A photograph of a forest floor. In the foreground, large, gnarled tree roots are exposed, some covered in moss. The ground is dark and covered with fallen leaves and small plants. In the middle ground, there are several green plants with large, rounded leaves and clusters of small purple flowers. The background shows a dense forest of tall, thin trees with light-colored bark, creating a misty or ethereal atmosphere.

SUSTAINING CONSERVATION

Westmoreland
Conservation
District 

2015 ANNUAL REPORT



HELPING PEOPLE USE RESOURCES WISELY

On the cover

Stephen Simpson's photograph of a misty Westmoreland County woodland shows three of the natural resources that the Westmoreland Conservation District works to conserve – forests... soils...and (just out of picture in foreground) streams.

Last year, the District undertook a \$1.2 million fundraising campaign, "*Sustaining Conservation*," to ensure that conservation will continue to protect these resources and be a major imperative in our county for years to come.



Dear Friend of Conservation:

As it often does, when our board met in 2014, it raised some important, but tough, questions. Namely, how do we sustain all that we've accomplished for conservation in Westmoreland County? And what can we do to make sure that conservation continues to be a local imperative in the future?

Exploring those questions led us to identify six key areas we needed to focus on:

- Enhancing client services
- Creating practical conservation demonstrations
- Managing our county's water resources
- Gathering science-based data
- Building new partnerships, and
- Improving our conservation campus.

In each area, we identified the tools, scientific support, partnerships, and functional capacity additions that would have to be in place if we were going to secure all the work that we've done and make possible all that we yet want to do.

To be able to obtain the majority and most immediate of the needs we identified, we launched a fundraising campaign – “*Sustaining Conservation*” – in late 2014, with a goal of raising \$1.2 million over two years. Longer-term, we hoped to raise an additional one-half million dollars so that all of the identified needs could be met.

In those last few months of 2014, we raised \$251,550. And through 2015, our first full year of fundraising, we raised an additional \$705,830 in donations and pledges from area foundations, businesses and philanthropists.

At the end of 2015, we are very gratified to report that we are almost to our short-term goal, and 56% of the way to our longer-term goal, with one more year of fundraising to go.

During 2016, in addition to our ongoing work with foundations and businesses, we also will begin to seek support from individual donors.

We are keenly aware that we never could have accomplished all that we have for conservation without the support of our many friends and partners. We are most appreciative of your support and hope that, as you have so many times in the past, you will join with us once again to keep conservation strong.

Ronald J. Rohall
Chairman

Gregory M. Phillips
District Manager/CEO

“Sustaining Conservation” got us thinking not only about the next 20 years of conservation in Westmoreland County, but also a little about the past, and all the good work we’ve been able to do, thanks to the support of many partners and donors.

So we went back into the photo archives to see just how things used to be not all that long ago. And we discovered some pretty dramatic and positive changes all through Westmoreland County.

Streams that were polluted are clean today...hillsides that were eroding are stable...land that was scarred with high walls is fertile and scenic...unhealthy, muddy paddocks are dry, productive fields...and residents of towns that routinely braced for flooding can sleep easier.

We hope that, in a few decades from now, we can look back again and see more, equally positive benefits that came about because of our efforts today and our “Sustaining Conservation” campaign.

Stable Soils



1980 – All it took was one bad thunderstorm to carve gullies and create severe erosion in steep slopes like this one at Newhouse Park in Delmont.



Today – The re-graded grassy slope between the ball fields and the tennis courts (to left in photo) is a favorite spot for watching outdoor movies, thanks to conservation improvements that included adding drains to take away water.

Clean Streams



1994 – Bob Hepler, a founding member of the Sewickley Creek Watershed Association, stands in Wilson Run, a tributary of Sewickley Creek polluted with iron and minerals from abandoned coal mines.



Today – Anglers enjoy fishing in the Youghiogheny River below its confluence with Sewickley Creek. Very near here, just below the town of Lowber, another conservation measure installed in 2001 has been cleaning up 90% of the abandoned coal-mine pollution that had been adding some 600,000 pounds of dissolved iron to the creek (and ultimately the river) each year.

Sustainable Communities



1995 – An 80-foot vertical high wall (foreground) was just one of the many dangerous remnants left behind when coal companies abandoned their mines at the turn of the last century. This site in Ligonier also had steep spoil piles and impoundments of water.



Today – The scenic and productive site after spoil piles were eliminated, the 3,300-linear foot high wall was backfilled, and the entire site was seeded and mulched.

Productive Farms



1995 – The mud and accumulation of animal waste in this heavy use area, a place where livestock are confined in winter, were familiar sights on area farms.



Today – A variety of conservation measures, including subsurface drainage, stabilized animal walkways, and fencing help keep farms dry and animals healthy.

Sustainable Communities



1972 – Flooding was a common occurrence along many Westmoreland County streams, but communities such as Scottdale along Jacobs Creek were among the hardest hit.



Today – This channel, with rock riprap stabilizing its bank on the right, was built to control flooding in and around Scottdale. Three dams also were built nearby and together they represent one of only a few watershed-wide flood-control projects in the United States.

Healthy Forests



Through the years – The spread of invasive species such as privet, Morrow's honeysuckle and multiflora rose suffocate the growth of native trees and plants in untended forests and woodlots.



Today – Individuals own about 80% of the total woodlands in Westmoreland County. Their willingness to be good stewards of these lands benefits all county residents. Bob Ackerman (pictured) has undertaken a number of conservation measures on his 130 acres, including planting some 15,000 tree seedlings on a portion of the land that had been strip-mined.

Sustaining Conservation

The hard work of our staff, the support of our partners, and the solid financial backing of the Westmoreland County Commissioners and the state have helped the Westmoreland Conservation District build a reputation as a leader in the county, the region, and across Pennsylvania.

We've not only excelled at our delegated duties – erosion control, agricultural management, dirt and gravel roads, and post-construction stormwater management – but we've also ventured into conservation work that is “above and beyond” our required duties, undertaking a variety of projects that are needed in our county, but have no funding to make them happen. As you'll see on pages 6-8, the way we made almost all of our latest group of 21 “above and beyond” projects a reality is by taking the initiative to apply for competitive grants.

And while we've been very successful in getting grant money for conservation projects, money alone isn't enough to put conservation measures on the ground in our communities. It also takes people, skills, tools, partnerships, and day-to-day support resources. In short, it takes capacity.

Our District builds capacity by periodically undertaking a general fundraising campaign. For example: our last major general fundraising campaign in 1998 raised \$1.3 million and built capacity that has carried us for the better part of 15 years. That campaign allowed us to:

- repurpose the Lauffer family barn into our conservation education center and headquarters
- add six more conservation programs, including conservation education and watershed restoration
- add five technical and two administrative staff

members to meet the growing demand for conservation services

- add 10 more volunteer associate directors
- add more than 65 professional volunteers who serve as advisory members to our technical programs, and
- take on multi-million dollars' worth of “above and beyond” conservation projects.

In our current “*Sustaining Conservation*” fundraising effort, we hope to raise \$1.2 million, and produce results that are equally as dramatic and long-lasting as our campaign 15 years ago.

These two pages show some of what we've been able to accomplish with the funds raised so far in the “*Sustaining Conservation*” campaign. The accomplishments are listed under six key areas of focus.



Enhancing Client Services

- Create four new offices for technical staff
- Install a new telephone system
- Purchase new equipment, including a plotter and camera



- Purchase new conference room and office furniture



Creating Practical Conservation Demonstrations

- Retrofit the Saint James Church parking lot in Ligonier to manage stormwater and protect Mill Creek

Managing Our County's Water Resources

- Begin work on a county-wide Integrated Water Resources Plan



Gathering Science-based Data

- Purchase stormwater monitoring equipment

Building New Partnerships

- Purchase two pickup trucks and adapt them as dual-fuel vehicles, able to run on gasoline as well as compressed natural gas



Improving our Conservation Campus

- Complete design and other preliminary work for upgrades to our campus

“Sustaining Conservation” Campaign Donors through December 31, 2015

J. Roy Houston Society

\$100,000 and above

Hillman Foundation

Katherine Mabis McKenna Foundation

Richard King Mellon Foundation

Westmoreland County

Benefactor

\$10,000 to \$100,000

Adam Eidemiller Inc.

Fawcett Trust

Richard Glance Architecture + Planning

Kim Miller

Pennsylvania Department of Environmental Protection/Pittsburgh Region Clean Cities

Peoples Natural Gas

Saint James Evangelical Lutheran Church

Patron

\$5,000 to \$9,999

Kacin Companies Builders Developers

RWS Development Co., Inc.

Friend

\$2,500 to \$4,999

Ridilla Family Partnership

Sponsor

\$1,000 to \$2,499

Anonymous

Partner

\$500 to \$999

Apex Energy, LLC

Blyth & Shearn Inc.

