CLINTON COUNTY
CLEAN WATER COUNTYWIDE ACTION PLAN (CAP) SECTION ONE:

NARRATIVE

PLAN HIGHLIGHTS

Clinton County was invited by the PA Department of Environmental Protection (DEP) to prepare an action plan to reduce pollution and improve the quality of waterways in the county. DEP sought Clinton County's involvement as part of larger efforts to reduce pollution entering the Chesapeake Bay into which Clinton County waters flow. Two lead agencies – Clinton County Conservation District and Clinton County Planning Department – worked with stakeholders from farming, conservation, industry, and government over a six-month period to prepare a Countywide Action Plan (CAP).

Clinton County has 89% natural areas, mostly forested, but it does have a productive agricultural sector and urban areas that generate nutrients and sediment, and it has a mining past that left 153 miles of streams impaired with acid mine drainage. Nutrient pollution is the particular concern for the Chesapeake Bay. DEP estimated that 3.3 million pounds of nitrogen and 179,000 pounds of phosphorus entered Clinton County waterways in 2019. DEP set a 2025 goal to reduce nitrogen by 727,000 pounds per year and phosphorus by 20,000 pounds per year.

Clinton County evaluated actions that could be taken within existing and reasonably available resources to reduce pollutants. There are opportunities. Many farmers are already using best management practices (BMPs) such as no-till and cover cropping, a significant amount of which may not be accounted for in watershed modeling data. With increased outreach and education, more farmers can be aided to use BMPs. County and municipal ordinances regulating development are ripe for updates. There are also challenges. Farmers already are burdened by regulations and hard pressed to do more. Funding is limited. Conservation groups lack "boots on the ground" to find and assist willing landowners, and not enough landowners are willing to install BMPs or even accept assistance.

In response, the Clinton County CAP proposes several priorities. One is to identify and get credit for existing BMPs and projects, agricultural and urban, that have gone unreported. Another is to seek additional resources to ramp up help to farmers to update conservation and manure management plans and implement BMPs like no-till farming, cover cropping, and riparian buffers. The emphasis is to promote more farm BMPs on a voluntary basis. Another priority is to update development regulations like the county subdivision and land development ordinance and municipal stormwater management ordinances, and to help municipalities be more effective and consistent in administering ordinances. These and other recommended actions are detailed in the next sections of the CAP.

PROCESS

Lead Agencies
The Clinton County Conservation District and the Clinton County Planning Department stepped up to serve as lead agencies for developing the CAP.

Core Work Team
Principal work in developing the CAP was done by a Core Work Team consisting of staff of the Conservation District and Planning Department, project consulting team (Denny Puko, Planning Consultant, and Herbert, Rowland & Grubic, Inc.), a civil engineering consultant (McTish, Kunkel and Associates), and the DEP lead contact. The Core Work Team held five in-person work sessions and multiple other electronic interactions.

Countywide Planning Team
Community and stakeholder input was provided by a Countywide Planning Team with 23 members representing farming, conservation, local governments, resource agencies, education, watershed associations, and businesses. The Countywide Planning Team held two virtual meetings, the first focusing on watershed conditions and goals, the second on options for BMPs and projects, and a third meeting, in-person, to provide input for the draft action plan.

Work Sessions
Three action planning work sessions – one focusing on agriculture, one on urban/municipal issues, and one on conservation – were held to discuss BMPs and projects in detail. Work sessions were led by the Core Work Team. Participants included Countywide Planning Team members and other stakeholders.

STATE GOALS

As part of its effort to reduce pollution to the Chesapeake Bay, the Commonwealth of Pennsylvania set goals for each county in the Bay watershed. The table below shows estimates for pollutants in 1985 and 2019 plus the 2025 state goals for Clinton County.

