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Join us on 9/27/17 Workshop for Developers & Engineers



The Envirothon is 32 Years Old! See pages 13 - 20 for this year's results





Don't miss our

10th Annual Envirothon

Clay Shoot

Friday, September 22
Catered barbeque lunch/afternoon

shoot See page 12

York County Conservation District

Our purpose is to promote wise use and management of soil, water, air, plants, wildlife and other natural resources through four program areas: Agricultural Resources, Education, Erosion & Sediment Control and Watersheds

We have served York County since 1938, when a group of 554 farmers from 18 townships signed a petition to form the York County Conservation District. This petition was approved by the state Soil Conservation Commission in 1948. Like all Conservation Districts, we are a legal subdivision of state government like townships or school districts. Our budget is supplied by county, state and federal programs, as well as foundation grants & fees for services. And we are managed by a board of environmentally aware York County citizen volunteers.

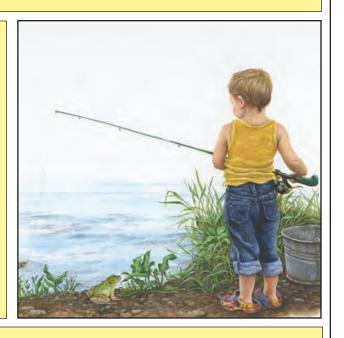
We have traditionally assisted agricultural producers and other landowners in protecting soils & reducing erosion in our waterways. Today, the District also works with non-agricultural landowners, developers and local government officials to protect our natural resources.

We do this by coupling technical & financial assistance with conservation planning and permitting requirements.

Education is a cornerstone of the District and we target a wide audience about effective pollution-prevention techniques to farmers, landowners, local officials, watershed associations, conservation organizations, civic groups, churches, schools, teachers and youth.

Our Vision - We are committed to the improvement & protection of our environment and the wise use of our County's diverse natural resources.

Our Mission - To achieve that vision we will be proactive providing conservation education, technical services and financial assistance, to enable the citizens of York County be good stewards of our natural resources.



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Around the District

We welcome **Alexia Woodard** to our staff as our new Program Assistant/Receptionist. Alexia (*pictured below right*) came aboard last fall to work with our Erosion & Sediment Control Staff. She is also the first contact for our office - greeting clients and answering our phones. Raised in Aberdeen, MD, she attended Aberdeen High School and the Community College of Baltimore County, and this fall will begin business administration classes at the University of Maryland University College to complete her bachelor's degree. Alexia moved back to York to be closer to family about five years ago and currently lives in Red Lion. In her spare time she enjoys cooking and reading - but her favorite activity by far is spending time with her two daughters, Gisele (3) and Kennedi (2). And her work? Alexia says she enjoys it because it gives her a chance to learn something new every day.







Mark Flaharty, Senior Ag Resource Conservationist, recently celebrated 30 years of service with YCCD. A York County native, Mark graduated from Kennard-Dale High School and Penn State. Growing up around his father's Ag Business, it was a smooth transition to work with farmers and landowners, first as an Ag Technician and eventually mastering the skills required of a soil and water conservationist, promoted to Senior Ag Resource Conservationist in 2012.

Mark (above left) has led the District Ag Team for several decades, trained nearly a dozen District Ag Team staff members, provided conservation planning, technical assistance, cost-share assistance and nutrient management to countless farm operations over the years. While rewarding, it is always challenging, as no two operations are the same.

Mark has been instrumental in maintaining excellent cooperation with our federal partners with the USDA & Natural Resources Conservation Service; working together in the shared mission of improving and protecting our soil and water resources. Not an easy task with the challenges of turbulent commodity prices and ever-increasing regulatory demands that come with stacks of paperwork. The soil and water resources of York County and downriver, and the citizens that depend on them, have been the benefactors of his efforts and we hope will continue to be for many more years to come. Congratulations Mark!

Our butterfly garden - in memory of our Office Manager, Whitney Leland - is underway. The entire staff recently spent an afternoon together beginning the process of creating a lovely site for retrospection, relaxation and habitat improvement. We will post updates as the garden establishes itself near nearby woodland edge.

Around the District, cont.

Dan Innerst, Associate Director (at right with wife Beth and their grandchildren), chose to become a member of our board last year at the request of longtime friend, fellow farmer and fellow associate board member, Leroy Bupp. A full-time farmer on the Dallastown farm where he grew up, Dan and his father Jay were recipients of our 2012 Clean Water Farm Award. Their family farm was originally purchased in the early 1900s by Dan's great grandfather.



Dan credits his father, grandfather and great-grandfather with his conservation ethic. The Innersts were recognized by the District for their conservation practices on this former dairy farm. The 111-acre York Township property now raises beef steers. Their projects includes nearly 35 acres that were enrolled in the Conservation Reserve Enhancement Program (CREP), approximately 20 acres of installed riparian buffer along the east brand of the Codorus Creek and Barshinger Creek - established by literally planting thousands of trees along the water. The building of three ponds and a wetlands to help retain water after flood events and then release it slowly back onto the soil in order to protect both their neighbors downstream and a reservoir used for York City's drinking water.

Additional work to protect the quality of the water on their farm - and neighboring areas - included installing a roof over their barnyard and concreting a heavy-use area near a second barn in order to handle any manure issues they were having.

Dan and his father have also made the commitment to preserve half of their farm through the York Ag Land Preservation Program and donate the other half of their farm to the York County Farm and Natural Lands Trust. With family members now interested in carrying on the family tradition of farming, Dan has welcomed the 5th and 6th generation of farmers and conservationists on his land. He mentioned that after only a year on our board he still had a lot to learn. We feel Dan could already teach many others a great deal!



