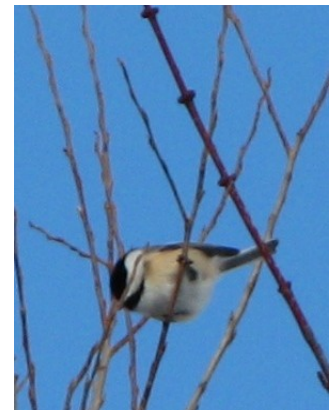


Erie County Conservation District

Annual Report 2010

Promoting Wise Land Use Throughout Erie County



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District Manager Report

In 2010, the Erie County Conservation District developed a strategic plan to identify and implement goals and objectives to meet the future needs of Erie County. The plan looked at each program the District offers.

The District surveyed stakeholders and partners asking what the District does right, where it needs improvement, and what it should offer in the future. Additional education and outreach programs including additional workshops topped the suggestions for future activities. Responses also confirmed that the services provided by the District are crucial to its partners and stakeholders. The new plan also recommends increased networking and cross training for greater success.

With the new plan, the District Board will be able to more easily evaluate each program's success and better determine the needs of those we serve. We will continue our strong relationship with co-operating agencies and other partners in conservation to maximize effective resource conservation.

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

Watershed Improvement Projects

Walnut Creek Septic Systems Grant

In the fall of 2009, the Pennsylvania Department of Environmental Protection (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. The grant funds education, compliance testing, repair, and renovation of septic systems in the Walnut Creek watershed.

The DEP's Watershed Management Program evaluated Walnut Creek, and found that one of the primary threats facing the stream was E. coli loading from malfunctioning septic systems. Pollution from malfunctioning septic systems is a major source of groundwater and surface water contamination. 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.

A Walnut Creek Watershed Improvements for Septic System Homeowners Workshop was conducted in March of 2010. Keynote speaker, Dr. Al Jarrett of Penn State University, spoke extensively on how to improve the functionality of septic systems, and the top ten reasons of septic system malfunction. Other guest speakers presented research documenting human pathogens released into the watershed via failing septic systems. Further, that contamination was from septic system failure existed across the watershed and was not the result of a few individual systems. The workshop received high marks from attendees, and was well-received by participants and the local news media.

Now, the District is working on the compliance testing, repair, and renovation phase of the grant. Residents of the Walnut Creek watershed will soon be hearing from the District about these exciting opportunities. The Walnut Creek Watershed Improvements for Septic System Homeowners grant has also proven to be an excellent pilot program for future septic system workshops. Eligible residents of the Trout Run and Godfrey Run watersheds will be offered a similar program in the near future.

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2010 Board of Directors

John Hallenburg – Chairman of the Board, Public
Ron Chapman– Vice Chairman, Farmer
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Barry Grossman– Director, County Executive
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LeRoy Gross – Associate Director

In 2006, the DEP identified Walnut Creek as a priority watershed because of its environmental, recreation, and economic benefit to the Erie community. Walnut Creek is approximately 22 miles in length and drains to Lake Erie, west of Presque Isle. It is located within Fairview, Millcreek, McKean, Summit, and Greene Townships. The watershed is threatened by commercial, residential, and agricultural development.

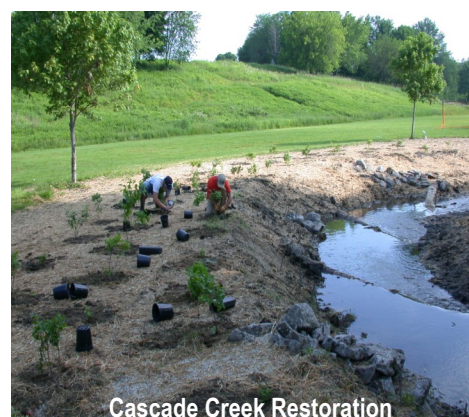
Trout Run Watershed Restoration

The Trout Run Watershed Implementation Plan (WIP), developed by the District, received final approval by the EPA in 2009. The plan addresses various watershed and water quality concerns within the Trout Run and Godfrey Run watersheds, and 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.

With grants previously obtained through DEP, the District took the initial steps in implementing the WIP in 2010. After issuing a request for qualifications, the District, with the assistance of a committee, selected and entered into a long term agreement with a design build team. The District contracted Floyd Browne Group and Meadville Land Service to design and build this project. In addition to design and implementation a variety of BMPs to address the concerns noted within the WIP, the Team will assist the District as needed in obtaining additional funding for future projects.

Cascade Creek Restoration Project

In cooperation with PA DEP, the City of Erie, PA Sea Grant, PLEWA, LEAF, and the SONS of Lake Erie, the District continued its restoration efforts within the Cascade Creek watershed in 2010. Building off past efforts realized in Phase I of the restoration project, 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 third portion addresses water quality through the use of a Post Construction Storm Water Management Best Management Practices, installed within a developed area, with historically little to no Post Construction Storm Water Management (PCSM) control.



