

# Countywide Action Plan Overview

## Montour County



### **Plan Purpose**

The Montour County Countywide Action Plan is a Watershed Implementation Plan to meet statewide pollution reduction goals by implementing best management practices to improve water quality in our local watersheds and ultimately the Chesapeake Bay. It is required by the Department Environmental Protection by direction of the Environmental Protection Agency. The plan will focus on nitrogen and phosphorus but will also address sediment pollution as well.

### **Plan Highlights**

The Montour Countywide Action Plan is a compilation of initiatives, best management practices and strategies to improve water quality within the county. The intent of this plan is not only to reduce nitrogen loading by 486,000 pounds and phosphorus by 5,000 pounds by 2025 as DEP requires, but to lay the foundation for future actions to achieve further nutrient and sediment reductions beyond 2025.

The Montour County Conservation District staff have met with stakeholders to obtain guidance on the development of the Montour County Action Plan. The Montour County Stakeholders included all municipalities and boroughs of Montour County, the Montour Conservation District, the Montour County Planning Commission, the Montour County Farm Bureau, and the Chillisquaque/Limestone Run Watershed Association. All stakeholders brought their own unique perspectives and had varying issues of concern when considering the causes of nutrient and sediment runoff in Montour County.

## **Key Findings**

The common issues that most stakeholders identified that need to be addressed to achieve our targeted goals are as follows:

- Over applications of nitrogen fertilizers on crop fields and from private residences
- Winter application of manure
- Cattle access to streams (Valley and Derry Townships)
- Field stacking of imported poultry manure from other counties
- Lack of buffers on streams and roadside ditches
- Lack of cover on crop fields over winter
- Nitrogen and Phosphorus pollution from overland flow/flooding (Mud Creek)
- Streambank erosion from storm water and falling trees (Anthony and Derry Townships)

The focus will continue to be on agriculture since it represents 71% of the nutrient and sediment runoff in Montour County, but efforts need to be taken to address urban/developed areas as well. There have been limited efforts taken to address urban/developed areas which account for 13% of the pollution load to the streams in Montour County. Therefore, the priority initiatives will be broken down into two categories focusing on agriculture and stormwater management which will encompass urbanized and more developed areas.

## **State Programmatic Changes**

- Creating a funding source for the establishment of buffers for both agriculture and in developed areas is recommended. Mandating a statewide buffer ordinance would require all landowners to commit to improving water quality and help Montour County to reach reduction loads.
- Regulating the use of fertilizers applied for lawn care would help avoid to over application of Nitrogen and Phosphorus statewide.
- Regulating pumping of private septic systems along with additional funding for Act 537 would assist with reductions.
- Floodplain Management enforcement by the municipalities will help avoid flood related issues when structures are built near streams.
- Enforcing Act 167 would help with excess stormwater issues and prevent streambank erosion.
- Developing new grants to be used between counties would help fund the implementation of these practices.

## Agriculture

- **Priority Initiative #1 Planning, Manure Management and Fertilizer Applications**

This initiative will focus on various aspects of farming including basic and more detailed nutrient management and fertilizer plans with the goal of reducing fertilizer applications specifically in a corn and soybean or alfalfa rotation. It will also include best management practices such as barnyards and manure storages for plan implementation as well. Ag Erosion and sedimentation plan development for Ag compliance will be a continuing effort under this initiative.

- **Priority Initiative #2 Soil Health and Cover Crops**

This initiative will focus on educating farmers about no till and the importance of cover crop establishment and how it relates to soil health. It will also include expansion of an existing incentive program for cover crop establishment that Montour County has been working on with Columbia County Conservation District over the last several years.

- **Priority Initiative #3 Buffers**

This Initiative will include educating farmers on the importance of buffers and developing an incentive-based program that will fund the establishment of buffers. This program will need to include preparation of buffer including soil testing liming, tree plantings and maintenance as well as rental payment for taking crop land out of production.

- **Priority Initiative #4 Reporting and Tracking Results**

Keeping track of progress including plan development and best management practice installation through Practice Keeper will be essential to measuring where Montour County stands when it comes to reaching our reduction goals. Reporting practices not funded by government related programs will be a focused with this initiative.

