

# **Erie County Conservation District**

## **Annual Report 2011**

### **Promoting Wise Land Use Throughout Erie County**



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## 2010 Board of Directors

John Hallenburg – Chairman of the Board, Public  
Ron Chapman– Vice Chairman, Farmer  
George Peters - Treasurer, Farmer  
Sue Moyer - Director, Public  
Robert Buhl – Director, Farmer  
Fathum Rahal – Director, Farmer  
Barry Grossman– Director, County Executive  
Robert Dowler – Associate Director  
LeRoy Gross – Associate Director

**Board meetings are held the 3rd Thursday of every month at 10:00 AM at Headwaters Park - 1927 Wager Road, Erie, PA 16509**

## District Manager Report

The Erie County Conservation District continues its efforts to expand relationships with a variety of audiences. Outreach to the public has tripled in the past year.

Our staff works diligently with our partners and the residents of Erie County on many key issues. Efforts center on the theme that our environment can be a friend or foe. Our staff continues to educate consultants, engineers, municipal officials, and the general public, both adults and school children, on topics such as sustainable energy, improving water quality and nutrient management. These workshops are well received and we look forward to offering more sessions on current environmental and agricultural issues in 2012.

One particular focus is improving water quality through storm water management, determining the source of E-coli contamination, and stream restoration. This year, the District completed two stream restoration projects in the Godfrey Run watershed - important work that boosts tourism in our region. Recently, the District was awarded another \$280,000 Growing Greener grant for restoration of the South Branch of French Creek and LeBoeuf Creek. Improved water quality allows fish populations to thrive. As a result tourism in our County flourishes because of the unique features found here and our attention to protecting water quality.

The District completed two Agricultural Best Management grants totaling \$315,000. The grants funded six manure storage facilities, extensive stream bank fencing, and other best management practices. The grant will enhance water quality in Erie County.

2011 was the first year the District hosted a Middle School Envirothon. The event, similar to the High School Envirothon, encourages students to study the environment. The academic competition combines classroom learning and outdoor activities.

The Erie County Conservation District is proud of its 63 year history of assisting our community to improve water quality and reduce soil erosion, issues which found their origin in our agricultural community. We do it with a variety of funding sources. This year the District managed \$1.2 million in funding for our programs and conservation activities. The funding has allowed us to do projects that not only improve our environment but improve Erie County socially and economically. We look forward to the challenges of the future and stand ready to protect and preserve our environment for our children and grandchildren.

## Dirt & Gravel Roads

Erie County's Dirt & Gravel Roads program completed four separate projects in 2011 in three townships that demonstrated a need for road surface stabilization and improved drainage, with limited funding.

## 2011 Conservation District Staff

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The projects stabilized 9,128 square feet of road banks in addition to 12,024 square feet of ditch stabilization and 22,776 square feet of vegetated management. We installed 530 feet of pipe and new this year, a French Mattress on the road bed. A French Mattress is placed under the road surface and consists of coarse rock wrapped in fabric through which water can freely pass. It is basically a French drain that is used similar to a culvert to allow water passage through the road-bed. It provides load support and establishes, maintains, or equalizes the subsurface water on both sides of the road.

Also new this year was the use of Driving Surface Aggregate (DSA) from three different suppliers. Two suppliers used glacial gravel and the third used a limestone generated DSA product that met the required specifications. All work added up to the stabilization of 14,836 square feet of road surface.

## **Watershed Improvement Projects**

### **Walnut Creek**

In 2006 Walnut Creek was chosen as a priority watershed for the Northwest Region due to its ties with the steel-head fisheries, ability to supply Lake Erie with fresh water, and recreational activities taking place within the stream. Walnut Creek is approximately 22 miles in length and drains to Lake Erie, west of Presque Isle. Because it runs through Fairview, Millcreek, McKean, Summit, and Greene Townships, the watershed is threatened by commercial, residential, and agricultural development. The Department of Environmental Protection (DEP) conducted a comprehensive assessment of Watershed Features/Characteristics, Public Health and Safety, Habitat and Biological Diversity, Water Use and Sustainability, Community Efforts for Conservation, and Pollution Control. The results of the study indicated that Walnut Creek and the Walnut Creek Watershed were at risk due to accelerated erosion, elevated levels of E. coli bacteria, increased pollutant loading, lack of drinking water source water protection, limited ground water resources, and an overall loss of wetland habitat. The DEP developed goals for improving the stream and watershed by reducing the individual impairments they had found.