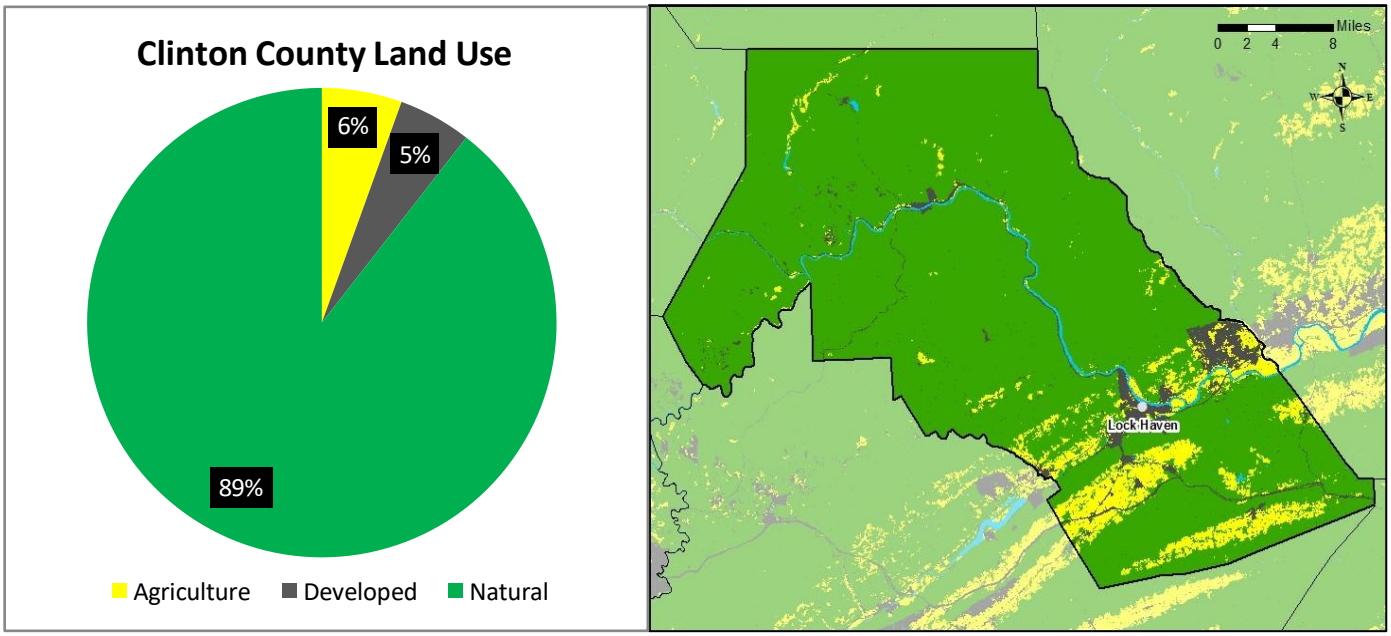
Year	Nitrogen (pounds/year) delivered to Clinton County waterways	Phosphorus (pounds/year) delivered to Clinton County waterways
1985	3,457,000	278,000
2019	3,292,000	179,000
2025 Goal	2,565,000	159,000
Targeted reduction	727,000	20,000

The Commonwealth proposes that a combination of state and local efforts is needed to achieve the above goals.

KEY FINDINGS

Water quality is tied to land use.

- Only 11% of Clinton County land is used for agriculture and development, but these lands generate far more nutrients and sediment per acre than forested land.