An additional 400 plus feet of stream bank rehabilitation, stabilization, and / or riparian buffer establishment was implemented along Cascade Creek, with estimated soil loss prevention in excess of 80 tons per year. In addition to the sediment load reduction, the BMPs installed will decrease the temperature of the stream and provide habitat. Over 300 feet of stabilization occurred within Frontier Park, and an additional 100 plus feet was stabilized directly upstream of the park, adjacent to a local business.

After discussions with many landowners within the watershed, the District is currently working in cooperation with Millcreek Township to install a BMP within the West Branch drainage basin. The BMP will improve water quality through reduced volume and rate of runoff to the downstream watercourse, while treating offsite storm water prior to discharge to the watercourse.

Funding for Phase III of the project was secured this year, 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 hopeful for summer of 2011.

Lake Erie Integrated Water Resource Management Plan

The Pennsylvania Lake Erie Watershed is the fifth largest watershed in the state of Pennsylvania, at more than 500 square miles in size. It has long been the subject of widespread and disparate attempts at conservation, research, education, and responsible development. Some of these endeavors have been successful, and some not. For the first time, an effort is

underway to inventory, evaluate, and analyze all known information pertaining to the Pennsylvania Lake Erie watershed.

Building on the successful model of the Presque Isle Bay Watershed Restoration, Protection, and Monitoring Plan, (<http://pib.psu.edu>) Erie County Conservation District has partnered with the Pennsylvania Department of Environmental Protection (PADEP) and Pennsylvania Sea Grant to collect data on the Lake Erie Watershed. All available information will be entered into an inventory database, including stream and watershed assessment information, bluff recession data, storm water management issues, and more. Historic research and new discoveries will be incorporated into the plan if found. Ongoing research and conservation efforts are similarly being observed.

A gap analysis will be used to identify areas where information is incomplete. Field verification will be done throughout the watershed where information is incomplete or conflicting. A voluntary advisory council representing partners and stakeholders from across the watershed has been regularly meeting to focus the scope and objectives of the plan.

At the conclusion of the project, a publicly accessible comprehensive GIS database of all available Pennsylvania Lake Erie Watershed data will aid users in wise decision-making for future projects.

Erosion and Sedimentation Control and NPDES Programs

The District continues to administer its most tenured programs, related to Chapter 102 and Chapter 92, erosion and sediment (E&S) control and the National Pollution Discharge Elimination Systems (NPDES) respectfully. Chapter 102 underwent final regulatory revisions in 2010, incorporating storm water and many of the NPDES permitting policy requirements. While a complete list of the changes cannot be listed here, a few of the most notable changes related to the revisions are that aside from agricultural plowing and tilling activities, timber harvesting, and road maintenance projects, earth disturbances greater than or equal to one acre require a NPDES permit for construction. If the permitted project is located within a High Quality or Exceptional Value watershed, there are also riparian buffer requirements that apply. NPDES also now requires more detailed Post Construction Storm Water Management documentation, related to implementation and long term maintenance. A complete copy of the Chapter 102 revisions may be obtained at the Department’s website at www.dep.state.pa.us .

In addition to the routine assistance provided to municipalities, land owners, and the regulated community, over the last year the District approved 114 E&S plans, and processed 22 NPDES permits. The following is a list of the District’s primary activities under the 102 program:

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

The Chapter 105– Waterway Management Program

The District’s continued the program responsibilities associated with Chapter 105, Dam Safety and Waterway Management. These include the review and acknowledgment of Chapter 105 General Permits, complaint investigation and compliance resolution, and education and assistance to private property owners and the regulated community related to the rules and regulations associated with Chapter 105. 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 to streamline and expedite the permitting process, and provide continued assistance to all its residents.

In 2010, the District issued 65 Chapter 105 General Permits, provided either technical, or educational assistance to over 200 private land owners, consultants, and, or businesses, and investigated over 30 program related complaints.

Coastal Zone

2010 Marks the 25th Anniversary of the Annual International Coastal Cleanup (ICC)



From Baltimore to Bangladesh, Ocean Conservancy leads the world's most astounding grassroots cleanup effort. Every year in September, more than half-a-million people in 100 countries remove millions of pounds of trash from beaches and waterways all over the world—and collect data on what they find. During the amazing signature event each September, hundreds of thousands of volunteers from countries all over the world spend a day picking up everything from cigarette butts and food wrappers to lost fishing nets and major appliances. Because trash travels to the ocean by way of storm drains and waterways (nonpoint source pollution), they don't just work along ocean beaches; these dedicated folks slog through mud and sand along lakes, streams, and rivers, too, often working far inland. See more info at www.oceanconservancy.com.