William Doney

Charles and Judy Duritsa

Stephen Pilipovich, PE, PLS

Westmoreland County

Boroughs Association

Associate

\$ 250 to \$ 499

ECO Friendly

Greg, Leanne and Brandon Phillips

Western PA Region of the
Antique Automobile Club of America

Donor

Up to \$250

Joe and Diane Dietrick

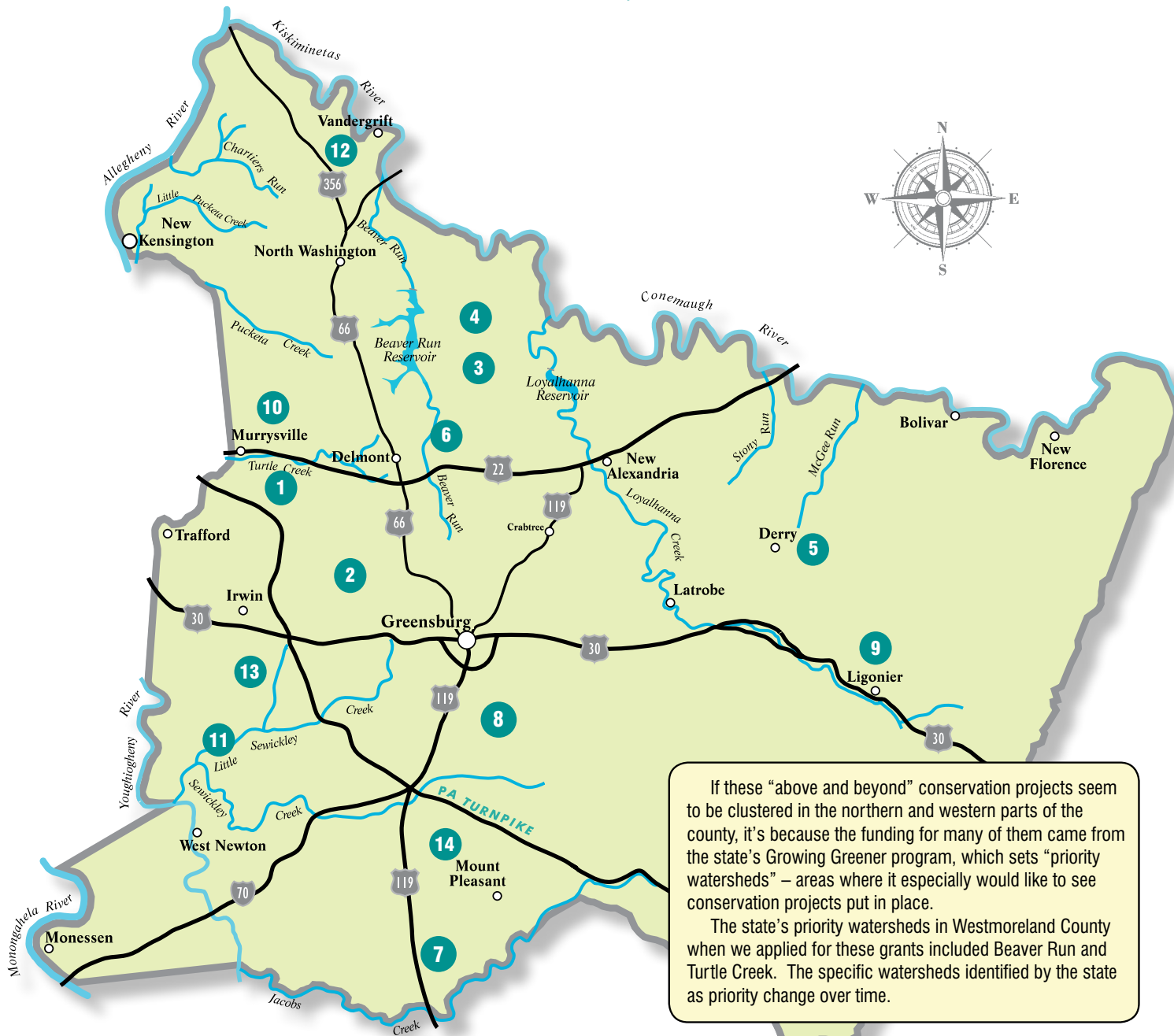
Conrad and Sandy Donovan

Shirley Gosnell

Commissioner Ted Kopas

Ron and Theresa Rohall

“Above and Beyond” Conservation Projects



If these “above and beyond” conservation projects seem to be clustered in the northern and western parts of the county, it’s because the funding for many of them came from the state’s Growing Greener program, which sets “priority watersheds” – areas where it especially would like to see conservation projects put in place. The state’s priority watersheds in Westmoreland County when we applied for these grants included Beaver Run and Turtle Creek. The specific watersheds identified by the state as priority change over time.

To be able to do conservation projects that are needed in our county, but that are “above and beyond” our funded, mandated duties, we seek out nontraditional sources of funding. This largely involves applying for competitive grants from the state and federal government, and from foundations and organizations.

How successful we are in winning these grants determines what “above and beyond” conservation projects we can do.

In 2015, we had some \$1,751,318 in nontraditional funding in-hand, and were using it to put 21 “above and beyond” conservation projects in place in our county.

These projects, which range from water quality improvements to measures to reduce flooding, are shown as numbers 1 through 14 on the map. Some of these are multi-year projects.

“Above and beyond” education projects that we were able to undertake because of our success in obtaining competitive grants are numbered 15 through 21, but not shown on the map.

FUNDED BY COMPETITIVE GRANT AWARDS

1 Turtle Creek Streambank Stabilization

Some 1,000 linear feet of slopes will be stabilized in five locations along Turtle Creek in Murrysville where the Turtle Creek Trail extension of the Westmoreland Heritage hiking/biking Trail will be built.

Funded with a \$92,963 grant from Growing Greener.

2 Municipal Stormwater Retrofits

Four older stormwater ponds owned by Penn Township were retrofitted as part of an ongoing program that did the same for three municipal-owned stormwater basins in Lower Burrell in 2014. Four more pond retrofits are planned in Murrysville in 2016.

Well-functioning stormwater basins help reduce the risk of flooding and benefit water quality.

Funded by a Growing Greener grant of \$128,000 received in 2013.

3 Beaver Run Road Improvement

About one mile of this private, interior road around Beaver Run Reservoir was improved in 2014 to reduce erosion. An additional one mile is scheduled to be improved in 2016.

Reducing the amount of sediment entering the reservoir helps improve water quality for the 50,000 homes and businesses that get their water from this reservoir.

Funded by a \$70,000 grant from Growing Greener.

4 Best Management Practices on Farms in Beaver Run Watershed

Major improvements in the storage of manure on a Salem Township dairy farm were made in 2015, benefitting the nearby stream, Beaver Run, and the reservoir that is the source of drinking water for some 50,000 homes and businesses in Westmoreland County.

Similar improvements and conservation best

management practices will be installed on three additional farms in the Beaver Run Watershed over the next two years. The planning and design for improvements on one of these three farms was completed in 2015.

This work will help the viability of these local farms as well as improving water quality for residents in communities including Delmont and Washington and Salem townships.

Funded by a \$129,945 grant from Growing Greener.

5 McGee Run Watershed Conservation Improvements

A variety of conservation measures were installed on farms, in forests, and in developed areas throughout this watershed in Derry Borough and Derry Township.

Water quality in the 27-square-mile McGee Run Watershed and communities downstream will benefit.

Funded by a \$300,000 grant from the Commonwealth Financing Authority and a \$20,000 grant from the Foundation for Pennsylvania Watersheds.

6 Stormwater Management in Delmont

In 2015, steps were taken to begin to reduce erosion and flooding issues in Delmont, as well as to improve water quality in Beaver Run Reservoir, the source of drinking water for 50,000 Westmoreland County homes and businesses.

An infiltration trench was installed at Shields Farm, a working farm as well as a recreation and festival site, which is uphill from the residential area of Delmont. Four grassy swales are also planned for this site.

The District staff also worked with Delmont officials to design additional stormwater and water-quality controls for the borough's maintenance facility.

Funded by a \$110,971 grant from Growing Greener.

7 Sherrick Run

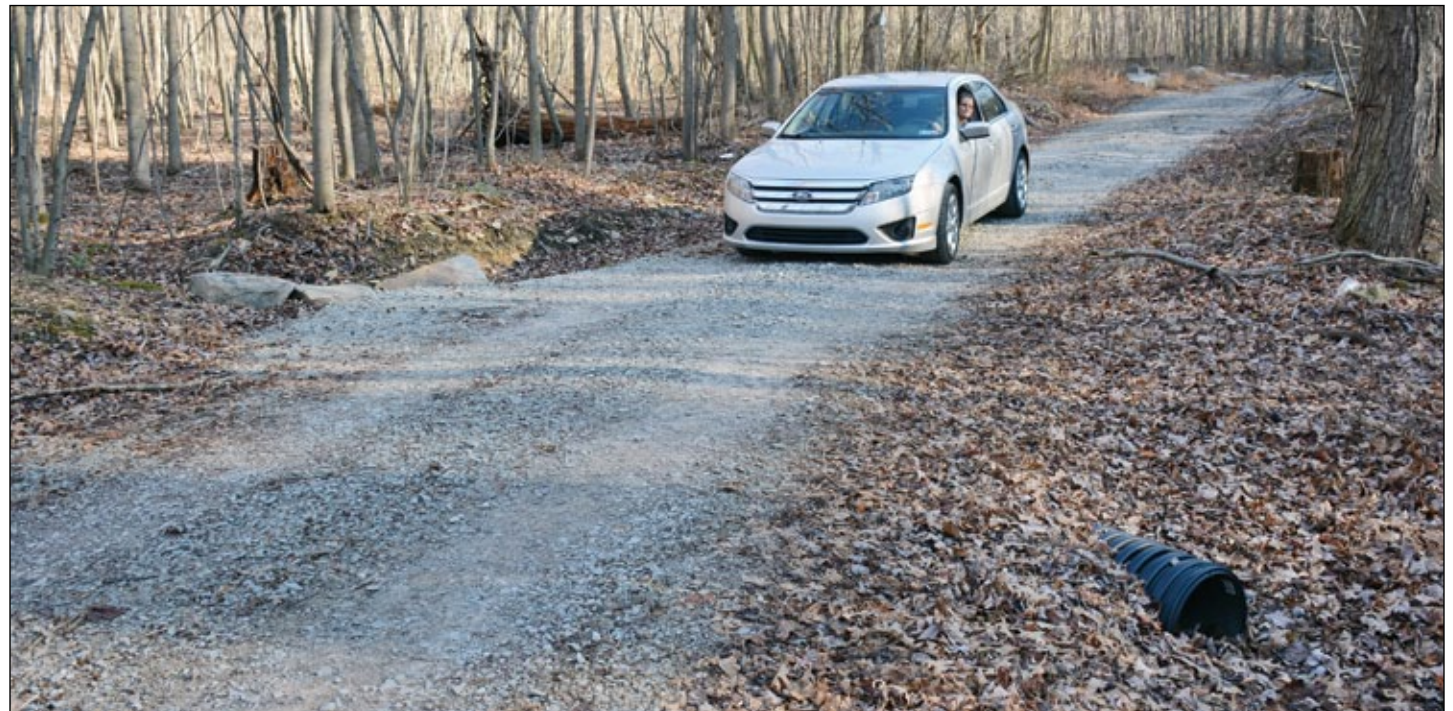
A section of Sherrick Run in Mount Pleasant Township will be enhanced with micropools and plantings for habitat and wildlife. This work will help protect water quality in this stream, which is part of the Jacobs Creek Watershed.

Funded by a \$150,000 grant from PennDOT to mitigate the environmental impact of highway improvement projects in our region.

8 Westmoreland County Community College Cherry Creek

During 2015, we secured a conservation easement from Westmoreland County Community College so that several best management practices – including riparian buffer enhancements and stormwater infiltration – can be installed on the college grounds over the next two years.

This conservation work will enhance the water quality of Cherry Creek, which is a tributary of



Millwood Road, McGee Run Watershed

Sewickley Creek.

Funded by a \$231,000 grant from PennDOT to mitigate the environmental impact of highway improvement projects in our region.

9 Saint James Evangelical Lutheran Church

We undertook our first green infrastructure project in Ligonier this year by retrofitting the parking lot of the Saint James Evangelical Lutheran Church with two rain gardens to control stormwater.

These improvements will prevent uncontrolled runoff from flowing into Mill Creek, a high-quality, trout-stocked fishing stream.

A number of partners provided the \$71,764 funding for this work, including the Richard King Mellon Foundation, the Ligonier Valley Endowment, and Saint James Evangelical Lutheran Church.

PARTNER PROJECTS

These are projects initiated by like-minded agencies, sometimes in concert with the District, and that District staff members helped to make happen.

10 Turtle Creek Stormwater Management

Projects will include a rain garden at Gateway School District, a stormwater basin retrofit at Monroeville Senior Citizen Center, a permeable pavement installation at the Monroeville Library, four municipal stormwater basin retrofits in Murrysville, and four in Penn Township.

Initiated by Westmoreland and Allegheny County conservation districts and funded by a \$208,000 grant from Growing Greener.

11 Lowber Abandoned Mine Treatment Area

This passive wetland that helps clean water in Sewickley Creek was improved with a new access area that provides easier access for tours, school groups, and maintenance, and a plan for mowing the embankments. A canoe and boat launch/

fishing area also was added nearby.

Initiated by the Sewickley Creek Watershed Association, with in-kind support from Sewickley Township and funding from a \$4,000 grant from the Western Pennsylvania Conservancy and the Foundation for Pennsylvania Watersheds.

12 Pine Run Abandoned Mine Drainage Discharge

In 2015, we studied several ways to treat an alkaline discharge on Pine Run in Allegheny Township. The discharge occurs less than 200 feet from Pine Run's confluence with the Kiskiminetas River.

The study was funded by a \$6,000 grant from Trout Unlimited, and conducted by Hedin Environmental in conjunction with the Kiski Valley Water Pollution Control Authority and the Kiski Watershed Association.

