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Perry County
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Implementation Plan
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Submitted by the:

Perry Conservation District

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Table of Contents

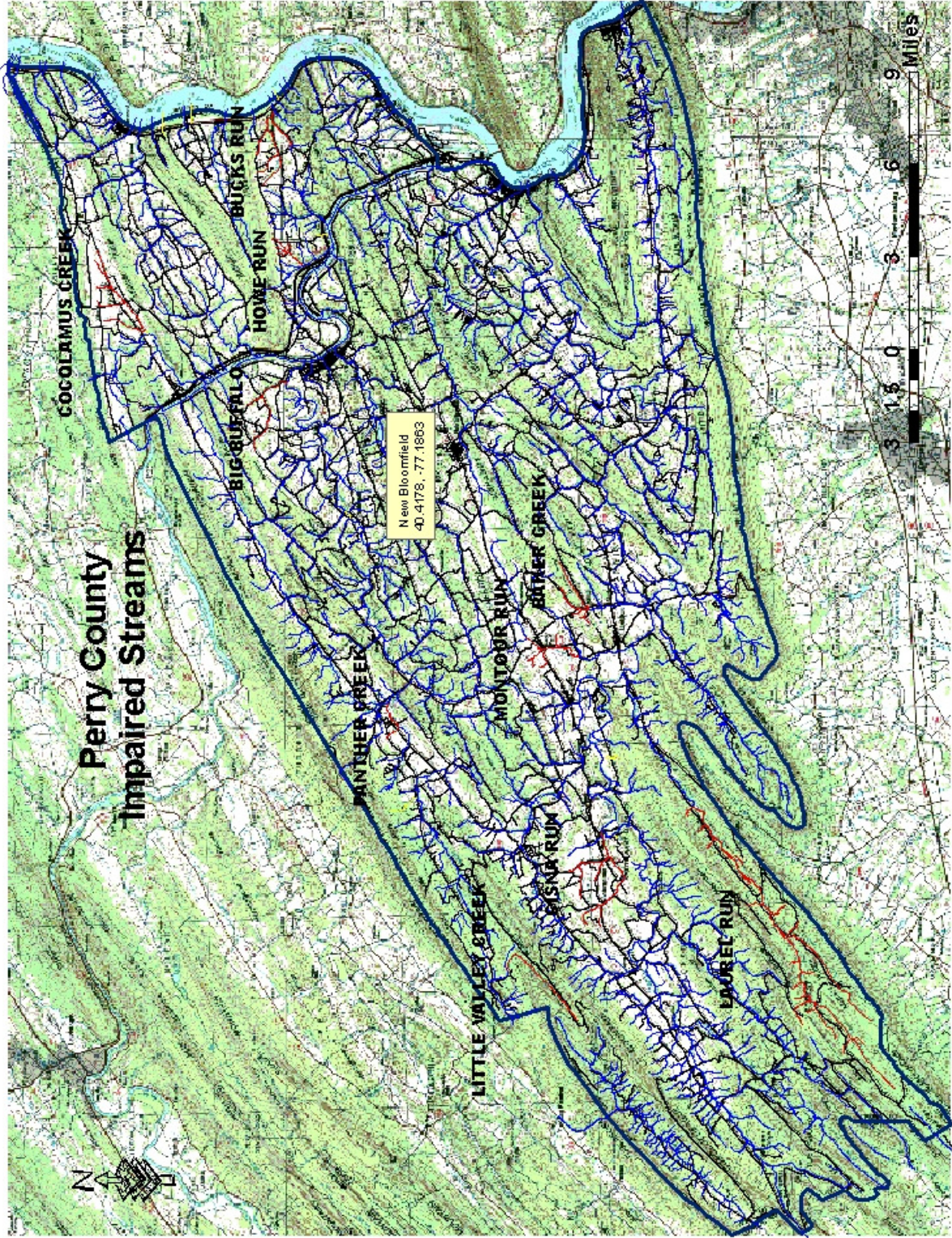
Perry County Description	3
Water Resources/Quality	3
Perry County Impaired Streams Map	4
Current Conservation Programs and Recent Accomplishments	5 – 8
Most Effective Approaches to Address Needs	9
Perry County Conservation District Strategy	9 - 11
Expected Results	11
Sources	11

