

Mercer County Conservation District



2016 Annual Report

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Administration

The Mercer County Conservation District (MCCD) was established in March 4, 1957 under the authority of the Conservation District Law of 1945, Act 217, of the PA General Assembly. Thus established, we are a legal subdivision of state government. Our purpose is to promote the sustainability of the county soil and water related resources through policies and programs that help to realize that goal.

A seven-member board of directors sets policies, enters into contracts, approves expenditures, and oversees the District staff. All are volunteers appointed by the County Commissioners. They serve without pay but may be compensated for expenses incurred in carrying out their responsibilities. The board meets the first Monday of each month.

Staffing

The programs and Board policies are carried out by a staff of six full-time employees. One intern helped with education programs and grounds maintenance at Munnell Run farm in the summer. All are county employees whose wages and benefits are partially paid through grants from the PA Department of Environmental Protection and the State Conservation Commission. About 50% of the cost of Conservation District staff wages was reimbursed to the County Treasury.

Financial Management

MCCD seeks funding from a diversified field of sources to carry out our programs in order to minimize the reliance on county taxes. Grants (both privately and publicly funded), contract agreements, delegation agreements, fees for services, sale of conservation related items, and donations are among the revenue sources used by MCCD. The Munnell Run Farm Foundation, Inc., a 501 c 3 nonprofit organization, helps with financial support of our Agriculture and Environmental Education Center.

Most grant monies, including the Dirt & Gravel Roads and Growing Greener are earmarked for the special programs to which they apply and are not part of the general revenue stream. State funds are received on a reimbursement basis. The Unconventional Gas Well Fund augments the revenue stream with an allotment of \$57,159.09.

An audit is conducted each year by a certified auditor according to the "Yellow Book" standards for government audits.

MCCD continues to support Munnell Run Farm through staffing and financial assistance. MCCD also provided a grant of \$9,594.00 to help with Educational Center plan development.

MCCD programs and events are listed on our website, <http://mercercountycd.com/>

2016 Board of Directors

James P. Rust, Chair
Donald Koontz, Vice Chair
Fred J. Brenner, Treasurer
Jeffery Kremis, Secretary
Timothy McGonigle, Commissioner Member
Cornelia Sealand
Thomas Shaffer

Associate Director

Amy Reeher

Staff

Jay Russell, District Manager
Jennifer Richael, Office Manager
Robert McDonald, E&S Technician
Shawn Hedglin, Nutrient Management Specialist; E&S Technician
Jacqueline McCullough, EE Coordinator/Watershed Specialist
Larissa Cassano, EE Educator

Interns

Lexie Arkwright
Cassie Welsh
Leslie Armer

2016 Financial Reports

Balance Sheet as of 12/31/2016

ASSETS

Current Assets	
Petty Cash	100.00
Cash on Hand	47.40
Regular Checking Account	96,244.11
Clean Water Fund - 102	30,962.12
Clean Water Fund - 105	16,100.00
Dirt & Gravel Roads Account	141,174.90
DGR Low Volume Roads	137,329.50

Total Current Assets \$421,958.03

Property and Equipment	
Furniture and Fixtures	0.00
Total Property and Equipment	<u>0.00</u>

Total Assets \$421,958.03

LIABILITIES AND CAPITAL

Current Liabilities	
Sales Tax Payable	<u>0.48</u>
Total Current Liabilities	0.48

CAPITAL

Beginning Balance Equity	52,504.20
Retained Earnings	243,949.93
Net Income	<u>125,503.42</u>

Total Capital \$421,957.55

Total Liabilities & Capital \$421,958.03

2016 Revenue and Expense Summary

Revenues

Sales	\$	5,227.46
EE Program Fees		2,245.00
E&SPC Plan Review Fees		13,995.00
NPDES Fees		7,850.00
Chapter 105 Fees		7,575.00
Other Fees		0.00
Grants: Watershed Specialist		24,967.48
Grants: CDFAP		82,765.00
Grants: Dirt and Gravel Roads		175,219.50
Grants: D&G Low Volume Roads		284,393.54
Grants: Nutrient Management Prog.		28,513.61
Grants: Environment & Ecology Ed.		720.70
Grants: UGWF		57,159.09
Grants - Other Unrestricted		200.00
Admin. Reimbursement D&G/Low Volume		17,220.70
Commissioners' Appropriation		25,061.67
Interest Income		434.76
Rent		27,000.00
Other Income		757.35
Total Revenues	\$	<u>761,305.86</u>