Mackenzie Mills is spending her summer interning with the District before she graduates from Bloomsburg University in December. Her major is Environmental, Geographical and Geological Sciences, with a subplan in Geography and Planning. In addition, she will graduate with two demanding minors - Professional Writing and Spatial Analysis & GIS. Born and raised in Dover, Mackenzie grew up around agriculture and has always been an outdoor enthusiast, so pursuing a degree and career that would allow her to be outside has always been her dream. Currently, she is working on a project for our Watershed Specialist, Gary Peacock, collecting data for the York County Riparian Forest Buffer Inventory for the Chesapeake Bay Program.

She is completing the Riparian Forest Buffer inventory that Gary had started in 2014 of all York County Streams. The goal is to qualify (i.e., DEP RFB Classes 1-3) and quantify (i.e., stream miles and acres) and submit this data to PADEP for updating their Chesapeake Bay Model input data deck. Ultimately it will give York County more credit in the Model and reduce the TMDL pollutant reductions needed.

Kelsey's observations so far..."This internship has been an eye-opening experience for me because it has allowed me a sneak-peek into what my life could be like after I graduate. The balance of field work, office work, and the time spent working directly with clients suits me perfectly. I just want a chance to help others, and ultimately, help Mother Earth. I have a lot of interest in using today's advanced technology with GIS to help make future conservation and planning efforts easier, more accurate, and readily available to those who could benefit from it." We will follow up on Kelsey's work in our next issue.



Fresh & Flavorful



Family Fun at the Farm Little Sprouts Summer Classes - Wed"s thru Aug. 9
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Ag Resources

A Focus on Soil Health, part 2, by Michele Grove

In our last newsletter, we began a series of articles on the importance of Soil Health and the benefits of a continuous No-Till Cropping System, reviewing five of the Management Principles and Techniques to Improve Soil Health. They were Maximizing Living Roots, Grow Living Plants, Manage Carbon, Plant Green and Enhance Soil Armor. In this issue we'll look at the following **Soil Health Management Principles and Techniques:** Diversify Crop Rotations, Plant Cover Crops, Diversify Cover Crops, Use Interseeding and Avoid Compaction. A major focus will be cover crops since you will need to start planning for them about the time you receive this newsletter in your mailbox.

• **Diversify Crop Rotations** – Crop rotation is the 'repetitive growing of an ordered succession of crops on the same land over multiple years.' Crop rotation is a common practice but it is more advantageous to incorporate more than two crops in a rotation. Adding legumes in the rotations fix atmospheric nitrogen for the next crop to utilize, thus reducing the need for nitrogen fertilizer. Pest management is another benefit. Insects, diseases and weeds will not continue to thrive if their host crop is not present. Greater crop diversity results in a more diverse below ground microbial community and the different root systems will help improve soil aggregation and health. Diverse crop rotations allow machinery to be used more throughout the year and labor needs are spread out.



Small grain, alfalfa and cover crop fields. Cover crop species may naturally die or herbicide may be applied to terminate the crop in preparation for the summer crop. Alfalfa is usually maintained for multiple years in a crop rotation. A sample rotation could be corn, wheat, double crop soybeans, corn, alfalfa for four years. (left)

Cover crops are used to: provide soil erosion protection; absorb, retain and recycle nutrients; fix atmospheric nitrogen; provide weed control; and provide forage. (right)



 Plant Cover Crops – Cover crops are primarily grown for non-commercial purposes at times when soil would otherwise be without living vegetation. Cover crops are used to: provide soil erosion protection; absorb, retain and recycle nutrients; fix atmospheric nitrogen; provide weed control; and provide forage. It is obvious that the roots of a growing crop and above ground plants are going to better protect soil from erosion than allowing it to be bare to the elements. Some nutrients are soluble and can leach below the root zone into groundwater and be lost to streams and water. Cover crops can take up these soluble nutrients and release them to the next crop upon decomposition. Some cover crops release organic acids that solubilize nutrients from soil particles making them available to the next crop. It is common knowledge that legumes fix nitrogen from the atmosphere because of a unique bacterial infection in their roots. Examples of legumes are alfalfa. soybeans, snap beans, hairy vetch, peas, clovers, cowpea, sun hemp, and fava bean. The unique rhizobium bacteria present with different species can survive in the soil for many years, but if a legume is not used in the field for a long period, the rhizobium may have to be re-introduced by mixing it with the seed prior to planting. When legumes die their protein cells decompose and release nitrogen that can be absorbed by another crop. Cover crops compete with weeds and some cover crops will release chemicals that inhibit weed germination and early growth. The biomass mulch left behind provides a physical barrier and light control mechanism that will inhibit weed emergence for the next crop. Additionally, cover crops can be used for grazing, green chop, silage or hay. Growing more feed on the farm helps balance nutrients and provides environmental benefits. On an interesting note, Capital RC&D did a cover crop survey here in York County in December 2016. Cover crops were only found to be growing on 33% of the fields surveyed.

 Diversify Cover Crops – Mixing different cover crops and planting them together allows better use of water, light and nutrients. The different species seem to compete less which produces greater biomass. The different species also use different resources resulting in more efficient utilization. The diversity in above and below ground characteristics provides more varied food sources for the soil microbes. The Cover Crops Periodic Table (at right) shows numerous species that can be used or combined to meet the needs of your operation.

Cool Season Plants						Warm Season Plants		
-Grass -						Grass		
Barley			_	Broadleaf Plants				Pearl Millet (wk)
Oat (wk)	Arugula						Safflower (wk)	Foxtail Mille (wk)
Ryegrass	Flax (wk)	l equimes				Buckwheat (wk)	eat Proso Millet	
Wheat	Rape	Turnip (wk)	Winter Field Pea	Chickling vetch (wk)	Medic	Chickpea (wk)	Sunflower (wk)	Sudan gras (wk)
Cereal rye	Phacelia	Radish (wk)	Lentil	Red clover	Ladino clover	Cowpea (wk)	Amaranth (wk)	Teff (wk)
Triticale	Canola / Mustards	Beet	Spring Pea (wk)	Crimson clover	Bean (wk)	Soybean (wk)	Chicory	Grain Sorghum (wk)
Forage Oat	Ethiopian Cabbage	Tyfon (wk)	Vetch	Sweet clover	Alfalfa	Sun Hemp (wk)	Flower mix	Corn (wk)

• **Use Interseeding** – Interseeding or 'relay cropping' is the establishment of a cover crop in a primary crop that is already growing. Interseeding can be used in different seasons with different crops. Broadcast frost seeding in February/March into winter small grains is successful because the freeze-thaw cycles create soil surface honey-combing which improves seed-to-soil contact. The cover crop may interfere with straw harvesting but rarely compromises the yield of the main crop. The cover crop may struggle to establish because of the competition of the main crop. Broadcast seeding into summer crops in mid-June is beneficial for establishing cover crops in late season harvested crops such as corn grain and soybeans.