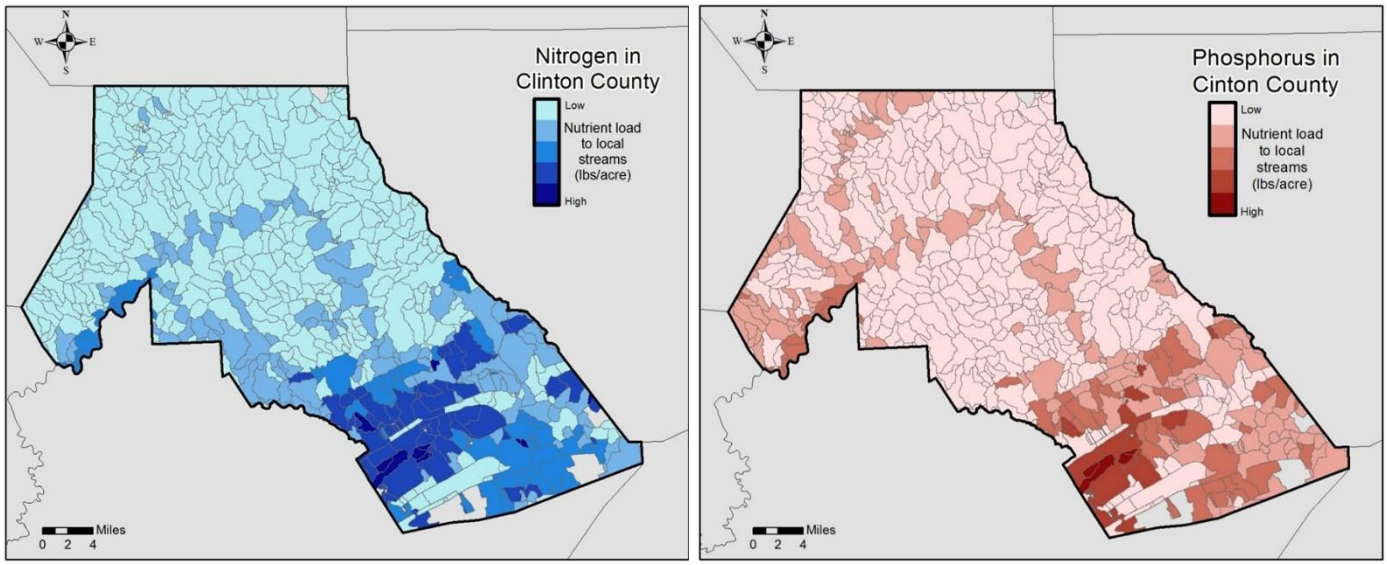


Source: PA Department of Environmental Protection, Clinton County Clean Water Technical Toolbox, October 2020

Agriculture and developed/urban lands are the primary "manageable" sources of nutrients and sediment in Clinton County streams.

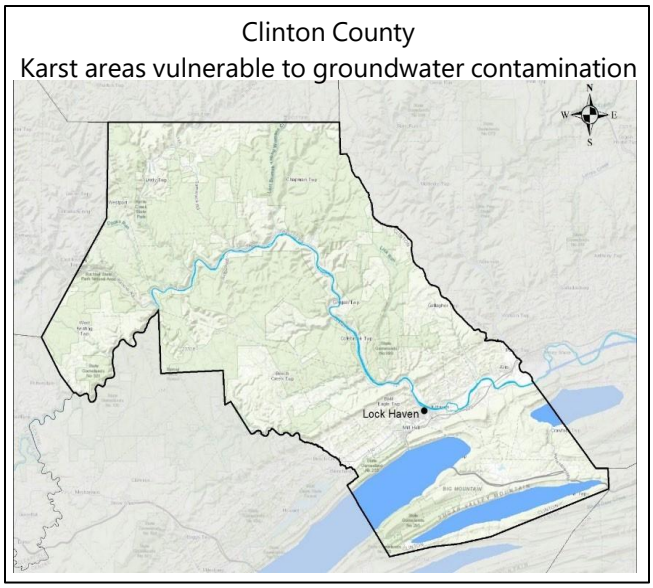
- On agricultural land, there is often a high application rate of fertilizer and manure. Most manure is applied from animal operations.
- Food processing residuals are a significant source of nutrients.
- Agriculture in the county is changing. More farms are producing vegetables and tobacco, which are not amendable to no-till farming, and more farmers are choosing to raise veal, which often results in hundreds of animals concentrated on small parcels, produces hundreds of thousands of gallons of liquid manure and necessitates the export of that manure to parcels across the County.
- On developed/urban land, a majority of nutrient load comes from turf grass and a majority of sediment load comes from impervious areas. Of particular concern are properties with large areas of maintained grass – parks, schools, and large institutional and business properties. Not to be overlooked are roads and bridges.
- There is a lack of data on the extent of non-farm fertilizer use, and it is believed that non- farm landowners overuse fertilizer.

The southeast region of the county stands out as a source of nutrients entering Clinton County streams.



