden impairment of a watershed leaving homes and businesses at risk. In this case, Hurricane Ida in 2021 totaled 8-11 inches of rainfall in Southeastern PA, which in some places exceeded the 100-year storm mark, and caused a flash flood emergency with historically high water levels.

As the storm moved through Caln Township it caused extreme bank erosion along an unnamed tributary of Beaver Creek that runs through a resident’s backyard. The erosion threatened the home’s structure and foundation and created safety issues where the streambank had cut away. After Hurricane Ida the landowner said there was less than four feet between the house and the top of stream bank. Because of this, they were worried about “flooding and having the foundation compromised.”

The CCCD served as the Sponsor of the project by entering into a cooperative agreement with NRCS. The District performed the project solicitation and assisted with construction inspection. Other duties included project permitting, securing construction easements, and various other project administrative duties. In addition to funding through the EWP program, the PA Department of Environmental Protection (PA DEP) also contributed to the emergency effort by funding 25% of the construction costs.
Stream bank stabilization was the goal of the project - a stacked rock wall along the eroded stream bank was installed with stone toe protection at the stream bed. The rock wall will stabilize the streambank to prevent any more cut-back into the yard. Additionally, grading work was done to provide a more gentle slope into the stream.

About the EWP grant, the landowner says they are “enormously grateful and happy. Thank you for giving us peace of mind. Now I can just focus on beautifying the property instead of rescuing the house from the water!” Likewise, the Conservation District was very grateful to be able to assist and be part of this stream restoration project that directly helped a Chester County resident and helped improve one of our watersheds.
Dirt & Gravel Low Volume Roads Program

Pictured is a portion of the damage to the Mill Road culvert in East Marlborough Township. This is a low volume road project that is scheduled to begin in April 2023.

The Dirt and Gravel Low Volume Road Program’s purpose is to provide funding to municipalities for the improvement and maintenance of unpaved roads, and now paved roads that have traffic volume of 500 cars or less with the goal of protecting water quality.

Pictured above you will find a snapshot of the Mill Road project that will be improving water quality in East Marlborough Township.

East Marlborough Township - Mill Road: A Low Volume Road tributary to the Red Clay Creek. The grant total for this project is $192,000.00. This LVR project has the following work elements implemented: Stream crossings improved, road banks improved, road surface stabilized, stormwater improvements.

In addition to the above project, CCCD has several 2023 projects in the pipeline. Jaine Lane in West Vincent Township, Chestnut Hill Road in North Coventry, and Indian Hannah Road in Newlin Township. Jaine Lane is a D&G project and Chestnut Hill Road and Indian Hannah Road are both LVR projects. Please visit the DG&LVR page on our website for more detailed information on our ever-growing program.

2023 Chesco Chesapeake Communities Action Plan (C3AP) Non-Ag Implementation Sub-Grants Program

Chester County has developed the Chesco Chesapeake Communities Action Plan (C3AP) to outline and recommend activities and approaches to ultimately result in the annual reduction of approximately 914,000 pounds of Nitrogen and 39,000 pounds of Phosphorus from entering our Chesapeake Bay tributary streams in agricultural and urban/suburban settings.

Chester County’s distribution of State Chesapeake Bay County Action Plan (CAP) implementation funds for 2023 included a local sub-grant application process for the non-agricultural sector during late summer 2022. Four applications were submitted to CCCD for this subgrant, and because of the limited available funding and a priority-based ranking system, funding has been awarded to two projects:

- Upper Oxford Township has been awarded $67,800 for the project “110 Turners Pond Drive Basin Retrofit” which will improve water quality in the Big Elk Creek by improving the function of an existing detention basin in its watershed. The township has obtained landowner agreements and completed preliminary design work.

- Oxford Borough has been awarded $105,104 for the project “Oxford Green Infrastructure: Bioretention Wetland BMP Construction at Community of Love Church.” An earthen berm will be installed at the rear of the Church to retain runoff and create a wetland or bioretention facility. The site is currently mowed lawn.

Both projects will be completed by June of 2024.
Rethinking Stormwater Features

When you think about managing your stormwater, what comes to mind? If you have a small residential property, you might just have a single downspout and a little impervious driveway surface to consider. If you are a farmer, you must think more carefully about keeping the clean stormwater separate from the dirty water coming off the barnyard so that they can be treated differently. If you are a developer, you must think about stormwater on a larger scale, and BMPs like infiltration basins can be a matter of legal necessity. As we improve our properties by adding paving, buildings, or other impervious surfaces, we increase the amount of stormwater runoff, and we have to cope with the consequences. However, if we think of stormwater as an opportunity to create valuable outdoor spaces on our properties in addition to “handling” the runoff, we can cultivate a sustainable approach to development.