13 Andrews Run Abandoned Mine Drainage Discharge

An anoxic limestone drain was installed to help clean this highly acidic tributary to Sewickley Creek. Phase II of the project will involve the creation of treatment and polishing ponds in 2016.

Initiated by the Sewickley Creek Watershed Association and funded by a \$183,000 grant from Growing Greener.



14 Misty Meadow Road

About 1,200 feet of this severely eroded unpaved road in Mount Pleasant Township was built up and surfaced with fine gravel in Phase I of a two-phase project.

Initiated by the Western Pennsylvania Conservancy, with \$30,000 in funding from the (Pennsylvania) Commonwealth Financing Authority.

EDUCATION PROJECTS

This work helps to raise awareness of good conservation practices with a variety of audiences throughout the county. These projects are not shown on the map on page 6.

15 Driveway Workshops

Forty people learned how to make cost-effective repairs to their unpaved access driveways and lanes and prevent erosion problems in the future.

The Pennsylvania Association of Conservation Districts provided \$2,000 in funding that allowed our watershed technician to then visit the workshop attendees' homes or businesses to make improvement recommendations.

16 Southwestern PA's Homeowner's Guide to Stormwater

Printed and distributed in 2015, this booklet shows homeowners how to assess their property to determine how much stormwater is generated, where it flows, and how to manage it.

Stormwater management helps reduce demand on the storm sewer system and so reduces the need to raise taxes for new infrastructure.

Funded by a \$4,700 grant from the Water Resources Education Network.

17. Best Management Practice Portfolio

This new addition to the District's website provides technical data on some of the many conservation best management practices we helped to put in place throughout Westmoreland County to manage

stormwater; restore watersheds; support agriculture; and improve dirt, gravel, and low-volume roads.

Funded by a \$3,000 environmental education grant from the Pennsylvania Department of Environmental Protection

18. Manure Management Workshops

Five half-day workshops drew 37 farmers, 36 of who completed manure management plans for their farms that day.

Recent state regulation requires any farm that has manure on the land to have and follow a written plan for how the manure will be managed.

Funded through a \$1,500 grant from the Pennsylvania Association of Conservation Districts.

19. Watershed Capacity-building/Networking

This event for all Westmoreland County watersheds featured speakers on nonprofit board development and insurance coverage needed for hosting watershed events.

Partially funded by a \$750 grant from the Foundation for Pennsylvania Watersheds.

20. Lynch Field Interpretive Signs

Interpretive signs describing the conservation best management practices installed at this public site, and a large kiosk explaining the value of Lynch Field as a natural flood plain, were written, designed, produced and installed.

Funding for this project was provided by a grant to Sewickley Creek Watershed Association from the Bridgestone Americas Trust Fund. The grant was facilitated by Firestone Building Products, LLC of Youngwood.

21. Turtle Creek Watershed Association Support

A website was developed and insurance coverage was obtained for this watershed group.

Funding was provided by a grant of \$1,000 from the Western Pennsylvania Conservancy/Dominion Watershed Mini Grant program.

2015 Program Accomplishments

State funding supports many of the core conservation programs we offer, including programs delegated to us by the state in agriculture, post-construction stormwater management, erosion and sedimentation control, and dirt, gravel, and low-volume roads. Much the work we do in these programs is detailed on the following pages.

State funding to conservation districts has increased in recent years, thanks to allocations from an impact fee enacted in 2012 to mitigate the impact of gas drilling (Act 13) and a transportation bill (Act 89) passed in 2013 to fund road projects, including the dirt, gravel, and low-volume road program.

AGRICULTURE

Two Derry Township farms received a variety of conservation best management practices – from stream buffers to fencing for rotational grazing – as part of the larger, McGee Run Watershed conservation project (see page 22).

Tributaries of McGee Run flow through both Serenity Acres, a horse farm owned by Cheryl Kohler, and a 197-acre heifer/steer farm owned by Tom Klejka. So reducing erosion, sediment, and nutrient pollution at these locations will have a positive impact on water quality for everyone downstream.

Conservation improvements also help increase the profitability of the farms in a number of ways, such as keeping the animals healthier by preventing them from creating a muddy stream.

The Kohler farm has conditions that are rather unique in hilly western Pennsylvania – its pasture field is virtually flat, in addition to being primarily



As part of the McGee Run Watershed conservation work, some 3,000 feet of fencing was installed on Cheryl Kohler's Derry Township farm, Serenity Acres, to create four separate paddocks where she can rotate the pasture for her horses, instead of giving them free rein of the entire farm.

clay, and so was almost always muddy. To solve this problem, a three-foot-deep ditch was dug all the way around the five-acre field and backfilled with gravel. This trench now drains the subsoil as well as any overland moisture flow.

Two thousand feet of underdrain also was installed to drain excess water from four new paddocks created for the horses. And three new, innovative frost-free hydrants were installed to supply water to the animals.

On the Klejka farm, some 600 feet of vegetated buffer was created along both sides of the McGee Run tributary that runs through this property. The trees and shrubs planted here act like a filter, straining out sediment, nutrients, pesticides and other pollutants before they reach the stream. The vegetation also helps to stabilize the streambanks, preventing erosion and cooling the stream, which improves

habitat for aquatic organisms. The buffer includes 1,200 feet of fencing to ensure that the cows don't get in the stream.

Also on the Klejka farm, erosion from two farm lanes was reduced by adding five conveyor-belt diversions to force water off the road surface.

In Salem Township, **conservation improvements began to be installed at the Boggs Dairy Farm**, a 30-milking-cow operation that recently changed ownership.

Previously, manure from the animals had been taken by wheelbarrow to an uncovered concrete pad that was less than 25 feet from the stream, Beaver Run, which just a few miles downstream feeds into the reservoir that is the source of drinking water for some 50,000 homes and businesses in Westmoreland County.



On the Klejka farm in the McGee Run Watershed, some 1,200 feet of fencing was installed along the stream to keep cows out of the water, except at a new limited access crossing area (center of photo), which also was added.

In 2015, work on a solid stack manure storage facility began at the Boggs Dairy Farm and by the end of the year, the walls were in place. The roof will be added in 2016.

If not properly managed, livestock wastes can become a source of nitrates and disease-causing organisms in both surface water and groundwater.

This improvement at the Boggs Dairy Farm, funded by Pennsylvania's Growing Greener program, will significantly reduce the amount of pollution entering the stream.

During the year, the District received **13 complaints related to erosion control and sedimentation on area farms.**

Our nutrient management specialist/agricultural conservation technician worked with the farmers in question and was able to satisfactorily resolve most of these complaints during the year.

The few complaints that were not resolved by

year-end will continue to be addressed in 2016 until they are resolved. Resolution may involve the farmer taking a variety of actions, including developing an agricultural erosion control and sedimentation plan and/or installing some new agricultural best management practices on the farm.

Our nutrient management specialist/agricultural conservation technician **provided information and assistance in response to 93 requests for conservation help** during the year.

Requests covered a broad range of topics, including: guidance on the best time to seed a pasture, mortality composting, state tax credits for equipment purchases, agricultural stream crossing permits, and managing stormwater runoff.

Some 130 people joined us in late January for the annual **Southwest Regional PA No Till Conference**. No till – a method that eliminates the need to

disturb fertile topsoil when planting or cultivating – is rapidly gaining acceptance as an approach to farming and now is used on nearly half of all the cropland being farmed.

Speakers at this year's conference, held at the Fred Rogers Center in Latrobe, were experts in matching no till accessories to the unique conditions each farmer faces; maintaining soil health; minimizing erosion; and minimizing the use of pesticides.

The conference is the only official regional no till conference in Pennsylvania. It is sponsored by Penn's Corner Conservancy and Charitable Trust, Penn State Extension, the United States Department of Agriculture Natural Resources Conservation Service, the Westmoreland Conservation District, and other conservation districts in the southwest region of Pennsylvania.

Our nutrient management specialist/agricultural conservation technician **hosted five half-day manure management workshops** during the year in a variety of locations throughout the county, including Allegheny, Donegal, Sewickley, Hempfield, and Ligonier townships.

A total of 37 farmers attended these events and 36 of them completed manure management plans for their farms that day. Our technician also assisted 22 additional farmers who completed manure management plans during the year.

Recent state regulation requires any farm that has manure on the land – either from a production animal or from a manure spreader – to have and follow a written plan for how the manure will be managed.

These manure management plans are kept on the farm and need to be available if asked for.

The workshops were funded through a grant from the Pennsylvania Association of Conservation Districts.

CLEAN STREAMS

We undertook our first green infrastructure project in Ligonier this year by **retrofitting the parking lot of the Saint James Evangelical Lutheran Church with rain gardens to control stormwater.**

This lot had no stormwater management features and uncontrolled runoff was flowing from the lot onto the adjacent Ligonier Borough streets (West Church and North Grant), then into a catch basin for the borough's storm sewer system, and ultimately into Mill Creek, a high-quality, trout-stocked fishing stream. Stormwater runoff like this is a problem because it can contribute to flooding and because it adversely affects the quality of the water.

We improved conditions at the church parking lot by resurfacing it and installing two rain gardens at its lower end, one to control water coming from the lot itself and one near an existing garage at its upper end to control water running off the roof of that structure.

Four trees also were planted in the 40-car lot to also provide shade and help manage stormwater.

A variety of partners provided the funding for this work, including the Richard King Mellon Foundation, the Ligonier Valley Endowment, and Saint James Evangelical Lutheran Church. Ligonier Construction Company assisted by providing in-kind services.

With funding from our “*Sustaining Conservation*” campaign, we took the first steps toward **scientifically monitoring existing stormwater management measures** at three locations throughout the county – Donohoe Center (GreenForge’s green roof and infiltration parking lots/walkway), Mount Pleasant (rain gardens), and Westmoreland County Community College (infiltration swales).



Westmoreland County Commissioner Ted Kopas demonstrates how water easily flows through the new porous parking lot added at the Derry Community Pool in the McGee Run Watershed.

We purchased site-specific temperature sensors and moisture sensors for these locations and tested them indoors to become familiar with how they work and what data they produce, and to determine the best way to interpret their information.

We plan to install them in the spring/summer of 2016 and, in a program modeled after that at Phipps Conservatory, each location will be monitored monthly for a period of three years on a number of data points, including the amount of infiltration, the

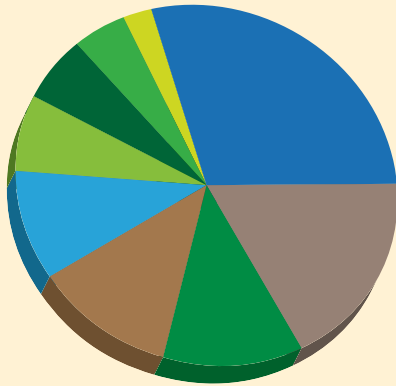
rate of runoff, and the amount and type of pollution.

In the past, we have encouraged the installation of conservation practices largely on data provided by others and on local anecdotal evidence of the practices’ effectiveness. And while this approach has been reasonably effective, we realize that we could make a much stronger case for conservation, reach out to a wider audience, and get more practices in place by being able to cite measurable data gathered from local sites.