In the fall of 2009, the Pennsylvania DEP awarded the Erie County Conservation District a \$65,000 grant to support an effort to attain widespread change in septic system operation and management across the Walnut Creek Watershed. Nearly 20 percent of all Walnut Creek Watershed residents use septic systems to treat their household sanitary wastewater. Proper maintenance and operation of a residential septic system can dramatically extend the life of the system and improve its function while protecting the watershed. Pollution from malfunctioning septic systems is a major source of groundwater and surface water contamination.

A Septic System Homeowners Workshop was conducted in 2010, and the District has continue to provide ongoing education and outreach regarding proper septic system maintenance to concerned homeowners. Limited funding remains available to assist qualifying homeowners with compliance testing, repair, and renovation of septic systems in the Walnut Creek watershed.

### **Cascade Creek Restoration Project**

In cooperation with the City of Erie and Millcreek Township, as well as PA Sea Grant, SONS of Lake Erie, LEAF, and Environment Erie, the District continued its restoration efforts within the Cascade Creek watershed in 2011. The major funding for the project was provided through a PA DEP Growing Greener grant and a Great Lakes Commission grant for reducing sediment.

Continuing on past successful efforts completed in Phase I, Phase II addressed additional bank stabilization along Cascade Creek, as well as the implementation of a sediment removal Best Management Practices (BMP). Working with Millcreek Township, the District worked to complete the construction of a sedimentation basin located in the upper watershed of the West Branch of Cascade Creek.

Phase II consisted of three separate projects to address water quality in the watershed. While two of the projects involved natural stream bank stabilization, the basin addressed water quality through the direct removal of sediment from storm water, as well as secondary Post Construction Storm Water Management BMP benefits due to reduced volume and rate of flow. The reduced flow further reduces downstream channel erosion and subsequent sedimentation.

Final planning for implementation of Phase III of the project has progressed throughout the year. The funding was secured



in the fall of 2010 through an EPA Great Lakes Restoration Initiative grant. The third and final phase will restore the final 1100 feet of bilateral stream bank within Frontier Park. Groundbreaking for Phase III is tentatively scheduled for summer of 2012.



Figure 1



Figure 2

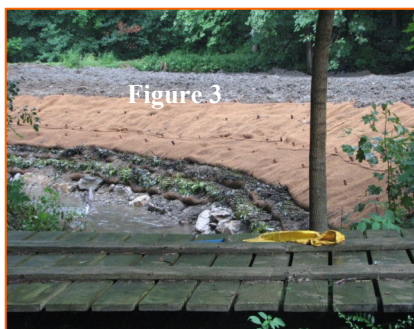


Figure 3



Figure 4

### Trout Run

The District continued to implement the EPA approved Trout Run Watershed Implementation Plan (WIP), which addresses various watershed and water quality concerns within the Trout Run and Godfrey Run watersheds. The plan details an implementation timeline and various best management practices (BMPs) for addressing said concerns. Some of these areas of concern include eroded stream banks, failing septic systems, excessive nutrients, and uncontrolled storm water.

Utilizing grant funding through DEP, the District completed two stream restoration projects along Godfrey Run, stabilizing nearly 500 feet of bilateral stream bank. The photographs included depict various areas of the two sites. Figures 1 and 2 depict an eroded bank along Reach D pre-construction. Figure 3 shows the area immediately after construction, while Figure 4 is the area two months after the establishment of vegetation. Figures 5-8 show the project along Reach C prior to construction, immediately upon completion, and post construction respectively. A third stabilization project, intended to stabilize an additional 500 bilateral feet within the watershed, is currently planned with initial design underway.

In April the District, in cooperation with Fairview Township, hosted a septic system workshop for private property owners. The workshop was intended to both educate property owners on the recommended maintenance procedures for septic system upkeep, and to identify interested parties to partner with the District to perform these maintenance items through grant cost share program. Malfunctioning septic tank systems contribute to the high levels of E-coli in this watershed. We continue to stress to property owners the importance of regular septic tank maintenance.