A high-boy type seeder drops seeds between rows. Some challenges to this are herbicide residues, lack of honeycombing, seed predation and lack of moisture. A unique piece of equipment, an interseeder, provides good distribution of seed, lower seeding rates than broadcasting, good soil-to-seed contact by using double disk openers, and greater protection from seed predators. Interseeding can also be practiced in perennial forages since most of the above ground plant is harvested and may lack cover over the winter. Examples would be planting winter grains or tillage radish crops into alfalfa. This adds more diversity for soil microbes which improves soil health.

• Avoid Compaction – It is important to understand what causes compaction and to avoid it as much as possible. Mismanagement of wet soils is the primary cause of compaction. Soil moisture acts as a lubricant that allows soil particles to slide over each other and be packed to higher density. Shallow compaction is caused by pressure exerted on the surface by equipment and animals.

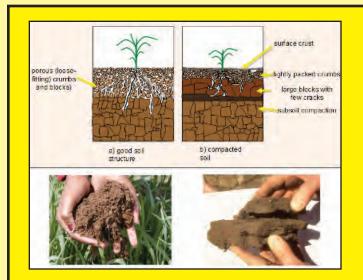
A larger footprint through lower tire pressure or equipment with tracks reduces surface pressure. Continuous no-till without cover crops and soil armor can also cause tightness near the soil surface allowing raindrops to pound the surface and increase soil erosion. Intermediate depth compaction can happen at 2"-4" as heavy equipment causes a platy soil structure. This layer is more susceptible to compaction because it lacks organic matter and root density, and retains soil moisture. This compaction can be a result of disking or vertical tilling while the soil was wet. Deep compaction can be associated with plow pans, heavy equipment and high moisture content. Some soil types are naturally prone to restrictive features such as fragipan. Cover crops and deep burrowing animals such as earthworms can help alleviate this natural compaction.

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I hope this article helps you better understand the benefits of diverse crop rotations, planting diverse cover crops and avoiding compaction. Although the "cover" is important to protect our soils during winter, they are also important to improving soil health and ultimately productivity. You may be skeptical and feel including cover crops is added expense and work, but I encourage you to experiment yourself. The research and testimonies bear witness that the benefits are both environmental and economical. Start now by picking a problem field and plan to plant a cover crop for this winter.

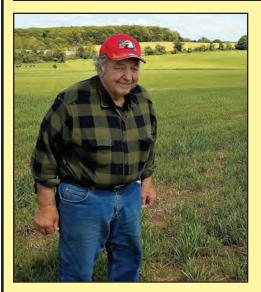
Pennsylvania No-Till Alliance has a Cover Crop Tips and Reference Guide with some of the following tips:

- * Plan your cover crops with the same effort you plan your main crop
- * Think of cover crops as an investment in building healthy soils, order your seed early and have it on hand at planting time
- * Cereal rye is a good beginning crop that can be planted into mid-November
- * Recruit extra help for fall planting and time your spring termination to prevent hair pinning when planting the next crop
- * Choose a compatible weed control program, and never give up despite some failures.
- * Be a scientist, like **Leroy Bupp**, and try something new!





Fields without cover crops are often prone to weed infestations. (above)

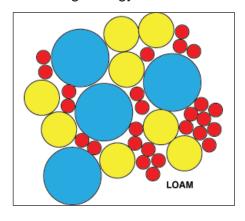


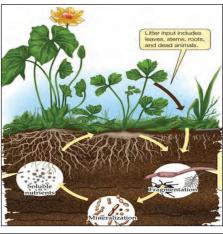
Our **Associate Director**, **Leroy Bupp**, has been passionate about conservation ever since he can remember. He has been involved in farming for 70 years, working on his grandfathers' farms and then actually buying one of those farms as a senior in high school!

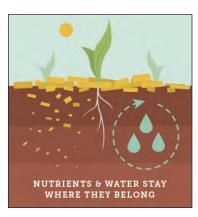
He acknowledges his Dallastown Vocational Agriculture class and Future Farmers of America (FFA) program with getting him involved and started with a Conservation Plan for his land. That 1963 plan (which he still has) included conventional tillage because that was "all we knew back then". However, the plan also incorporated contours and short rows – practices his grandfather didn't like.

Leroy Bupp, continued.

Through the years, Leroy has been a scholar of conservation efforts and a scientist by way-of-experiments in his own fields as he learned "new-fangled things" from educational meetings and farming publications. He remembers finding an article on no-till farming in 1974, which was the spark for his passion that still continues today. As a founding member of the PA No-Till Alliance twelve years ago, Leroy continues to be a voice and knowledgeable source for no-till information. Leroy is often asked to present at farmer meetings throughout PA and neighboring states. His presentations are practical and designed to help people understand soil science better. He likes to use simple props, like different-sized balls, to demonstrate soil particle size. It helps people visualize how water can percolate down through the air pockets in healthy soil. Leroy says, "it's all about understanding biology" in order to understand the benefits of no-till.







Loam is soil composed of sand, silt, clay, and organic matter in evenly mixed particles of various sizes. Its porosity allows high moisture retention and air circulation. Of all the components of soil, organic matter is probably the most important and most misunderstood. Organic matter serves as a reservoir of nutrients and water in the soil, aids in reducing compaction and surface crusting, and increases water infiltration into the soil.

