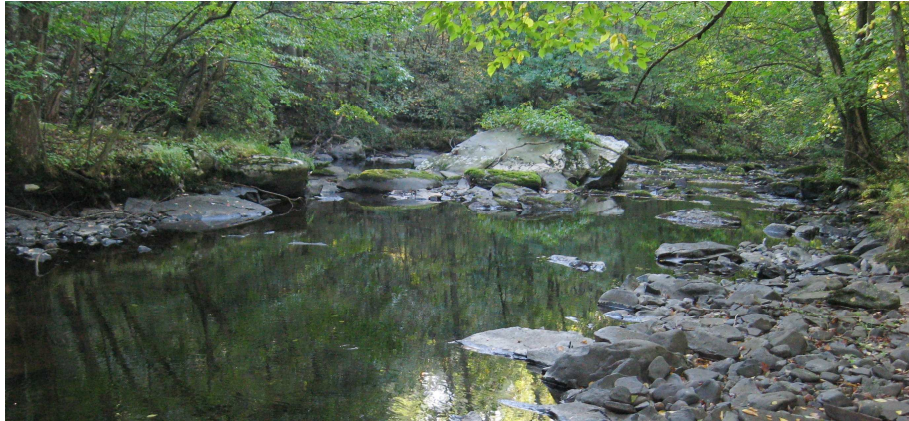




2014 Annual Report



“Those who can, do. Those who can do more, volunteer.” ...Unknown

As a member of the of the Pike County Conservation District Board of Directors over the past eleven years, I have been very privileged to work with some amazing people on the Conservation District Board. They are a dynamic group of dedicated volunteers who all see the many benefits of their volunteer work. These people give of their time and expertise working as volunteers to affect important conservation work in Pike County. They come from diverse backgrounds and interests bringing expertise and input to the policy decisions which guide the District's programs and staff.

With the declining rates of volunteerism across the county, and country, which are effecting many organizations, particularly volunteer fire and emergency personnel, it is becoming increasingly difficult to find individuals who have the time and inclination to “..do more.” Our Conservation District Board continually seeks out dedicated individuals – volunteers who will work towards the conservation of our County's natural resources.

This annual report highlights the broad range of conservation activities and projects which our Board volunteers and our professional staff have worked on over the past year. I am hoping that as you read through the articles you will find something that really interests you. Perhaps it will interest you enough to attend one of our monthly meetings or educational events or to follow our website or Facebook page to see what your Conservation District is all about. Or perhaps you will find yourself with time and the inclination to become part of the heart of our Conservation organization. We look forward to meeting you!

PCCD Board Chairman Scott Savini

OUR MISSION

Pike County Conservation District is committed to natural resource conservation through leadership, education, technical assistance, planning and enforcement to ensure the long term protection and sustainable use of Pike County's natural resources and implementation of environmentally sound development and land use practices.

District Board Updates

2014 Board of Directors

Scott Savini, Chairman
Bob Engvaldsen, Vice Chairman
Linda Cioppa, Treasurer
Richard A. Caridi, Commissioner
Pete Helms, John Sivick, Mike Mancino

Associate Directors

Ray Banach, Ken Ersbak
Carole Linkiewicz,
John Milliken, Kelly Stagen

2014 District Staff

Sally Corrigan, Executive Director
Michele Ulmer, Administrative Manager
Kelly Rodemich, Technical Program Assistant/
Gypsy Moth Coordinator
Tina Spizuoco, Administrative Assistant
Ellen Enslin, Senior Resource
Conservationist
William Erdman, Resource Conservationist
Marianna Quartararo, Resource Conservationist
Vinny Cordova, Watershed Specialist

Pike County Commissioners

Richard A. Caridi
Matthew Osterberg
Karl A. Wagner, Jr.

District Meetings

Monthly-third Monday
(unless otherwise advertised)
9:00 am at the District Office.
The public is invited to attend.

District Office

556 Route 402
Hawley, PA 18428
PHONE: 570-226-8220
FAX: 570-226-8222
email: pikecd@pikepa.org
www.pikeconservation.org



Pike County Conservation District Board of Directors pictured from the left; John Sivick, John Milliken, Kelly Stagen, Linda Cioppa, Carole Linkiewicz, Mike Mancino, Scott Savini, Pete Helms, Commissioner Richard Caridi, Bob Engvaldsen and Ken Ersbak. Missing from the photo is Ray Banach

The Pike County Conservation District Board will miss the volunteer service and expertise of our long-time Director Linda Cioppa who resigned from the Board late in 2014 to relocate to sunny California. For eleven years Linda served as a volunteer Director on the Conservation District Board holding the position of District Treasurer for much of that time. She also served as District representative to the Pennsylvania Association of Conservation Districts (PACD) and later became the PACD Northeast Regional Director serving on the state level Board. Linda's dedication and volunteer service to the District's mission was invaluable. Her professional background and expert advice were key in District financial matters. Linda's passion and advocacy efforts helped to shape the District's role in the community. Her efforts for Conservation of Pike County natural resources will be missed.

2014 brought a few new faces to the Conservation District Board. John S. Sivick, sworn in as the new District Public Director by Pike County Commissioner Richard Caridi in January, is a long-time resident of Pike County and serves as a Lehman Township Supervisor. He has worked closely with the District over the years on a variety of projects and has been a great advocate for the District's water quality programs.

Mike Mancino, sworn in as the District's new Farmer Director by Board Chairman Scott Savini at the February 2014 Board meeting, filled the unexpired term of Farmer Director Ray Banach. Ray resigned as a Director but has remained on the Board as an Associate Director. Mike Mancino is a Lackawaxen Township Supervisor and owns the Vanderbeek Farm and Equestrian Center in Lackawaxen.

In August, Kelly Stagen joined the Conservation District Board as an Associate Director. Ms. Stagen's background is in mixed media art and childhood education. She has lived in Blooming Grove, Pike County since 1988 and is eager to volunteer. She states she was "*not born to sit on the couch but rather to do.*" Kelly worked previously with the District through a Pike County Conservation District Environmental Education Project grant to install a native plant garden outside the Hemlock Farms Youth Center.



District Board Updates

The District continued to support the Forest Legacy Program efforts by landowners in Pike County by providing a letter of support for a Forest Legacy Program application submitted in 2014 by landowners in Pike County. The Little Bushkill Headwaters Forest Reserve includes three large tract landowners with close to 5,000 acres of contiguous well-managed forestland in the headwaters area of one of Pike County's exceptional value watersheds. Delaware Highlands Conservancy worked with the landowners to develop and submit the application.