Source: PA Department of Environmental Protection, Clinton County Clean Water Technical Toolbox, October 2020

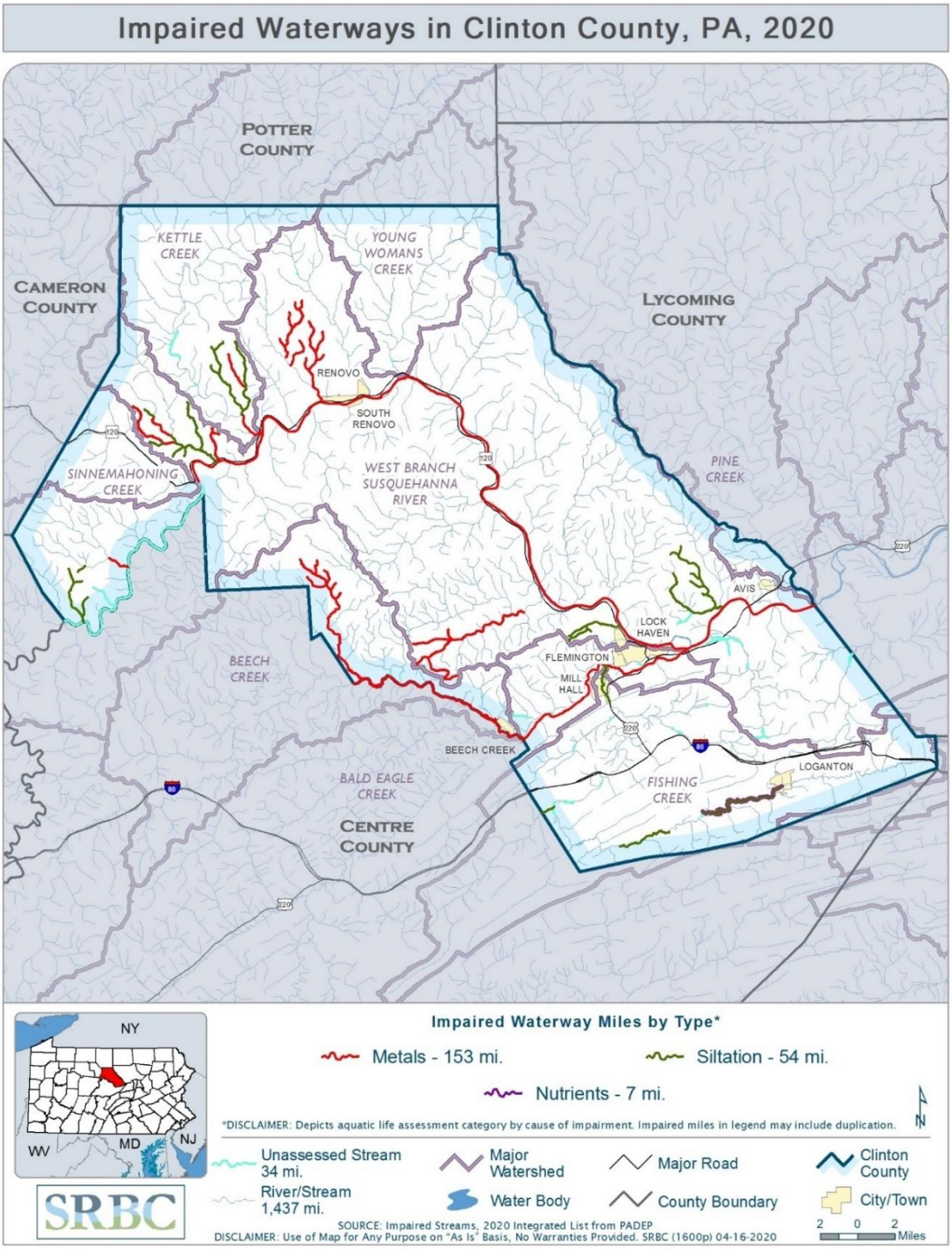
- Agriculture and developed/urban are the primary land uses in the southeast region.
- The watershed of Fishing Creek covers most of the region and its farms. Fishing Creek is a renowned trout fishery and an asset to a county whose heart and soul is hunting and fishing.
- Parts of the region are characterized by karst geology which subjects groundwater to greater chance of contamination from the application of manure and unchecked erosion.
- Many residents in rural areas of this region are solely dependent upon wells for drinking water.



Source: PA Department of Environmental Protection, Clinton County Clean Water Technical Toolbox, October 2020

Clinton County has 214 miles of streams identified as impaired.