A. Perry County Description

Perry County is located in the South Central DEP district and lies completely within the Chesapeake Bay Watershed. It encompasses 554 square miles, and is bordered on the east by the Susquehanna River and on the west by the Tuscarora State Forest. Sixty percent of its 354,560 acres are forest land, 25 percent or 88,640 acres is in agricultural use, and the remaining 15% or 53,184 acres is in residential use. According to the 2010 Census, Perry County's total population is 45,965 with a population density of 83.4 persons per square mile. Perry County is rural for the most part, with 70% of its working population employed outside of the county. Education, health and social services are important industries in the county. Perry County agriculture is the leading industry in the county with \$140,401,000 in total sales (2012 Pennsylvania Ag Statistics). Livestock and livestock product sales totaled more than \$112,674,000 and Perry County's 81,253 acres of field crops and forages sales, along with sales from Christmas trees, nurseries and greenhouses had a combined total value of \$27,727,000 in 2012. Perry County has about 889 farms averaging 152 acres each for a total of 135,075 acres.(2012 NASS) There are about 384 cattle operations including dairy & beef, 65 hog farms, 146 poultry farms and 33 sheep farms. These operations have about 30,000 AEU (Animal Equivalent Units) of livestock and about 46,731 AEU of poultry.

B. Water Resources/Quality

Perry County can be divided into three large DEP designated watersheds which all drain to the Susquehanna River and ultimately the Chesapeake Bay. They are 1) Sherman Creek – CBP 7A; 2) Buffalo, Little Buffalo – CBP 7B; and other small tributaries to the Juniata River; and 3) Bargers Run, Hunters Valley Run – CBP 6C; Bucks Run and other small tributaries to the Susquehanna River. A Perry County impaired streams map can be found on page 4. Reductions in sediment and nutrients in these watersheds will directly improve the water conditions in the Chesapeake Bay. Under the provisions of Chapter 93 of the Clean Streams Law, Laurel Run from the north branch basin source to the south branch is classified as an Exceptional Value stream. The headwaters of Sherman Creek, all of Little Buffalo Creek, and Laurel Run from the south branch basin source to the north branch, and from the confluence with the north branch south to T 339 are classified as High Quality. Perry County is also home to a number of approved trout stocking streams and several Class A Wild Trout Waters. All of Perry County's 303d listed streams except Laurel Run and Little Valley Creek are impaired due to excessive sediment and nutrient loads. DEP personnel have identified agriculture as the primary source of the excess nutrient and sediment loads. Waters impaired due to agriculture account for about 5% of the total stream miles in the County.



C. Current Conservation Programs and Recent Accomplishments

The Perry Conservation District has a long tradition (since 1950) of working with its cooperating agencies to oversee the implementation of a wide variety of natural resource conservation programs including those aimed at reducing soil erosion and managing nutrients especially on agricultural operations. The following highlights summarize more recent accomplishments.

Conservation Planning

Working conservation plans, in addition to helping the farmer meet State and Federal requirements, provide the farmer with a blueprint for managing his land while minimizing erosion problems. The conservation plan can also identify BMPs that need to be maintained or installed so the farmer can make financial and land use planning decisions based on identified conservation needs. Much of this technical assistance is provided through the USDA Natural Resources Conservation Service (NRCS) who writes ~50 plans representing ~2500 ac/year. The Conservation District has also provided cost share funding to cooperators through the Chesapeake Bay Special Projects program to hire a technical service provider to develop plans for 5-10 farmers annually.

Agricultural Outreach & Education

Perry County Conservation District has engaged in a comprehensive outreach effort to inform all county farm operators, landowners and livestock animal owners of their responsibilities under the Pennsylvania Chapter 102 Ag erosion, sediment & storm water management and Pennsylvania Chapter 91 Ag pollution control and prevention regulations. Through this program, a representative from the District will meet with all farm operators, landowners, and animal owners in the county by 2017 and provide them information on current regulations. In 2013, 100 outreach visits were conducted. Part of this outreach effort is to also plan and conduct Manure Management Plan Writing workshops for livestock animal owners in Perry County. In 2013, two workshops were held assisting 16 livestock owners with writing a manure management plan.