The District entered into an agreement in 2014 with long-time partner the Pinchot Institute for Conservation to work with the Institute on a William Penn Foundation grant to complete water quality monitoring in priority watersheds in the Upper Delaware. The District agreed to provide surface water data collected by District staff for stream sites within the Upper Delaware Watershed, such as Bushkill and Toms Creek Watersheds. District surface water data including biological analysis will be used by Pinchot in this Upper Delaware monitoring effort.

The Pike County Conservation District Board supported PACD proposed policies regarding distribution of unconventional gas well (UGW) funds to Conservation Districts for Fiscal Year 2014/2015. These policies included: Flexibility, Long-term Decision, and Percentage/Formula Policy.

Lacawac Sanctuary, a 500+acre wildlife sanctuary and education and research center, is located along the western shores of Lake Wallenpaupack. The District has long participated with Lacawac on educational outreach programs and events. The Pike Wayne Envirothon and the week-long Conservation school are just two examples of this partnership. In 2014, PCCD Board agreed to become a non-fee based member in the Lacawac Environmental Research and Educational Consortium (LEREC). The Consortium offers great benefits to members and participating schools and universities. The District looks forward to this great partnership!



PCCD Resource Conservationist Marianna Quartararo, Senior Resource Conservationist Ellen Enslin and Pike County Commissioner Richard Caridi during our Adopt a Highway Cleanup

Organizations that Nominate Directors to the Conservation District

The Pike County Conservation District (PCCD) serves as a leader in the county with a mission and commitment to natural resource conservation. The District is concerned with important conservation and environmental issues in the County and at the broader state and federal level. While the District operates with a full staff of eight professionals to implement conservation programs in the County, guidance and policy decisions are made by the Conservation District Board (as per Conservation District Law, Act 217 of 1945). This Board is made up of seven (7) volunteer members from throughout Pike County who represent a diversity of expertise and interests.

These volunteer Board members are appointed by the Pike County Commissioners from a list of nominees submitted by Pike County organizations who are "*nominating organizations for PCCD*" and approved as such by the State Conservation Commission. These nominating organizations play a critical role affecting the diversity of people who serve as Conservation District Directors. These organizations regularly seek Pike County residents who are interested and involved, who can provide the kind of qualified and capable volunteers, and who can be considered for nomination to the Conservation District Board.

If your organization is interested in becoming a *nominating organization for PCCD* or if you are an individual who is interested in working with the Conservation District, please contact the PCCD Executive Director at 570-226-8220 or scorrigan@pikepa.org.



Pictured from the left are District Board Chairman Scott Savini, Farmer Director Mike Mancino and Karl Eisenhauer of the Wayne/Pike Farm Bureau

PCCD Nominating Organizations

Delaware Highlands Conservancy
Gifford Pinchot Audubon Society
Milford Garden Club
Northeast PA Audubon Society
Pike Co. Agricultural Fair Association
Pike County Penn State Extension
Pike County Builders Association
Pike County Planning Commission
Pike Federation of Sportsmen's Clubs
Pike/Wayne Chapter Trout Unlimited
Wayne/Pike Farm Bureau

2014 Staff Highlights



Executive Director
Sally Corrigan



Watershed
Specialist,
Vinny Cordova



Resource
Conservationist
Will Erdman



Senior Resource
Conservationist
Ellen Enslin,
CPESC

Executive Director Sally Corrigan led the Pike County Conservation District staff team through another busy year that included the addition of two new staff members! In March, Vincent Cordova joined the District as the new Watershed Specialist. Vinny graduated from Bloomsburg University with a Bachelor of Science in Environmental Biology. He is a native of Matamoras, Pike County. His curiosity in the sciences and appreciation for the great outdoors makes the Watershed Specialist position a great fit. Also in March, William Erdman joined the Staff team as the District's third Resource Conservationist. Will moved to Northeast Pennsylvania from Central New Jersey. He is a Penn State graduate with focus in Community, Environment and Development. He also has a certificate in Geographic Information Systems (GIS) and has worked for the USDA and the organic farming community.

The Pike County Conservation District Board was proud to recognize the District's Senior Resource Conservationist Ellen Enslin who received Certification as a Professional in Erosion and Sediment Control (CPESC) in 2014. The CPESC® certification is given to specialists who have met established educational and practical standards, expertise and knowledge. They must subscribe to a code of ethics, pass a rigorous qualifying exam, and maintain expertise through a continuing professional development program. A CPESC demonstrates through education, experience and examination, their knowledge of effective and economical methods of minimizing soil erosion and sediment transport due to land disturbance activities.

Administrative Manager Michele Ulmer worked closely with the District's administrative staff team which handles all aspects of the District's day-to-day operations. Michele continued to work with the Pike-Wayne Conservation Partnership, represented the District on the PACD Education and Outreach Committee, is a District Voting Delegate to the PACD Executive Council and works with the State Conservation Commission's Leadership Development Committee. Technical Program Assistant/Gypsy Moth Coordinator Kelly Rodemich provides support to all technical program areas including both Chapter 102 and Chapter 105 delegated programs. The District's Administrative Assistant Tina Spizuoco regularly puts her artistic talents to work for the District. This year she designed and painted the District office Rain Barrel as well as a beautiful rain barrel auctioned at the District's Annual Dinner in November.



Pictured from left ; Administrative Assistant
Tina Spizuoco, Administrative Manager
Michele Ulmer and Program Assistant/Gypsy
Moth Coordinator Kelly Rodemich



Spring Cleanup at the PCCD Office!
Pictured above from the left are Vinny Cordova,
Watershed Specialist, Will Erdman, Resource
Conservationist, Ellen Enslin, Senior Resource
Conservationist and Marianna Quartararo, Resource
Conservationist



Administrative Assistant Tina
Spizuoco put her artistic talents to
work in May designing and painting
the District's Rain Barrel

Annual Dinner Celebrates Water Resources

Pike County is extraordinarily blessed with clean water resources. And these clean water habitats support a vast array of wildlife. Vacationers and residents alike enjoy these special water resources—our lakes, rivers and streams — making use of them for fishing, swimming and canoeing year round. The Pike County Conservation District Board and Staff celebrated Pike County's water resources with over 60 partners and friends at the District's Annual Dinner in November.

Watershed Specialist Vinny Cordova discussed the results of a recent groundwater study completed by the United States Geological Survey (USGS) and the Pike County Conservation District. The focus of the study was on developing baseline data for the county's drinking water prior to any potential unconventional natural gas drilling. Creating baseline information on groundwater is a crucial step in protecting our drinking water resource. Cordova also highlighted the many other ways the District keeps close tabs on the quality and quantity of the county's drinking and surface water resources. Administrative Manager Michele Ulmer highlighted the *Every Drop Counts! Use a Rain Barrel* Project. This Project included twenty organizations involved in the Pike/Wayne Conservation Partnership, four School Districts, twelve local businesses in Pike and Wayne counties, and the Downtown Hawley Partnership.