- 7 miles of the Loganton Catchment of Fishing Creek are impaired by nutrients.
- 54 miles of streams are impaired by sediment.
- 153 miles of streams are impaired by acid mine drainage.



Source: PA Department of Environmental Protection, Clinton County Clean Water Technical Toolbox, October 2020

OPPORTUNITIES FOR SUCCESS

There are opportunities for landowners and homeowners to undertake efforts known as BMPs – best management practices – to further reduce pollution to waterways and create a dramatic impact for good in Clinton County.

- Efforts of farmers, with help from local conservation agencies and groups, have led to many (an estimated 60%-70% of county farms) successfully implementing soil health practices such as no-till farming and cover cropping, with opportunities to promote more voluntary efforts.
- There could be more opportunities to plant additional riparian buffers, install stream fencing and crossings, and undertake meadow and pollinator plantings. However, additional resources will be required to undertake the outreach and education required to identify willing landowners.
- With a better evaluation of the transport of manure in Clinton County, there are opportunities to match manure needs with supplies. Particularly, there is an opportunity to move manure from ag areas for application to help reclaim lands degraded with acid mine drainage.
- There are active stakeholder groups in the county and region – government agencies, watershed associations, and other community, ag, and conservation nonprofits – that can assist in implementing BMPs.
- There are universities in and near the county – Lock Haven University and Penn State University – with programs and students that offer assistance.
- The Pennsylvania legislature is considering a bill (Senate Bill 251) to reduce the environmental impact of fertilizer applied to turf areas such as lawns, golf courses and athletic fields.

CHALLENGES TO IMPLEMENTATION

Clinton County faces challenges to undertaking BMPs to further reduce pollution. Some are challenges most counties face and some are unique to Clinton County.

- BMPs come at a cost, and resources – funding, agency staff time, and volunteers – are limited.
- Farmers already are burdened by regulations and hard pressed to do more.
- For many of the remaining landowners that have not implemented BMPs, there is a lack of knowledge, interest, and willingness to do so.
- Many farmers still see installing BMPs such as riparian buffers as losing potential cropland.
- Clinton County has a large Plain sect population that resists participation in government programs.
- There is a lack of clarity and understanding of the extent to which existing BMPs are entered into the Chesapeake Bay watershed model which is relied upon to depict existing levels of pollution and to set goals for pollution reduction.
- The Clinton County Conservation District, one of the lead agencies in the CAP and the primary county agency assisting landowners with conservation practices, also has a regulatory role which in the public eye can overshadow its assistance role and make building partnerships with landowners challenging.

CAP GOALS

The following are the overarching goals for the Clinton County CAP:

Identify and get credit for existing BMPs and projects not accounted for.

Ensure existing farms have implemented current conservation and manure management plans and have implemented the BMPs those plans require.

Increase voluntary use of BMPs including cover crops, no till farming, and riparian buffers and protections.

Update and promote more consistent and effective administration of county and municipal regulations for development, stormwater management, and floodplain management.

Improve communication and engagement.

- Get more groups to be active partners.
- Promote coordination and information sharing between groups active in BMPs.
- Identify willing landowners.
- Compile and promote available resources.
- Educate and promote best practices.

Work towards a common agenda for all involved agencies and groups. Pursue priorities in the Clinton County Conservation District Strategic Plan.

- Encourage erosion and sedimentation control.
- Ensure nutrients are applied at the right amount, at the right time, and in the right place.
- Minimize and remedy negative impacts on water quality.
- Help meet nutrient pollution reduction goals to improve health of county waters and the Chesapeake Bay watershed.
- Provide environmental education programs and public outreach activities.

SUMMARY OF PRIORITY BMPs AND PROJECTS

Initiatives denoted in **Green** below have been completed.