The permeable parking lots and walkways around our barn headquarters have been in place for 15 years. Regular, long-term use by some 4,000 visitors a year has taken its toll, and **several need to be redone.**

In 2015, we developed designs and material

2015 Stream Encroachment Permits by Category



Utility Line Stream Crossings	24
Bank Rehabilitation, Bank Protection and Gravel Bar Removal	15
Temporary Road Crossings	10
Minor Road Crossings	10
Fish Habitat and Enhancement Structures	8
Intake and Outfall Structures	6
Agricultural Activities	5
Agricultural Crossings and Ramps	4
Small Docks and Boat Launching Ramps	2
Total Stream Encroachment Permits	84

recommendations for these areas, which include the 10-car parking lot in the front of our building. This lot was constructed in 2000 to showcase seven different types of infiltration pavers, a relatively new concept at that time.

Using funds raised in our “Sustaining Conservation” campaign, we plan to replace the variety of permeable pavers in this front demonstration lot with just one type in 2016. The lot behind the building as well as sidewalks around the building also will be redone, but with a variety of permeable paving systems and so become the new demonstration area.

Monitoring equipment will be installed to scientifically measure how well the new systems are working.

At the Derry Community Pool, we helped to **transform abandoned tennis courts into a new parking lot with expanded areas of grass, trees, and 30 permeable parking spaces** to infiltrate rainwater.

This was one of several projects in the larger, McGee Run Watershed conservation project, financed by a grant from the Watershed Restoration Protection Program, which is administered by the (Pennsylvania) Commonwealth Financing Authority, and the Foundation for Pennsylvania Watersheds (see page 22).

Allegheny County Conservation District has been reorganizing and rebuilding in recent years, and one of the most significant steps it has taken is to create a stormwater management program.

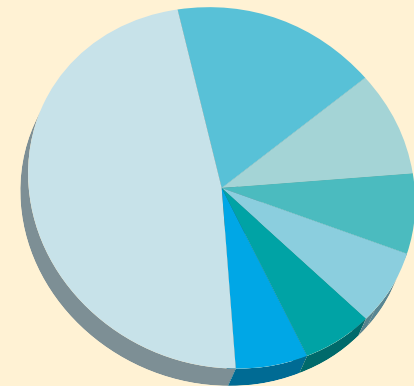
Managing stormwater is an effort that is above and beyond the responsibilities Pennsylvania delegates to districts. The fact that Allegheny County Conservation District made this additional commitment nonetheless reinforces what the Westmoreland Conservation District has long maintained: that

managing stormwater needs to be a priority in our region.

We are very gratified that Allegheny County Conservation District is joining with us in this effort, and during the year we worked together to apply for a **\$208,000 grant from Growing Greener.** The application was successful and the money **will be used for a joint project to manage stormwater in the Turtle Creek Watershed**, portions of which are in both of our counties.

The project includes a number of stormwater management practices, including demonstrations

2015 Stormwater Plans by Municipality



Hempfield Township	17
Unity Township	9
Murrysville	7
Penn Township	7
Rostraver Township	6
Salem Township	6
Municipalities with 5 or fewer	47
Total Stormwater Plans	99



Work continued on a multi-year effort to help municipalities improve the functioning of older stormwater ponds, including this one in Penn Township. Well-functioning stormwater ponds help reduce the risk of flooding and benefit water quality.

in visible public areas – a rain garden at the Gateway School District campus, a stormwater basin retrofit at Monroeville Senior Citizen Center, and permeable pavement installation at the Monroeville Library – in addition to four municipal stormwater basin retrofits in neighborhoods in Murrysville, and four municipal stormwater basin retrofits in neighborhoods in Penn Township.

Construction is scheduled to begin in 2016.

The Pennsylvania Department of Environmental Protection has delegated responsibility to us for **reviewing post-construction stormwater management plans.** These plans are required from anyone

who undertakes a project that disturbs more than one acre of ground.

Our District stormwater staff review these plans to assess how the project, when completed, will impact the volume of stormwater runoff and water quality.

During the year, our staff reviewed 49 such plans for projects that included:

- Speedway gasoline/convenience stores in Unity, Murrysville, and Salem townships
- Penn Crossing senior housing in Penn Township
- PennDOT's interchange upgrade in New Stanton

- Excelsa Health Orthoplex in Hempfield Township and
- Marian Woodlands housing development in Rostraver Township.

Thanks to a Growing Greener grant received in 2013, we were able to **continue a program of retrofitting older stormwater ponds owned by municipalities in the county, this year focusing on four ponds in Penn Township.**

The municipality provided a match for the grant money, which was used to upgrade the structures' design and technology so that they do a better job of holding back rainwater. Well-functioning stormwater basins help reduce the risk of flooding and benefit water quality.

Our annual **Engineers' Workshop drew a record crowd – more than 380 participants from 10 area counties.**

Keynote speaker Dr. Robert Traver, PE, professor of civil and environmental engineering at Villanova University, showed the variety of green infrastructure in place in Villanova's stormwater research and demonstration park – including rain gardens, a bio-infiltration traffic island, and a green roof – and the data gathered on the effectiveness of each.

Also presenting on topics ranging from working with contractors, wetland regulations, and implementing erosion and sediment control were Darl Rosenquest, PE, PG, senior engineer with Pennsylvania's Department of Environmental Protection; Larry Gasparato, project specialist with PENNVEST; Pat Gavaghan, owner and senior ecologist with Ecotune Environmental Consultants; Art Gazdik, PE, principal of Groundwork Civil; John Heyl, PE, engineering manager with Lennon, Smith, Souleret

Engineering, Inc.; and members of the District's stormwater staff.

Workshop attendees earn professional development hours, which can be applied to their Professional Engineer license renewal and other certifications.

Early in the year, **7,500 copies of the booklet we adapted for southwestern Pennsylvania – Homeowner's Guide to Stormwater – were printed and distributed to local municipalities.**

About two-thirds of municipalities in Westmoreland County are required to meet federal requirements regarding stormwater management, one of which is public education and outreach. This booklet helps them meet that requirement.

The booklet received good secondary distribution, including postings on many municipal websites and a reprinting in its entirety in the Hempfield Township "Headlining Hempfield" township newsletter.

The booklet also underwent a second printing of an additional 3,000 copies during the year by the Allegheny County Conservation District.

Partners on this project, partially funded by the Water Resources Education Network, included Penn's Corner Conservancy and Charitable Trust, Allegheny County Conservation District, Westmoreland County Planning Department, City of Pittsburgh, Allegheny County, and Penn State Extension.

STABLE SOILS

Perhaps the largest infrastructure project currently under way in Westmoreland County is the **\$54-million upgrade of the Center Avenue/Interstate 70 interchange in New Stanton.**

The project, which began construction in September, will involve six phases over a period of about three years and alleviate traffic conflicts caused by the close proximity of the Hunker, New Stanton, and Pennsylvania Turnpike interchange ramps.

Our senior erosion control specialist inspected the large, complex work site eight times during the last four months of the year to ensure that erosion was held in check during the initial work on the highway project, which involved demolition of some buildings, relocation of utilities, the addition of four stormwater retention ponds, and a very large earth-cut to make room for new ramps and travel lanes on Interstate 70. Roundabouts – circular traffic junctions in which vehicles move in one direction without stop lights – also will be built on both sides of the interstate.

Our erosion and sediment control specialist conducted regular field inspections on the **Lower Burrell sanitary sewer project**, a 50-linear-mile community infrastructure upgrade.

During the course of her many inspections, our specialist discovered that the project overseers had failed to obtain the necessary permits, including wetland crossing and stream crossing permits; that the contractors were working from plans that had not been approved; and that lack of erosion controls meant that direct sediment pollution was occurring from the 31.5-acre project area.

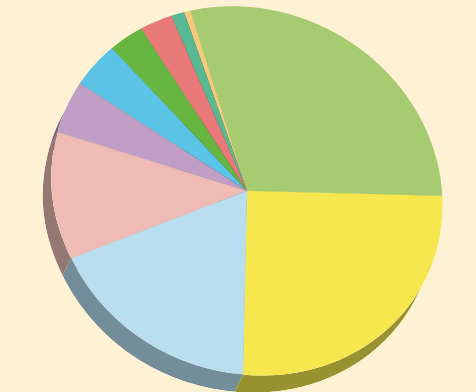
We notified the project engineer of these problems and he subsequently applied for and obtained

all the necessary permits.

By the end of the year, the sewer line and its associated pumping station were complete, but site restoration is still to be done and erosion issues remain.

The large number of infractions of Pennsylvania law, the absence of good conservation practices, and the significant pollution caused by this project mandated that we refer it to the Pennsylvania Department of Environmental Protection for enforcement

2015 Erosion and Sedimentation Control Plan Reviews by Watershed



Loyalhanna Creek.....	55
Sewickley Creek.....	50
Turtle Creek	33
Kiskiminetas River.....	21
Youghiogheny River.....	9
Jacobs Creek	8
Pucketa Creek/Allegheny River	6
Conemaugh River.....	5
Indian Creek.....	2
Monongahela River	1

Total Plan Reviews190



Map courtesy of the Pennsylvania Department of Transportation

Aerial view of the proposed design of one of the largest infrastructure projects currently under way in Westmoreland County – the \$54 million upgrade of the Center Avenue/Interstate 70 interchange in New Stanton. Our staff inspected this large, complex work site eight times during the last four months of the year to make sure erosion was minimized.

action, the outcome of which was still pending at year-end.

Our technical staff joined state and other county conservation officials in Harrisburg during the year to **coordinate their technical reviews of a new, cross-state pipeline project proposed by Sunoco Pipeline**. At the end of the year we were continuing to work with the company to make revisions and additions to their plans.

This project, known as the Pennsylvania Pipeline, will cross more than 300 miles of Ohio, West Virginia, and Pennsylvania. In our county, it will travel for some 35 miles, following much the same route as the Mariner East pipeline that Sunoco built several years ago. That pipeline entered Pennsylvania at Houston and traveled eastward to Philadelphia.

In Westmoreland County, the new 20-inch Pennsylvania Pipeline will be installed in or adjacent to the same the right of way created for Mariner East as it travels from Houston to Delmont. When the new pipeline reaches Delmont, a pump station will be built, and the pipeline will connect to it before it continues on its journey east, following another existing pipeline right of way to Philadelphia.

Overall, the Pennsylvania Pipeline Project will disturb 365 acres of soil, create 148 stream crossings, and initiate other activities in Westmoreland County that will be regularly inspected by our District staff to ensure good conservation of our resources.

In 2015, our technical staff **reviewed five separate plans and permit applications for a proposed natural-gas-fired electric-generating plant in**

South Huntingdon Township.

Our staff also met multiple times with company officials to ensure that good conservation practices to prevent erosion and manage stormwater would be put in place at the site.

Late in the year, the company began clearing land for the power plant, which will have capacity to create 925 megawatts of electricity, enough power to meet the energy needs of some 925,000 homes.

Construction is scheduled to begin in the spring of 2016.

In 2015, the Westmoreland Conservation District conducted **73 pre-application/application meetings with those applying for a National Pollutant Discharge Elimination System permit**.

Any activity – such as building a house or strip

mall – that disturbs one or more acres of ground is required to obtain this NPDES permit before work begins.

Pre-application/application meetings help ensure that the applicant's permit package is complete when it is submitted, which makes for quicker review time.

A series of **three workshops was held for employees of the Municipal Authority of Westmoreland County** to explain various erosion and sediment pollution controls that can be used when they are on the scene of a water-line break or other emergency. These controls minimize the amount of sediment, mud, and other pollution that can get into nearby streams and catch basins.

We recommended that the authority consider purchasing a number of sediment filter bags, which are durable, reusable, and can be easily put in place by hand on ground or paved surfaces. These filter bags are effective in preventing suspended soils from contaminating area streams and wetlands.