Leroy has employed numerous soil health principles over the years. He has increased his soil organic matter from 2% to 4.8% and closely monitored his soil quality through soil sampling and recordkeeping. An increase of just 1% organic matter increases water absorption from 1"to 4". That is a tremendous amount of water being retained on the farm. It is being absorbed for crop utilization, instead of running off and carrying sediment and nutrients with it.

As far as cover crops, there are limits to York County's harvesting season. But Leroy has used annual ryegrass for years and is experimenting with multi-species such as annual ryegrass, crimson clover and tillage radish. Oats are also quick to establish and increases biomass/organic matter.

Leroy believes organic matter is not given enough credit or talked about enough. Organic matter stores water and nutrients and is the fastest creator of soil biology. Early on, Leroy installed terraces which now stay dry since his organic matter has increased. Surface manure application has also been a practice he has utilized. That manure provides fiber on the surface and aids in decomposing residue...all adding to organic matter. Leroy observes streams after rainfall and has been able to link upstream tilled fields to muddy waters. Even tilled fields with residue seem to have an infiltration problem. Leroy admits he has planted green mostly by accident. He was usually occupied with cow care - delaying his spraying duties, so his planter help would just continue planting. Now his life-time of observations and learning benefit us all. If you ever get a chance to meet and talk with Leroy - do so - he is a master of soil health principles. He has much to teach us and you will not be disappointed.



Erosion & Sediment Control

E&S Program Accomplishments for

Preconstruction meetings	24	General NPDES Issued	41
New Plan Reviews	90	Total site inspections	221
Revised Plan Reviews	60	Sites in compliance	98
Total Project Acres	3,374	Complaints Investigated	97
Total Disturbed Acres	125		

The Conservation District will be holding a day-long Workshop for Developers and Engineers on Wednesday, September 27th at Wyndridge Farms near Dallastown.





Presentations will include recent updates to the Chapter 102 program / What constitutes an Exceptional Value Wetland / The Notice of Termination (NOT) process / The PCSM Instrument recording process / BMP photos from the field / Alternative approved BMPs / Common deficiencies (and resolutions) on E&S and PCSM plans. DEP staff, product manufacturers, and District staff will be presenting.

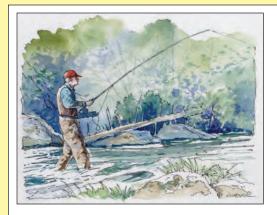
Please check our website at **www.yorkccd.org** for upcoming registration information. We look forward to seeing you there!"

Our E&S and Ag staff attended a 3-day U.S. Army Corps of Engineers and Natural Resources Conservation Service **Basic Wetland Identification Workshop** in May. Participants were instructed on the basics of wetland science and the identification of hydrophytic vegetation, hydric soils and wetland hydrology indicators. Classroom and fieldwork were held at the District, Codorus Township Park, Crist Memorial Park, and a farm in Glen Rock. The weather was fine and an unexpected guest showed up to dine on goose eggs!





Trout & Clean Stream Waters

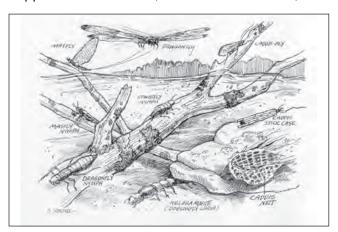


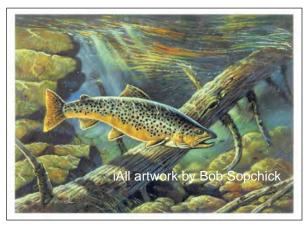
The **Brook Trout** - our official state fish and the only trout native to Pennsylvania's streams - demands a clarity and purity of water unique among the commonwealth's many other significant fish populations. But this is good news.

Like the macroinvertebrate **mayflies** clinging to underwater vegetation, living among sunken woody debris or hiding beneath water-smoothed rocks & pebbles, **both species are indicator species** - organisms whose presence is a sign of a specific environmental condition. In this case, species **found in waters that are clean, cold, fast-flowing and highly oxygenated.**

In addition, for wild trout, those clean, cold moving waters must have abundant underwater habitat to support their own naturally reproducing populations. Such a body of water is referred to as a **Class A Wild Trout Waters.** These waters represent our state's best wild trout waters and are protected by the Pennsylvania Department of Environmental Protection (DEP) and the federal Clean Water Act.

Recently the PA Fish & Boat Commission listed **45 streams in York County as Pennsylvania Wild Trout Waters** - meaning streams that support natural wild trout reproduction. The majority of these streams are located in the rural southeastern portion of the county. Five of these 45 streams are listed as Class A Wild Trout Waters. And while most York County streams don't support breeding populations of brook trout, they do support the introduced, and now naturalized, wild brown trout, and some introduced rainbow trout.





One of the reasons the Conservation District works so closely with farmers and contractors in York County is to ensure that any activity that includes a discharge into these waters (such as eroded soil or sediment from work sites, or excess nutrients from livestock or fertilizer) complies with the federal standards. Riparian buffers are an example of a Best Management Practice (BMP) promoted by the District to maintain clean waters to support trout and other dependent species.

Riparian buffers are areas of grass, trees and/or shrubs adjacent to streams, ponds, and wetlands. Increased vegetative cover helps regulate water temperature, add organic matter, and reduce nonpoint source pollution - such as sediment, excess nutrients and pesticides from reaching the water. Our job is to help keep our natural waterways clean and healthy.







Education & Communication

Envirothon 2018 begins with our 10th Annual Clay Shoot at Central Penn Sporting Clays on Friday, September 22nd. A day of camaraderie, sportsmanship and competition helps to kick off our upcoming Envirothon Sponsorship campaign. Consider putting together a team of friends, family or co-workers, or join one of our teams. It's great fun and a superb day afield for a wonderful cause. To register go to our website at yorkccd.org or contact our office at 717-840-7430.