Figure 5

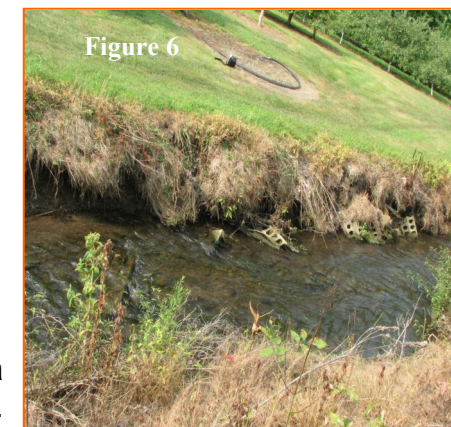


Figure 6



Figure 7



Figure 8

The District continues to seek interested property owners willing to partner on implementing various projects, including agricultural BMP implementation, stream bank stabilization, and PCSM BMP implementation. While it is anticipated that the majority of the projects will occur on private property, the use of municipal, county, and state owned lands all remain viable options for potential projects.

## **The Chapter 105– Waterway Management Program**

In 2011, the District continued its delegated responsibilities associated with the Chapter 105 program. Aside from the review and acknowledgment of Chapter 105 General Permits (GP), other duties include site inspections, complaint investigation, and compliance resolution.

Through either structured training events or informal individual meetings, the District provided routine education and or assistance related to the Chapter 105 rules and regulations to private land owners, municipal officials, consultants, and or businesses.

While state funding for the program ceased some time ago, the District has chosen to continue to provide these services to the residents of Erie County, in an effort to streamline and expedite the state and federal permitting process related to 105 GPs.

In 2010, the District issued 86 Chapter 105 General Permits and provided either technical or educational assistance to over 220 residents of Erie County. Over 40 program related complaints, and site inspections were completed.

## **Erosion and Sedimentation Control and NPDES Programs**

The District continues to administer the Chapter 102 program related to erosion and sedimentation (E&S) control and the National Pollution Discharge Elimination Systems (NPDES) permitting program. Chapter 102 underwent final regulatory revisions in the latter part of 2010, in particular incorporating NPDES permitting policy, including PCSM requirements. While the E&S program remains the most tenured program at the District, its primary objective of minimizing accelerated erosion and subsequent sedimentation through the implementation of Best Management Practices (BMP) has not changed. In conjunction with the associated NPDES permitting requirements, the District continues to work to maintain and improve water quality.

A notable change related to NPDES permitting eliminates the “point source discharge” requirement from earth disturbance site. Aside from agricultural plowing and tilling activities, timber harvesting activities, and road maintenance projects, all earth disturbances greater than or equal to one acre over the life of a common plan of development require a NPDES permit for discharges during construction activities. More detailed PCSM documentation related to implementation and long term maintenance of the BMPs has also been addressed. A complete copy of Chapter 102 may be obtained at the Department’s website at [www.dep.state.pa.us](http://www.dep.state.pa.us).

In addition to the routine assistance provided to municipalities, land owners, and the regulated community, in 2011, the District approved 130 E&S plans, and processed 33 NPDES permits. The following is a list of the District’s primary activities under the 102 program:

- |                            |  |                           |
|----------------------------|--|---------------------------|
| —Education & outreach      | —NPDES Permit review & issuance                    | —Complaint investigation  |
| —Compliance achievement    | —Technical & administrative assistance             | —E&S site assistance      |
| —E&S plan technical review | —NPDES pre-application & pre-construction meetings | —Routine site inspections |

## **International Coastal Clean-Up (ICC) Keep Presque Isle Beautiful**

The ninth annual Pennsylvania-Lake Erie International Coastal Cleanup was held on September 17, 2011. There was a new attendance record for volunteers, who removed trash and debris from the Lake Erie shoreline and adjacent tributaries. The event drew 1,518 volunteers that removed 7,577 pounds of trash and separated out recyclable materials. International Coastal Cleanup is an opportunity to educate participants of all ages about litter, recycling, and stewardship. It also helps to keep waterways free of trash and debris.

Many local and state organizations coordinated the yearly cleanup at 15 sites throughout Erie County. Local schools and colleges made up more than half of the volunteers who took part in the cleanup. All trash generated from the cleanup was disposed at Lakeview Landfill free of charge.



The District provided site coordination at Erie Bluffs State Park. The Lake Erie shoreline was cleaned up from the mouth of Elk Creek and west for about one mile. The group consisted of 28 volunteers, mostly scouts and students. The volunteers collected about 500 pounds of trash and 150 pounds of recyclables. Don Blakeslee of Erie County Recycling supplied hand-held scales for each of the sites to better calculate actual weights for better data.

The Pennsylvania-Lake Erie International Coastal Cleanup documented all of the trash that was collected. During a news conference at the Tom Ridge Environmental Center, organizers reported the results of the items found during the 2011 cleanup.