We worked with Ligonier Township on developing the sections of their new zoning ordinance that relate to erosion and sediment control, stormwater management, timber harvesting, grading, and so on.

The new ordinance helps ensure that any work being done in the township will have conservation measures in place.

We also met with township officials to discuss revising our Conservation Partnership Agreement with them (see page 17). It now contains an agreement that the township will not issue its grading permit until the District issues its erosion and sediment pollution control permit.

During 2015, **three dirt and gravel roads and five low-volume roads were improved in area communities.**

Some \$116,700 was invested to improve sections of three **dirt and gravel roads**, making them more passable for drivers and reducing erosion and the amount of sediment getting into nearby streams. Improvements included grade breaks, in-stream stabilization structures, and Driving Surface Aggregate.

Some \$133,900 was invested to improve sections of five **low-volume roads**, some of which may be paved or tarred and chipped. Improvements included crosspipes, conveyor belt diversions, and French mattresses. Low-volume roads are classified as those traveled by fewer than 500 vehicles a day.

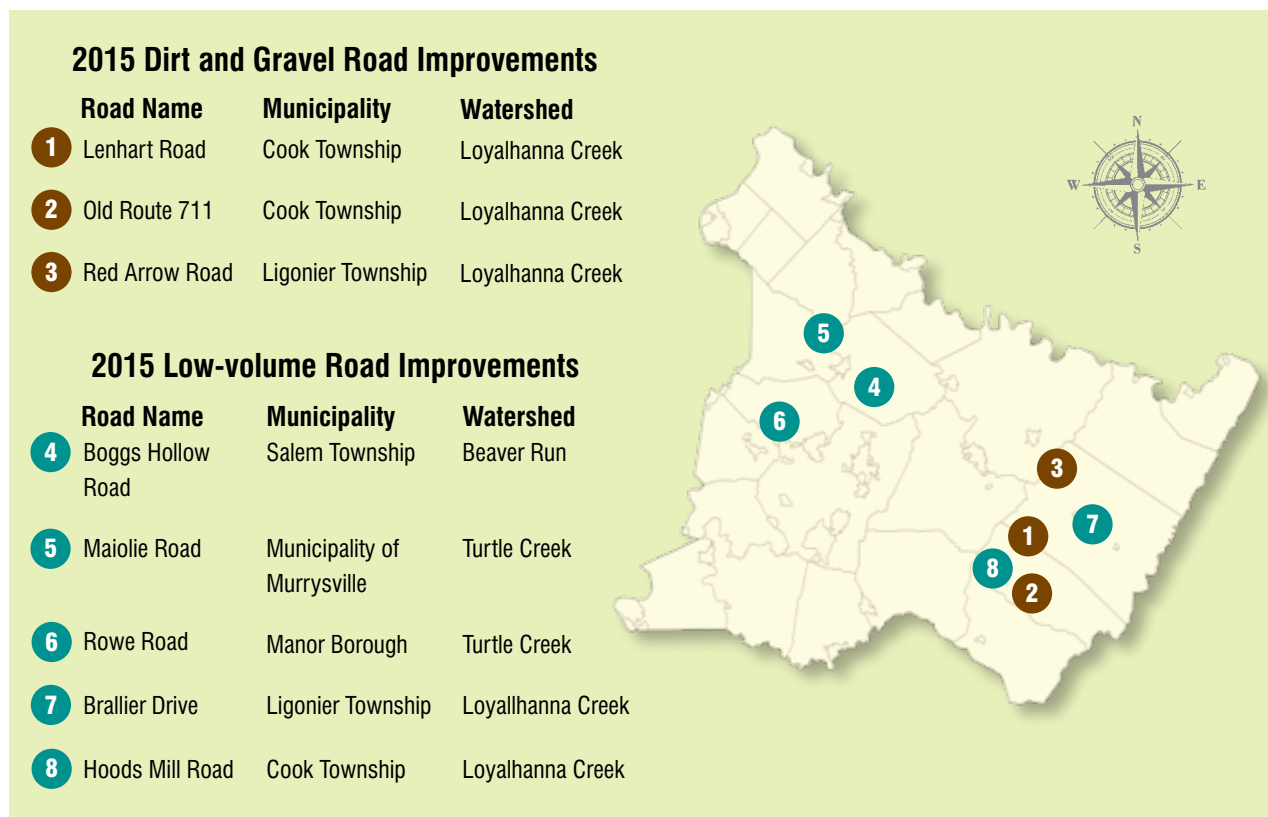
Our watershed specialist provided **design assistance and project management on work to improve about 1,200 feet of Misty Meadow Road**

in Mount Pleasant Township.

This unpaved road was so severely eroded that parts of it were as much as three feet below the level of the surrounding ground, and needed more than 100 tri-axle truckloads of shale rock to build it back up. A layer of fine gravel was laid down on top of the shale and drainage also was added to move water away from the road.

In 2016, the new road surface will get its final surface treatment, with Driving Surface Aggregate, a specification developed by the Penn State Center for Dirt and Gravel Roads Studies.

The Misty Meadow road-improvement project was initiated by the Western Pennsylvania Conservancy, with funding from the (Pennsylvania) Commonwealth Financing Authority.





Portions of Misty Meadow Road in Mount Pleasant Township were so severely eroded that they were as much as three feet below the level of the surrounding ground. More than 100 tri-axle truckloads of shale rock were needed to build the road surface back up.

Our erosion control staff was invited to speak at the PennDOT winter construction conference at California University in January.

More than 100 people, including inspectors, supervisors, and maintenance personnel attended and heard our staff explain what they should be looking for when inspecting best management practices and conducting maintenance of the controls.

We updated our **Chapter 102 Erosion Control Fact Sheets** and shared them with all Westmoreland County municipalities.

Chapter 102 refers to a section of the Pennsylvania Code that requires earthmovers to follow erosion control and stormwater management practices.

In November of 2010, significant changes were made to this code, including a change in the size – from five acres to one acre – of construction sites that are required to obtain a National Pollutant Discharge Elimination System permit. This change means that many smaller construction projects, including some residential ones, now must obtain this permit before work can begin.

To ensure that information about this change and other requirements related to meetings, reports, permits, buffers, and so on was getting to the public, we distributed this new fact sheet by mail, in our workshops during the year, and in a post on our website.

We hosted a **Municipal Roundtable** in February at our headquarters. Forty-two Westmoreland County municipal officials attended the event, in which our staff shared information on Chapter 102 erosion control (see previous item); bridge maintenance; stream encroachment requirements; the Dirt, Gravel, and Low Volume Road Program; and Conservation Partnership Agreements, which are documents that outline how the District and the municipality will work together to minimize the impact of development on the natural resources in that area.

Subsequently, **we met with seven area cities, boroughs, and townships in the county and updated our agreements with them.**

We now have Conservation Partnership Agreements with 31 of the 65 municipalities in Westmoreland County. Our goal is to review and update them every five years.

Our March workshop, **After the Storms: How to Repair and Maintain Gravel Driveways and Unpaved Lanes**, drew some 40 participants in two sessions, held in Allegheny and Ligonier townships

respectively.

Participants learned how to make cost-effective repairs to their unpaved access areas and prevent erosion problems in the future. They also each received a voucher, good for a visit to their home or business by our watershed technician during which she would assess their driveway or lane, make improvement recommendations, and provide technical guidance.

Twenty-five of the participants requested and

2015 Erosion and Sedimentation Control Inspections by Municipality

Unity Township	60
Hempfield Township	54
Ligonier Township	36
Penn Township.....	19
North Huntingdon Township	17
Derry Township.....	16
Murrysville.....	16
Mount Pleasant Township.....	15
Salem Township.....	12
Allegheny Township	12
Rostraver Township.....	11
East Huntingdon Township	11
Donegal Township.....	9
Ligonier Borough.....	8
Fairfield Township.....	6
Lower Burrell	6
Townships with 5 inspections or fewer ...	52
Total Inspections.....	360

received this on-site visit by year-end and at least one of them, Adam Eidemiller Inc., implemented the suggestions we provided. During the first six months of 2016, we will be following up with all those we visited to see if they implemented the suggested practices.

The on-site visits were partially funded by a grant from the Pennsylvania Association of Conservation Districts.

Abandoned mine drainage discharges along Pine Run, a stream in Allegheny Township that

flows directly into the Kiskiminetas River, have been contaminating both waterways for many years.

In 2006, two of these discharges were captured and piped to within 200 feet of the confluence of Pine Run and the river. This significantly improved the water quality in about 1,000 feet of Pine Run, but did nothing to improve the water quality of the river. The location of the new discharge also prevents aquatic life from the river from entering the stream.

In 2015, we asked Trout Unlimited to fund a study exploring the possibility of capturing this new discharge and piping it to a nearby sewage treatment

plant where it could be treated.

The study was funded, and conducted by Hedin Environmental in conjunction with the Kiski Valley Water Pollution Control Authority and the Kiski Watershed Association. Although treatment of the alkaline discharge would not involve the use of chemicals, the complexities of treating mine water at the sewage treatment facility were formidable.

In an attempt to find an alternative solution, we currently are investigating the possibility of building a passive treatment system, such as a series of wetlands, at the southern end of the sewage-treatment plant's property.



Before (left) and after (right). Work done by Adam Eidemiller Inc. to stabilize an access road on one of its properties in Greensburg, using information learned during the District's driveway workshop.



Photo by Gary Wilson

Aerial view of the confluence of Pine Run and the Kiskiminetas River, showing the orange plume of abandoned mine drainage. The sewage treatment plant is just to the right of the plume.

In early April, we **hosted a capacity-building/networking dinner for all Westmoreland County watersheds.**

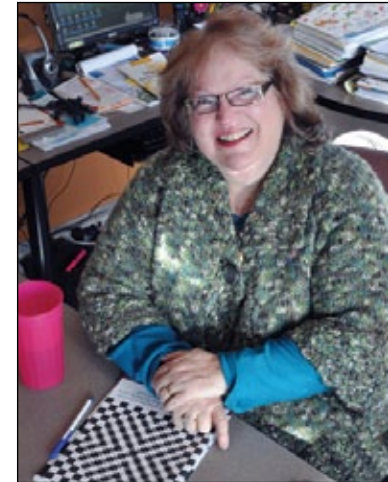
The program featured Peggy Outon, executive director of the Bayer Center for Nonprofit Management at Robert Morris University, who spoke on nonprofit board development, and Todd Whiteman,

nonprofit insurance specialist with Enscoe Long Insurance Group of Bridgeville, who spoke on insurance coverage needed for hosting watershed events.

The event was extremely well-attended, with Kiski, Turtle Creek, Sewickley Creek, Mountain, Jacobs Creek, and Loyalhanna watershed associations

and the Conemaugh Valley Conservancy represented.

The event was partially funded by a grant from the Foundation for Pennsylvania Watersheds.



Peggy Outon, executive director of the Bayer Center for Nonprofit Management at Robert Morris University, spoke on nonprofit board development at a dinner we hosted for area watershed groups.

FORESTRY

Our watershed-wide conservation project in McGee Run in Derry Borough and Derry Township (see page 22) included **developing a Forest Stewardship Plan for a portion of the largest privately owned forested tract in Westmoreland County.** About one-tenth of this 5,000-acre tract drains into the main stem of McGee Run.

As part of our overall conservation effort in this watershed, our forester performed an extensive inventory and evaluation of the nearly 500 acres of this large property that lie just south of Ridge Road. This woodland contains some plantings done in cooperation with the American Chestnut Foundation and the Pennsylvania Game Commission.

