The Pennsylvania Association of Conservation Districts (PACD) recently received a grant that can be used to assist ag producers to either update or develop new plans that are required to be in compliance with PA regulations. The Ag Plan Reimbursement Program is available to farmers in any watershed, and the funding can help pay for new or updated conservation plans, agricultural E&S plans, manure management plans, and Act 38 nutrient management plans.

The available funding can cover 80% of the cost of the plan up to a maximum of $1500. The operator is responsible for paying 20% of the plan cost as match. Multiple plans can be funded up to a total maximum of $6000 per operator. Funding for this program is first come, first served, and is available across the state until the funding is exhausted or until June 30, 2024.

In order to obtain the funding, landowners and operators must work through their local Conservation District to apply. Once a short application is complete, the Conservation District will submit the application to PACD for approval of funds. Once the plan(s) is completed, the Conservation District is responsible for ensuring that the plan(s) meet regulatory requirements. When this is confirmed, the funding payment will be made available to the applicant.

If you have any questions or are interested in applying, please contact Dan Miloser at 610-455-1380 or dmiloser@chesco.org.
Cornerstone Grant: Ryerss Farm for Aged Equines

Chester County Conservation District recently partnered with The Hankin Group and Stierly Excavating to provide financial and technical assistance to repair and address erosion issues on a unique equine operation.

Founded in 1888, Ryerss Farm is the country’s oldest non-profit organization of its kind. It cares for aged, abused, or injured horses - providing a home where they can spend their golden years out to pasture.

CCCD provided financial assistance for this project through its Operation & Maintenance Program, which serves to assist landowners/farmers with best management practices on their operations that are need of repair or improvement. In this instance, the Conservation District joined the Hankin Group to repair numerous BMPs around the farm that will not only help to improve water quality, but also create a safer and more manageable operation for the horses and farm staff. Improvements made around the farm include: a regraded and resurfaced animal trail that horses will use to access sections of the pasture, resurfaced animal heavy use areas, as well as new and improved stormwater controls around the headquarters. This project highlights the impactful work that can be achieved when organizations partner together for a common goal.

Financial assistance through the Operation & Maintenance Program is made possible from funding provided by the National Fish and Wildlife Foundation. This program is available for select geographies of the Delaware River Watershed. Cost-share for BMP implementation is now capped at a new flat rate maximum of $30,000. If interested in this program, please contact CCCD.

Agricultural Outreach with CCCD

Just a reminder that if you are farming in Chester County, and you are unsure of what you may need or who to talk with to get answers to your questions, please feel free to contact Gaye Lynn Criswell, Outreach Coordinator for CCCD. You can email Gaye Lynn at gcriswell@chesco.org or call 610-455-1365. She can help answer your questions or point you in the right direction for further assistance. She looks forward to talking with you soon!
My first year at the Chester County Conservation District (by Thomas D’Lauro)

As I approach one year with the Conservation District, I thought I’d take the opportunity to reflect on what was an eventful and productive spring and summer. I had the opportunity to work with more of our Urban Team members on a basin retrofit project and tag along on some E&S inspections. While I’m always happy to work with my fellow Ag Team members – I enjoyed the opportunity to get some cross-training and experience projects from the urban side.

I also was able to experience some District outreach and hopefully help educate some fellow Chester County residents! With the rest of the team, I was able to put together a few educational outreach videos on mushroom identification and barnyard operations/management (see the article below for more information), and this last week I attended the Mushroom Festival for first time while working at the District’s table.

Perhaps most importantly, these last few months have seen me taking on more of my duties as the mushroom farm resource conservationist. I’ve enjoyed meeting and working with more of our county’s mushroom farmers and look forward to continuing to do so!

Chester County Conservation Video Series

Sustainable conservation solutions require the support of our greater community, and this is why education and outreach is a cornerstone of the work being done here at the Chester County Conservation District. Earlier this year, thanks to the generous funding of the Pennsylvania Association of Conservation Districts, the Chester County Conservation District had the opportunity to create a short video series to provide non-farmers with a deeper understanding of the complex and essential conservation work being done on farms across the county.