Locally, over the past nine years 8,106 volunteers have collected 314,499 trash items in Erie County. The information gathered during past cleanups has been used as educational material for environmental programs in local schools and highlighted in the Erie Times-News Newspapers in Education section. For more info on the PA-Lake Erie Cleanup visit [www.goerie.com/section/coastalcleanup](http://www.goerie.com/section/coastalcleanup). The Coastal Resources Management Program of DEP has been the main sponsor of PA-Lake Erie International Coastal Cleanup since 2003.

#### Top Five things Collected at the 2011 Costal Cleanup

1. 19,716 cigarette butts and cigar tips
2. 4,547 beverage caps/lids/straws
3. 6,277 beverage containers
4. 5,495 food wrappers/containers
5. 2,578 plastic bags

In its 26<sup>th</sup> year, the **International Coastal Cleanup** is a world-wide event. It is oldest and largest volunteer project of its kind. See [www.coastalcleanup.org](http://www.coastalcleanup.org) for the world-wide event homepage. The next International Coastal Cleanup event will take place on Saturday, September 15, 2012, from 9 a.m. to noon.

## Environmental Education

This past year proved to be very successful for the environmental education program. With over 2,000 park patrons, students, scouts, and teachers served, the education program again increased its outreach and programming. This increase is due to the efforts of District staff and also to the many grants that were awarded during 2011 to the Conservation District and also Headwaters Park.

The Education program is involved in several programs that occur annually throughout the Erie region. Mill Village Elementary school, part of the Fort LeBoeuf School District, hosts an annual Earth Day celebration for its 100+ elementary students. The District organizes and leads the activities for very enthusiastic and energetic groups of students and teachers. Headwaters Park is also home to the Erie County High School and Middle School Envirothon, last year serving over 200 students and advisors from across the county. Our education program also participates in the LEAF Festival held at Frontier Park. We were involved in several other events throughout the year, including Allegheny College's Creek Connections event held at Allegheny College in the spring for middle and high school students. Our staff was involved in several Earth Day and science fair exhibitions and events throughout 2011, talking with numerous visitors about land and water conservation and environmental health.

The education department makes visits to schools and facilities, reaching out to groups interested in bringing environmental education further into their curriculum. Many times throughout 2011 the District worked with Earth Action and middle school students on researching information for their school's environmental projects. Staff worked with Mercyhurst University and an afterschool program for middle school students, focusing on environmental and science career opportunities. PA SeaGrant invited the District to participate in educational events aboard the Flagship Niagara in the fall. The Enviroscope and composting also proved to be popular subjects in the classroom.

Headwaters Park saw an increase in school visits in 2011. Both Fairview and North East kindergarteners visited the park, accounting for over 200 students exploring the trails. During school visits, students explore trails in the park and rotate through age-appropriate activities. The District hosted a spring Envirothon study session, which will continue in 2012 also. Several scouting groups visited the site for badge work and Eagle Scout projects, producing a wonderful set of wood duck boxes strategically placed throughout the wetlands. In October we hosted the first Eco-Sabbath event in conjunction with Erie's No Impact Week celebration. We hope this event will continue to grow in years to come.

Many grants played a part in the development and maintenance of the park and also outreach to the community.

- Through a *Keep America Beautiful* grant, trash and recycling bins were placed in the park. We also replaced and updated park signs through this funding source.

- A Department of Environmental Protection Environmental Education Grant enabled the District to build a Community Learning Garden and Compost Park. We completed the park in September 2011. The education program coinciding with the garden is ongoing and will be completed with 80 second graders in May 2012.
- A Pennsylvania Association of Conservation Districts grant was awarded to host a rain garden workshop in the spring of 2012.

Grant opportunities greatly assist the District's environmental education program and our efforts to reach diverse groups of people and cover a variety of conservation and environmental topics.

The District has many programs and events in the works for 2012, including continuing the K-6<sup>th</sup> grade photo essay contest. Utilizing every opportunity available, staff continues to encourage schools, scouts, and the general public to call on us as an environmental resource. We are currently looking to expand our connections with the local schools and teachers and also Headwaters Park patrons. Through these connections and outreach, we hope to continue to make a positive impact in the environmental and conservation education within the Erie community.

### **Envirothon 2011 Annual Report**



**High School Envirothon Winners from North East School District Team Green Flash**

The Erie County Conservation District continued its tradition of hosting a successful High School Envirothon in May of 2011. With over 100 high school students and advisors representing 7 school districts across the county, the environmental competition showcased the talent Erie has to offer. In 2011, the event also welcomed a new high school team representing the Millcreek School District.