He looked at things such as the age and height of the trees, the density of the stand, the conditions

2015 Forest Management Plans

Acres	Municipality	Watershed
160	Donegal Township	Loyalhanna Creek
120	Municipality of Murrysville	Turtle Creek
85	Derry Township	Loyalhanna Creek
80	Hempfield Township	Sewickley Creek
60	Municipality of Murrysville	Turtle Creek
49	Ligonier Township	Loyalhanna Creek
40	Unity Township	Sewickley Creek
35	Washington Township	Pucketa Creek
33	Unity Township	Loyalhanna Creek
10	Donegal Township	Indian Creek
8	Hempfield Township	Sewickley Creek
8	Unity Township	Loyalhanna Creek
4	N. Huntingdon Township	Brush Creek

Total Acres: 692



Our forester Tony Quadro checks a woodland floor in the McGee Run Watershed for signs of regeneration, and notes a number of red oak seedlings.

of the understory, the habitats for wildlife, and the types of tree species present and, from this, developed a management plan that suggests treating invasive and interfering species, encouraging the regeneration of oaks, and doing some improvement cutting where the over-story is too dense. He also suggested installing deer fencing to help the forest's regeneration.

This Forest Stewardship Plan was submitted to the Pennsylvania Bureau of Forestry's Forbes District Service Forester for her review, which was pending at year-end. Once the plan is approved, it will be shared with the woodland owner who is free to decide which, if any, of these recommendations

she wishes to implement.

Our forester spoke on Roads and Trails for Working Forests at the second-ever Private Forest Landowner Conference, held March 20-21 at the Blair County Convention Center, Altoona.

His talk was attended by 25 people and covered planning, locating, designing, building, and maintaining roads and trails that allow owners to access their woodlots in a way that does not create unnecessary erosion.

He explained how to check soil types, elevations and boundaries of a property; illustrated

some conservation best management practices; and detailed what permits may be needed for building trails and roads.

The Center for Private Forests at Penn State organized the event.

We hosted a **Loggers Workshop** at our headquarters this year, in cooperation with the Pennsylvania Sustainable Forestry Initiative.

Chuck Coup, program manager with SFI, discussed statewide regulations for loggers and our forester presented information on best management practices, how to do erosion and sediment control plans, obtaining permits, and helpful information resources, including the web-based soil survey.

The 13 attendees also had an opportunity to apply this information by taking a walk through nearby Ann Rudd Saxman Nature Park and developing a plan for how they would approach logging it (no logging is actually planned for this site).

By attending the workshop, these loggers become qualified by the Sustainable Forestry Initiative, which commits them to conforming to a set of standards that include maintaining forest productivity and health and protecting water quality and biological diversity. Loggers often need SFI training to be able to bid on and buy certain tracts of timber.

Our forester prepared **forest management plans for 13 properties** in our county during the year.

He visited each property, took an inventory, and evaluated each woodlot on a number of factors, including species' age and the amount of invasive species present. From this, he prepared a brief overview of each lot along with basic recommendations on how to manage it.

Forest management plans are much less detailed than a Forest Stewardship Plan.

SUSTAINABLE COMMUNITIES

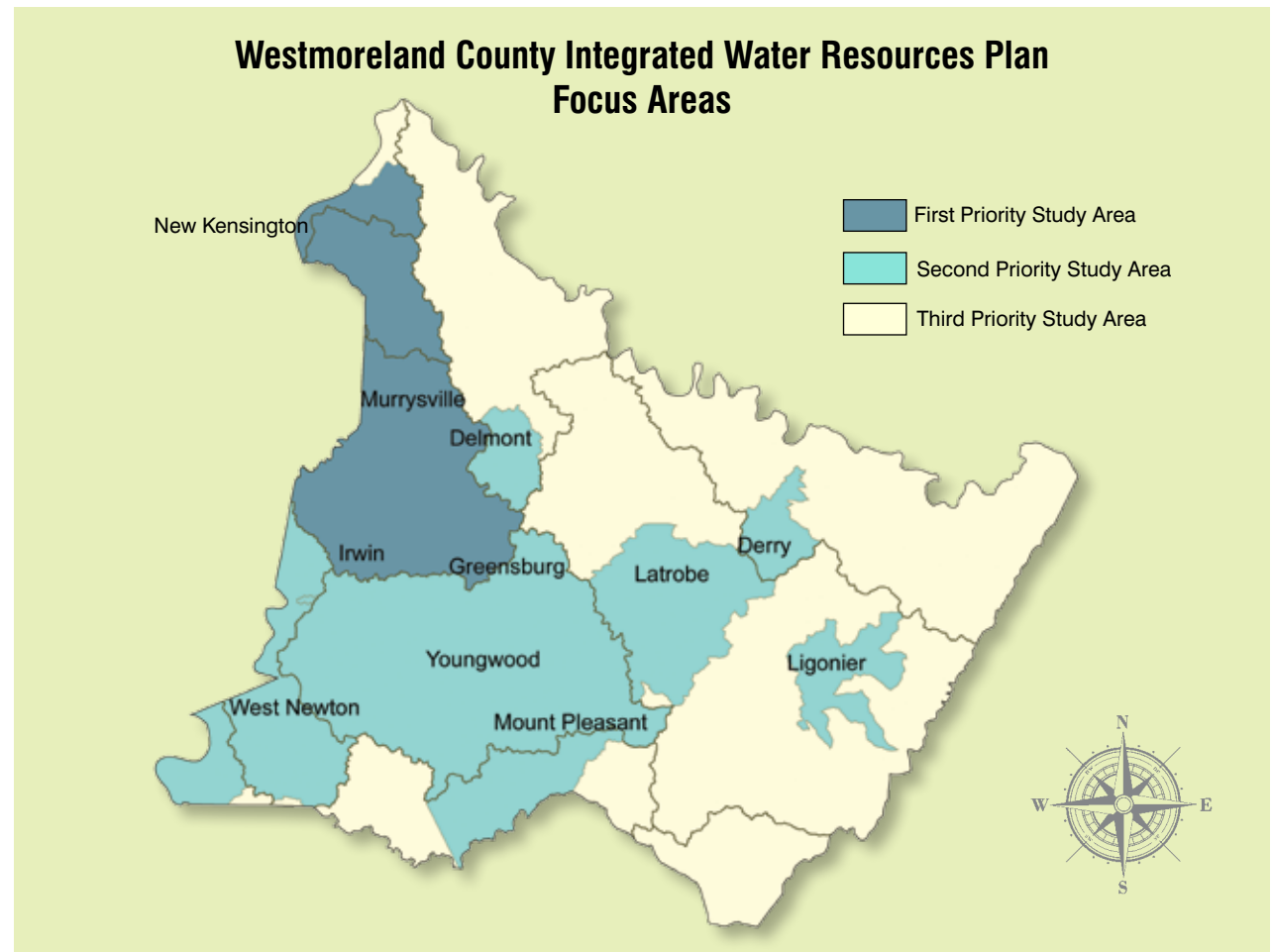
The Westmoreland Conservation District has gathered a wealth of information over the years about drainage problems, runoff characteristics, floodplain areas, and a host of other current and projected water-related conditions in watersheds in Westmoreland County.

We have long wanted to have the ability to more deeply analyze this data and, from it, **develop a county-wide, watershed-based plan for managing our water resources.** With funding obtained from

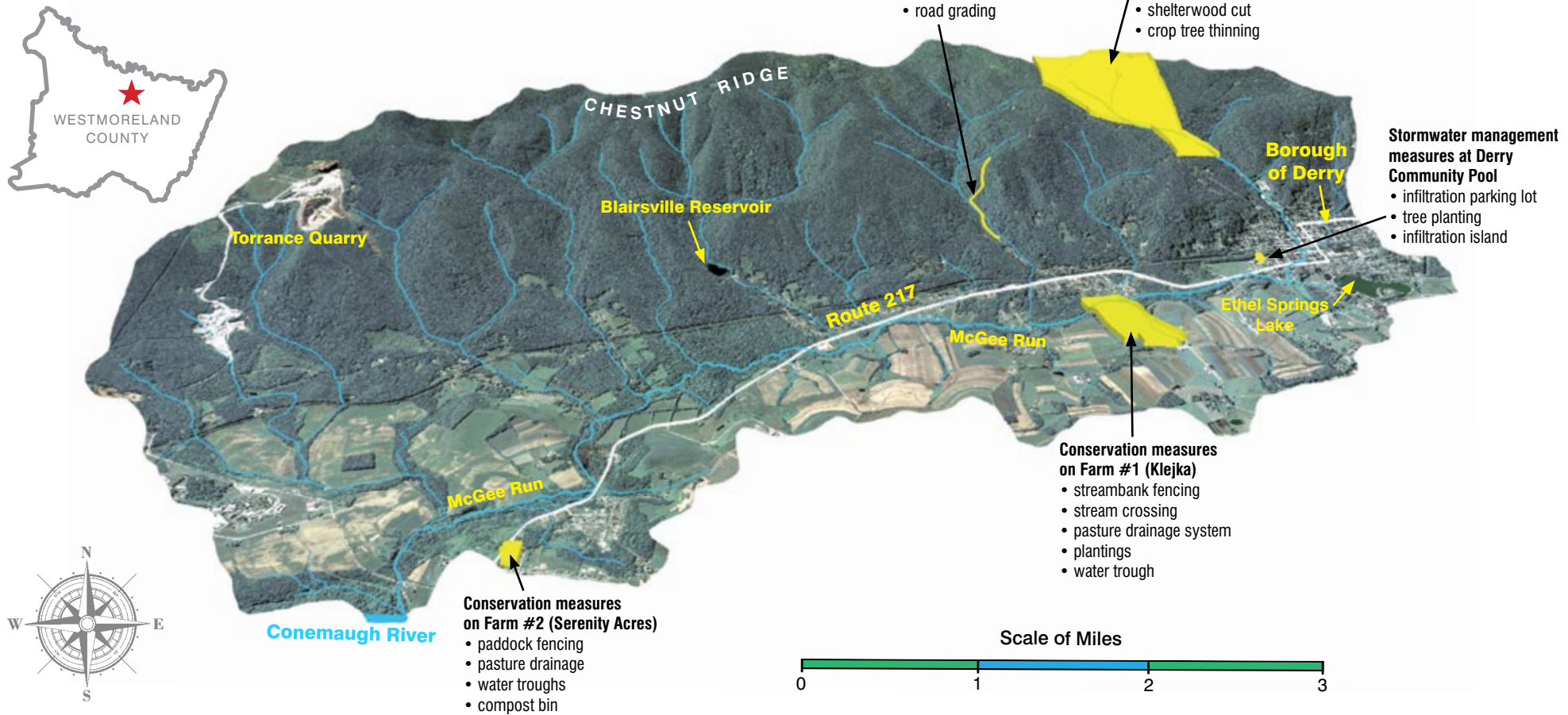
the Richard King Mellon Foundation during 2015 in our “*Sustaining Conservation*” campaign we can now begin to do that.

During the year, we took the first steps: obtained authorization from the county to proceed with the project, identified a consultant to do watershed modeling, and started gathering information and using it to create raw data on topography, soils, type of land cover, and so on.

We also began to identify the key agencies/organizations that should be involved in this process and the first Westmoreland County watersheds we will



Conservation Improvements in the McGee Run Watershed (Derry Borough/Derry Township)



focus on: Turtle Creek and Pucketa Creek.

A county-wide water management plan can do a number of important things, including creating better quality of life in local communities by reducing the risk of flooding.