Expenses

Cost of Sales	\$	3,114.02
Postage Expense		1,191.86
Office Supplies Expense		1,724.06
Field Supplies Expense		8,546.56
Contracted Services		412,840.39
Equipment Purchases		5,782.86
Equipment Rental		5,131.13
Bank Charges		54.00
Maintenance & Repairs		952.02
Insurance		750.00
Accounting & Legal Services		3,200.00
Permits and Fees		90.00
Reimbursed Wages		150,856.68
Travel Expense		1,578.89
Meetings and Banquets		0.00
Advertising		279.19
Grants and Awards		9,594.00
Subscriptions		(165.00)
Memberships		2,052.40
Gifts and Donations		0.00
Permits and Fees		90.00
Utilities		386.75
Photography		0.00
Rent		27,000.00
Other Expense		794.82

Total Expenses \$ 635,844.63

Net Income \$ 125,461.23

Overview

The Mercer County Conservation District is in a time of transition with a new District Manager. The main goals of the District remain steadfast: to protect and improve the natural resources throughout the county, guide and assist residents in regulatory compliance, and a focus on developing and implementing environmental education programs. Together, as a staff of 6, we work to meet these objectives and serve the county.

Environmental Education

This past year, our educators’ scheduled 128 programs that were implemented both on-site at Munnell Run Farm (MRF) and off-site, in Mercer and surrounding counties. The district was able to reach over 3,600 people in 2016 through its educational programs alone.

The education staff continued to focus on their initiative to advocate people to “get outside and come alive” and as well as visit and experience Munnell Run Farm. Program topics covered a vast range and some of our most memorable were the interpretive nature walks (wildflower, winter/summer tree ID), youth archery camp, and visits from guest speakers of local and state agencies.

New programs included a Children’s Series, a middle school “Kids in the Mud” Series (developed by intern Lexie Arkwright), other seasonal classes, and an



Youth Archery Camp

interactive monthly series called “Get Outside, Come Alive” which showcases recreation and conservation in and around the county.



“Kids in the Mud” Series

At Munnell Run Farm we established an heirloom garden with historic crop varieties from the 1800s to complement the historic Bigler House located on the land. We plan to incorporate gardening into future program series. An end-of-season harvest was donated to the Community Food Warehouse located in Sharon, PA.

A wide array of different groups and organizations requested programs either at Munnell Run Farm or off-site; group demographics were broad, representing retired professors to scout troops to daycares.

Other programs the educators assisted off-site were: the Envirothon at Pymatuning State Park, various local speaking engagements, and various community events.

We have continued to develop relationships between local colleges and universities for site visits, future programming, and internship opportunities. In 2016 the district also had one summer intern from Slippery Rock University working on her practicum hours for her undergraduate degree. The paid summer intern, Lexie, was a huge asset to the educational staff because of her previous experience working with MCCD and MRF.



*Mercer County Envirothon
Winners- Commodore Perry HS*

One of the biggest watershed highlights from 2016 was the 'Watershed Explorer's Adventure Camp'.

An environmental education grant was received through DEP that enhanced this unique opportunity. This was our 6th year holding the camp and we focused on



Watershed Explorer's Adventure Camp 2016

glacial features in our area. At this camp, students learned about the glacial history of our area and took field trips to immerse themselves into geological history and how historical ice movement affects our lives today. Campers kayaked on Lake Wilhelm, traveled by pontoon on Lake Arthur at Moraine State Park (named for the end of the glacier) to visit an Esker, and experienced a geological themed interpretive hike in McConnells Mill State Park.

Dirt and Gravel Roads

The Dirt and Gravel Road Program is a grant funded program that focuses on improving water quality impacted by roadway systems. To accomplish this goal, road owning entities can apply for grants to undertake Environmentally Sensitive Maintenance (ESM) practices that provide long term stream improvements as well as improvements to the road. Conservation Districts receive an annual allocation from the State Conservation Commission to make grant funds available for road maintenance projects.

