

Bedford County Conservation District 2008 Annual Report

The Conservation District was organized in 1956 as a legal subdivision of state and local government, under the authority of Act 217, to assist landowners in Bedford County with natural resource related issues, and provide the technical and financial assistance to implement conservation practices on their land. There are 66 conservation districts in Pennsylvania, representing every county except Philadelphia, dedicated to conserving our soil and water resources.

A board of directors, who reside within the county, know its people, and is concerned with the local conservation issues, guides the district. The district has expanded its services and staff to serve clientele from both farm and urban communities reflecting the complex and ever-changing environmental and land-use issues we face today. The District provides assistance to citizens, landowners, organizations, agencies and local governments in critical land use decisions both regulatory and non-regulatory, water quality issues, nonpoint source pollution abatement, and other resource related areas.

Erosion & Sediment Pollution Control Program

The district, under delegated authority from the Department of Environmental Protection (DEP) and the State Conservation Commission, administered the Erosion and Sediment Pollution Control Program at a Level II authority under the Chapter 102 regulations and the Pennsylvania Clean Streams Law. This involved technical review of erosion control plans for earthmoving activities, project inspections, compliance activities, complaint response and public education. The purpose of this program is to protect our land and waters from accelerated erosion and sedimentation during any earth disturbance. The district investigated 33 referred complaints. The scope of projects reviewed by the district can range from single building construction disturbing a minimal area to highway projects involving several acres of disturbance. The district received and processed 34 Erosion and Sediment Control Plan reviews. The reviews encompassed over 500.33 project acres with disturbed acres totaling 76.52. The district conducted 33 active project site inspections.

Construction sites involving more than 5 acres of actual earth disturbance or greater than 1 acre of earth disturbance with a point source discharge must apply for and receive a National Pollution Discharge Elimination System (NPDES) permit for the discharge of stormwater prior to commencing any earthmoving activities. The district administered the NPDES program for construction sites, processed technical review of applications and accompanying E&S plans, and inspected of permitted sites to ensure compliance with permit conditions. Individual NPDES permits are issued for those sites located in Special Protection Watersheds. In 2008 the district processed 15 General and 7 Individual NPDES permits.

Dirt & Gravel Road Program

The Environmentally Sensitive Dirt and Gravel Road Program is a county level grant program that provides funds for pollution prevention projects on publicly owned dirt and gravel roads. Eligibility requirements to receive grant funding includes attending the two-day training offered by the Penn State Center for Dirt and Gravel Road Studies. The program goal is to reduce erosion, sediment and dust pollution by providing technical and financial assistance.

The State Conservation Commission provides oversight and statewide administration through support from the Penn State Center for Dirt & Gravel Road Studies. Locally the district appoints a Quality Assurance Board comprised of representatives from the District, Natural Resource Conservation Service, and the PA Fish & Boat Commission. The QAB adopts appropriate operational procedures and standards, reviews eligible applications and makes recommendations to the District board for funding approved road projects.

Through 2007, the program expended \$28.7 million on 1790 completed contracts statewide, with in-kind support from project participants averaging over 37% during that period. In Bedford County to date,

nearly \$400,000 was allocated to 50 projects with over \$180,000 of in-kind contributions from township participants.

The Watershed Specialist administers technical aspects of the County Dirt and Gravel Road Program. During 2008, projects were completed on two roads in East Providence Township and one road in Londonderry Township that will reduce sediment pollution to streams.

Also during 2008, the Conservation District, updating a database that dated from 2000, completed a countywide reassessment of dirt and gravel roads. Sections of unpaved township roads causing impacts to streams were identified, mapped, and ranked, yielding an inventory of 205 verified worksites on nearly 90 miles of roadway. This list will be valuable in assisting townships to identify priority work areas and in addressing the most significant sources of pollution.