A Silent Auction was the highlight of the evening with the rain barrel designed and painted by PCCD's Administrative Assistant Tina Spizuoco and a second rain barrel bringing in \$325 toward the environmental education programs. A special thanks to Cathe Marrow and Gloria and Peter Talman who won the high bids.

Pictured from the left, Cathe Marrow, winner of the designed rain barrel, PCCD staff member Tina Spizuoco, the artist, and Gloria and Peter Talman who took home the second rain barrel.



Pocono Source Water Protection Collaborative

Clean water has a great friend in northeast Pennsylvania!

Several partners joined together in 2013 to develop a collaborative which focuses on maintaining the excellent drinking water quality of Pike County and the region. Pike County Conservation District partnered with Hemlock Farms Conservancy, Milford Water Authority, Hemlock Farms Community Water Company, Twin & Walker Creeks Watershed Conservancy, Blooming Grove Township, The Lackawaxen River Conservancy, Penn State Extension, Master Well Owners, and Pennsylvania Rural Water Association to form the Pocono Source Water Protection Collaborative (PSWPC). The League of Women Voters Water Resource Education Network (WREN) assisted in the Collaborative's formation and provided guidance on educational outreach and water resource protection initiatives.

One of the main areas of focus for the Collaborative is to support community water systems in their drinking water protection efforts through development of source water protection plans. Many of the smaller community water providers only have one well with no backup well, which is why it is so important to protect these systems. Source water protection planning involves actions such as mapping a water supply protection zone, identifying potential sources of contamination, and developing an emergency response plan for addressing such things as accidental spills that may impact the water supply's drinking water sources. PSWPC also hopes to extend participation of community water suppliers by highlighting the benefits and opportunities of working together.

The Collaborative was begun with assistance of a start-up grant in the amount of \$5,000 from the Water Resources Education Network, a project of the League of Women Voters of Pennsylvania Citizen Education Fund through a grant from the Pennsylvania Department of Environmental Protection for Drinking Water Source Water Protection administered by the US Environmental Protection Agency.

The Pocono Source Water Protection Collaborative meets bi-monthly and will continue its work through 2015 and beyond. More information can be obtained by calling the Pike County Conservation District.



Chapter 102 Erosion and Sediment Control & Stormwater Management Program



PA Interstate 84 Sawkill Creek Crossing



PPL Susquehanna Roseland
Transmission Line

The District continued to work closely with the Pennsylvania Department of Environmental Protection (DEP) to implement all resource programs that have been delegated via an agreement to the District. In addition to the Waterways Management (Chapter 105) Program, Conservation District staff carry out responsibilities of PA DEP under the Erosion and Sediment Control Program (Chapter 102). Land developments and other activities which disturb the earth are required to develop and implement an erosion and sediment (E&S) control plan which effectively minimizes the potential for sediment runoff. Most of these E&S Plans are reviewed for compliance with Chapter 102 by District Technical Staff. Site inspections are also completed by staff.

District Technical Staff attended specialized training provided by DEP in 2014 to update staff who are implementing the programs in the field and to provide information on Standard Operating Procedures (SOPs), policies and forms which may have changed during the year. During 2014, Technical Staff worked with applicants and engineers on several large projects in Pike County including: PPL Susquehanna Roseland Transmission line, Tennessee Gas Northeast Upgrade project, Pennsylvania Department of Transportation Interstate 84, Section 448 and Section 449 and State Route SR2001, Section 401 and Section 402 reconstruction, Saiello (Kahr Firearms), Delaware Valley School District projects, and numerous other projects throughout Pike County.

Changes in Regulation

One important change for Individual NPDES (National Pollution Discharge Elimination System) projects which was enacted in 2014 effects riparian buffers on these NPDES development sites. Essentially this new riparian buffer legislation (Act 162) amends the PA Clean Streams Law adding provisions which effect Individual NPDES Permits for discharges associated with construction activities within 150 feet of a special protection --High Quality or Exceptional Value - stream, river, creek, lake, pond, or reservoir. The Act became effective on December 21, 2014. The District will continue to keep abreast of new implementation guidance from PA DEP and how these changes will impact Pike County projects.

PCCD 2014 E&S Control & NPDES 102 Program Highlights

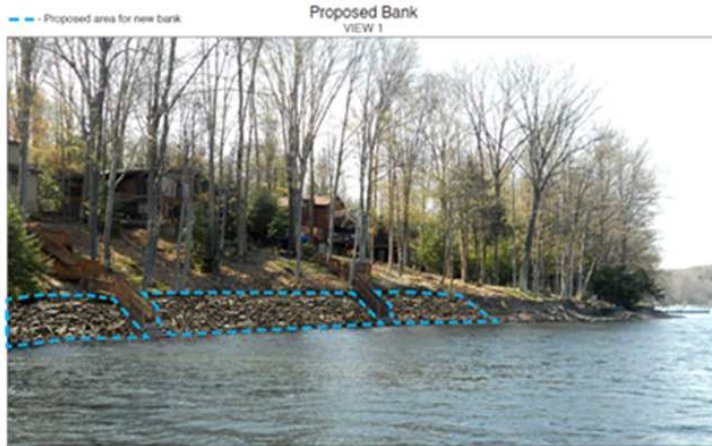
Technical Assistance Provided	652	Project Acres	1907
Initial Plan Reviews	30	Total Acres Disturbed	422
Follow-up Plan Reviews	63	Complaints Investigated	32
Site Inspections	228	Combined Staff Hours	4,591

The District processed six Individual/General NPDES Permits in 2014

PCCD Staff Participate in Contractor Workshop

Pike County Conservation District Technical Staff participated in the March 2014 Contractors Workshop hosted by PPL's Lake Wallenpaupack Office. Over 70 local contractors attending the workshop were presented with important information that can impact their work in and around the *Big Lake*. PPL Lake Staff discussed the reason and schedule for fluctuating water levels at the lake and how contractors can locate PPL's property line and normal high water mark. Additionally, PPL covered the types of projects which are prohibited on their property, permits required by PPL, and rules which apply to vegetation management at the lake. Pike and Wayne County Conservation District Staff discussed local, state and federal permitting including general permits dealing with docks, gravel paths, boat ramps, steps, and bank stabilization as well as erosion and sediment control plans (E&S) and dredging. Contractors attending were added to PPL's Contractors List often requested from lakefront-lot owners.