Conservation

Priority Initiative 1.1 - Promote, Support, and Implement Riparian BMPs
Priority Initiative 1.2 - Promote, Support, and Implement new Forest and Meadow-land
Priority Initiative 1.3 - Implement Stream Restoration Projects
Priority Initiative 1.4 - Implement Wetland Restoration
Priority Initiative 1.5 - Fishing Creek/Bull Run WIP – Completed
Priority Initiative 1.5A - Evaluation and Assessment of Impaired and Degraded Stream Reaches – New for 2025
Priority Initiative 1.6 - Begin Implementation of Beech Creek Assessment/Restoration Plan
Priority Initiative 1.10 – Continue Dirt and Gravel/Low Volume Road Program
Priority Initiative 1.11 – Enhance Capacity of Watershed Organizations and Other Non-Profits

The following initiatives have been removed and consolidated into the creation of 1.5a.
Priority Initiative 1.7 Develop Big Plum and Little Plum Run Coldwater Conservation Plan
Priority Initiative 1.8 Develop Drury/Sandy Run Coldwater Conservation Plan
Priority Initiative 1.9 Develop Cooks Run Coldwater Heritage Plan

Urban and Municipal

Priority Initiative 2.1A – Create a Multi-Municipal Planning/Zoning Agency
Priority Initiative 2.1B – Update County Subdivision and Land Development Ordinance
Priority Initiative 2.1C – Prioritize Act 167 Planning
Priority Initiative 2.2 A – Training for Local Officials on Stormwater and Floodplain Law, Requirements, and Proper Procedures
Priority Initiative 2.2B – Capture and get credit for unrecorded urban BMPs
Priority Initiative 2.2C – Emphasis on Enforcement by County Agencies of Zoning, Subdivision, Floodplain, and Stormwater Regulations
Priority Initiative 2.2D – Address Threats From Development
Priority Initiative 2.3A – Identify and Promote Implementation of Various Projects from the Clinton County Hazard Mitigation Plan
Priority Initiative 2.3B – Encourage Large Scale Stormwater Facility Retrofits for Problem Areas
Priority Initiative 2.3C – Remove Derelict Buildings from Flood Plains
Priority Initiative 2.3D – Work with Water and Sewer Authorities to Improve Old Infrastructure and Degrading Sewer Lines – Completed
Priority Initiative 2.4 – Improve Technology Capacity to Aid BMP Planning, Implementation, and Data Management – Completed
Priority Initiative 2.5A – Conduct Fertilizer Education – Completed
Priority Initiative 2.5B – Develop and Education Program to Work with Commercial Businesses, Public Lands, and Homeowners

Agriculture

Priority Initiative 3.1 – Establish Funding/Staff to Assist in Data Collection and Accounting
Priority Initiative 3.2 – Help Farmers and Operators to be in Compliance with State Planning Requirements – Completed
Priority Initiative 3.3 – Implement a Survey Process for Capturing Current Agricultural Best Management Practices
Priority Initiative 3.4 – Continue Promotion of No-Till Farming Practices and Cover Cropping
Priority Initiative 3.5 – Farmer Education Program for Assistance with Soil Health and BMPs
Priority Initiative 3.6 – Pilot Program to Move Manure from Ag Communications to AMD Lands
Priority Initiative 3.7 – Agricultural Preservation
Priority Initiative 3.8 – Outreach and Partnership Building - Completed
Priority Initiative 3.9 – Establish a Real Time Stream Monitoring Program
Priority Initiative 3.10 – Provide Data Transparency for Practitioners who use Practice Keeper

COST ESTIMATES

Below are estimates of costs *beyond existing staff and resources* needed to implement the CAP.

	New Staff Costs		Project Costs
	#FTEs	Total over 5 years	
Conservation BMPs & Projects	10.0	$2,300,000	$1,110,000
Urban and Municipal BMPs & Projects	0.5	$25,000	$35,000
Agriculture BMPs & Projects	5.3	$759,750	$2,798,000
TOTAL	15.8	$3,084,750	$3,943,000

Note: Costs have not yet been estimated for many Urban and Municipal BMPs and projects.

PARTICIPANTS IN THE COUNTYWIDE ACTION PLAN.

CLINTON COUNTY BOARD OF COMMISSIONERS
Miles Kessinger, Chairman
Jeff Snyder, Vice Chairman
Angela Harding, Commissioner

LEAD AGENCIES

Clinton County Conservation District
Clinton County Planning Department

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Frank Rohrer, City of Lock Haven, Chesapeake Conservancy
Gerald Seyler, Crawford Township Supervisor
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Justin Snook, Clinton County Farm Bureau, Farmer
Richard Sodergren, Kettle Creek Watershed Association
Paulette Trudell, Headwaters RC&D
Jim Vaiana, First Quality