York County Conservation District College Scholarships 2017-2018

We are in the process of updating our College Scholarship Application Packet and ballots. We plan to have the new scholarship information posted on our website by mid-July.

Once again we will choose two \$1,000.00 Scholarship recipients for the upcoming college calendar year. The scholarships are open to any York County resident attending an accredited college or university and majoring in agriculture, conservation, environmental studies, natural resource management or a related science field.

Senior high school students may apply *if they* are already accepted at a school and attending in the fall of 2017 or the winter or fall of 2018. The deadline for applications is Oct. 31, 2017.

Please go to www.yorkccd.org - click on education in the drop-down menu

ENVIROTHON ENVIRON









THE 2017 ETHON-NEWS - Our Season in Review

Thirty-Two Years! That's how long the York County Conservation District has been sponsoring the Envirothon - part of the largest and longest-running environmental high school competition in North America. The Pennsylvania Envirothon is one year older and the North American Envirothon began three years later, but the overwhelming success of all the Envirothons has led to increased opportunity for students of all ages here in York County. Instead of just a high school program, we offer the Envirothon to 3rd & 4th graders, 5th & 6th graders, and Middle School students too. This year over 1,000 students participated on 181 teams from public schools, charter schools, home schools and private schools. Students from 3rd grade through their senior year spent the better part of the school year studying & competing extra-curricularly in Aquatics, Environmental Current Issues, Forestry, Soils & Land Use and Wildlife. These kids study for fun! At a time when understanding science is a crucial life skill, the Envirothon will continue to provide students with the critical thinking skills necessary to make informed decisions in school, at home and - most important - as adults.









Thank You to our Sponsors!

The Envirothon is a success because of our sponsors - it would not happen without them. Our fundraising starts in September with our **Annual Clay Shoot** and continues through April. Thank you to the many individuals, companies, cooperating agencies, and schools, who continue to support us. We raised \$30,700 this year, including a record \$8,580 during our Clay Shoot!!! We would also like to thank John Rudy County Park - "The Official Home of the Envirothons."

Please mark your calendars for Friday, September 22nd for our <u>10th Annual Clay Shoot!</u>

@ Central Penn Sporting Clays

to kick off our 2018 Envirothon Sponsorship Drive.

Register your co-workers, friends and family for a catered barbecue lunch & afternoon shoot.

Join us in supporting a great cause in a beautiful setting!





Thank you to our 2017 Clay Shoot Sponsors:
Aquatic Resource Restoration Company (ARRC),
Resource Environmental Solutions, Mr. and Mrs. Randy Byrnes,
HRG, Inc., Trumbull, Lee Fence and Outdoor, Deller Excavating LLC,
Mark Flaharty, Commissioner Doug Hoke,
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Seth Grove, Kristin Phillips-Hill, Kate Klunk, Kevin Schreiber

We wish to thank the following for graciously donating at the \$1,000.00 & up ELK SILVER LEVEL

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Izaak Walton League Chapter #67; Jefferson Sportmen's Assoc.;
JVH Excavating, Inc; York County Solid Waste Authority;
York Excavating LLC





We wish to thank the following for donating at the \$500.00 & up BROOK TROUT BRONZE LEVEL

Adams Electric Cooperative Inc.;
C.S. Davidson, Inc.;
Exelon Generation & Peach Bottom Atomic Power St.;
LSC Design Inc; Rotary Club of York-PPE Committee;
Spring Grove Area School District; Stewart & Tate, Inc.;
Susan Byrnes; Trumbull Corporation;
York Water Company



We wish to thank the following for donating as \$250.00 & up MOUNTAIN LAUREL PATRONS

Bruce Holbrook; Bottom Line Contracting Inc.; Carol Park; Craig & Laura Franciscus; Deanna Stambaugh; PTO Sinking Springs School; Albert Dehoff & Sons; Conewago Enterprises, Inc.; First Capital Engineering, Inc.; Glatfelter Insurance Group Flying Excavating Inc.; Hively Landscapes; Miller Plant Farm; Southern PTO; Mr. Carroll L. & Linda Missimer III; Northeastern School District; PTO Shrewsbury Elementary; Spoutwood Farm Center; Tammy L. Grove; Wolf Farms, Inc.; York Ag Products, Inc.; York Township

We wish to thank the following RUFFED GROUSE PATRONS

Lucy Kniseley; Southern Elementary PTO; Central Penn Sporting Clays; Craley Fish & Game Assoc.; Deller Excavating, Dorgan & Zuck Building Contractors Inc.; Environmental Concepts Landscaping; Gordon L Brown and Assoc. Inc.; Keith Eisenhart; Matt & Ann Gruner; Spring Grove Elementary PTO; Windsor Twp.; York Rifle Range



Association; Grimm Trophy and Gifts; David Leese; Ellis Crowl; Friends of Chris Reilly; Keller-Brown Insurance Services; Kenneth Sheffer; North Hills Elementary PRTO; Northern Elementary PRTO; Shiloh Garden Club; Stewartstown Elementary PTA; Stony Brook Elementary School; Travis & Christine Sherman; Francis & Cynthia Owings; Waterbody Builders LLC; York-Adams Pomona Grange

Thank you to our Cooperating Agencies & Volunteers York County Parks & Recreation Dept., York County Planning Commission, Pennsylvania Game Commission, Pennsylvania Fish & Boat Commission, Penn State Cooperative Extension, Natural Resource Conservation Service, Department of Conservation & Natural Resources, PA Department of Environmental Protection, York Rotary PPE Committee, York County Conservation District, York County Solid Waste & Refuse Authority, The Envirothon Committee and the many additional volunteers who help make our competitions such a success. Thank you to Rutter's Dairy; Brown's Orchard and Farm Market, Flinchbaugh's Orchard & Farm Market, Stauffer's, and Millicent Neill Decker for their In-Kind Donations. A special thank you to the Penn State Master Watershed Stewards and the Pennsylvania Game Commission for their entertaining and educational programs presented during our lower grade competitions.