Watershed Specialist

During 2008, the Watershed Specialist continued monitoring in the Yellow Creek watershed to document stream flow and nutrient loads. This data will hopefully show improvements in water quality resulting from the efforts of many agencies to install Best Management Practices to reduce agricultural pollution, including the Conservation District No-Till and Cover Crop programs. Water quality monitoring also continued on tributaries to Shawnee Lake, including Kegg Run and Shawnee Branch, in to assess nutrient loads that might be contributing to the turbidity and algal blooms in the lake. The Watershed Specialist assisted Department of Environmental Protection personnel in data collection on the lake in addition to the tributary monitoring.

Technical assistance in volunteer training, water quality monitoring, and GIS mapping was provided to the Bobs Creek Stream Guardians for their work on a Coldwater Conservation Plan for Wallacks Branch, an important wild trout tributary of Bobs Creek. Funding for the Stream Guardians study is provided by the PA State Council of Trout Unlimited and the PA Fish and Boat Commission.

The Watershed Specialist was involved in environmental education activities that included: county Envirothons for elementary, junior, and senior high students, Everett 6th grade environmental field days, programs for Bedford Area Parks and Recreation at Shawnee Lake, field trips to stream and mine drainage treatment systems for Tussey Mountain elementary students, and conservation district newsletters and website. Assistance was provided to classes from Allegany College of Maryland conducting studies on county streams and to Fort Bedford Trout Unlimited members studying stream life.

Environmental Education

Environmental education programs are offered to all age levels, including kindergarten through high school students, youth, scout, and various adult groups.

Conservation news, program and resource information are promoted through the district's Conservation Notes newsletter that is shared with over 1200 county educators, residents, farmers, county leaders, and various organizations.

This year Bedford County held its twenty-third Envirothon for students in grades nine through 12; its twenty-first event for students in grades seven and eight; and its sixteenth event for students in grades five and six. The events were held at Shawnee State Park and were a huge success with more than 300 students participating. The winners from the Sr. High event participated in the State Envirothon, placing 26. The Pennsylvania Envirothon hosted 65 five-member teams at Penn State University, Main Campus, State College.

Bi-Annually the Conservation District partners with WOSA to hold a tree seedling sale. Thousands of trees are distributed to county residents. The profits benefit conservation education programs at the district, including Bi-annual Arbor Day presentations offered to all school districts within Bedford County.

The students watch an Arbor Day video, participate in a group discussion/question period, and received a white pine tree seedling.

The district offers a \$500 scholarship in honor of the late Glen Beach and his contributions in conservation tillage, funded through the No-Till Rental Equipment Program. The scholarship is available to an undergraduate college student in the field of agriculture, environmental studies, soils, or natural resources. Scholarships will be awarded on the basis of academic merit, curriculum of study, quality of the written essay and career goals that are consistent with the BCCD mission.

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Pennsylvania Envirothon

In 2008, more than 300 high-school students representing 65 counties participated in the twenty-fifth Pennsylvania State Envirothon. The event was held at the Pennsylvania State University on May 19 and 20. The Pennsylvania Envirothon is the outcome of 67 county competitions that take place during the months of April and May and involves more than 15,000 teenagers throughout the Commonwealth.

The Envirothon is a competition that challenges students to think critically about the natural world and their role in it. It's a competition that helps students develop the thinking skills they will need for a lifetime of finding balanced solutions to complex issues, such as how to encourage economic development and still preserve open space.

Teams were evaluated by practicing environmental professionals in five areas of study: soil/land use, forestry, aquatic ecology, wildlife, and current environmental issues. The teams also delivered a 5-10 minute oral presentation to a panel of five judges. The presentation consisted of how the team's proposed idea would positively and/or negatively impact the land, water, air, wildlife, forests, and people of the area.

This year's oral component focused on the current issue theme, *Recreational Impacts on the Natural Environment*. The teams were asked to develop a management plan focusing on the Appalachian Trail. The plan had to address critical recreational activities which negatively impacted the Appalachian Trail in

Pennsylvania. The team also addressed solutions to minimize those critical recreational impacts on the Appalachian Trail and defined strategies of how to implement the solutions.