The District participates every year by serving as site coordinator, pairing up with the Department of Conservation and Natural Resources (DCNR) and does a cleanup at Erie Bluffs State Park, one of the fifteen cleanup sites in Erie County. We had an awesome array of “little People” this year (Cub Scouts and Brownies) along with their parents and our other “regulars” (see photo). We meet at Elk Creek Access parking lot, typically at 9am on the 3rd Saturday in September. We then shuttle across the Park to Duck Run at the west end, from there we walk down Duck run to the lake and then walk the shoreline back to Elk Access. The large black garbage bags get heavier and fuller as the walk progresses. We usually get done around 1pm and cover about two miles. This year's data for the Lake Erie Cleanup was 907 volunteers, 526 bags of trash and recyclables collected. Trash collected weight was about 3.5 tones and recyclables about 1 ton along 69 miles of Lake Erie Shoreline. You can view the cleanup sites along the Lake Erie Coastline and sign up for the 2011 cleanup at www.goerie.com/coastalcleanup. Thanks to Julia Donahue from Erie County Planning, Don Blakesley and Erie County Recycling came aboard and was able to secure funding to purchase 25th Anniversary T-shirts and water bottles for the participants. To see the DEP's news release go to: www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=14268&typeid=1

The Coastal Nonpoint Pollution Program (CNPP)

2010 saw a continuation of similar activities from previous years, providing coordination, technical assistance, education and outreach on coastal nonpoint source pollution issues. Continued activities involve the Dirt and Gravel Road Program, International Coastal Cleanup, The Regional Science Consortium and Best Management Practices implementation and maintenance at Headwaters Park.

Noteworthy is the development of the Park's Master Site Development Plan (MSDP). In Its early stages, the CNPP program is involved with the process of obtaining a grant for the plans creation, as well as researching for ideas and projects to be included in the Park Plan, especially those relating to nonpoint source pollution. The Park's newly acquired wetland and its downstream proximity to Interstate 90 will provide many opportunities to study nonpoint pollution and experiment with ways to measure, monitor and reduce it. The wetland will provide interactive learning opportunities for nonpoint source pollution awareness and education for Park visitors, especially the students that come for the environmental education programs we offer.

The Coastal Zone Management (CZM) Program at DEP is now technically the Coastal Resources Management Program (CRM). To see the projects funded in Erie County in 2010 take a look at the CRM web page at www.dep.state.pa.us/river/czmp.htm.

Environmental Education

In the initial years of the Environmental Educator position, growth was exponential and opportunities grew with the position. 2010 was no exception, with increased attendance from regional groups and requests for programming in a variety of areas and venues. From school groups to scout groups, children to adults, small group meetings to the Envirothon, the Erie County Conservation District's education program is filling a niche in the Erie community and looks to continue and expand its efforts in 2011.

A significant event that is hosted annually by the District is the Erie County Envirothon. The Envirothon is a competition where students compete in the categories of forestry, aquatics, wildlife, and a current issue. 2010 current issue was protection of ground water. Last year was first year that the Envirothon took place at Headwaters Park. Fifteen high school teams from across the county attended the competition. North East High School's team Green Flash won the county title, moving on to the state competition in late May, where they placed 4th in the State.



Interest in the Envirothon is growing. The District plans to expand the program and host the first annual Middle School Envirothon May 12, 2011, with favorable results. Many districts have inquired about the event and several schools are putting together the maximum number of teams allotted. The Middle School Envirothon will begin each station with an interactive learning activity, followed by a short written test. It is the hope of the District that students involved in the Middle School Envirothon will discover an interest in our natural resources and conservation and participate in the Envirothon throughout their high school career with a goal of pursuing a related interest upon graduation.

Two educational grants were funded and completed in 2010. A DEP Environmental Education grant and a DEP Coastal Zone Management grant. The environmental education grant funded a study of local educator's knowledge and classroom practices regarding the PA Standards for Environment and Ecology. The study results were used to create Elementary, Middle, and High School Compendiums of lessons and resources focusing on areas in which teachers requested support. The compendiums are available at the District for all area educators, free of charge. To obtain a copy contact the District.

The Coastal Zone Management grant focused on expanding the watershed and wetland educational programming at the District and in the classroom. Funds were used to create new programs for elementary and middle school students to educate children about stream water quality, municipal water quality, and general water conservation and preservation. Programs for local scouts were also created, along with an informational brochure regarding programming available at the District and the Headwaters Park facility. Several pilot programs were conducted with diverse groups of students with positive feedback and evaluations. Some of these programs were water quality testing and wetland wildlife. Programming developed from both grants will be integrated into the current environmental curriculum offered here at the District.