Pennsylvania Resource Enhancement and Protection Program

The Resource Enhancement and Protection (REAP) Program allows farmers and businesses to earn tax credits in exchange for "Best Management Practices" (BMPs) on agricultural operations that will enhance farm production and protect natural resources. The program is administered by the State Conservation Commission (Commission) and the tax credits are awarded by the Pennsylvania Department of Revenue. Eligible applicants may receive between 50% and 75% of project costs as state tax credits for up to \$150,000 per agricultural operation. The amount of tax credit available to a recipient is dependent on the type of BMP implemented. The Conservation District's role in this program is to determine farm operator's eligibility, verify their Conservation and Manure Management Plans are current and implemented and assist with the PA REAP application process. In 2013 \$254,000 in PA State Tax credits were awarded to Perry County Farmers with Conservation District assistance.

Chapter 102 Erosion and Sediment Pollution Control Program

The District administers the State Erosion Control Program. State Law requires all earthmoving activities such as land development, logging and agriculture operations, to develop and implement erosion control plans that meet State engineering standards. In 2013 approximate accomplishments were: 27 plans reviewed, 10 NPDES permits issued, 17 complaints handled, 38 site inspections and 142 technical assistances.

Dirt & Gravel Road Program

The district administers the Dirt and Gravel Road program which receives approximately \$40,000 a year in funding to improve gravel roads in a manner to reduce erosion, run-off and dust. In 2013, Jackson Twp. was contracted \$50,000.00 to improve Robinson Road.

Conservation Tillage

One of the greatest areas of success in Perry County has been the transition from conventional tillage to conservation tillage by the County's farmers. A large percentage of Perry County farmers have already adopted and implemented conservation and minimum tillage farming practices. According to a tillage survey completed by Capital RD&C in 2012, 51% of acres planted were planted using no-till with surface residue at 30 % or more and 50% of acres were planted with other methods (reduced tillage, mulch-till, conventional tillage.) The Perry Conservation District promotes the use of no-till planting through its no-till equipment rental program. The current program includes 4 no-till grain drills capable of planting forages, pasture mixtures, commodity crops, cover crops, wildlife food plots and native grasses. In 2013 district owned machines were used to plant ~3,800 acres in Perry County, from 2005 through 2013 total rental acres have increased approximately 10% per year. Another means of promoting the use of no-till farming has been the recent formation of the Perry County No-till Group, and no-till, farmer to farmer based interest group that meets 3-4 times per year with Conservation District oversight. This group offers all levels of information from no-till beginners to long term no-tillers.

Farmland Preservation

Another success story in Perry County is Land Preservation. Recognizing the threat of urban sprawl on the natural resources of the County the District has been instrumental in promoting land preservation for over two decades. Urban sprawl can have many adverse environmental impacts. One major impact is that urban sprawl generally will create more impervious areas which results in more runoff to area streams. This "extra" runoff can substantially accelerate stream bank erosion resulting in increases in sediment and nutrient loadings

In 1996, the fruition of years of effort was realized when Perry County's first farm was preserved with a conservation easement. The District now administers the State Farmland Preservation program, its own woodland/open space easement program and assists the Central Pennsylvania Conservancy (CPC) on any land preservation projects within the county. To date 8000 acres have been preserved (or are under agreement of sale) with the County Farmland Preservation program by 53 conservation easements. These acres are inspected annually. This program focus is a high priority with the District.

Chesapeake Bay Program

Many projects have been completed in Perry County under the State Chesapeake Bay Cost-Share Program since its inception in 1990. In 2013 Chesapeake Bay Special Project funds were used to: trade/upgrade/purchase and new Land Pride model 606NT pasture drill, contract a Technical service provider to write 5 conservation and manure management plans and trade/purchase/upgrade one of the Districts John Deere model 1590 no-till grain drills.

Nutrient Management

The PA Nutrient Management Act became law in 1993 and went into effect October 1, 1997. This law required all operations with greater than two thousand pounds of animals per acre to have a written plan detailing the environmentally sound application of manure. In 2005 the Environmental Protection Agency mandated that the Pa State Conservation Commission revise the regulations to define some operations as Concentrated Animal Feeding Operations (CAFO) with increase planning requirements. Perry County farms under Act 38 Nutrient Management Law include 14 operations regulated as CAFO's, 14 operations regulated as CAOs and 36 Volunteer operations (VOL).