Waterways Management Program



Pictured: A potential bank stabilization project in Pike County submitted under a Chapter 105 General Permit #3 for Bank Stabilization.

Activities that change the current cross section of a stream or waterway or that encroach into the floodway of a water body can impact aquatic life, habitats adjacent to water bodies, or cause flooding resulting in property damage. So planning for properly addressing and minimizing these potential impacts is important whenever work in and around streams and waterways are proposed.

The Pike County Conservation District works with the Department of Environmental Protection to provide technical assistance and oversight to residents and businesses who are planning to complete work in and around waterways.

The District handles Chapter 105 (Waterways Management) General Permits, which authorize certain types of work in and along waterways including: Fish Habitat Enhancement; Small Docks & Boat Ramps; Bank Stabilization; Utility Line or Minor Road or Trail Crossings of streams or wetlands.

An example of two projects in Pike County which were authorized under Chapter 105 permits through the District in 2014 include a shoreline rehabilitation project along Lake Wallenpaupack. Two adjacent property owners each worked with the District to obtain authorization under General Permit #3 for Bank Stabilization. At the same time, the property owners worked through the Lake Wallenpaupack Watershed Management District (LWWMD) to obtain grant funding to assist them with the project. LWWMD provides funding for projects which may improve and enhance water quality within Lake Wallenpaupack.

PCCD 2014 Waterways Management 105 Program Highlights

Technical Assistance Provided	395
General Permits Acknowledged	24
Complaints Investigated	22
New Sites Inspected	36
Total Inspections	37
Combined Staff Hours	1,333

PCCD Staff Attend Refresher Course on Wetlands

Pike County Conservation District Technical Staff sharpened their wetland identification skills in June 2014 by attending a U.S. Army Corps of Engineers instructed Wetland Identification course. Providing both classroom instruction as well as field application, the week-long training was held at the Monroe County Conservation District's Environmental Education Center in Bartonsville, PA. Federal, State and county personnel attending the course studied plant identification, wetland hydrology and introductory soil science including the identification of hydric soils. Wetlands are an important natural resource especially in the glaciated regions of northeast Pennsylvania. Understanding the important role wetlands play not only in habitat for important flora and fauna but also in groundwater recharge and water quality is critical to their conservation. Our local economy regularly benefits from the services these important ecosystems provide.

Pictured are PCCD Staff Senior Resource Conservationist Ellen Enslin and Resource Conservationist Will Erdman at the training. District Watershed Specialist Vincent Cordova also attended. For information about wetlands visit <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-97948/3150-FS-DEP1436.pdf>.



Dirt, Gravel & Low Volume Road Maintenance Program



2014 Old Greentown Road Completed Road Project, Greene Township.
This project utilized \$30,936 in Dirt and Gravel Road Funding in 2014.

In 2014, the Pennsylvania Dirt, Gravel and Low-Volume Road Maintenance Program received an increase in statewide funding from \$5 million to \$35 million annually. Twenty percent, or \$7 million, continues to be dedicated to the PA Department of Conservation and Natural Resources for its dirt and gravel road system. The remaining \$28 million flows through the State Conservation Commission to Conservation Districts across the state and then to local, public road-owning entities. A new aspect of the program created by the 2014 transportation law, which authorized these additional funds, includes the dedication of \$8 million of the total \$35 million for the maintenance of low-volume paved roads.

Fiscal year 2014-2015 funding for Pike County includes \$125,463 for Dirt and Gravel Road Maintenance and \$40,000 for Low-Volume Roads. The Pike County Quality Assurance Board (QAB) reviewed recommended updates to policies and procedures that were drafted on a statewide level to meet these increased funding opportunities. The focus of the program - to fund safe, efficient and environmentally sound maintenance - remains unchanged. The Pike Conservation District is looking forward to implementing these important program changes in 2015 and utilizing all of the fiscal year funding to the benefit of Pike County.



2014 Mt. View Road Completed Road Project, Greene Township.
This project utilized \$22,710 in Dirt and Gravel Road Funding in 2014.

While modifications were being made to the state-wide program in 2014, Pike County Conservation District worked with local municipalities to identify and complete Dirt and Gravel Road Maintenance projects. Greene Township received funding for two new culverts added on Old Greentown Road to help alleviate road and channel washouts and break up the stormwater discharge points. A larger culvert was installed at an existing location and set at a less erosive orientation. The road surface was stabilized for 725 feet with Driving Surface Aggregate.

In addition, the third and final phase of drainage and roadway improvements were completed on Mountain View Road in Greene Township. Two "tear-drop" channel outlet structures were added directly upslope of Sugar Hill Creek. Roadside channels were redefined and almost 900 feet of roadway was topped with Driving Surface Aggregate. This project has eliminated the direct channel discharges to Sugar Hill Creek, a high-quality, cold water fishery.

More information for eligible applicants on grant application rounds in 2015 can be obtained by contacting the Pike County Conservation District.

Gypsy Moth Program Update for 2014

As a result of the low number of Gypsy Moth egg masses found during the 2013 survey period, the PA Department of Conservation and Natural Resources (DCNR) Division of Forest Pest Management did not suggest a Gypsy Moth suppression program for Pike County in 2014. Defoliation and Gypsy Moth populations were monitored throughout 2014 including egg mass surveys conducted by PA DCNR. Monitoring will continue through 2015 in order to determine if populations have increased causing a need for treatment in 2016. We will continue to update the District website with any new information.



Gypsy Moth caterpillars are from 1 1/2 to 2 1/4 inches in length. They have yellow markings around their head and distinctive pairs of blue and red spots on their backs.

PCCD Environmental Education Grant

The Pike County Conservation District (PCCD) Board of Directors established the Environmental Education (EE) Project Grant Program in 2005 to provide school classrooms or youth organizations with funding for projects that complement the conservation mission of the District. In 2011 and 2012, the East Stroudsburg School District (ESSD) Lehman Intermediate Outdoor Club received two PCCD EE Project grants. The Lehman Intermediate Outdoor Club along with Eagle Scouts, Girl Scouts, Student Council, E-Team and Lehman gifted students highlighted the work they completed with the grant funding at a presentation for the Conservation District Board in February 2014. Their grant activities received rave reviews from the District Board. Several activities included in ESSD's interactive outdoor classroom and trail at the school district's north campus were assisted with the grant funds. An interpretive sign for the trail system was installed. Educational materials on the effect of deer overgrazing on the flora and fauna were researched and produced allowing students to compare and contrast the environmental effect of the growing deer population in the Pocono region. District grant funds were also used to complement funding the School received from a Department of Environmental Protection Environmental Education grant to build a deer enclosure as part of the Outdoor Classroom. To learn more about the Outdoor Classroom visit the East Stroudsburg School District website www.esasd.net/Page/4076.