Awards were presented to the 10 teams scoring the greatest number of points. The Pennsylvania Department of Agriculture and the State Conservation Commission awarded over \$9,000 in college scholarships to each team member of the three teams scoring highest in the station testing.

The state winning five-member team from Penncrest High School honored Pennsylvania with a third place finish at the 2008 Canon Envirothon. Winners were announced during closing ceremonies of the weeklong North American environmental education competition held at Northern Arizona University, Flagstaff, AZ, and sponsored by Canon U.S.A. More than 250 teenagers from 45 U.S. states and nine Canadian provinces studied environmental issues and resource conservation, while competing for a share of more than \$100,000 in Canon scholarships and prizes.

The Pennsylvania Envirothon sponsors and partners include many of Pennsylvania's corporations, conservation districts, and various state and federal agencies/organizations.

Chesapeake Bay Program

During the 2008 calendar year, the Bedford County Conservation District's Chesapeake Bay Program has further reduced sediment and nutrient run-off into the Chesapeake Bay. In accordance with the district's 2006 County Implementation Plan, the Chesapeake Bay Program, through the installation of Best Management Practices (BMPs), continues to address sediment and nutrient losses, from agricultural operations, as its highest priority. The Bedford County Conservation District, through the 2008 first round Special Project Funding Program Allocation, requested 125,000 dollars for the implementation of BMPs which included: Pasture renovation, cover crops, no-till corn, Yellow Creek monitoring system, a no-till pasture seeder, manure composting design, waterway and diversion, and a cattle walkway. Of the \$125,000 requested \$25,000 for cover crops and \$22,000 for no-till corn were awarded for a total of \$47,000. A majority of the allocated dollars were utilized in the agriculturally impaired Yellow Creek watershed of Bedford County. Best Management Practices implemented included no-tilled crops and no-tilled fall cover crops.

In 2008, Chesapeake Bay Special Project Funds focused on the implementation of no-till BMPs throughout the county. Through these funds, the district was able to purchase, repair, and maintain no-till rental equipment for Bedford County producers. Approximately 8300 acres of crops were no-tilled in Bedford County through the use of the district's rental equipment in 2008. Chesapeake Bay Special Project Funds were also used to implement 3325 acres of fall cover crop BMPs in Bedford County. Through the district's 2008 Cover Crop Incentive Program, approximately 2000 acres of corn silage stubble received a fall no-tilled cover crop. There were also 1200 bushels of rye cover crop seed (approximately enough for 600 acres) that were sold at a reduced rate to farmers who chose not to receive incentive payments for planting a cover crop.

Agricultural Conservation

The ACT position is currently handling a few projects in the county. Projects included: the Bedford County cover crop incentive program that was funded by the Chesapeake Bay Program, the ACRE inventory and assessment project, the Phosphorous and Sediment Reduction grant, Biosolids compliance checks, gypsy moth suppression scouting, and updating the Bedford County Agricultural Security database.

Through grant money supplied by the Chesapeake Bay Program, the Bedford County Cover Crop Incentive program was designed with the intention of reducing sediment and nutrient runoff from corn silage fields in the county by planting wheat, rye, or barley. 2008 was the second year the Chesapeake Bay program funded a cover crop incentive payment in Bedford County. The technician's involvement included signing up farmers, delivery and set-up and maintenance of no till drills for establishment of the

cover crop and field checks to ensure growth, and suitable cover was achieved for fields that were enrolled into the program.

The Phosphorous and Sediment reduction grant was designed to reduce the amount of phosphorous and sediment loads that enter the waters of the commonwealth in Bedford County. There were 7 farms that participated in the grant they were located in different watersheds throughout the county. The grant promoted continuous no-till and the addition of cover crops to the farmer's rotation. The farmers are also given technical support from the Blair-Bedford Crop Management Association's crop technician, who performs pest and weed scouting, population counts, early season chlorophyll leaf meter tests, and late season stalk nitrate checks.