<u>Senior High Envirothon (21 teams)</u>: The Central York team returned for their second win in three years at our Senior High event. Representing York County, they placed 9th overall out of 64 teams (and 2nd in the Wildlife category) at the Pennsylvania Envirothon in late May (photo on front cover). Spring Grove's **Nicloe Guise**, was awarded our \$500 **Paul Wilson Conservation Award**. Nicole is planning a career in agricultural sciences at Penn State this fall.





Senior High top-ten overall placing (total score 500)

10th Place – Dallastown Wrenegades - 305

9th Place – Northeastern Sassafras – 307

8th Place - Susquehannock Big Trees - 309

7th Place – Spring Grove Wetland Warriors - 313

6th Place - Susquehannock Little Trees - 324

5th Place - Central York Monotone Caw - 336

4th Place - West York Wildfire - 361

3rd Place - Dallastown Hellbenders - 369

2nd Place - YHSA Perspicacious Potato-Lovers - 397

1st Place – Central York Betula Lenta - 403

Testing Station Results - out of 100 points

Aguatics – 3rd – YHSA Perspicacious Potato-Lovers 74

2nd – West York Windstorm 77

1st - Central York Betula Lenta 78

Current Issues - - "Ag Soil & Water Cons. Stewardship"

3rd - Dallastown Hellbenders 88 tb.

2nd – West York Wildfire 88 tb.

1st - Central York Monotone Caw 94

Forestry - 3rd - Central York Betula Lenta 68

2nd – Dallastown Hellbenders 75

1st - YHSA Perspicacious Potato-Lovers 78

Soils – 3rd - Northeastern Sassafras 77

2nd - YHSA Perspicacious Potato-Lovers 83

1st - Central York Betula Lenta 91

Wildlife – 3rd – Central York Monotone Caw 74

2nd - YHSA Perspicacious

Potato-Lovers 76

1st - Central York Betula Lenta 80







Middle School Event - 31 teams





Top-ten overall placing (out of 400)

10th Place - Northern Omniscient Owls - 292

9th Place - Red Lion Lethargic Lizards - 304

8th Place - Dallastown Rabid Raccoons - 304 (tb)

7th Place - Shrewsbury Christian Roaring Lions - 314

6th Place - Central York Whirling Whirligigs - 315

5th Place - Dallastown's Outrageous Owls - 316

4th Place - York Suburban Radical Raccoons - 331

3rd Place - York Homeschool Wannabe Woodchucks 333

2nd Place - Central York Heuristic Hickories - 366

1st Place – York Homeschool Goats - 372

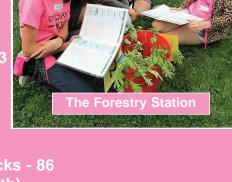


Aquatics: 3rd – York Homeschool Wannabe Woodchucks - 86

2nd - Central York Heuristic Hickories - 86 (tb)

1st - _York Homeschool Goats - 94





Current Issues: "Conservation in Your Life"

3rd – York Suburban Radical Raccoons - 96

2nd – York Homeschool Goats - 96 (tb)

1st - Central York Heuristic Hickories - 98

Forestrv:

3rd – York Homeschool Wannabe Woodchucks - 83

2nd - York Homeschool Goats - 92

1st - Central York Heuristic Hickories - 96

Wildlife -

3rd - York Suburban Radical Raccoons - 82

2nd – Central York Heuristic Hickories - 86

1st - York Homeschool Goats - 90

5th & 6th Grades - 58 Teams





5th & 6th Grades top-ten overall Placing (out of 400): (TB- tiebreaker)

10th Place – Shallow Brook Slithering Snakes - 313

9th Place - St Joseph Golden Whirligigs - 319

8th Place - Sinking Springs Savage Skunks - 325

7th Place - Indian Rock Rockin' Raccoons - 334

6th Place - Leib Elementary Puddle Ducks - 335

5th Place - Dallastown Super Snapping Turtles - 335 (tb)

4th Place - Locust Grove Savage Salamanders - 338

3rd Place - York Homeschool Terrifying Turtles - 340

2nd Place - Sinking Springs Sasassy Sassafrases - 341

1st Place – York Homeschool Nutty Ninjas - 358

Wildlife Station Bird Nests

Testing Station Results - 100 pts each category

Aquatics:

3rd - York Homeschool Nutty Ninjas - 90

2nd - Spring Forge Whitetails - 92

1st - Indian Rock Rockin' Raccoons - 98

Current Issues: "Conservation in Your Life"

3rd - S. Mountain Couch Conservationists - 93

2nd – Locust Grove Savage Salamanders - 95

1st - Leib Elementary Puddle Ducks - 95 (tb)

Forestry:

3rd - York Homeschool Nutty Ninjas - 86

2nd - East York Daring Dragonflies - 86 (tb)

1st - Sinking Springs Sasassy Sassafrases - 87

Wildlife:

3rd - Leib Elementary Puddle Ducks - 86

2nd - York Homeschool Terrifying Turtles - 88

1st - York Homeschool Nutty Ninjas - 94





3rd & 4th Grades Event - receive proficiency level ribbons and fun prizes - 73 Teams





Gold Level - Blue Ribbon category - scoring between 260 & 306 out of total of 320 pts:

Dallastown Int. Bold Bobcats, Dallastown Int. Radiant Raccoons, Ore Valley's Heroic Hemlocks, Indian Rock Awesome Opossums, Loganville-Springfield Stinging Bees, Indian Rock Harenadoes, Dallastown Int. Outstanding Otters, St. Joe's Dallastown Rascal Raccoons, Leader Heights Spunky Skunks, Ore Valley's White-tailed Wonders, Shrewsbury's Powerful Pouncing Porcupines, Macaluso Loyal Jazzy Mink, Spring Grove Prickly Porcupines, Stewardstown Ferocious Fantastic Minks, Trimmer's Marvelous Macroinvertebrates, Macaluso Lovely Jolly Mayflies, North Hills Awesome Possums, Lincolnway Courageous Canine Coyotes, St. Joe's Dallastown Awesome Opossums, York Homeschool Magnificent Minks, Stewartstown Fun Fluffy Foxes