The District also awarded a PCCD Environmental Education project grant in 2013 to the Hemlock Farms Community Association Youth Center to design and plant a native garden. In May 2014, Youth Center Advisor Kelly Stagen provided an overview of the project to the District Board. Students learned to build a native, sustainable garden that included the installation of a rain barrel. An outgrowth of this grant project was the addition of Kelly Stagen as an Associate Director on the PCCD District Board.

Two grants were awarded by the District in 2014. Wallenpaupack Middle School received a \$500 grant for garden supplies and Junior Master Gardener resources for their school site garden. Dingman-Delaware Elementary School received a \$500 grant to build a shade structure at their outdoor classroom. To date, over \$6,500 in funds have been provided to thirteen separate projects throughout Pike County.



Lehman Intermediate Outdoor Club
Presentation at the PCCD February
Board meeting



Hemlock Farms Community
Association
Youth Group Garden Work Day

Common Waters: A Delaware River Partnership

The Pike County Conservation District has been an active partner in Common Waters since its inception in 2007. This collaborative partnership continues to work hard for the forest and water resources in the Delaware River watershed. Despite the challenges imposed by working across state boundaries in this three state region of Pennsylvania, New York and New Jersey, partners have been successful in working towards forest and water resource conservation at this regional scale. Some examples of Common Waters successes are listed below. Also please visit: http://www.pinchot.org/gp/common_waters.



- Common Waters successfully launched and implemented the Common Waters Fund in 2011 to provide a funding mechanism for private forest landowners in the three state region of the Upper Delaware to obtain assistance for implementing forest stewardship and best management practices on their lands.
- Common Waters Fund funneled almost \$1 million dollars to private forest landowners in the region for managing their forest resources. Coordination of this on-the-ground effort was largely handled by Conservation Districts across this three state region.
- Common Waters Partnership worked through Pinchot Institute for Conservation Studies and partnered with the Model Forest Policy Program (MFPP), the Cumberland River Compact, and Headwaters Economics in 2012 to create a climate adaptation plan for the communities of the Upper Delaware River Region.
- Common Waters was awarded a 3-year grant to expand its efforts to support and maintain regional water quality in Pike and Monroe Counties in Pennsylvania and Sullivan County in New York. The grant is part of a \$35 million multi-year initiative by the William Penn Foundation to protect and restore critical water resources in the watershed. Pike County Conservation District worked with Common Waters on this initiative in 2014 and will continue through 2015.

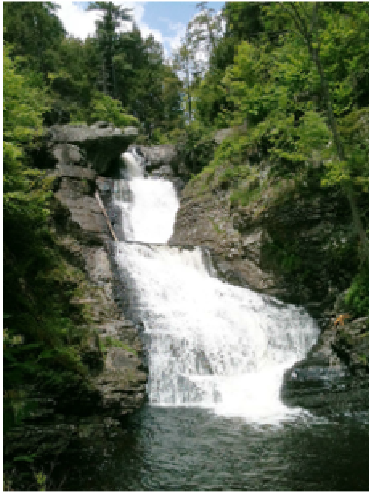


Photo credit: Outcrop of the Mahantango Formation and Raymondskill Falls, Pike County, Pennsylvania. Photograph by Leif Olson, U.S. Geological Survey.

USGS Groundwater Assessment of Pike County

Groundwater is the main source of drinking water for the residents of Pike County. Whether you have your own well or you obtain your water from a community water supply, all of Pike's drinking water comes from groundwater. Groundwater also provides the base flow for the Pike County streams which is especially important during drought periods. Pike County has been shown to have relatively good groundwater quality along with a stable supply of water to fit the County's current needs; however keeping a baseline of information is important to protecting this resource. Pike County Conservation District has joined with the US Geological Survey on a number of studies investigating the county's water quality and quantity. Visit these sites for more information: <http://groundwaterwatch.usgs.gov> or <http://pubs.er.usgs.gov>

In July 2014, the most recent USGS study conducted in cooperation with PCCD was published. *A Reconnaissance Spatial and Temporal Baseline Assessment of Methane and Inorganic Constituents in Groundwater in Bedrock Aquifers, Pike County, Pennsylvania, 2012-2013* by Lisa Senior (USGS Scientific Investigations Report 2014-5117) looked at the quality of groundwater and provided a baseline of water quality data from shallow groundwater found in bedrock below the earth's surface (0-1000 ft. deep) prior to any natural gas development in our region. Groundwater found in this bedrock supplies Pike County's population with the majority of its drinking water. (Note: Pike County is underlain by Marcellus Shale and other shale formations. The county sits entirely in the Delaware River Basin where, as of 2014, there currently is a moratorium on hydraulic fracture gas drilling.)

This reconnaissance study, conducted in 2012-2013, included sampling of twenty wells in summer 2012 and four of those wells sampled at one month intervals for a year. The twenty wells were spread throughout the County with the hope of providing adequate representation of overall groundwater quality along with the variation across the County. The subset of four wells were sampled to characterize the temporal variation of the different constituents throughout a year cycle of the seasons.

The wells were sampled for all of the drinking water safety standards set by the Environmental Protection Agency (EPA) together with constituents associated with the process of unconventional hydraulic fracturing and for the presence of naturally occurring methane. Developing the data is important in order to have a baseline and a good idea of the seasonal variability throughout the county.

The data collected showed relatively healthy water quality across the county. Sixteen of the twenty wells had traces of methane, two of which had higher than 2 mg/L of methane. Methane starts becoming a concern above 10 mg/L. Other elevated components found in one or more wells were: Arsenic, radon, iron, manganese, lithium, boron, fluoride, sodium and bromide. Some on these indicate hard water which was known and all of these were within ordinary limits and were likely naturally occurring. The data also showed a variability throughout the year of about 20%. There is more investigation to come in the future.

Funding for this study was provided by the USGS, Pike County Conservation District and the Pike County Scenic Rural Character Preservation Program. The full study can be found at pubs.usgs.gov/sir/2014/5117.

For 2015...

In late 2014, PCCD and USGS were awarded grant funding for additional study of Pike County's groundwater. The new grant funding provided by the Commonwealth Finance Authority from the Marcellus Legacy Fund (a fund supported by Act 13 gas well impact fees) will allow PCCD and USGS to expand sampling throughout the county to approximately 60 groundwater wells in 2015-2016. Wells will be selected from a list of private residential or business wells owned by individuals who agree to volunteer access to their well for the study. Pike County residents who may be interested in participating in this study should contact the District office.