The 2016 program year for Dirt, Gravel, and Low Volume Roads was filled with activity. During the course of the year, we provided technical assistance to eight municipalities for the development of grant requests, understanding and meeting grant program policy requirements, and the installation of

project practices. This year we evaluated a total of nine Dirt and Gravel Road and two Low Volume Road requests for funding. Throughout the year, a total of six new contracts for Dirt, Gravel, and Low Volume Road projects were awarded totaling \$552,652.68. Of those contracts, four were for Dirt and Gravel projects and two for Low Volume projects. One existing Low Volume Road project contract was completed during the calendar year totaling \$50,891.00.

Dirt and Gravel Roads allocations provided improvements on over 8,900 linear feet of roadway (1.68 miles) during 2016.



Creek Road Project above Lake Wilhelm in New Vernon Township

These improvements were focused on providing drainage, base, and driving surface to projects. The cumulative impact of the installation of these practices will be improved roads and reduced maintenance costs for project participants, along with a reduction of roadway impacts to local water bodies. Low Volume Roads allocations provided improvements on 775 linear feet of roadway during 2016. These improvements removed the existing road surface and crushed it to provide a new base course with the addition of 800 tons of fill to supplement and establish drainage. The installation of these practices is further detailed in the report, but in general will provide the municipality with positive drainage and a road base that can be returned to a low volume paved surface if desired.

Erosion and Sediment Pollution Control, Stream and Wetland Encroachments

In 2016, work included 34 plan reviews, 32 site inspections, and 12 complaints investigated. Of the complaints, 3 are considered as ongoing compliance, 3 were referred to DEP for enforcement action, and 6 were resolved. In addition, our technicians gave planning assistance to 113 individuals, engineers, developers, and planners. Please see the included report for additional details.

Our technicians assist with erosion and sediment pollution control plan development, review plans for technical adequacy and compliance with the regulations, inspect construction sites, respond to complaints and seek voluntary compliance where necessary. The exceptions include oil and gas development and surface mining activities. Those sites are administered and overseen by PA DEP.

Looking Ahead to 2017

Our focus will be on local schools and untapped audiences. We will continue to develop new programs to cover a wide array of outdoor interests for all ages. Stay tuned as we add even more educational programs to the calendar in hopes to branch into the local communities as well as gain more returning visitors to the farm.

The Dirt and Gravel/ Low Volume Road Program has some great projects coming up in 2017. We look forward to the improvements.

We are making some adjustments in our Agricultural Conservation Assistance Program, as we are adding an Agricultural Resource Conservationist to better serve producers in Mercer County.

Erosion and Sediment Pollution Control

MCCD continued our delegated authority under the Pennsylvania Clean Streams Law (PA Code 25, Chapter 102, Erosion Control). Our staff assists developers, engineers and architects, landowners and others in planning their earth disturbance activities in a manner that minimizes sediment pollution.

Folded into the responsibilities under Chapter 102 is the federal National Pollution Discharge Elimination System (NPDES) for Stormwater on construction sites. An earth disturbance activity requires this federal permit if it disturbs 1 acre or more. To obtain the permit an E&SPC plan must be approved by MCCD and an application fee of \$500 for General NPDES Permit, or \$1500 for an Individual NPDES Permit must be paid to the Mercer County Clean Water Fund to help defray the cost of administering the program.

Erosion and Sediment Pollution Control Plan Reviews			
Activity	Reviews	Approved	Pending
Residential	4	3	1
Commercial/Service	12	10	2
Utilities/Pipelines	4	4	0
Transportation	6	6	0
Schools/Churches	4	3	1
Government facilities	0	0	0
Logging	3	3	0
Agriculture	1	1	0
Stream Restoration	0	0	0
Other	0	0	0
Total	34	30	4
Total Project Acres	718.3		
Total Disturbed Acres	292.53		
NPDES Permit Processing			
Activity	Approved	Pending	N/A
Residential	2	1	0
Commercial/Service	7	2	0
Transportation	0	0	0
Utilities/Pipelines	0	0	0
Schools/Churches	3	1	0
Stream/Wetland Restor.	1	0	0
Other	0	0	0
Total	13	4	0
Total Project Acres	461.8		
Total Disturbed Acres	201.0		

An additional a fee of \$110 per acre of earth disturbance rounded to the nearest whole acre is to be made payable to the Mercer County Conservation District.