Pennsylvania's Manure Management for Environmental Protection requires all operations with animals to have a Manure Management Plan with supplemental guide for the Land Application of Manure. The Perry Conservation District has decided to engage in State delegation to ensure the integrity of this program. Four complaints were handled in 2013.

USDA Programs

As a close cooperating agency, the Natural Resources Conservation Service (NRCS) has assisted in the successful completion of numerous projects with the District through technical support delivery and education. Through the years, NRCS in conjunction with the Farm Service Agency has also implemented and administered numerous programs that have reduced sediment and nutrient pollution throughout the County. Current programs:

Agricultural Management Assistance (AMA)

This program helps agricultural producers use conservation to manage risk and solve natural resource issues through natural resources conservation. NRCS administers the AMA conservation provisions while the Agricultural Marketing Service and the Risk Management Agency implement other provisions under AMA.

Conservation Stewardship Program (CSP)

This Program helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resources concerns. Participants earn CSP payments for conservation performance—the higher the performance, the higher the payment.

Environmental Quality Incentives Program (EQIP)

This program provides financial and technical assistance to agricultural producers in order to address natural resource concerns and deliver environmental benefits such as improved water and air quality, conserved ground and surface water, reduced soil erosion and sedimentation or improved or created wildlife habitat.

Conservation Reserve Program (CRP)

This program pays a yearly rental payment in exchange for farmers removing environmentally sensitive land from agricultural production and planting species that will improve environmental quality.

Conservation Reserve Enhancement Program (CREP)

This program, an offshoot of CRP, targets high-priority conservation issues identified by government and non-governmental organizations. Farm land that falls under these conservation issues is removed from production in exchange for annual rental payments.

Grassland Reserve Program (GRP)

This program works to prevent grazing and pasture land from being converted into cropland or used for urban development. In return for voluntarily limiting the future development of their land, farmers receive a rental payment.

NRCS Report for Fiscal Year 2013

- Planning Highlights
 - Wrote 49 conservation plans on 2,664 acres
 - 5 Comprehensive Nutrient Management Plan (CNMP) written
 - 2 CNMPs applied
 - 3 feed management plans implemented

- Installed:
 - 12,800 feet of fence
 - 1,676 feet of animal walkways
 - 1 stream crossing
 - 166 acres of forage planting
 - 135 acres of forage harvest management
 - 1,105 feet of pipeline
 - 612 acres of prescribed grazing

 - 8 acres of grassed waterways
 - 225 feet of lined waterways
 - 2,568 feet of diversions
 - 8 structures for water control
 - 1,352 feet of underground outlet
 - 984 acres of no till

 - 2 waste facility closures
 - 5 waste storage facilities
 - 2 pumping plants
 - 9 waste transfer lines
 - 7 heavy use area
 - 1 roof runoff management
 - 293 ac. of nutrient management

 - 325 feet of stream bank protection
 - 49 acres of conservation cover

D. Most Effective Approaches to Address Needs

Providing educational, technical, and financial assistance to the agricultural community has been proven to be the most effective approach in promoting better soil and water conservation.

Program oversight for more regulatory programs such as Act 38, NPDES and erosion control regulations, will be tempered by active pursuit of obtaining voluntary compliance first and foremost and providing all educational materials, information, and guidance that the regulated community may need to stay in compliance.

E. Perry County Conservation District Strategy

I. Existing Resources

Much of what can be accomplished is dictated by funding levels. Currently, the District has the following staffing resources available for work in directly implementing this strategy:

Ag Resource Specialist	100% Bay Technician funding
2 Part time Ag Resource Specialists	100% Nutrient Management funding
Watershed Specialist	45% Watershed Specialist funding
	50% Nutrient Management funding
	5% Recycling funding
Resource Specialist	40% 1 st tech (E&S) funded
	40% ACT funded
Full time NRCS District Conservationist	
Part time NRCS Technician	
Full time NRCS Soil Conservationist	
District Manager/Secretary	

II. Plan of Action to Reduce Sediment and Nutrient Loads to the Bay

The Conservation District Board has identified the following areas of focus in soil and water conservation:

- A. Agricultural Best Management Practices Tech and Financial Asst
- B. No-till Drill rental program
- C. Erosion Control/NPDES Storm water Regulation Program
- D. Conservation Planning
- E. Nutrient Management Act 38 program
- F. Farmland Preservation Program
- G. Environmental Education
- H. Dirt and Gravel Road Program

Conservation District Board and Staff plan to continue to focus on these program areas as the primary means of implementing the Perry County Implementation Plan.