ACRE Agricultural, Communities and Rural Environmental Initiative

The ACRE grant inventory and assessment project is targeted towards the Yellow Creek watershed. There was an assessment performed on 32 farms within the watershed. Of those 32 farms, 16 chose to participate in the NFWF Park the Plow for Profit program. This program is designed to convert farms into continuous no-till systems. The ACRE evaluation was used to determine the farms' eligibility to receive nutrient trading credits. This assessment was used to determine which farms need the most assistance to be in compliance with the ACRE initiative. To be compliant each farm must have an approved conservation plan, and manure management plan, and they must be implementing any practices that are required through the plans to reduce nutrient and sediment discharged into water sources. The assessment included; headquarters and farmstead, cropland, hayland and pastureland, woodland, wildlife and wetland conditions.

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Biosolids

The ACT position conducted the biosolids field compliance checks. There were 7 different sites visited and checked to make sure that the municipality or septic tank service is hauling and spreading the material in accordance to DEP regulations. The district's responsibility is to confirm that the sites have a conservation plan implemented and are in compliance. Active site visits included: Colerain Township, East Providence Township, West St. Clair Township, Napier Township and East St Clair Township.

Nutrient Trading

The district received an environmental stewardship watershed protection grant to generate nonpoint source nutrient and sediment reduction credits with the potential to trade the credits and achieve cost effective water quality improvements. The district provides technical assistance to the agricultural community and administers monetary incentives specifically to those producers that are in baseline compliance and willing to implement additional conservation practices.

The program targeted the agricultural impaired Yellow Creek Watershed and eligible producers committed to continuous no-till and operations fulfilled the baseline compliance. Each farm had an approved conservation plan, manure management plan, and they must be implementing any practices that are required through the plans. In 2008 sixteen farms were verified in compliance and enrolled 1100 acres of no-till corn for nutrient trading.

Act 38 Nutrient Management

Nutrient Management Planning

The Act 38 Nutrient Management Plan program has experienced the first full year of using a standardized plan format. The new format now takes into account nitrogen, phosphorous, and potassium in the plan. Nutrient applications are now balanced for either nitrogen or phosphorous that is applied through fertilizer and manure applications. Soil tests are required on every field at least once every three years. Manure analysis must be taken for each major manure group annually.

There are five farms in Bedford County that are required to follow these regulations. These farms are CAOs (concentrated animal operations) and/or CAFOs. Farms of this size are likely exporting manure to other farms crop fields. These importing farms are also required to develop a planning process to account for the manure being applied to their fields. There are more than 30 farms in the county that receive manure from these large operations. Nutrient plans or balance sheets must be developed to show where, when, and how much manure is being applied to these fields. The district experienced an increase in the number of farms importing poultry manure from out of county CAOs. These farms are also required to develop balance sheets and maps for the fields receiving this manure. District personnel assisted in the development of many of these plans.

All farmers are encouraged to have nutrient plans developed for there farming operation. Approximately 60 farms in the county have volunteer plans written to help them balance their nutrient needs. By adopting these plans farms are eligible for various programs that help implement best management practices that reduce soil and nutrient runoff.

One other new element of nutrient planning was including horse operations under these regulations. Landowners that have at least 8 animal equivalent units or 8000 pounds of horses and have more than two animal equivalent units per acre to spread manure are regulated under this program and must develop a nutrient management plan for the operation.

Nutrient Management Plan Reviews

District personnel review nutrient management plans that are written by certified individuals from private industry, certified landowners, and district personnel from other counties. These plans are reviewed to make sure they meet the requirements of The Pennsylvania Nutrient Management Law and then approved by the local conservation district. The regulations were updated during the year to include phosphorous to the plans. The plans reviewed during the year included several Concentrated Animal Operations and volunteer landowners interested in applying for funds to install BMPs.

District personnel also reviewed nutrient plans and nutrient balance sheets that were developed for importing farms. This planning process is required for farms importing manure from CAOs in the county as well as those importing manure from farms across the state.

Annual status reviews are conducted on the counties CAO farms and nutrient management grant recipients each year. These status reviews help to keep these farms current with the new regulations and help to head off any problems that may develop.