The process of creating the videos was completely new for us, and our team set to work writing scripts, gathering photos, and recording audio. Agricultural conservation is not possible without dedicated operators, so reaching out to Walt Moore of Walmoore Holsteins made perfect sense. He graciously welcomed our team to his dairy operation and gave a comprehensive tour which exemplified the utility of conservation practices, including cover crops, no-till management, and manure storage.

With enough raw footage to create our videos, the editing process began. Two distinct videos were created: the first focused on the basics of ‘Best Management Practices,’ and the second focused on practices specific to livestock. Once complete, the videos were released and have been well received.

Working on the production of these videos was a new and fun experience and would not be possible without the contribution of the Pennsylvania Association of Conservation Districts and cooperators like Walt Moore. I hope you will check out our videos on the Chester County Conservation District’s Youtube Channel and keep an eye out for future content from CCCD!

Financial and other support for this project is provided by the Pennsylvania Association of Conservation Districts, Inc. through a grant from the Pennsylvania Department of Environmental Protection under Section 319 of the Clean Water Act, administered by the U.S. Environmental Protection Agency.
Farming and Technology – Taking Off with Drones

Have you ever seen crop-dusting in Chester County? We have a mini-version of it now through the use of drones. If you see a large drone in the sky above a field it could be a farming drone. Drones can be used for a variety of reasons on a farm - from taking pictures, measuring fields, and spreading fungicide to broadcasting a cover crop and more. That is what Gaye Lynn Criswell witnessed last week in one of the fields on her way to work. Her curiosity got the best of her as she pulled over to watch a large drone zig zagging over a field.

She met Josh Gable, from DelCarm. He is a drone pilot with all the credentials, certificates, and notifications to be able to use a drone to farm. The drone was broadcasting a cover crop over soybeans. If it had been done in the usual manner, some of the soybeans would have been damaged by the tracks of large ground equipment that would have been used and there would have been more time spent by hauling the equipment to the field or more time to wait for the beans to come off. Instead, his drone was flying in a predetermined pattern so that it could seed every square foot of the field. It was about eight feet above the soybean crop and flew back and forth until it told the pilot that it needed something, such as a battery in need of charging or more seed mix. At one point it flew back to “home,” a charged battery was inserted, and then it went right back to where it left off to continue its flight - taking only a few hours to complete its task.

One of DelCarm’s services is to provide ground equipment for spraying, but recently they have added drone services into their mix. They started using drones on a few thousand acres in Maryland and Delaware and have recently moved into Chester County, with the drone’s capabilities being used on a few hundred acres. These drones can spray smaller areas of about four acres at a time with pesticides, fungicides, and even broadcast seed mixes. The drones and pilots have to have all the certifications, licenses, and other necessary paperwork prior to engaging in farming from above. They also add a field boundary so that what is being sprayed stays on the designated field and ensures the drone stays within the designated property. There are plenty of benefits in the use of this technology. It’s less stress on the field through reduced damage to crops and compaction caused by equipment traffic. It can spray when conditions may otherwise be unsuitable for tractor use, and it can help ensure farmers are applying the correct nutrient rates to give future crops what they need while protecting water quality.

As drone farming in Chester County is now a reality, we will have to wait and see how it takes off. We, and many farmers, are as curious to see the results of using drones. Hopefully this new technology will lead to better outcomes for our local farmers.

Management and physical best management practices (BMPs) on farms and on construction sites help minimize the effects of erosion and the deposition of sediment and other material into surface waters. Sediments pollution can smother food sources and breeding habitat that fish and other animals further up the food chain rely one. Many or local fish, birds, amphibians and small mammals rely on tiny critters, called macroinvertebrates that begin, or spend their entire lives, in our streams. Macroinvertebrates can be “bugs”, but also include worms, shelled (clams, mussels, etc), crustaceans, beetles, a variety of fly larvae and nymphs, and more. Macroinvertebrates are sensitive are a water quality indicator. The abundance, variety, or presence or absence of certain types of macroinvertebrates give clues on how healthy or impaired a stream is.