Erosion and Sediment Pollution Control Continued

ESCGP-2 Permit Processing

Activity	Approved	Pending	N/A
Compressor Station Modification	0	0	0
Pipeline	0	0	0
Project Acres	0		
Disturbed Acres	0		

Our technicians assist with erosion and sediment pollution control plan development, review plans for technical adequacy and compliance with the regulations, inspect construction sites, respond to complaints and seek voluntary compliance where necessary. The exceptions include oil and gas development and surface mining activities. Those sites are administered and overseen by PA DEP.

Stream and Wetland Encroachments

Chapter 105 General Permits Processed

	Ackn	Pend	NA
GP-01 Fish habitat enhancement	1	0	0
GP-02 Small docks, boat launch	5	0	0
GP-03 Streambank protection	1	0	0
GP-04 Intake and outfall structures	7	0	0
GP-05 Utility line stream crossing	7	2	8
GP-06 Agriculture crossings	0	0	0
GP-07 Minor road crossings	3	2	0
GP-08 Temporary road crossings	0	1	0
GP-09 Agricultural activities	0	0	0
GP-10 Abandoned mine reclamation	0	0	0
GP-11* Maintenance, repair, rehab	5	0	0
GP-15 Prvt. Res. const. in wetland	0	0	0
Total permits acknowledged	29	5	8
Permits pending revision	5		
Permit withdrawn	8		

*GP-11 is processed by PADEP

A portion of Chapter 105 of PA Code Title 25 has been delegated to MCCD, specifically the part that deals with General Permit processing and compliance with erosion and sediment pollution control requirements. We do this as a service to county citizens, as we get no remuneration from PA DEP for our efforts.

In 2016, work included 34 plan reviews, 32 site inspections, and 12 complaints investigated. Of the complaints, 3 are considered as ongoing compliance, 3 were referred to DEP for enforcement action, and 6 were resolved. In addition, our technicians gave planning assistance to 113 individuals, engineers, developers, and planners.

Agricultural and Environmental Education Programs

2016 was a major success in the environmental and agricultural education department of Munnell Run Farm. The Educators continued to schedule innovative and new programs to enhance the educational programming not only at Munnell Run Farm, but within the surrounding communities.

This past year, the educators scheduled 128 programs that were implemented both on-site at Munnell Run Farm and off-site throughout not only Mercer County, but into surrounding counties. The district was able to reach over 3,600 people last year through its educational programming alone.

They continued to focus on their initiative to not only “get outside and come alive”, but to check out Munnell Run Farm and all it has to offer.

Program topics ranged from, but were not limited to: interpretive nature walks, wildflower



Youth Archery Camp

identifications, winter/ summer tree ID programs, maple sugaring 101, watershed 101, stream ecology, macroinvertebrate studies, youth archery camp, adult archery shoot, wildlife programs, seasonal programs, hydrangea wreath workshops, basket weaving programs, a new canvas painting series, “Down on the Farm” programs, boy scout “trout discovery” journey, and a free monthly movie night video series, just to name a few.

The educational department made it a priority to provide new and engaging topic ideas and programs for the public. New programs this year were:

Children’s Series, a middle school “Kids in the Mud” Series developed by intern Lexie Arkwright, an interactive monthly series called “Get



“Kids in the Mud: Campfire Cooking” with Lexie Arkwright Program

Outside, Come Alive” that showcases recreation and conservation in and around the county, and special guests, Tamarack Wildlife Rehabilitative and Education Center, Jack Stupka with a grafting class, Laura Dengler and Mark Lewis with a backyard sugaring program, wildlife photographer Jim Law, Specialty Outdoors from Butler PA , the PA Game Commission for an elk program, and the Rocky Mountain Elk Foundation.