On small properties, rain gardens are a great way to enhance the landscape. Rain gardens are gardens of native shrubs and flowers that are planted in a depression that is designed to capture stormwater runoff from the surrounding area, such as at the outfall of a downspout. Rain gardens reduce your stormwater footprint and provide aesthetically pleasing habitat for birds and pollinators. Many flowers will only grow in wet conditions such as those found in a rain garden. Interesting rocks, benches, and other decorative items may be added to increase aesthetic value.

On larger sites, infiltration basins can be designed or retrofitted with native wildflowers and warm season grasses to improve infiltration and value to wildlife. This also adds significant aesthetic appeal. These need to be mowed annually to no less than 6 inches in height, ideally in the spring once it is dry enough to traverse in a mower.

On sites where people might want to walk around outside on their breaks from work, stormwater features can be incorporated into intentional natural spaces for people to enjoy. Paths weaving between basins with woody vegetation sprinkled throughout, tables and chairs for picnic lunches, and benches for birdwatching are all components of innovative stormwater management which incorporate the human element of nature.

The photo shows an innovative stormwater feature at Penn Medicine Radnor. This photo was taken in mid-February of 2023. Note the tables, chairs, and walking path; the greenery; the tall grasses (great for ground-nesting birds); the red osier dogwoods; and the river birch trees.

It’s Time to Convert Your Basins

Now that we are officially in the growing season, it is time to start thinking about getting your basins converted to the final stages. There are several key factors to look for to determine if your basin is ready for this stage. In order for a sediment basin to be converted to the final Post Construction Stormwater Management facility the drainage area to the BMP must be adequately stabilized. We typically recommend at least a 70% uniform vegetative cover, and this can be confirmed by requesting a site visit from one of our conservationists. Another key factor to keep in mind would be vehicle access to the basin - it can be more helpful to consider getting to the conversion while there is still access to it.

There are a few things to keep in mind during the basin conversion as well. It is best to complete the conversion in a short period of time since this will prevent the possibility of leaving the area exposed to the weather. Be sure all materials for the conversion are already onsite and ready to be installed. Some permanent basins may require different types of seed or plugs to be installed for the final conditions. Once the basin has been converted it is critical to keep an eye out for any signs that the basin may have failed. A sign of failure would be if the basin is holding water longer than 72 hours, which will lead to a need for inspection by the design engineer. Please reach out if there are any questions about basin conversions on your site.
CHESTER COUNTY CONSERVATION DISTRICT
674 Unionville Road, Suite 105
Kennett Square, PA 19348
610-455-1360
chesco.org/conservation

BOARD OF DIRECTORS

Directors
Tom Brosius, Chairman
Don Gable, Vice Chairman
Robert Struble, Jr., Secretary/Treasurer
Joshua Maxwell, Commissioner Director
Brian K. Campbell, Director
Francis Iacobucci, Jr., Director
Walter T. Moore, Director

Associate Directors
G. Pownall Jones, Associate Director Emeritus
Lynda Farrell, Associate Director
Tyler Lantz, Associate Director
David Ross, Associate Director

STAFF

Christian E. Strohmaier, Managing Director
Caitlin Betts, Administrative Assistant
Tammy Cairns, Publications Coordinator
Gaye Lynn Criswell, Outreach Coordinator
Annette Ives, Assistant Administrator
Paige LaDuca, Grant Coordinator
Corinne Trice, Watershed Coordinator

Dan Miloser, Agricultural Team Leader
Laurell Bostdorf, Agricultural Resource Conservationist
Benjamin Drover, Agricultural Resource Conservationist
Thomas D’Lauro, Agricultural Resource Conservationist
Jeff Griffiths, Agricultural Resource Conservationist
Kara Schoch, Agricultural Resource Conservationist

Shannon Healey, Urban Team Leader
Jim Demchak, Urban Resource Conservationist
Chris Rodriguez, Urban Resource Conservationist
Joe Sofranko, Urban Resource Conservationist

Vacant Position, District Engineer
Nick Gamble, Stormwater Engineer
Lisa Walsh, Agricultural Engineer