To help protect groundwater supply areas, public awareness is important. Water Supply Area Signs (similar to the one pictured) inform the public of the need to act when there is potential of contamination within these critical areas. Chemical or fuel spills can pose a significant contamination risk to the local water supply if immediate action to contain and clean up the spill is not taken. If you see a chemical spill or accident in these areas, note the nearest mile marker or landmark and report the accident/spill to 911.

Water Supply Area signs on Interstate 84 and Route 6 help protect Milford's water supply, and on Route 739 they indicate a critical area for Hemlock Farms Community's water supply.

A Groundwater-level Monitoring Network for Pike County

During 2014, the Pike County Conservation District (PCCD) continued its partnership with US Geological Survey (USGS), Exton office and 24 Pike County property owners to monitor groundwater levels in Pike County. Conservation District staff monthly monitor water levels in 24 wells located throughout Pike County with at least one well in each of the major watershed areas. Water level measurements began in June 2007 with USGS staff taking responsibility for the initial measurements; PCCD staff trained by USGS Technicians have continued the monthly data collection since 2009. All monthly data is immediately entered into the USGS database and is available to the public on the internet. Visit: <http://groundwaterwatch.usgs.gov/countymap.asp?sa=PA&cc=103>.

Data and summary statistics — such as well depth, most recent well level measurement with date, well site name and identifying number, short description of the local aquifer as well as tables and graphs showing historical data for each well site since monitoring began — can be viewed on-line. Data is being used to determine average depth to groundwater, annual fluctuation in water levels and variable climactic fluctuations especially in periods when conditions may be dry and water level decline may be of concern. Comparison of well level depth county-wide indicates median depth to water level in the wells and is reflective of both topographic setting and rock type of the aquifer.

Pike County Conservation District is committed to continuing this groundwater partnership with USGS through 2016. Funding for the project is provided by the USGS, PCCD, and the Pike County Scenic Rural Character Preservation Program.

Monitoring Pike County's High Quality Streams

Pike County Conservation District (PCCD) continued the annual surface water quality monitoring program in 2014. Vincent Cordova, the District's Watershed Specialist, coordinated a full schedule of sampling, continuing years of water quality monitoring in Pike County streams. Both District staff and Board members participate in this watershed work.

Annually, PCCD monitors approximately 30 stream sites with over 45 stream sites county-wide included in the PCCD Surface Water Quality Monitoring Program. The District added several special study sites to the program in 2012 to broaden the baseline of information. During April and May 2014, District personnel conducted sampling of 31 stream sites including eight special study sites. Fish surveys were completed in August 2014 on six streams with the assistance of Aquatic Resource Consulting biologists. 2014 monitoring included streams such as the East Branch Wallenpaupack Creek, Sawkill, Toms, Shohola, Hornbecks and Dingmans Creeks among others.



Resource Conservationist Will Erdman (l) and Vinny Cordova (r) sample for macroinvertebrates in one of Pike County's cold water streams.

Biological monitoring of streams serves several purposes. It can provide an early warning of changes in water quality, detect pollution events or other episodes which cause changes, evaluate recovery from disturbed conditions, or reveal environmental trends and cycles. Information derived from long-term biological monitoring can be used to assess water quality trends and develop programs which provide for proper conservation and protection of stream ecosystems.

Aquatic macroinvertebrates (primarily insects) and fish are important biological components of these freshwater systems. They are the fundamental sensors of any stress that occurs within a stream ecosystem. This stress can manifest itself in the health of the aquatic organisms themselves, and/or can cause subtle or dramatic changes in overall community structure. So monitoring of the biological organisms that live in stream ecosystems and also the attributes of stream habitats and changes to these habitats can provide us with information on understanding the health of our water resources over time.

Pike County's freshwater streams range in size from small headwater streams to large rivers. Nearly all of these waterways are classified by the PA Department of Environmental Protection (DEP) as "High-Quality" or "Exceptional Value." (PA Code Title 25, Chapter 93). To understand if these systems are changing over time, Pike County Conservation District (PCCD) has been monitoring stream biology for over 20 years. The District's monitoring has included analysis of macroinvertebrate and fish populations, habitats and some basic physical and chemical parameters such as temperature, pH, dissolved oxygen, and conductivity. Analysis of the information is summarized in the District's Annual *Environmental Quality of Pike County Streams* which is posted on the Conservation District website.

Wallenpaupack Wins 2014 Pike/Wayne Envirothon



Pictured above is Pike County Commissioner Richard Caridi with PCCD Administrative Manager Michele Ulmer and the **Wallenpaupack Walleyes** Envirothon Team



Pennsylvania Game Commission Wildlife Conservation Officers demonstrating to students how data is collected from black bears to determine health of the resident population



Students identifying soils in the Soils and Land Use Testing Station at the 2014 Pike/Wayne Envirothon

The Wallenpaupack Walleyes from Wallenpaupack Area School District won the 28th Annual Pike/Wayne Envirothon held in May 2014 and went on to represent Pike County at the State-wide Envirothon held at Susquehanna University and PPL's Montour Preserve. Second place at the Pike/Wayne Envirothon went to *The Avengers* from Wallenpaupack and third place to the *Canaan Christian Creationists* of Canaan Christian Academy. The Pike/Wayne Envirothon, held at the PPL Environmental Learning Center in Hawley, was an exciting day of competition and included a fun visit from Calkins Creamery. This one-day educational event is designed to test the knowledge, skills and problem solving capabilities of high school students regarding our earth's natural resources. Canaan Christian Academy, Delaware Valley, Wayne Highlands, Wallenpaupack, and Western Wayne High Schools all competed in 2014.

The program included an opportunity for students to get up close and personal with wildlife. Pennsylvania Game Commission Wildlife Conservation Officers demonstrated to students how data is collected from black bears to determine health of the resident population. A live, but tranquilized, black bear was weighed and measured. Ear tags were placed for future tracking of the animal. A minor tooth was extracted to send to a lab for determining the age of the bear.

One of the day's highlights was a special program featuring Emily Montgomery of Calkins Creamery, a seventh-generation family farm in Wayne County. Emily explained the cheese-making process and how they market their products throughout the region. There were plenty of cheese samples for the students.