New this year was the establishment of a historic Bigler House garden that had time period vegetables grown in it. This garden was a trial run to determine how to incorporate gardening into the programming series next year. The garden had: heirloom tomatoes, cherry tomatoes, eggplant, peppers, deer tongue lettuce, black seeded



Cherry Tomatoes in the Garden.

simpson lettuce, white cucumbers, red leafed kale, lazywife beans, crookneck squash, pumpkins, and

popcorn. It was a great learning experience for the educational staff; a lot of the produce from the season was donated to the Food Warehouse located in Sharon, PA.

A wide array of different groups and organizations requested programs either at Munnell Run Farm or off-site. These groups included: a homeschool group, Life Skills and title I classes from Grove City & Reynolds, Mercer Area Library, Shenango Valley Area Library, Mercer County Boy Scouts, Mercer County Girl Scouts, the PA Fish and Boat Commission with the Linesville Hatchery, Lakeview High School science students, Penndot in Mercer, PA, Avalon Springs Nursing Center, Buhl Park, Case Avenue Elementary School, Hermitage Agway, Jamestown Head Start, Lakeview Middle School, Summer Academy with Hermitage Schools, St. Michael's Pre-K, ILR Retired Group from SRU, Slippery Rock students, Grove City College, a local cyber school, archer enthusiasts, as well as, adults and children, in general.



The Sights of Munnell Run Farm

The educators immersed themselves in the communities, taking the programs to them. They were able to travel to the Mercer Area Library and the Community Library of the Shenango Valley to assist in their summer programming. Other programs they assisted off-site were: the Envirothon at Pymatuning State Park, Agway "Plight of the Bald Eagle" program in Hermitage, Watershed Explorer's

Adventure Camp at Goddard State Park, Stoneboro Lake, Pymatuning State Park, Linesville Fish Hatchery, McConnell's Mills State Park and Moraine State Park, to Sharpsville for a Salvation Army Program on Birds, the Penndot Open House, Case Avenue Middle School Science Fair, the Great Stoneboro Fair, the Linesville Fish Hatchery Open House, Avalon Springs Nursing Center for movie days, and Pet Fest in Grove City with the local Agway.

This past year, the two educators were able to develop relationships between local colleges and



Mercer County Envirothon Winners- Commodore Perry

universities for site visits, future programming. They worked in depth with the environmental education class at Grove City College to gain a glimpse into the life of an environmental educator and a taste of teaching in a non-formal setting. They were able to help facilitate the Earth Day Celebration at Munnell Run Farm and provided interactive learning stations for participants. Larissa attended internship fairs at Thiel and Westminster in hopes of providing more opportunity and exposure to students looking for internships. MCCD also had one summer intern from Slippery Rock University who was working on her practicum hours for her undergraduate degree. The paid summer intern Lexie Arkwright was a huge facet to have this summer she developed and took the lead on some of the programming.

Watersheds

A watershed is an area of land that catches and drains water into some type of water source. There are a wide variety of water sources it could drain into, from rivers, lakes, and streams, to something as small as a puddle or as big as the ocean. "Why are watersheds important" is a question many people may wonder about. Watersheds provide: food, recreation, industrial opportunities, irrigation, transportation, water, and habitat for wildlife. They are important for our health, our environment, our economy, in another words, our existence. In essence, we all live in a watershed. How people treat their watersheds may directly affect their water supply; therefore it is imperative that people are aware and conscientious about what they do.

In Mercer County, there are five major watersheds. They are the: Shenango River,



Major Watersheds of Mercer County.

Neshannock Creek, Wolf Creek, Sandy Creek, and French Creek. All of these are collectively a part of the Ohio River Basin.

MCCD has been working diligently to incorporate programs that focus on watersheds; whether it be through stream studies, watershed awareness, geocaching, or wildlife programs, we have made it our goal to spread watershed awareness and being a proactive citizen of watersheds. This past year, we were able to develop various educational programs that focused on a wide array of topics; some of the programs included: a vernal pool program with a local life skills class, the Envirothon, watershed discovery program, trout discovery children's program, the watershed challenge,

and watershed explorer's adventure camp just to name a few.