- **Priority Initiative #5 Ag-Land Preservation and Cropland Retirement**

There is currently a push to retire cropland and put in solar panels within the next three years. There would be no fertilizers after initial grass plantings and land would not be cropped again for at least 30 years. Storm water management on solar farms will have to be addressed. Ag-land preservation must be a continued priority in Montour County to prevent development of invaluable farmland.

## **Storm Water Management**

- **Priority Initiative #1 Stream Restoration**

Identification of projects and seeking alternative funding sources within specified watershed is a priority. Continuing efforts through an established partnership that exists between the Montour Conservation District, PA Fish and Boat Commission, the Department of Environmental Protections, and the North Central Pennsylvania Conservancy that funds and constructs fish habitat structures on Ag impaired streams will be a primary focus of this initiative.

- **Priority Initiative #2 Flooding Wetlands and Storm Water BMP's**

Wetland restoration has been a priority in Montour County over the last decade and will continue to be a priority. A partnership established between the Conservation District and US Fish and Wildlife Service has led to the restoration over 50 acres of wetlands. More urban townships have ongoing issues with storm water runoff so construction of infiltration basins to reduce storm water from entering our streams, needs to be a goal. The Montour Conservation District has installed an infiltration basin in our backyard for storm water management purposes. The basin is an effort to not only control storm water, but it was planted with pollinator mixes and trees and shrubs to convince neighboring landowners to install storm water basins on their property.

- **Priority Initiative #3 BMPs in Developed and Urban Areas**

This initiative will include educating private landowners on the importance of buffers and developing an incentive-based program that will fund the establishment of buffers. This program will need to include preparation of buffer including soil testing liming, tree plantings and maintenance. This will also focus on proper fertilization of lawns and lawn care.

## **Partnerships**

- **Priority Initiative #1 Partners**

This initiative will showcase the partners within our county in which we hope to continue working with or develop a closer working relationship with. In order to implement the Countywide Action Plan, additional help and resources will be needed and we can find this help within our county.

## **Opportunities for Success**

Since 2011 the Montour County Conservation District has been focusing on Ag compliance by prioritizing the development and implementation of manure management plans to improve water quality in our local watersheds. To date 93% of known operations have their manure management plans in Montour County and approximately 90% of the plans have been implemented with the required best management practices. It is clear that the Agricultural Community has shown their commitment to reducing nutrient and sediment runoff from entering our local streams. Plan development and the implementation of best management practices on farms in Montour County has helped us establish a good working relationship within the Ag

Community. This relationship will be key to our success in convincing the agricultural community of what still needs to be done to reach our goals.

Experienced staff that communicate well and have the trust of farmers within the community is vital to continued success. The staff are knowledgeable on various funding sources and know how to limit out of pocket expenses to the landowner by utilization of the REAP program and developing innovative methods to get matching funds towards Growing Greener funded projects.

The Montour Conservation District has collaborated with the Northcentral Pennsylvania Conservancy, Pennsylvania Fish and Boat Commission, US Fish and Wildlife Service and the Department of Environmental Protection to install fish habitat, buffers, and stream crossings on Ag impaired streams in Montour County. We also work with the Chillisquaque/Limestone Run Watershed Association on identifying priority projects within Chillisquaque Creek and Limestone Run Watersheds. The US Fish and Wildlife Service also has partnered with us on the construction of over 60 acres of wetlands on farmland in Montour County. Relying on existing partnerships and creating new ones focused on the urban community will help lead us to success.

The CAP will help to better the community by improving water quality in the county therefore increasing funding received within the County. Along the way we do expect to experience some positive outcomes that may involve some additional projects we have not become aware of yet. Including the possibility of buffers and storm water control projects located in urban settings. We also expect to see an increase in the local economy with the use of our local contractors and supplies, in which we already apply into our current projects and plans.

The Montour County Conservation District has long been committed to work to reach goals of reducing Nitrogen and Phosphorus levels and improve water quality locally and ultimately in the Chesapeake Bay. The Implementation of the Countywide Action Plan will help us further our efforts on what still needs to be done to achieve our reduction goals by 2025.

### **Challenges to Implementation**

The over application of Nitrogen fertilizer on cropland is widespread, however convincing farmers to reduce fertilizer outputs and how it could affect crop yields will be a concern moving forward.