III. Conservation Program Goals/Plan of action

The Conservation District envisions the following goals being accomplished in the next 10 years.

- A. Agricultural Best Management Practices (BMPs) Technical and Financial Assistance
1. Animal Waste Management Systems: 30 new systems installed, 15 old systems updated.
 2. Conservation Tillage: 90% of farms applying conservation tillage ~50% meeting advanced no-till
 3. Cover Crops: 90% of all land with less than 30% residue and/or land without a crop growing which receives manure should be protected with cover crop. In addition, promotion of cover crops on these and other acreage via education or financial assistance initiatives shall remain a high priority.
 4. Pasture Management: Pasture land should be managed for good cover with riparian areas protected. The goal being an additional 7500 acres managed for good cover with installed off stream watering BMPs. This number includes horse pasture management.
 5. Stream bank stabilization needs: There are 1,284 miles of streams in Perry County. One third, or about 400 miles, would benefit from riparian buffers and/or more aggressive stream restoration practices. Goal: Additional 1000 acres of riparian and grass buffers.
 6. Other BMP's comprehensive conservation planning will indicate the need for many other types of bmps such as diversions, waterways, strip cropping, etc.
- B. No till rental program. The District no-till drill program and support of the local no-till group shall remain a high priority. In ten years a goal will be to have over 40,000 acres planted using the no-till drills with 10 new farmers/year trying the drills and 3 farmers per year converting to an all no-till system.
- C. Erosion Control/NPDES Storm water Regulation Program. The goal will be to issue and achieve compliance on 15-20 NPDES storm water discharge permits for construction activities and meet other delegated activities.
- D. Conservation Planning Needs: It is our goal that 90 % of all farms should have an up-to-date conservation plan (about 800 conservation plans covering 88,000 acres of cropland and pasture); more than half should be at a "best" level of conservation. Staff shall make conservation planning and implementation a primary goal. In addition, effort shall be made to garner grants to support the use of technical service providers in meeting this goal.
- E. Act 38 Nutrient Management Planning Needs: All CAOs and all animal production farms that receive government financial assistance need to have nutrient management plans that meet Act 6 requirements. These plans need to be updated every 3 years or upon significant change in management. The goal would be to ensure all operations requiring Act 38 NMPs to have current plans and to be implementing the plans. In addition any volunteer desiring coverage under this program should be assisted. In addition, all other operations with production animals not regulated under ACT 38 or CAFO regulations are required to have an implemented animal waste management plan meeting Chapter 91 requirements. Our primary goal will be to assist 90 % of all producers in understanding the requirements of Chapter 91 and to assist 300 producers in writing a manure management plan.

- F. Farm Land Preservation Needs: Preserving an additional 7500 acres under the farmland preservation program and open space initiatives will still give development “room” while protecting the integrity of the natural resource base in the county.
- G. Environmental Education: By the year 2017 all agricultural producers with animals in the County will be visited by staff with the express purpose of relating environmental rules regarding soil conservation and manure management. This will involve up to another 700 visits above the 450 done as of June 30, 2014. Agricultural newsletters, field days, and workshops will be planned annually to promote soil conservation and nutrient management planning and bmps.
- H. Dirt Roads: We estimate 10-15 miles of dirt roads and lightly used improved roads in the County will be improved under this program minimizing sediment and storm water impacts on local waterways.

F. Expected Results

The goal of Perry County’s Implementation Plan is improving water quality through the reduction of sediment and nutrients. Implemented, this strategy will improve water quality throughout Perry County, and ultimately help improve the waters of the Chesapeake Bay. As Perry Conservation District is funded for the plan of action outlined in the above strategy, Perry County will be able to dramatically decrease the sediment and nutrient loading of its waters and continue to play an important role in restoring the Chesapeake Bay.

G. Sources

Input and suggestions for changes and updates in the County Implementation Plan were received from a variety of sources. Credit and thanks go to:

NRCS Ashley Lenig
DEP Bill Botter
The Perry Conservation District Board
Penn State Cooperative Extension Service