One of the biggest highlights from this past



Watershed Explorers Adventure Camp. Hiking at McConnell's Mills State Park.

year's educational programming was the Watershed Explorer's Adventure Camp. An environmental education grant was received through DEP that enhanced this unique opportunity. This

was our 6th year holding the camp. At this

camp, 14 students learned the importance of stream health by assisting and helping with various techniques to assess the health of the stream emphasizing the concept of "everyone lives downstream". Campers had the opportunity to: assist and help in aquatic macroinvertebrate (underwater creatures) studies, learn how to identify the various macros, assist in a chemical assessment of the stream, discussed the importance of streams to not only animals, but humans, and visited various locations to see the differences between lakes, rivers, and streams. This year the special emphasis was on the unique glacial history in our watersheds and we were able to provide each camper with their very own backpack equipped with tools and guides on how to perform soil studies and identify various rocks. Throughout this camp, we highlight a wide array of off-site visits to showcase what this region in PA has to offer in regards to outdoor recreational opportunities. During camp, we made off-site visits to: Goddard State Park, Stoneboro Lake, Pymatuning State Park, the Linesville Fish Hatchery, McConnells Mills State Park, and Moraine State Park.

MCCD hosted the eleventh annual Watershed Challenge in cooperation with the Penn-Ohio Watershed Association, the Neshannock Chapter of Trout Unlimited, Lawrence and Crawford County Conservation



Watershed Challenge. Students at the Watershed Station

Districts, Trumbull Ohio Soil and Water Conservation District, Pymatuning State Park, Pennsylvania Game Commission, US

Forest Service, and Pennsylvania Fish and Boat Commission. Teams of students, in grades 6th through 8th attended this Envirothon-like competition.

Jacqueline spent a substantial amount of time doing work focusing on the priority watershed identified with DEP this past year, the Sandy Creek Watershed. With the manager and the conservation resource specialist identifying and developing grant proposals for Growing Greener in the project area. She spent time identifying and mapping areas within the watershed that need work or assistance. One grant requested funds for \$40,000 to improve Elder Run with stream improvements suggested by the PA Fish and Boat Commission. Another grant was written for \$220,000 to improve and implement best management practices on identified farms within the Sandy Creek watershed.

The District has continued to manage the Shenango River geoWatershed Trail (SRWT) that was installed in 2015 throughout the Shenango Watershed thanks to a PACD grant. Jacqueline keeps up to date with the geocaching website and keeping track of those who have completed the earthcaches on the SRWT. To date, 392 different individuals have

been on the SRWT; of those, 84 have completed the entire trail.



Manure Management Activities

The 2016 program year focused on education and outreach efforts to increase program awareness and support. Our efforts included education to the agricultural community on meeting the requirements of Act 38 Nutrient Management, Chapter 91 Manure Management, and Chapter 102 Erosion and Sediment Control. These responsibilities presented us with opportunities to conduct education programs relating to Nutrient and Manure Management. This year we provided two educational workshops. One training (Manure Management Plan Writing Workshop) included hands-on training to assist operators in



the completion of a written Manure Management Plan. The other training was a collaborative effort entitled the

Northwest Region Manure Management Field Day. This was conducted in Crawford County at the Apple Shamrock Dairy and included topics on an introduction to the Manure Management Manual, Agricultural Erosion and Sediment Control Requirements, PA Onestop Farm Mapping, and a Manure Spreader Calibration for both liquid and solid manures.

Throughout the year, 34 individuals were provided with Manure Management Plan Workbooks and began the development of written manure management plans for their operation



One operator completed a manure management plan for their operations during the year that was verified by the District. Our education, outreach, and technical assistance efforts on nutrient management reached a total of 46 individuals during the course of the year. These efforts included the institution of a grant program that is funded by the District's Unconventional Gas Well Funds (UGWF) and provides financial assistance to operators for the development of Nutrient Management Plans. Two operations in the Sandy Creek Watershed signed cooperator agreements to develop Nutrient Management Plans for their farms utilizing the District's UGWF. In addition to these funds, one operation also developed a REAP application and was awarded tax credits for their completed plan.