With farmers fighting for every farmable acre, taking land out of production with the establishment of buffers along streams and roadside ditches might be difficult for some farmers to accept. Farmers have already done much to improve water quality within Montour County and their willingness to do more is unclear.

Focusing on private residences will be something new to the Montour Conservation District staff. Convincing landowners to install buffers along streams goes against the idea that everyone needs to have a nice, manicured lawn that is so shared in the community. Generating interest in buffer plantings and having private landowners attend meetings may be difficult.

Funding sources that will provide compensation to landowners willing to install buffers may have to be continuous since cropland will be taken out of production. No cost share program is endless. Utilization of CREP might not be a viable option since the program took rented ground from farmers and many farmers have negative views of the program.

# Plan Summary

## State Programmatic Changes

- Action 1.1 Development of a Funding Program for Buffer Establishment, Maintenance including rental payments for Agriculture
- Action 1.2 Develop source of funding to establish buffers in developed and urban areas
- Action 1.3 Develop and adopt a Statewide Buffer Ordinance
- Action 1.4 Regulate Nitrogen and Phosphorus fertilizers on lawns
- Action 1.5 Enforce Act 167
- Action 1.6 Develop Sewer Pumping Ordinance
- Action 1.7 Funding source for Act 537
- Action 1.8 Floodplain Management
- Action 1.9 Develop block grant to be used between counties and partnerships

## Agriculture

### Priority Initiative #1 Planning, Manure Management and Fertilizer Applications

- Action 1.1 Develop basic Manure Management Plans
- Action 1.2 Develop Ag Erosion and Sedimentation Plans
- Action 1.3 Expanded Nutrient Management
  - Develop Nutrient Balance Sheets (NBS)
  - Activity 1: Convince farmers to reduce fertilizer applications by 40-50 lbs. on corn following legumes
  - Activity 2: Focus on Core N fertilizer acres & N rates for manure applications
  - Activity 3: Develop plans Involving placement and timing of N and P
- Action 1.4 Develop Demonstration Plots
  - Activity 1: Compare fields with reduced N fertilizer rates as per NBS to those fields where farmers continue to apply the regular N fertilizer rates.
- Action 1.5 Barnyard Runoff Controls
- Action 1.6 Manure Storages
- Action 1.7 Conversion of cropland to pasture
- Action 1.8 Watering systems
- Action 1.9 Stabilize animal walkways and travel lanes
- Action 1.10 Work with Plain Sect Farmers on plan implementation
- Action 1.11 Milk house waste system
- Action 1.12 Establish funding/staff support to the agriculture community
- Action 1.13 Chesapeake Bay Inspection Program
- Action 1.14 Seek funding options for BMP implementation

## **Priority Initiative #2 Soil Health and Cover Crops**

- Action 2.1 Continue to educate farmers on the importance of soil health
- Activity 1: Continue to have annual soil health trainings
  - Activity 2: Continue to educate farmers on Soil Health and the importance of no-till and cover cropping.
  - Activity 3: Soil Health Breakfast for farmers to discuss cover cropping and soil health
- Action 2.2 Provide Incentives for farmers to plant cover crops
- Activity 1: Continue to utilize Growing Greener Grant with Columbia County Conservation District to pay farmers to establish multi species cover crops
  - Activity 2: Create Cover Crop Incentive Programs that provides more flexibility.
- Action 2.3 Educate and Work with Plain Sect Farmers on Soil Health and Cover Crops
- Action 2.4 Convince farmers to plant legume cover crops before corn for N need

## **Priority Initiative #3 Buffers**

- Action 3.1 Increase buffers on streams and roadside ditches
- Activity 1: Provide Education to farmers and landowners on importance of buffers
- Action 3.2 Provide incentive-based program for buffers
- Activity 1: Buffer program must include funding for establishment and maintenance
  - Activity 2: Soil testing and liming will be required
- Action 3.3 Use CREP program since it is already established
- Action 3.4 Utilize Native Creations for education on buffers and tree plantings and buffer establishment
- Activity 1: Utilize and work in Coordination with Native Creation Grant for Funding of Buffers and creation of Buffers
- Action 3.5 Educate farmers and landowners on the correct maintenance of buffers
- Action 3.6 Discuss Mandatory Stream Buffer Program Ordinance with townships
- Activity 1: Develop model ordinance
- Action 3.7 Grass strips along streams
- Action 3.8 Streambank fencing