Top-scoring Aquatics: Dallastown Intermediate Radiant Raccoons
Top-scoring Forestry: Dallastown Intermediate Bold Bobcats
Top-scoring Wildlife: Dallastown Intermediate Radiant Raccoons
Best Teamwork-Runner up: Trimmer's Marvelous Macroinvertebrates

Best Teamwork-1st Place: St. Rose Fierce Falcons



Your 2018 Envirothon Event Dates

Senior High - Tuesday, April 24th Middle School - Tuesday, May 1st 5th & 6th Grades - Wednesday, May 2nd 3rd & 4th Grades - Tuesday, May 8th



<u>Silver Level – Red Ribbon category</u> - scoring between 235 & 257 out of total score of 320:

Shrewsbury's Big Bad Beavers, Shallow Brook Bustling Bees, Paradise Perky Porcupines, Locust Grove Happy Herbivores, New Salem Mammal Madness, Clearview Wacky Wonderful Walnuts, Stony Brook Competitive Creatures, Paradise Peaceful Pines, Hopewell Winterstown Diving Dolphins, St. Joseph York Black, Saint Patrick Beatboxing Beavers, St. Joseph York Gold, Wellsville Whining Winning Warthogs, Dallastown Elem. Awesome Opossums, New Salem Terrible Trees, Northern Elem. Dabbing Deer, Spring Grove Perfect Panthers, York Township Magnificent Menagerie, Wellsville Screaming Goats, Leib Elem. Leaping Lemurs, Shallow Brook Trophy Takers, Kreutz Creek Evergreen Environmentalists, Sinking Springs Bobcats, Sinking Springs Snowshoe Hares, Spring Forge Aquatic Masters, Northern Elem. Ferocious Felines

Bronze Level - White Ribbon category – scoring between 120 & 233 pts. out of total of 320:

Hopewell Winterstown Fierce Foxes, Southern Elem. Wild Whitetails, Dillsburg Fun Fungus Funguys, Hayshire Positive Power Porcupines, Saint Patrick Rascal Raccoons, Lincolnway, Fierce Fiery Foxes, South Mountain Sky Flying Skunks, Fawn Fast Fighting Foxes, Clearview Bionic Bustin' Beavers, Hanover Street Magical Minks, Trimmer's Super Streams, St. Rose Fierce Falcons, Hanover Street Fearsome Foxes, York Homeschool Rocking Rhizomes, South Mountain Camouflage Crayfish, Southern Elem. Flying Squirrels, Leib "Owl" Knowing Owls, Fawn Five Fantastic Fawns, Delta Five Fierce Bears, Locust Grove Rockin' Raccoons, Roundtown oak Nature Rockets, North Hills Little Cottontails, Spring Forge Bouncing Bobcats, Delta Battling Beavers, Dillsburg Envirothon Awesomeness, St. Rose Fantastic Foxes.







At the Senior High level, over 10 million people have participated in the Envirothon nationally since 1979. More than one million dollars in scholarships have been presented and 55% of Envirothon students go on to careers in natural resource & conservation.

Traditionally a Senior High program, the York County Envirothons begin in 3rd grade.

Is your child & school involved?
Contact The York County Conservation
District for more information 717-840-7190



Watershed Specialist Gary Peacock

Urban Stormwater Management

Precipitation in an urban or suburban area that does not evaporate or soak into the ground but instead runs across the land and into the nearest waterway is considered stormwater runoff. Increased development across the watershed has made stormwater runoff (also called polluted runoff) the fastest growing source of pollution to the Chesapeake Bay.

Stormwater runoff can push excess nutrients from fertilizers, pet waste and other sources into rivers and streams. Nutrients can fuel the growth of algae blooms that create low-oxygen "dead zones" that suffocate marine life.

What exactly is a pollutant? It's any natural substance...including life-sustaining nutrients...in the wrong place and the wrong volumes.

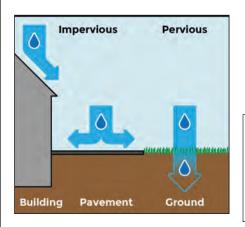


Forests, wetlands and other vegetated areas can trap water and pollutants, slowing the flow of stormwater runoff. But when urban and suburban development increases, builders often remove these natural buffers to make way for the impervious surfaces that encourage stormwater to flow freely into local waterways.

Impervious surfaces are paved or hardened surfaces that do not allow water to pass through. Roads, rooftops, sidewalks, pools, patios and parking lots are all impervious surfaces. According to the U.S. Environmental Protection Agency (EPA), the presence of roads, rooftops and other impervious surfaces in urban areas means a typical city block generates more than five times more runoff than a forested area of the same size.

Impervious surface data are used to measure the rate of development across the watershed and to identify high-growth areas and patterns of sprawling development. Between 1990 and 2007, impervious surfaces associated with growth in single-family homes are estimated to have increased about 34 percent, while the watershed's population increased by 18 percent. This indicates that our personal footprint on the landscape is growing.

According to the Chesapeake Bay Program's Watershed Model, stormwater contributes 16 percent of nitrogen loads, 16 percent of phosphorous loads and 25 percent of sediment loads to the Bay.



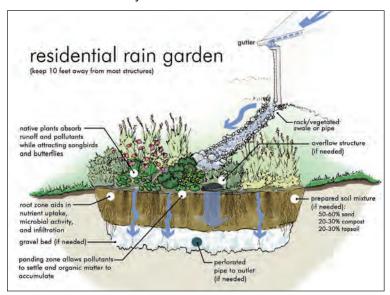


To combat the impact of stormwater runoff on impervious surfaces Permeable substrates can be installed. They allow water to percolate through the substrate instead of hitting the hard surface and running off that surface Thus reducing flooding, slowing down the flow of pollutants and decreasing the chances of erosion. To lessen the impacts of stormwater runoff on the Bay, consider reducing the amount of precipitation that can run off of your property. Install a green roof, rain garden or rain barrel to capture and absorb rainfall; use porous surfaces like gravel or pavers in place of asphalt or concrete; and redirect home downspouts onto grass or gravel rather than paved driveways or sidewalks. You can also reduce the use of fertilizers and pesticides on lawns and garden and follow safe and legal disposal methods of paint, motor oil and other household chemicals to make sure they do not run into rivers and streams.