Find the following macroinvertebrates below:

AQUATIC SOWBUG, CADDISFLY, CRANEFLY, CRAYFISH, DAMSELFLY, DRAGONFLY, GIANT WATER BUG, HELLGRAMMITE, MAYFLY, MIDGE, RIFFLE BEETLE, STONEFLY, WATER BOATMAN, WATER PENNY, WATER SCORPION, WATER STRIDER
Chester County has developed the Chesco Chesapeake Communities Action Plan (C3AP) that outlines and recommends activities and approaches intended to ultimately result in the reduction of approximately 914,000 pounds of Nitrogen and 39,000 pounds of Phosphorus annually entering our Chesapeake Bay tributary streams from both agricultural and urban/suburban settings.

Chester County’s approach for distribution of State Chesapeake Bay County Action Plan (CAP) implementation funds for 2023 included a local sub-grant application process for the non-ag sector during late summer 2022. BMPs that qualify for funding include practices that achieve nutrient and/or sediment reductions. CAP implementation funds are being prioritized for shovel-ready or nearly shovel-ready projects that can be fully implemented within 12-18 months. Local municipalities, non-profit organizations, Non-Governmental Organizations (NGOs), landowners, and other organizations were encouraged to apply.

All applications received will form the basis of the County’s 2023 CAP implementation funding request submitted annually in October. The final available amount of funds for the 2023 calendar year will be determined on or around December 1, 2022. It is anticipated that Notice of Awards will occur in early 2023.

Beaver Creek Dam Rehabilitation

Since summer 2021, the Beaver Creek Flood Control Dam near Guthriesville has been under construction as part of a USDA-NRCS PL-566 program funded rehabilitation project in order to comply with the most up-to-date dam safety standards and further extend the functional lifespan of the dam. The Natural Resource Conservation Service (NRCS) has provided technical support and financial assistance during this project to the Chester County Water Resources Authority (CCWRA). NRCS included the CCCD Agricultural Engineer to also provide on-site quality assurance support during construction this summer.

The old riser was decommissioned last year along with structural changes to the auxiliary spillway to protect the vegetated spillway from erosion. Between July and September 2022, construction on the new concrete riser structure was completed. Additional stabilization work at the dam in the fall of 2022 include increased rock protection at the inlet and outlet of the principal spillway.

Beaver Creek Dam is operated as a dry dam, so it functions as a short-term flood mitigation. In conjunction with the rehabilitation project, the dam owner (CCWRA) eliminated a standing sediment pool and has seeded the flood detention basin to promote a naturalized stream channel and enhance adjacent wetlands and wildlife habitat. Additional information on the rehabilitation project can be found at chesco.org/water/BeaverCreekDam.
White Clay Multi-Functional Riparian Buffer Project Highlight

Chester County Conservation District received $52,289 from Pennsylvania Association of Conservation Districts Multifunctional Riparian Buffer Subgrant to help fund the installation of a 5.5 acre multifunctional riparian buffer in Franklin Township in the White Clay Creek Watershed on an agricultural property. Much of the area converted into native woody vegetation was previously taken over by invasive shrubs and vines, so very little land was taken out of agricultural production. “Multi-functional” species such as persimmon were included in the planting to potentially add production value to the land when the trees are mature. The project included extensive invasive species removal for site preparation in early 2022, and the planting was completed in May of 2022.

The White Clay Watershed Association’s Wild and Scenic River Program and Franklin Township were the driving partners managing this project and contributing in-kind and cash match. Funding is in place for post-planting mowing during the establishment period to combat invasive weed pressure for a minimum of five years and the first mowing took place at the end of June.

Got Mud and Manure? Addressing Animal Concentration Areas

Often otherwise known as sacrifice lots, barnyards, and dry lots, these areas can quickly become a mud pit when animals, rain, and runoff combine. Depending on your site and how you manage your animals, fixing this issue may look very different for different people and farms. The Heavy Use Animal Protection (HUAP) best management practice includes a few key components:

- Stabilize the area. We recommend removing organic material down to a base layer of subsoil and then covering with geotextile, stone, and a top dressing layer of stone dust, or sometimes concrete for cattle barnyards. Use what is appropriate for the animals using this area.

- Divert up slope water, which is generally considered “clean” runoff water, from going through this area where animals congregate.