Phosphorus and Sediment Reduction Grant

This was a three-year grant that was initiated in 2006. We worked with seven farmers in the county that initially planted 286 acres of no-till crops. In 2007 these farms increased the no-till planted acres to nearly 500 acres of corn and hay. In 2008 the final year of this grant the seven participating farms planted over 725 acres of no-till crops. Soil and manure sampling, access to no-till equipment, crop scouting, nutrient recommendations, and other cropping assistance is being provided with this grant. These seven farms also implemented nearly 500 acres of cover crops in the fall. Interest in continuous no-till planting continues to grow in the county. The Park the Plow for Profit continuous no-till program was initiated this past fall in the Yellow Creek Watershed with seventeen new participants interested in implementing no-till planting on their farms.

Equipment Rental Program

The Bedford County Conservation District currently implements an equipment rental program. The District feels that no-till planting is essential in reducing erosion and nutrient runoff from farmland. The program started with one no-till drill, but has currently expanded to include eight no-till drills, eight no-till corn planters, three damp lime spreaders, and three pieces of liquid manure equipment. This equipment is owned and maintained by the District and is delivered to landowners to operate.

The drills were utilized by 67 landowners, on approximately 2,200 acres of cropland this past spring to plant hay, small grains, and soybeans. An additional 700 acres of alfalfa and grass hay were planted in the fall. More than 3,000 acres of cover crops were planted on corn stubble fields in the county. This equipment plays an important role in implementing the required components of many conservation plans.

The no-till corn planters were utilized by sixty five landowners to plant 2,234 acres of corn and sorghum. The planters are set up to plant 30" and 36" row spacing. Six of the planters are equipped with dry fertilizer hoppers and two with liquid fertilizer tanks. Management decisions made when no-tilling corn need to be made 6 to 12 months ahead of planting. Adequate herbicide, lime, and nutrient applications are critical components to making no-till work.

Two damp lime spreaders were purchased in 2004 and a new spreader was made available in 2008. These spreaders will spread various types of lime as well as poultry litter. Over 4,000 tons of lime was spread during the year.

The liquid manure equipment consists of two 3,250 gallon tank spreaders and one 32' multi-purpose pump. The tank spreaders are equipped with flotation tires and hydraulic brakes. They require a minimum 120 horsepower tractor to safely operate. The pumps can be used in either straight walled pits or earthen lagoons with sloped sides. They have hydraulic controls to operate the mechanical parts of the pump.

Landowners are required to use this equipment in an environmentally sound manner. Conservation plans and nutrient plans are critical components of making sound environmental decisions. Soil testing and manure analysis are recommended to those who use the equipment.

Nutrient Management Grant Program

This program is available to landowners that have an approved nutrient management plan with recommended best management practices (BMPs) listed in the plan. There are financial guidelines that must be met to qualify for this program. Applications may be obtained from your local conservation district or from the State Conservation Commission.

AgriLink Loan Program

The AgriLink Program provides low interest loans for the construction and implementation of BMPs listed as part of an approved nutrient management plan. District personnel provided information to interested landowners on this program and helped several apply for this funding.

Agricultural Land Preservation

The Bedford County Agricultural Land Preservation Board administers a farmland preservation program for purchasing and accepting donations of agricultural conservation easements to preserve the most productive soils in Bedford County. The district assists the Bedford County Agricultural Land Preservation Board with Level I services by providing nutrient planning, conservation planning assistance and evaluate growth and best management practice installation. In addition, the district schedules and conducts annual field reviews of each easement with ten easement monitoring field inspections completed for more than 1800 preserved acres in 2008. The district promotes efforts to support the

growth and existing agricultural communities through program promotion and outreach. The latest cooperative initiative in 2008 was a signage campaign recognizing 2000 acres of preserved farmland throughout Bedford County.

The district also assisted the Bedford County Planning Commission to develop and update a centralized Agricultural Security database. This is a GIS program that maps all of the properties in the county, for each township, that have enrolled their property as an Agriculturally Secure Area through their township. Data entry is verified through Registers and Records Office.