The plan also will lead to drinking-water quality improvements, sewage and septic system improvements, and better management of water's role in development, agriculture, and recreation.

The plan will be a meaningful guidance document for the major users of our county's water and for those

who help ensure its quality. It also will help to protect the county's exceptional-value and high-quality streams, and encourage remediation of impaired streams.

We put in place all but one of the **conservation projects we identified for the McGee Run Watershed during the year**, installing a variety of conservation measures on two farms and stormwater management practices at the Derry Community Pool, and developing a stewardship plan for a 500-acre woodlot

(see pages 9, 12 and 20). In 2014, we completed the first project in this effort, improvement of one-half mile of Millwood Road, the longest dirt and gravel road in Westmoreland County.

The final project, an innovative-design compost bin, will be installed in early 2016.

This McGee Run watershed-wide conservation project was funded with a \$300,000 grant from the Watershed Restoration Protection Program, which is administered by the (Pennsylvania) Commonwealth Financing Authority, and a \$20,000 grant from the

Foundation for Pennsylvania Watersheds.

In 2015, the District was awarded \$92,963 to **stabilize the streambanks in five locations along Turtle Creek in Murrysville**. The money was provided by the state's Growing Greener program and will be used to add rip rap and to plant trees as a means to shore up some of the stream's steep and eroding slopes, including one with a precarious 15-foot drop.

A combined total of about 1,000 linear feet of slopes will be stabilized in this area near the Franklin Township Sewage Treatment Plant, and will then become the base for the Turtle Creek Trail extension



One of the severely eroded streambanks along Turtle Creek that will be stabilized with rip rap and trees, thanks to a grant received in 2015. This area will become the base for the Turtle Creek Trail extension of the Westmoreland Heritage hiking/biking Trail.

of the Westmoreland Heritage hiking/biking Trail.

Thanks to state-initiated changes in 2014 to the dirt and gravel road program, every municipality in Westmoreland County now has roads that are eligible to receive funding from this program, which is now referred to as the Dirt, Gravel and Low Volume Roads program.

As a result, **19 municipalities in our county applied for funding to improve low-volume roads and 14 municipalities in our county applied for funding to improve dirt and gravel roads during 2015**.

These applications will be assessed by a three-person panel that includes representatives from the Westmoreland Conservation District, the Fish and Boat Commission, and the Natural Resources Conservation Service. Awards will be announced in early 2016.

We added a new section to our website – **a portfolio of some of the conservation best management practices** that our staff have helped to put in place in various communities.

The 26 case studies show real-world applications of stormwater management, watershed restoration, dirt and gravel road improvements, and agricultural practices.

They provide cost information, technical details, and performance data on measures such as the use of soil-containment systems for urban street trees in Vandergrift and a French mattress and conveyor belt diversions at the Westmoreland Fairgrounds.

Our watershed specialist and watershed technician worked with the **Sewickley Creek Watershed Association and Sewickley Township to make improvements at the Lowber passive-wetland**

abandoned mine drainage treatment site.

Improvements included adding a second location where visitors can park and access the series of treatment ponds, developing a mowing plan for the treatment area, and adding a canoe/kayak launch.

The new treatment-pond access location is at the opposite end of the system from the original parking/access point and relieves visitors from having to walk nearly one-half-mile to see all seven ponds and return to their vehicles.

The new access point provides gravel parking for three vehicles and a set of steps to get to the ponds. Installation was done by Sewickley Township, which also offered to implement a plan our watershed technician developed for keeping the area around the ponds mowed. Mowing is critically important for the correct functioning of the treatment ponds because the roots of trees and other large vegetation can cause the embankments that separate the ponds to fail.

The third improvement was the addition of a canoe/kayak launch across the road from the Lowber treatment site, next to Sewickley Creek. This area also will provide convenient access to the stream for those who like to fish. The canoe/kayak/fishing access site was installed by Adam Eidemiller Inc.

The work at Lowber was funded by grants obtained by the Sewickley Creek Watershed Association from the Western Pennsylvania Conservancy and the Foundation for Pennsylvania Watersheds.

Our staff also assisted **Sewickley Creek Watershed Association in creating an anoxic limestone drain to clean abandoned mine drainage that was polluting Andrews Run** in Sewickley Township.

Land was excavated and 260 tons of limestone rock was buried near the groundwater discharge.

When the highly acidic polluted water flows through this rockbed, its pH is raised, which means that pollutants such as iron and magnesium drop out of the water more readily.

Phase II of the cleanup project will involve the creation of treatment and polishing ponds, which will be built in 2016.

The work on Andrews Run is funded by a \$183,000 grant from Growing Greener.

Our watershed staff was instrumental in **helping the Turtle Creek Watershed Association develop a website, www.turtlecreekwatershed.org, and in obtaining insurance coverage**, thanks to a Western Pennsylvania Conservancy/Dominion Watershed Mini Grant.

During the year, our staff also helped the watershed association apply to the same program for another grant to develop signage along Turtle

Creek and the Turtle Creek Trail extension of the Westmoreland Heritage hiking/biking Trail.

Our visual communications specialist and hydraulic engineer worked with Sewickley Creek Watershed and the City of Greensburg to **develop interpretive signs for the stormwater management practices installed at the Lynch Field recreation complex in Greensburg.**

Five 12" X 14" signs each describe one of the conservation best management practices: rip rap, jack dam, geoweb, shade trees, and deflectors, underwater structures designed to slow down the flow of the stream.

A large, two-sided kiosk explains the value of Lynch Field as a natural flood plain, as well as the historic uses of the site. All signs include a QR code that connects to the Sewickley Creek Watershed Association website.

Funding for this project was provided by a grant to Sewickley Creek Watershed Association from the Bridgestone Americas Trust Fund. The grant was facilitated by Firestone Building Products, LLC of Youngwood.

Eighty students from eight area high schools participated in the 2015 Envirothon at Twin Lakes Park. Burrell, Franklin Regional Senior, Greater Latrobe, Greensburg Central Catholic, Mount Pleasant Area Junior-Senior, Norwin, Southmoreland, and Yough Senior high schools entered a total of 16 teams in the competition, which tests students' knowledge of the natural world and their role in it.

For the second year in a row, Norwin High School won the event and went on to participate in the statewide competition. Yough Senior High School took second place and Southmoreland High School captured third place.



Improvements at the Lowber passive-wetland abandoned mine drainage treatment site included mowing the area around the ponds by Sewickley Township, and the creation of a canoe/kayak launch on Sewickley Creek.



New interpretive signs at Greensburg’s Lynch Field recreation complex inform visitors about the property’s importance in managing stormwater and helping water quality in Jack’s Run.

Partnering with the District to host the Envirothon were: Penn State Extension, the Pennsylvania Department of Conservation and Natural Resources – Bureau of Forestry, the Pennsylvania Department of Environmental Protection, the Pennsylvania Fish and Boat Commission, the Pennsylvania Game Commission, the Westmoreland County Bureau of Parks and Recreation, and the United States Department of Agriculture Natural Resources Conservation Service.

Event sponsors were the Pennsylvania Envirothon, Inc. and Apex Energy, LLC.

Overall, the **29 education events that the District initiated or helped to host reached some 1,100 individuals** during the year with relevant information on how they can help steward our natural resources.



Members of the Norwin High School team, winners of the 2015 Westmoreland County Envirothon. (L to R) Lauren Kratzenberg, Maggie Lyons, Joyce Muchoney (team advisor) Brooke Blatney, Rachael Bindas, Caity Pietrusza.

ORGANIZATIONAL DEVELOPMENT

A 2014 strategic organizational evaluation identified key items – tools, scientific support, partnerships, and functional capacity additions – that would secure conservation’s position as a local imperative for the foreseeable future, benefitting all area citizens.

The “*Sustaining Conservation*” campaign was launched in late 2014 to raise funds to obtain those items.

2015 was the first full year of fundraising, and we were most gratified by the positive response we received from area foundations, businesses and philanthropists. We raised \$705,830 during 2015.

Added to the \$251,550 we raised during the last few months of 2014, we ended 2015 almost to our short-term goal of \$1.2 million, and 56% of the way toward our longer-term, \$1.7-million goal.

A complete list of 2014 and 2015 donors can be found on page 5.

As we were successful in our requests for funding in our “*Sustaining Conservation*” campaign, **we began applying the funds to the needs we identified.**

During 2015, we were able to complete the transformation of the carport on the lower level of our barn headquarters into four offices for six technical staff members, as well as to:

- begin work on an integrated water resources plan for Westmoreland County (see page 21);
- obtain monitoring equipment so that we can gather measurable data on the effectiveness of various conservation measures, including rate of runoff, amount of infiltration, and the amount and type of pollution present;



The Katherine Mabis McKenna Foundation was presented with the J. Roy Houston Conservation Partnership Award at our annual reception for its more-than-20-year support of the District.

Shown (l-r) are: Barry Kukovich of Peoples Gas, sponsor of the award; District Chairman Ron Rohall; Linda McKenna Boxx, Zan McKenna Rich, and Nathan McKenna Boxx of the foundation.

- install a much-needed new telephone system with a console and 18 receivers;
- add a rolling file for space-efficient storage of some 2,500 development plans and permits;
- replace our plotter;
- totally refurbish and upgrade our technical and contacts database (see page 27); and
- purchase office furniture.

Lack of a Pennsylvania state budget during 2015, coupled with an across-the-board decrease in funding to all county-supported agencies, made for some **challenging fiscal operations and budgeting.**

We took a variety of steps, including being more careful than ever with expenses. We reduced our bank fees, for instance, by changing our bank to Somerset Bank and Trust, Ligonier office. We also established a \$100,000 line of credit there during the year to bolster our operational reserve.

We were able to boost revenue by increasing fees for erosion and sediment control plan reviews. And

the major increase in funding to the Dirt, Gravel, and Low-volume Roads Program initiated by the state in 2014 resulted in an increase in the amount of money districts receive to administer this program. In 2015, this administration fee helped to partially fund several technical staff positions.

We undertook a **complete restructuring of our database** during the year, which had grown increasingly slow and plagued with error messages.

The new database is more user-friendly and web-based, which will allow us for the first time to access it from any Internet connection. This remote-access feature, scheduled to be implemented in 2016, will allow our erosion control staff to file reports directly from the field, instead of the current system in which they complete paper forms by hand and then give this information to an administrative staff person to key it into the system.

Remote access capability also will enhance the quality of field reporting by allowing staff to directly enter photographs, such as photos of erosion control practices implemented on commercial and residential development sites.

The Katherine Mabis McKenna Foundation and Mike and Ina Bazley received awards at our annual reception and open house in September.

The McKenna Foundation received the J. Roy Houston Conservation Partnership Award for its more-than-20-year support of the District.

The McKenna Foundation has been a long-time supporter of co-locating like-minded conservation agencies, and supported this first in the McKenna Center circa 1972, then in Donohoe Center in 1994, and most recently, as the District and its sister agencies grew, on the expanded conservation campus in 1998, 2007, and 2014.



Mike and Ina Bazley received the Conservation Farmers of the Year Award at our annual reception for installing a number of conservation improvements on their 53-acre Derry Township farm to reduce erosion, encourage pollinators, limit sediment pollution, and improve pastures.

Shown (l-r) are: Westmoreland County Commissioner and District Board Member Ted Kopas; District Board Secretary Kim Miller; Ina and Mike Bazley.