The Pike/Wayne Envirothon and Pennsylvania Envirothon partner with the USDA Natural Resources Conservation Service, Pennsylvania (PA) Fish and Boat Commission, PA Game Commission, PA Department of Conservation and Natural Resource Bureaus of Forestry and State Parks, PA Department of Environmental Protection, PA Department of Agriculture, and the PA Department of Education to bring this competition to students each year. These partners provide educational reference materials for high school teams as well as technical expertise, knowledge, and manpower at the event. Each year both Pike and Wayne Conservation Districts seek financial contributions to support this highly successful youth conservation program with donations supporting the purchase of Envirothon T-shirts, educational prizes and awards, lunch and an ice cream bar for students.

Special Thanks to this year's sponsors for your generous support of the program! Pennsylvania's Trappers Association, Professional Forest Industry Association, Dutch's Supermarket, Wallenpaupack Veterinary Clinic, Davis R. Chant Realtors, Woodloch Pines, PPL Inc., Honesdale National Bank, Dime Bank, Elegante's Restaurant, Wayne Bank, Honesdale Farm & Garden (Agway), Inc., Natures Grace Health Foods & Deli, Dirlam Brothers Lumber Company, Pennsylvania Envirothon, and Yatsonsky's Farm.

Hawley Earth Fest

The Pike/Wayne Earth Day Planning Committee joined forces with the Downtown Hawley Partnership in 2014 to expand the Annual Pike/Wayne Earth Day event into a weekend-long celebration titled *Hawley Earth Fest*! Conservation District staff participated in the planning committee and helped promote the weekend's activities which included the Hawley Farmer's Market, children's events, a photo exhibit, comedy night, and music throughout the community at local businesses. The highlight of the weekend was the *Species Parade* through Bingham Park in Hawley. After the parade, participants migrated to the PPL Wallenpaupack Environmental Learning Center for the Pike/Wayne Earth Day Festival. This annual celebration of the regions natural resources is a great community effort. Planning for the 2015 Hawley Earth Fest is well underway. Be sure to visit www.HawleyEarthfest.com for the latest information or on Facebook at www.facebook.com/HawleyEarthfest.



More Conservation Education and Outreach...

- Participated in the Adopt-a-Highway Cleanup along State Route 402 adopting a two-mile stretch in front of the District office.
- Conducted groundwater protection education including a groundwater flow-model demonstration for over 200 students at Wallenpaupack High School.
- Provided two scholarships to Pike County students attending the Monroe County Conservation School.
- Supported and promoted educational programs of the Pike/Monroe Forest Landowners Association.
- Provided funding for eight Pike County classrooms to receive the Gifford Pinchot Audubon Society's Audubon Adventures program. The 2014-2015 theme was "*Caring for our Planet*".
- Discussed opportunities to work with the Pike County Tick-Borne Disease Task Force on education and outreach with potential launch of information on Earth Day 2015.
- Worked with Penn State Extension and their 4-H groups on a Stream Team event at Akenac Park, located in Delaware Township. Students enjoyed collecting macroinvertebrates in the stream, learning components of a healthy stream and what the presence and abundance of those insects says about the water quality in the watershed.
- Worked with The Girl Scout Heart of Pennsylvania Troop #52727 from Shohola to spruce up the Senior Center Rain Garden located at the Lackawaxen Fire Department. The Troop's work on the rain garden earned them the *Girl Scout Bronze Award* --- a leadership adventure and the highest honor a Girl Scout Junior can achieve.
- Presented updates on District Programs and projects to the Pike County Association of Township Supervisors at their annual meeting in October.



PCCD Watershed Specialist Vinny Cordova
assisting with the Penn State Extension
Stream Team Event

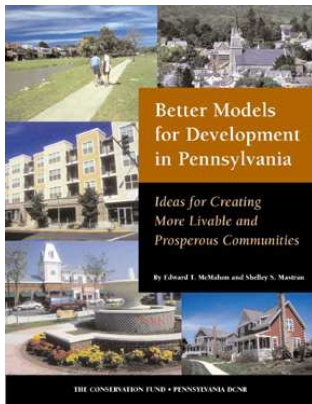


PCCD Resource Conservationist Marianna
Quartararo, Juliana Cabany, Kendall Mrozinski,
PCCD Watershed Specialist Vinny Cordova,
Adrienne Gordon, and Kaila Dunn



Pike County Conservation District is on Facebook!
Join us: www.facebook.com/pikeconservation

Celebrating 10 Years of the Pike/Wayne Conservation Partnership



The Pike/Wayne Conservation Partnership celebrated ten years of successes in 2014! The alliance of government, non-government, non-profit and grass roots organizations has grown to over twenty organizations working toward common goals for natural resource conservation, sustainable communities and citizen involvement in community planning in Pike and Wayne Counties. Since 2004 the Partnership has been meeting to coordinate workshops, stretch funding dollars and collaborate on projects of similar concern within the region. The group meets on a regular basis to share information and provide updates on current activities. Each organization has developed a better understanding of one another's role in protecting and preserving the natural resources. This understanding has opened lines of communication as well as provided important contacts helping Partners achieve both individual and group goals. This collaboration has helped reduce duplication of services to residents of the region. Information is communicated in a complementary manner, making it easier for the public to understand. Goals are interrelated, so the message to the public builds with each member's subsequent efforts and ideas build on one another. The result has seen some extraordinary efforts reaching the entire region.



2005 NEPA Environmental Partnership Award Recipients

One of the most successful efforts of the Partnership has been the coordination of educational programs that have brought numerous speakers and topics to audiences throughout Pike and Wayne Counties. Topics focused on *Financial Benefits of Conservation*, *Better Models for Land Development*, *Understanding Local Government*, *Conservation by Design*, *Groundwater Protection*, *Grant Writing Basics*, *Realtors Workshops*, and *Wetland Identification*. Partnership program efforts were recognized in 2005 with a *NEPA Environmental Partnership Award*, and the 2006 workshop series was recognized by the Northeastern PA Nonprofit & Community Assistance Center's Annual Community Awards for projects and programs that have made an extraordinary impact upon the quality of life within the communities they serve. Many of the Partners programs were also offered through the Wallenpaupack Area School District Community Education program. In 2011 through 2013, the Partnership offered a Spring/Summer Series of educational programs focused on water and forest resources and their economic value to our community. A Pike/Wayne Conservation Partnership Display, featuring each of the Partnership organizations, has been used at all joint educational programs and events such as the Black Bear Film Festival in Milford, the Festival of Wood at Grey Towers, NEPA Audubon Arts and Crafts Festival and Pike/Wayne Earth Day.