Our everyday actions - from fertilizing our lawns and using water to driving our cars to work and school - have a major impact on the wetlands, ponds, streams and Bay. An impact that can't be fixed by government and non-profit restoration partners alone.

By making simple changes in our lives, each one of us can take part in restoring and protecting clean water for healthy communities, vibrant economies, future generations to enjoy.

Visit How-To-Tips at http://www.chesa-peakebay.net/takeaction/howtotips







The York County Ag Preservation Program

Patty McCandless, Program Director 118 Pleasant Acres Road, Suite F York PA 17402 717-840-7400 / Monday-Friday 8:00 am to 4:30 pm



Farmland preservation efforts continue to make progress across the County of York. Four organizations operate in York County preserving farms through conservation easement purchase or the donation of a conservation easement. To date, 280 easements, on 41,643 acres have been preserved by the County Ag Land Preservation Board. In total, York County contains 407 preserved farms on 52,222 acres! In Pennsylvania, 5,136 farms on 536,181 acres have been preserved through the PA Agricultural Conservation Easement (ACE) Purchase Program. Additional lands have been preserved by the many Land Trusts which also operate in Pennsylvania.

The York County Ag Preservation Program, continued

Conservation easements are legal instruments restricting uses on the land to agricultural or conservation purposes. Limited non-agricultural uses, which are compatible with farming, may be permitted by approval of the easement holder, or, specifically included within the easement language. For example, the State ACE program, allows one additional residential structure to be constructed on every preserved farm following preservation. Agricultural use structures are permitted by the easement if approved by municipal ordinance. Certain rural enterprises, which are minor, seasonal, or incidental to the primary farming operation, are also permitted. Commercial non-agricultural uses are generally prohibited.



Did you know only 2% of the population in our country feeds the other 98%?

Following preservation, all easements are inspected on a schedule to ensure the easement provisions are being observed by the current landowner. Easements which involve a donated easement, or federal funding, must be inspected annually. Easement purchases using no federal funds are inspected every other year as required by the PA Agricultural Conservation Easement Purchase Program. Landowner's are invited to participate in the inspection. The inspection visit is an excellent opportunity for landowners to review their easement and provide updates about the farm to agency staff. Ownership and/or farm operator changes, structural modifications, or other proposed changes to the farm are discussed. Conservation matters and conservation programs are a common topic during this periodic visit. Letters of notice always precede the inspection visit with an invitation for landowner participation. Landowners of farms, preserved by the previous owner, typically have many questions and concerns about the easement restrictions. The inspection visit is an excellent opportunity to understand the easement on the farm they purchased. The YCALPB and staff encourage realtors to fully disclose to prospective farm buyers the restrictive nature of the easement requirements. Landowners who consider the purchase of a preserved farm must be comfortable with the easement restrictions as they are perpetual, or, "run forever on the land" and may not be removed.



Thank you County Commissioner's for another year of farmland preservation with their approval of \$293,271 in January 2017, a new high in county funding since 2008. Increased 2017 state funding came through the increase in the cigarette tax and York received \$1,431,775 in state match funds. In the first two quarters of 2017 the YCALPB office held receipt of 44 easement applications (4,509 acres). Thus far, three farms, covering 537 acres, have been selected by the YCALPB for preservation through easement purchase. The federal ACEP program may provide additional funds but as yet remain undetermined. In June, the YCALPB will select additional farms for land preservation. On behalf of the County of York and the Commonwealth of Pennsylvania, a sincere thank you to the farm families who made this commitment.



Conservation Horizons
York County
Conservation District
118 Pleasant Acres Road
York PA 17402

Non-Profit Org. U.S. Postage PAID Permit No. 476 York. PA

"Society is defined not only by what it creates, but by what it refuses to destroy"

- John Sawhill

Would you like to be on our mailing list? Our newsletter *Conservation Horizons* is published 3 times each year free to over 8,000

York County homes & businesses. To be put on our mailing list call or email: 717-840-7430 or yorkccd@yorkccd.org.

If you would rather "Go Green" and save paper, send us an email request and put "Electronic Newsletter" in subject line to receive your newsletter electronically.

Or contact us with address changes or to be dropped from our mailing list. Thank you.

YCCD District Calendar

July 2017

July 4	Office Closed - Independence Day
July 12-13	PACD/SCC Joint Annual Conference
	State College
July 13	YCCD Board Mtg – 7:00 pm Annex
July 27	Dirt Gravel Low Volume Road Appl.
·	deadline
	August 2017
Λιια 1	Appual Concernation Awards Pionia

Aug 1 Annual Conservation Awards Picnic @
Rocky Ridge Park, 5:30 pm

YCCD Board Mtg - 7:00 pm Annex

Aug 13-15 NACD NE Region Mtg - Vermont

Aug 15-17 Ag Progress Days, Rock Springs

Aug 24 DGLVR QAB Mtg.

September 2017

Sept 4	Office Closed - Labor Day
Sept 14	YCCD Board Mtg. 7:00 pm Annex
Sept 22	10th Annual Clay Shoot Fundraiser @
	Central Penn Sporting Clays - Noon
Sent 23 24	Watershed Weekend

Sept 23, 24 Watershed Weekend

Sept 27 E&S Workshop, Wyndridge Farms

October 2017

	October 2017
Oct 9	Office Closed - Columbus Day Holiday
Oct 12	YCCD Board Mtg, 7:00 pm Annex
Oct 17	PACD Regional Directors Mtg, Carlisle