The foundation helped expand and revitalize Ann Rudd Saxman Nature Park; create the Monastery Run Improvement Project, which used passive wetlands to treat a stream degraded with pollution from abandoned coal mines; support regional trail development, including the Great Allegheny Passage; and many other important conservation initiatives.

The Katherine Mabis McKenna Foundation is led by Chairman Linda McKenna Boxx, Vice Chairman Zan McKenna Rich, and Treasurer Nathan McKenna

Boxx, who all were in attendance at the reception to receive the award.

The J. Roy Houston Conservation Partnership Award is underwritten by Peoples Natural Gas, which also is the reception's major sponsor.

Mike and Ina Bazley, familiar faces at local farm markets for more than 22 years, were named **Conservation Farmers of the Year**.

The Bazleys have installed a number of conservation

improvements on their 53 acres in Derry Township to reduce erosion, encourage pollinators, limit sediment pollution, and improve pastures.

The two stabilized stream crossings and the pollinator-plant-rich buffers they created on both sides of the stream that flows through their farm, for instance, help to improve water quality in McGee Run, a stream and watershed that was the focus of a major conservation effort during 2015 (see page 22).

The Bazleys also installed an animal walkway to protect steep areas of their farm from erosion and

use two separate rotational grazing systems with a total of seven paddocks for the Texas Longhorn cattle and lambs they raise.

William Mihalco and Reid Crosby were named associate directors of the District in 2015.

William is a retired environmental engineer who serves on the Penn Township Zoning Hearing Board and is a member of the Allegheny County Local Emergency Planning Committee. He also is a volunteer with the Turtle Creek Watershed Association.

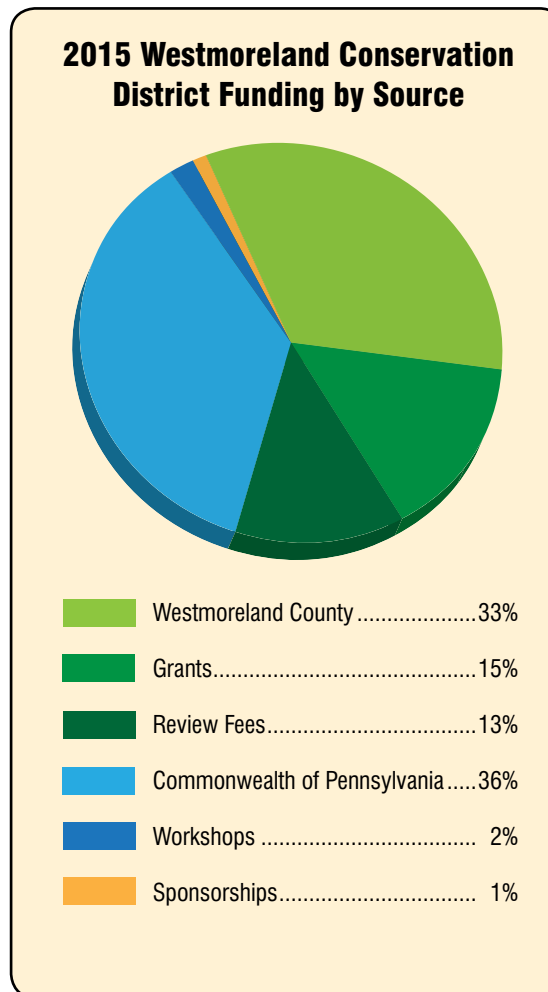
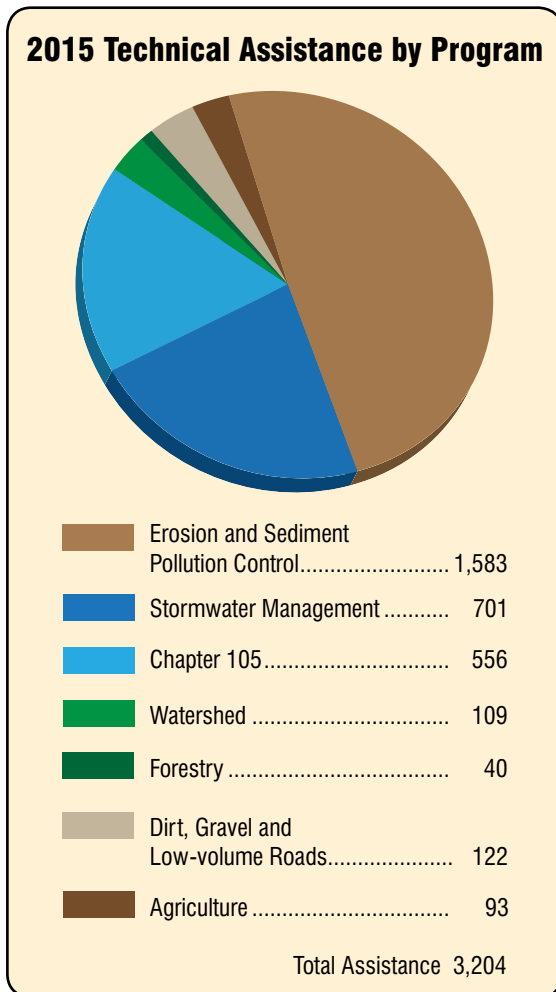
Reid is a woodworker, blacksmith, lumberman, artist, and small-scale farmer. He is a charter board member of Construction Junction and is a member of the Hempfield Citizens Zoning Review Board and the Westmoreland Beekeepers Association.

Community service is part of the job for many District staff members. Greg Phillips served the Regional Trail Corporation as a board member and president during 2015, and he and Tony Quadro also served on the board of the Westmoreland Land Trust.

Karen Barnhart and Mark Jackson lend their support to the Five Star Trail, Rob Cronauer volunteers with the Westmoreland Heritage Trail, Chelsea Walker serves with the Kiski-Conemaugh Watershed Association, and Jessica Thornton and Jim Pillsbury volunteer with Turtle Creek Watershed Association and Sewickley Creek Watershed Association respectively.

Four policies were adopted during the year, including those related to the following.

- Resolving manure-related complaints
- Resolving accelerated soil erosion complaints on agricultural lands
- Nominating individuals for the Hall of Honor
- Volunteer agreement to hold harmless



FINANCIAL STATEMENT

Concise Statement of Financial Position

Combined Funds - December 31, 2015

ASSETS

Cash	\$ 1,052,860
Accounts Receivable	\$ 267,984
General Fixed Assets	\$ 334,659
Total	\$ 1,655,503

LIABILITIES AND NET ASSETS

Current Liabilities	\$ 159,937
Net Assets	\$ 1,495,566
Total	\$ 1,655,503

Concise Statement of Activities

Combined Funds - Year Ending December 31, 2015

SUPPORT

Westmoreland County	\$ 728,385
State Grants	\$ 658,633
Admin. Services	\$ 94,452
Consulting, Planning & Fees	\$ 280,965
Room Rental/Interest	\$ 4,436
Unclassified Operating Revenues	\$ 56,651
Grants & Contributions	\$ 533,504
Special Projects/Intergovernmental	\$ 323,462
Total	\$ 2,680,488

EXPENDITURES

General Conservation	\$ 1,547,060
Special Projects	\$ 532,598
Capital Outlays	\$ 226,594
Other	\$ 20,309
Total	\$ 2,326,561

Net Change in Fund Balance	\$ 353,927
Fund Balance - Beginning	\$ 836,330
Fund Balance - End	\$ 1,190,257



Westmoreland County Commissioners Ted Kopas, Gina Cerilli, and Chuck Anderson.

We are very grateful to the Westmoreland County Commissioners, who allocate a major portion of the District’s funding, and whose long-time support has provided the foundation on which we have been able to grow.

With the county’s strong support, we have been able to attract significant additional dollars to Westmoreland County for conservation improvements. The commissioners also provide the campus on which the District and like-minded agencies reside. We plan to invest some \$300,000 from our “Sustaining Conservation” campaign in infrastructure improvements on this campus.



BOARD OF DIRECTORS

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Vice Chairman

Conrad Donovan
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Kim Edward Miller
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William Doney

Charles Duritsa

County Commissioner Ted Kopas

Paul R. Sarver

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Robert Pore

Theresa Gay Rohall

John Turack

Keith Walters

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District Manager/CEO

Anthony P. Quadro, Jr.
Assistant District Manager/Technical Programs Director/Forester

Karen Barnhart
Fiscal Administrator

Sandra Dzendzel
Director of Administration

Mark Jackson
Visual Communications Specialist

Sandra Donovan
Receptionist/Secretary

Technical Staff

James W. Pillsbury, MS, PE
Hydraulic Engineer

Kathryn Hamilton, RLA
Landscape Architect/Stormwater Technician

Matt Zambelli
Green Infrastructure Specialist (GIS)

Robert D. Cronauer
Watershed Program Manager

Chelsea Walker
Watershed Specialist

Christopher Droste
Senior Erosion Control Specialist

Jessica Kane
Erosion Control Specialist

Daniel Griffith
*Nutrient Management Specialist/
Agricultural Conservation Technician*

Kathleen Fritz
Technical Programs Administrator

Christie Sebek
Technical Programs Secretary

Educational Staff

Jen Novak
Education Program Coordinator

ADVISORY COMMITTEES

These committees are made up of community volunteers, District board members, associate board members, and staff members. We very much appreciate all the volunteers who provide their professional expertise and give their time to help develop and sustain the District's programs.

AGRICULTURE

Wayne Baughman
William Clouser
William Doney
Rita Coleman
Daniel Griffith
Dustin Heeter
Jim Kennedy
John Lohr
Kim Edward Miller
Gregory Phillips
Robert Pore
Betty Reefer
Paul Sarver
Gary Sheppard
Thomas Sierzega
Fred Slezak

COMMUNICATIONS

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Karen Jurkovic
Ted Kopas
Jen Novak
Gregory Phillips
John Turack
David Uhrinek
Matt Zambelli

DIRT, GRAVEL AND LOW-VOLUME ROADS PROGRAM

Robert Cronauer
Matthew Kauffman
Ron Rohall
Thomas Sierzega
Chelsea Walker

EROSION CONTROL COMPLIANCE

Matthew Kauffman
Charles Duritsa
Kim Edward Miller
Anthony Quadro

FORESTRY

Edward Callahan
Mike DiRinaldo
Tom Fitzgerald
John Hilewick
Anthony Quadro
Ron Rohall
Jessica Salters

GOVERNMENT RELATIONS

Joseph Dietrick, PE PLS
Charles Duritsa
Ted Kopas
Ron Rohall
Fred Slezak

TECHNICAL PROGRAMS

Andrew Blenko, PE JD
Chris Bova
Emil Bove, PLS
Lucien Bove, PE
Kevin Brett, PE
John Campfield
Robert Cronauer
Joseph Dietrick, PE PLS
Christopher Droste
Kathleen Fritz
Larry Gasparato
Kathryn Hamilton, RLA
Donald Hixson, PE PLS
Charles Kubasik
Brian Lawrence
Dallas Leonard
Suzy Meyer, RLA
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Les Mlakar
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Jen Novak
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On the Horizon

When we penned those words in 1994 for the back cover of our annual report, we had just moved into Donohoe Center, a brand new innovative, one-stop conservation service center.

And although we knew there was great potential here...and even though our vision was lofty...we never could have imagined that today Donohoe Center would be just one part of a larger, eight-acre conservation campus that now includes three buildings, including our own dedicated conservation District headquarters and education center.

When we look ahead, we can't know just what shape the future will take. But our "*Sustaining Conservation*" campaign is making sure that there will be enough potential to make it a reality.



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