2008 Festival of Wood- Partnership provided an educational display and met Smokey Bear.

Grant funding has been secured by various Partnership members over these first ten years for specific projects. As examples: In 2006 the Pike County Conservation District, in cooperation with the Partnership, received a DEP Environmental Education Grant for a direct mail and website campaign entitled *Your Land, Your Legacy*. Brief profiles of local individuals who were actively working toward better planning and/or land use management or local residents who were utilizing conservation options to protect their acreage were featured in the direct mail pieces and website campaign. *Your Land, Your Legacy* reached over 10,000 Pike County residents. Grant funding for the *Every Drop Counts! Use a Rain Barrel* project was secured by the Pike County Conservation District for this Partnership inspired program in 2013.



Pictured above from left: Sue Currier, Delaware Highlands Conservancy, Representative Sandra Major, Representative Micheal Peifer and Michele Ulmer, Pike County Conservation District at the 2008 Pike/Wayne Conservation Partnership Legislative Breakfast

Since 2006 the Partnership has met annually with federal, state and local legislators to discuss current legislation and how the Partnership can work with legislators to achieve similar goals. These Annual Legislative functions have been instrumental in providing Partnership members the opportunity to meet one-on-one with legislators to discuss issues of similar concern. In 2014 the discussion focused on the importance of the natural resources to our local economy as well as some exciting projects the Partners are currently working on to protect these resources. Partners discussed how our conservation community is promoting the use of alternative energies, sharing resources to educate our residents and visitors on the importance of our resources, and securing funding to protect the water and forest resources that support our community's economy.

The *Science on Tap Series*, began by the Partnership in 2014, brings experts to an informal setting to lead a lively discussion at each "Science on Tap" event. Attendees enjoy food and drink specials offered by the host venue through their menu. The expert discussion is always free. 2014 Science on Tap events included: the Science of Beer, Science of Trout, Science of a Healthy Forest, Science of Composting, and Science of the Pocono Mountains. Visit <http://scienceontap.weebly.com/> for more information. *Continued on next page...*

Celebrating 10 Years of the Pike/Wayne Conservation Partnership

In 2015 the reimagined *Pike/Wayne Conservation and Leadership Academy* will provide a unique experience for youth in Pike and Wayne Counties. Partnership members have combined efforts to develop a week-long residential summer camp and activities for 13-15 year-old students with an interest in wildlife conservation, environmental science, ecology and the outdoors. For more information visit www.PikeWayneCLA.weebly.com.

The Pike County Conservation District has been a key player in the Pike/Wayne Conservation Partnership since 2004. This Partnership has brought many opportunities to the District that would not have been possible without the collaboration and cooperation of its partners.



2009 Pike/Wayne Conservation Partnership Legislative Breakfast

Pike /Wayne Conservation Partnership includes: Pike County Conservation District, Pike County Office of Community Planning, Delaware Highlands Conservancy, Penn State Extension, The Nature Conservancy, Alliance to Keep Pike Green, The Pinchot Institute for Conservation, the Upper Delaware Roundtable, National Park Service - Delaware Water Gap National Recreation Area, National Park Service- Upper Delaware Scenic and Recreational River, Pennsylvania Environmental Council, PA Department of Conservation and Natural Resources, The Lackawaxen River Conservancy, PPL, Lake Wallenpaupack Watershed Management District, Pocono Environmental Education Center, The Lacawac Sanctuary, Wayne Conservation District, the Northeast PA Audubon Society, Lackawanna College, US Forest Service at Grey Towers National Historic Site, and SEEDS (Sustainable Energy Education and Development Support).

District/Partnership Environmental Education Grant

The Pike County Conservation District, along with the Pike/Wayne Conservation Partnership, was awarded a PA Department of Environmental Protection Environmental Education Grant in 2013 for *Every Drop Counts! Use a Rain Barrel* Project. While the project started out as a simple partnership effort, it blossomed into a tremendous educational outreach opportunity expanding to include the entire community. The Partnership educated the community on the importance of water conservation and stormwater management with the use of beautifully designed and painted rain barrels.

Students from Canaan Christian Academy, Delaware Valley, Honesdale and Wallenpaupack High schools designed and painted rain barrels which were then distributed to twelve businesses throughout Pike and Wayne Counties for display. The display included a brochure promoting the use of rain barrels and providing simple steps individuals can take to conserve water around their own home. The brochure also promoted a list of Partnership sponsored programs and included information on the 2014 Pike/Wayne Earth Day Silent Auction of all the student painted rain barrels. Programs included topics such as water conservation, non-point source pollution, best management practices to assist with storm water management, water quality and testing, native plants, green cleaning and home energy efficiency tips. The Silent Auction raised \$975 which was distributed back to the participating schools to be used for environmental education.

Pennsylvania Environmental Council presented a Northeast Pennsylvania Environmental Partnership Award to the Pike/Wayne Conservation Partnership's *Every Drop Counts ~ Use a Rain Barrel* Project in 2014. For information on the project visit <http://www.pikeconservation.org/EveryDropCounts.htm>.

**Every
Drop
Counts!**
Use a Rain Barrel



What is the Pike County Conservation District?

The Pike County Conservation District was established in 1956 by the County Commissioners. Districts are designated by state law as the primary local government unit responsible for conserving natural resources and implementing programs to quantify, prevent and control nonpoint sources of pollution. The District serves as a community clearinghouse for natural resource conservation information and educational materials as well as state and federal regulatory and permit information.

The District provides these services through various delegation agreements, contracts and grants, primarily with state agencies. The remainder of the District budget is funded by fees and county support.

Pike County Conservation District provides an essential local perspective and focus on balancing environmental conservation with growth and development and has a long history of responsible, efficient delivery of state environmental programs at the county level. An engaged volunteer board of directors represents a cross section of local interests governing a diverse District staff who are well-trained and experienced. All of these individuals share a vested interest in their communities. Residents, businesses and economies of the County, all of which depend on a healthy environment, benefit greatly from the Pike County Conservation District's programs and services.

"Volunteers do not necessarily have the time; they just have the heart" ...Elizabeth Andrew



The Pike County Conservation District Board is currently developing a new strategic plan that will guide the PCCD Board and Staff into the next few years. In the fall of 2014, the Conservation District distributed a survey to residents, visitors and partners to assist with identification of the Pike County's most important natural resource issues. The survey was completed and presented at a public meeting held November 6, 2014 at the PCCD Education Building in Blooming Grove (pictured above). In identifying these concerns, the Conservation District can then determine what role or service the District should provide to support the community and protect natural resources. The plan should be completed in the Spring of 2015. This Strategic planning effort is being supported by a grant that was received through the PA Leadership Development Program with funding from the PA State Conservation Commission.

Our Vision

Pike County Conservation District will be a recognized and respected leader in fostering a conservation ethic among government officials, non-governmental groups, the development community, community associations, land owners and the general public that results in conserving the integrity of the natural systems that enrich the Pike County environment.