- Fence this area to be able to keep animals confined and for best pasture management flexibility.

- Keep manure routinely cleaned off this area to reduce large amounts of nutrients from manure running off this area.

- Capture any nutrients from manure related runoff with a good grass filter area below; at least two or more times the length of the HUAP. The grass helps to trap the nutrients from further leaving the area and uses it to grow.

A landowner installed this HUAP for their small barn on a very steep slope. A plastic grid material was installed in addition to the fabric and stone mentioned above that we normally recommend. This plastic grid is often used in horse stalls to keep stall floors level. This plastic grid needs to be installed level because it can quickly become slippery for larger animals. When installed correctly, however, it will make clean up and maintenance in a heavy use area very easy for years to come! Careful grading and excavation work was done to make sure storm water was diverted around the barn and barnyard. These grids can also be used in gate areas, in front of sheds, or around water troughs.

The same type of plastic grid was also used to stabilize along the edge of a parking lot where grass is still able to grow up through, but light use during wet weather or throughout the year will not create mud.
Dirt & Gravel Low Volume Roads Program

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.

Below you will find a synopsis of the Oak School Road project that will be improving water quality in Newlin Township and a snapshot of the Kimberton Road project that will be improving water quality in West Vincent Township. Please visit our website at http://www.chesco.org/1992/Dirt-Gravel-Low-Volume-Road for more detailed information on our ever growing program.

- Newlin Township – Oak School Road: A Dirt and Gravel Road tributary to the West Branch of the Brandywine. The grant total for this project is $23,844.00. This D&G project has the following work elements implemented: Ditches improved, ditch outlets added, road banks improved, road base improved, road surface stabilized, stormwater improvements.

- West Vincent Township – Kimberton Road: A Low Volume Road project tributary to Pickering Creek and French Creek. The grant total for this project is $100,000.00. This Low Volume Road project has the following work elements implemented: Ditches improved, ditch outlets added, road base improved, stormwater improvements, vegetative management.

In addition to the above completed projects, we several projects in the pipeline. Bair Road in Tredyffrin Township, Chestnut Hill Road in North Coventry Township, and Mill Road in East Marlborough Township. All three projects are on low volume roads. In 2022 we have seen several new municipalities jump on board the program with newly proposed projects to improve water quality to their streams.

A new off right of way outfall and crosspipe on Oak School Road in Newlin Township finished in July 2022.

New Urban Project Pre-App request form and CCCD District Application

CCCD recently instated an updated version of the Pre-Application meeting request form for an upcoming NPDES plan submission. In addition to the original form, we have added a note to have the applicant’s consultant to come prepared to take meeting notes. This change will be helpful during the review process. A pre-application meeting is strongly encouraged before the submission of an NPDES permit. This can eliminate any big-ticket items that can come up during the review process. During the pre-application meeting it is always a great chance to determine if the NPDES permit will need to have a PE Review. This is something that CCCD has recently updated in our New District Application, which was published on April 4, 2022. This new application has several drop-down menu options for the submission type, project type, permit type, and review type. The review type comes with the options for standard review and Professional Engineer (PE) review. The standard review should be used for all general (PAC) projects. The Professional Engineer review should only be applied to the following cases:

- All individual permits
- Projects utilizing the MRC BMP
- The impervious area will increase by 50 acres or more from pre-construction condition to post-construction condition, or by 25 acres or more if the receiving surface water is impaired for water/flow variability or flow modifications/alterations.
- The post-construction runoff volume for the 2-year/24-hour storm event exceeds 250,000 cubic feet (cf)

The difference (post-construction minus pre-construction) in runoff volume for the 2-year/24-hour storm event exceeds 500% of the pre-construction runoff volume.

There is an increase (post-construction minus pre-construction) in runoff volume for the 2-year/24-hour storm event that is being managed solely using BMPs that will not collect and manage stormwater in a dedicated storage area (i.e. riparian forest buffer, soil amendments) or if the proposed infiltration BMPs do not rely solely on gravity.

These topics should be discussed during the pre-application meeting to verify if a PE review is necessary. The review type determines the fee for the NPDES submission, so please reach out to schedule your pre-application meetings.