Recycling Activities

The Bedford County Conservation District Clearville Recycling Center recycled ----- tons of material during 2008. The collection facility operated the first and third Saturday and Tuesday of each month from 9 till 1. Items collected were newspaper, office paper, junk mail, Magazines, cardboard, plastic bottles, plastic ag bags, plastic bail wrap, aluminum cans, bi-metal cans, clear glass, brown glass, green glass, oil and antifreeze. Electronic materials were added to the collection materials in April 08.

The Bedford County Conservation District offered special collection days. During the fourth Thursday of each month county residents can bring plastic and glass materials to the Conservation District office.

In 2008 the Tri-County Solid Waste Board, County Coordinators, Parks Garbage Service and Interstate Waste Services (landfill) changed program operations. The New Bedford County recycling program includes seven drop-off bins located within the county and 18 recyclable materials. Activities at the recycling drop-off bins are coordinated between the county coordinator, the municipalities and the site sponsors, who include: Bedford Township, Broad Top Township, and Everett Church of the Brethren, United Church of Schellsburg, Londonderry Township, King Township and the Sandy Run Landfill. Residents may recycle their newspapers, office paper, magazines, shredded paper, junk mail, paper bags, cardboard boxes, pizza boxes, food boxes, paper towel rolls, paperboard packaging, aluminum/steel cans, aerosol cans, plastic bottles, and green/clear/brown glass bottles at any of the green drop-off containers. Over ----- tons of recyclables were collected from the drop-off bins in 2008.

In addition to the drop-off programs, a variety of other recycling activities included: Grant writing for in-school recycling and Bi-Annual Hazardous Household Waste collections.

Gypsy Moth Suppression Program

The purpose of the Gypsy Moth Surveillance Program is to protect forested residential and recreational areas and certain other high-use areas from serious gypsy moth damage. It was not designed to prevent or retard the spread of the gypsy moth, or to control it in uninhabited forest lands. The program was designed to provide temporary relief for one season to residents in infested areas. The goal of the program is control, not eradication, of the pest. Statewide a total of 221,221 acres were treated at a total cost of \$7,989,777. The overall success rate for the suppression project was 97%.

Weather conditions influence Pennsylvania forests in a variety of ways. Water stress in combination with insect pests and disease agents can significantly influence host condition and forest health. In 2008, hatch and early larval development were delayed due to cool wet weather during May and early June. These conditions helped promote the Entomophaga maimaiga infection of gypsy moth throughout most infested areas of the state, but the extent of larval mortality was variable, ranging from 20% to 100%. Gypsy moth infestations actually increase in some areas, particularly the Pocono Region, where decline or collapse was expected after four straight years of significant impacts.

In 2008, the Bureau of Forestry treated 12,485 acres of state and private forestland within Bedford County. Aerial surveys were conducted by the Bureau of Forestry and ground surveys of gypsy moth defoliation were conducted by the district in June and July revealed little to no defoliation within Bedford

County. Some small pockets of defoliation were discovered in the southeastern section of the County, but not enough to warrant a spray program.

West Nile Virus Control Program

The Bedford County West Nile Virus Program collected 14,023 mosquitoes in 758 samples in 2008. Among these samples submitted to the state labs, 414 samples were tested for West Nile Virus and 16 samples were tested for LaCrosse Virus. Two samples from Bedford County were found to contain West Nile Virus, in both cases found in the commonly collected *Culex restuans* mosquito. Both of these samples were collected in July 2008, from King Township on the 23rd and from Cumberland Valley Township on the 30th. None of the samples tested positive for LaCrosse virus

Two birds were tested for WNV, both found to be negative for the virus. There were no human cases of West Nile virus disease reported in Bedford County during 2008.

During 2008, the program conducted 26 larvicide treatments using Bti, Altosid, or Agnique MMF. No adult treatments occurred in Bedford County.

Educational activities by the WNV program included Bedford Parks and Recreation programs at Shawnee State Park, displays at Youth Field Day and watershed festivals, and newspaper articles and radio PSA's.