Mercer County is scarcely populated with concentrated animal operations (CAO's), which was the initial target of the legislation. Our Delegation Agreement with the state now requires that we implement the Act 38 Nutrient and Odor Management Program and the Manure Management Program. These duties include: plan review and approval of Act 38 Nutrient Management Plans (NMPs), Status Reviews of approved NMPs, providing plan implementation assistance, assisting operators in developing written Manure Management Plans, assisting with cost-share application development and approval, investigating agriculturally related complaints and obtaining voluntary compliance within the regulatory framework. This year we worked with 1 farm operation to regain compliance with the nutrient management act at an existing Concentrated Animal Operation. Finally, we assisted 3 operators with REAP financial assistance program questions and verified two application forms for grant assistance.

Farming operations in Pennsylvania should expect continued environmental scrutiny with the implementation of the Manure Management Manual. Regulations affecting farm operations in Pennsylvania have changed and more emphasis is being placed on smaller farms. Historically, PA has focused on

large animal operations such as Concentrated Animal Operations (CAOs) and Concentrated Animal Feeding Operations (CAFOs) with their regulatory programs. Now all farms are expected to develop written plans to address the requirements in Chapter 91 and Chapter 102.

What does this mean for agriculture?

Operations that land apply manure or agricultural process wastewater must have a written Manure Management Plan. This plan will identify field specific manure and fertilizer application

rates and must follow the format in the revised Manure Management Manual unless the farmer gets approval



from the PA DEP. Also, farms that undergo plowing and tilling activities (including no-till cropping) and/or have an Animal Heavy Use Area (barnyard or feedlot) must have a written Agriculture Erosion and Sediment Control plan. This plan will include site specific Best Management Practices (BMPs) to reduce accelerated erosion and sedimentation. One notable highlight is that areas within 100 feet of a stream must maintain a minimum of 25% plant cover / residue or additional BMPs are required. Under most circumstances, a Conservation Plan will address most of the requirements of an Ag E & S Plan. The District is available to help guide farm operators to develop these plans for their own operations.

Dirt, Gravel, and Low Volume Roads Program

The 2016 program year for Dirt, Gravel, and Low Volume Roads was filled with activity. During the course of the year, we provided technical assistance to eight municipalities for the development of grant requests, understanding and meeting grant program policy requirements, and the installation of project practices. This year we evaluated a total of nine Dirt and Gravel Road and two Low Volume Road requests for funding. Throughout the year, a total of six new contracts for Dirt, Gravel, and Low Volume Road projects were awarded totaling \$552,652.68. Of those contracts, four were for Dirt and Gravel projects and two for Low Volume projects. Three of the four Dirt and Gravel projects were completed during the calendar year totaling \$192,261.20. One existing Low Volume Road project contract was completed during the calendar year totaling \$50,891.00.

Dirt and Gravel Roads allocations provided improvements on over 8,900 linear feet of roadway or 1.68 miles of road during 2016. These improvements were focused on providing drainage, base, and driving surface to projects. Drainage improvements included over 800 feet of underdrain



and the construction of a 1,100 square yard French Mattress with 696 tons of R-3 (also including the application of over 2,500 feet of geotextile separation fabric). A total of seven new drainage pipe outlets were also installed. One new culvert pipe was replaced. One storm water detention facility which included a hickenbottom outlet was constructed to address water flowing to the roadway. Over 350 tons of 2A material was placed on road shoulders to provide a stable road edge after the application of Driving Surface Aggregate.

Finally, over 5,300 tons of Driving Surface Aggregate was added to 8,400 linear feet of roadway. The cumulative impact of the installation of these practices will be improved roads and reduced maintenance costs for project participants, along with a reduction of roadway impacts to local water bodies.

Low Volume Roads allocations provided improvements on 775 linear feet of roadway during 2016. These improvements removed the existing road surface and crushed it to provide a new base course. Also, 800 tons of fill was added to establish drainage and supplement the base course. The establishment of a base course also included the installation of 1,300 square yards of geotextile separation fabric. To complete this project, drainage features were also installed. These features included 1,500 feet of underdrain with outlets. In addition to underdrain, two new shallow cross pipes were installed to divert water out of the road profile. Two grade breaks were incorporated into the shallow cross pipe installations to encourage water to run off the roadway and into the ditches where it is quickly dispersed from the road cross section. Finally, one stream culvert was also replaced during the project. The installation of these practices will provide the municipality with positive drainage and a road base that can be returned to a low volume paved surface if desired.