School program curriculum was updated and published in a brochure and online. The environmental educator visited schools across the county to introduce services available through the District. Due to ever-changing information and practices regarding the environment and environmental education, the District strives to stay updated on current knowledge and innovative ideas. The programs look to not only teach schools and groups in the Erie region about our beautiful natural resources, but also introduce new ideas and best management practices that the community can utilize in their own home and work environment. In this way, it is the District's mission to inform and educate the residents of and visitors to Erie County.

For information on the Envirothon or any of our environmental programs or to obtain a copy of the any of the compendiums, contact the environmental education, Kristen Currier.



Agricultural Activities

The goals of the Agriculture program in Erie County are to assist farmers and landowners with planning and implementing Best Management Practices, assist with concerns related to animal agriculture and manure management, the Nutrient Management program, and provide technical assistance to minimize soil erosion for landowners and farmers.

Nutrient Management

The Nutrient Management program continued to grow during 2010. There were 22 approved plans in Erie County with many more expected. All livestock farms in the County, including horses, are encouraged to get a plan. The benefits include knowing how much manure to spread on fields and how much fertilizer to buy, if any is needed. Also limited liability protection if you have implemented your approved plan and are following it. For more information contact Bethany Fritz, the District's Ag Specialist.

Farm Land Preservation

The District is still involved with the Farm Land Preservation program. The program provides funds for the purchase of development rights on farmland. This allows farmland to stay in agricultural use for infinity. As of December 31, 2010 there were approximately 6600 acres and 52 farms preserved in Erie County.

Workshops and Field Days

The District partnered with other Districts to hold a No Till Workshop at Ernst Conservation Seeds in Meadville and a No Till Field Day at Greene-Summit Farms in Erie. The topics included BMP's, manure management, soil testing, cover crops, no till equipment, slug management, and nutrient management. Several speakers were on hand at each meeting to present the topics and answer any questions that might be asked.



No Till Farm Equipment featured at a Field Day

Ag BMP Growing Greener

The District received two Growing Greener Grants in 2007. They were both titled Ag BMP Cost Share Programs. One was for \$70,000 and the other was for \$300,000. Both these grants will end June of 2011. Over the past three years we have installed 34 BMP's on 14 different farms. The BMP's include: stream bank fencing, heavy use areas, manure stor-

Manure Storage Facility funded through Ag Best Management Practices



age, spring development, diversions, grassed waterways, access roads, stream crossings, and many more. The total cost of these projects was \$493,900.00 with the District using \$264,000.00 worth of GG funding. Several of the landowners also received funding from NRCS to cover some of the costs. We are finalizing the last of the projects to be complete by June 1 of 2011.

Other Projects

ARRA

In partnership with PennVest's Green Reserve Project, the Erie County Conservation District applied for and received ARRA Funding to address seven roads of concern that cut across streams and wetlands. The project stabilized 112,000 square yards of road base, 96,000 linear feet of ditch line by increasing ditch outlet frequency, and 23 acres of road surface.

The work remediated problems caused by road beds and surfaces that trapped water or acted as a barrier to natural wetland flow. Water trapped on the uphill side of a road saturates and undermines the road base. As a result, the road base is not able to support traffic loads which in turn lead to frequent surface maintenance creating loose and easily erodible surface material. Unstable road surfaces drain sediment to nearby streams and wetlands. Concentrated runoff from parallel road ditches also contribute to sediment draining directly into streams and wetlands, increasing flood flows and reducing groundwater infiltration.

Funds enabled the District to implement environmentally sensitive maintenance practices. The District created additional ditch outlets in the form of cross pipes and turnouts to reduce the connectivity of the road drainage to streams and wetlands and performed full depth reclamation to create a stable base for a more maintainable road surface. Full depth reclamation is a process of in-place recycling of an existing road surface to create a stable road base. Full depth reclamation creates a hydroscopic layer that prevents groundwater from mixing with the road system, thereby reducing sediment and improving road stability.

Tree Seedling Sale

Every year the district employees help Headwaters Trust with their annual seedling sale. Orders are accepted throughout February and March. Orders are picked up on the last Friday in April at the Waterford Fair Grounds. The revenue gathered from the sale is used to fund the Envirothon and provide scholarships to students. Last year we received 411 orders, which resulted in thousands of seedlings being planted throughout Erie County.

Headwater Trust paid the expenses for the Erie County winning Envirothon team to participate in the Conservation Leadership School. The Conservation Leadership school is a week long program held at Penn State University where students learn about conservation practices through hands on experience and gain valuable leadership skills.

The students who attended the school were, Rebekah Petroff, Lucas Beardsley, Alex Britt, Falon Hall, and Adam Gleisner. During the August Board Meeting, three of the students who attended the school gave a presentation to the Board Member about what they learned during the week.

The District and Headwaters Trust was pleased with the success of last year's sale and has good expectations for the 2011 sale.

Crews working on McLaughlin Road



A special thank you to our partnering agencies. Our success would not be possible without your help and support.