The day began cool and sunny at Headwaters Park as the students arrived in their teams, ready to take on the five testing subjects: Forestry, Aquatics, Soils/Land Use, Current Issue, and Wildlife. The students completed each test as a team, working together and using their combined knowledge and skills to obtain the highest score possible in each category. As students broke for lunch, the staff quickly computed

each teams' scores to announce the winners. The third place winner for 2011 was the North East team "Nice Girls" with the Runner-up team of EALEA representing the General McLane School District. The 2011 winner of the Erie County Envirothon was Team Green Flash representing the North East School District. Team Green Flash moved on to represent Erie County in the state competition later that month.

2011 marked the first year for the Middle School Division Envirothon that was hosted at Headwaters Park. The event was a great success, hosting over 100 middle school students and advisors from six school districts across Erie County. The middle school event is modeled after the high school competition with several modifications. Students worked together as teams through the event, challenging their knowledge on quizzes focusing on Forestry, Wildlife, Soils/Land Use, and Aquatics. Following the quizzes, the groups engaged in hands-on activities to learn further about the topic. Activities were led by experts in their field from the Erie Zoo, PA SeaGrant, and the DCNR. Students were able to interact with professionals in conservation and environmental fields, asking questions and exploring the subjects further. The final rotation was an oral presentation the students prepared on a previously given topic.

Advisors and District staff were impressed with the amount of time students spent preparing their presentations and also studying topics for the team quizzes. Students greatly enjoyed the activities and working alongside professionals. Although the focus of the middle school event is to introduce students to conservation and environmental topics, students were very excited to see how they fared in the scoring. In 2011, the third place team was "Team Green", representing the Fort LeBoeuf School District. The "A" team from North East School District captured the Runner-up position, while "Team Red" from the Fairview School District secured their spot as the 2011 Middle School Envirothon winners.

**Middle School Envirothon Winners from Fairview School District Team Red**



Both events were held in May of 2011, with the 2012 competitions scheduled for early May as well. Advisors and students alike were fully engaged and excited by the events, having spent several months in preparation to showcase their talent and knowledge. The District looks forward to the Erie County Envirothon, both High School and Middle School, for the spring of 2012!

## **Agricultural Activities**

The goals of the Agriculture program in Erie County are:

- Help farmers and landowners plan and implement Best Management Practice
- Manage and administer the Nutrient Management program which assists with concerns related to animal agriculture and manure management
- Provide technical assistance to minimize soil erosion for landowners and farmers.



### **Nutrient Management**

The Nutrient Management program encourages all county livestock farms, including horse farms in the county to develop a plan. The benefits of a nutrient management plan include knowing how much manure to spread on fields and how much fertilizer to buy, if any is needed. Another benefit is limited liability protection if you have an approved plan and have implemented it.

In 2011, the DEP released new Manure Management regulations that require all persons housing livestock, including horses or those who spread manure on their property to have an updated manure management.

For more information contact Bethany Fritz.

### **Farm Land Preservation**

The District continues to be involved with the Farm Land Preservation program. The program provides funds for the purchase of development rights on farmland, ensuring farmland stay in agricultural use for perpetuity. As of December 31, 2011 there were approximately 6800 acres and 54 farms preserved in Erie County.

### **Workshops and Field Days**

The District hosted several Ag Schools in the spring. The topics included Nutrient and Manure Management, erosion control, animal mortality management, best management practices, conservation planning, integrated pest control, and farm safety.

The District partnered with other Districts to hold a Field Day at a farm in Crawford County. There participants saw a demonstration about cover crops and the different types of crops that can be used. The District also helped with a Grazing Field Day at a local beef producer's farm in Erie County. Several speakers were on hand at each meeting to present topics and answer any questions.



### **Ag BMP Growing Greener**

The District received two Growing Greener Grants for Ag BMP Cost Share Programs in 2007. Work on the grants, one for \$70,000 and the other was for \$300,000, was completed in fall of 2011. With the funding, the District helped implement over 35 Best Management Practices on 18 different farms. Best Management Practices included: stream bank fencing, heavy use areas, manure storages, spring developments, diversions, grassed waterways, access roads, stream crossings, and many more. The total cost of these projects was over \$500,000.00 with the District using over \$315,000.00 worth of Growing Greener funding. Several of the landowners also received funding from NRCS to cover some of the costs.