## **Priority Initiative #4 Reporting and Tracking Results**

- Action 4.1 Use Practice Keeper and Field Doc to report plans and BMP Installation
- Action 4.2 Montour CD Staff needs to keep track of all implemented practices and plans to evaluate where the County stands to reach nutrient reduction goals
- Action 4.3 Utilize GIS Mapping system to help track projects and location
- Action 4.4 Meet with farmers on Record Keeping focusing on manure application rates

## **Priority Initiative #5 Ag-land Preservation and Cropland Retirement**

- Action 5.1 Solar panel development will take cropland out of production
- Action 5.2 Storm water management on solar farms
- Action 5.3 Implement Ag-land preservation program

## **Storm Water Management**

### **Priority Initiative #1 Stream Restoration**

- Action 1.1 Install Fish Habitat Structures on Ag Impaired Streams and reconnect floodplains
  - Activity 1: Continue to work with Northcentral Pennsylvania Conservancy, DEP and PA Fish and Boat Commission Partnership to establish fish habitat structures on ag impaired streams
  - Activity 2: Search for additional grants funding to support additional stream restoration projects to meet increased demands
  - Activity 3: Continue to identify design and construct fish habitat projects through other funding sources
- Action 1.2 Continue to monitor macroinvertebrates on Chillisquaque Creek to compare IBO scores for possible de-listing
- Action 1.3 Continue to work with Susquehanna University and PA Fish & Boat Commission on macroinvertebrate studies and electro-fishing to monitor status of wild brook trout in Limestone Run
- Action 1.4 Community Tree Clearing of fallen trees in streams due to flooding
  - Activity 1: Hire logging company to cut trees creating erosion in Mud Creek and West Chillsquaque Creek
  - Activity 2: Utilize townships to remove trees with trucks and equipment
- Action 1.5 Submit macro data for DEP review

### **Priority Initiative #2 Flooding, Wetlands and Infiltration Basins**

- Action 2.1 Continue to restore wetlands through the partnership with US Fish & Wildlife Service
- Action 2.2 Educate private landowners on impacts of storm water on streams and the importance of storm water management
- Action 2.3 Promote the construction of infiltration basins on private residences
  - Activity 1: Show private residences our Demo Basin for the office
  - Activity 2: Utilize pollinator mixes, flowering trees and shrubs fruit bearing trees to convince landowners to construct infiltration basins
- Action 2.4 Apply for grant to fund Infiltration basins on private residences
- Action 2.5 Update Act 167 Plan
- Action 2.6 Continue to work with MS4 Stormwater BMP Implementation
- Action 2.7 Hazard Mitigation and Floodplain Management



### **Priority Initiative #3 BMPs in Developed and Urban Areas**

- Action 3.1 Educate private landowners on importance and purpose of buffers
- Action 3.2 Use pollinator mixes, flowering trees, shrubs, and fruit bearing trees to convince private landowners to plant buffers rather than mowing along streams
- Action 3.3 Develop incentive- based buffer program that pays for establishment and maintenance of buffers.
  - Activity 1: The wider the buffer the more the incentive payment offered
- Action 3.4 Discuss mandatory stream buffer program ordinance with Townships in urban areas
  - Activity 1: Develop model ordinance
- Action 3.5 Plant Buffers
- Action 3.6 Nutrient application reduction on lawns
- Action 3.7 Conservation landscaping
- Action 3.8 Continue to administer the dirt & gravel roads and low volume roads program
- Action 3.9 Establish an educator position within the county
  - Activity 1: Educate the public about BMPs through demonstrations and handouts

## **Partnerships**

### **Priority Initiative #1 Partners**

- Action 1.1 Involve Penn DOT in implementation practices
- Action 1.2 Work with NRCS on programs in the county
- Action 1.3 Work with PA Game Commission
- Action 1.4 Work with PA Fish and Boat Commission
- Action 1.5 Work with US Fish and Wildlife
  - Activity 1: Installation of wetland projects
- Action 1.6 Continue work with NPC
- Action 1.7 Involve County workers in implementation
- Action 1.8 Involve MARC in various activities
  - Activity 1: Educate the public