

Cumberland Countywide Action Plan for Phase III WIP and Land Conservation Initiatives

Erin Letavic, P.E.
Civil Engineer
Project Manager
Herbert, Rowland &
Grubic, Inc.

Stephanie Williams
Senior Planning Manager
Cumberland County
Planning Department

Elizabeth Grant, AICP
Planning Specialist
Cumberland County
Planning Department

What is the Phase III WIP?

- Pennsylvania's Phase III WIP is a **statewide** plan to improve water quality by reducing nutrient and sediment loads
- Includes a series of Best Management Practices (BMPs) that are to be installed at specific locations, or are performed at prescribed intervals in order to reduce pollutants entering waterways
- Goals must be met by 2025 on a statewide level

Where are WIPs being developed ?

Watershed Map



The Chesapeake Bay Watershed spans six states and the District of Columbia.

- Six Bay States and the District of Columbia are involved in the Chesapeake Bay Agreement
- Phase I and II were completed in 2010 and 2012
- EPA has oversight of the process

What are the statewide goals?

- PA has made progress on reductions since 1985, but must pick up the pace to achieve reductions by 2025
- Reduce Nitrogen by 34.31 M lbs/year
- Reduce Phosphorus by .757 M lbs/yr

Figure 1. Pennsylvania's Planning Targets

Year	Nitrogen (million lbs/year)		Phosphorus (million lbs/year)	
	Delivered to the Bay	Delivered to Local PA Waterways	Delivered to the Bay	Delivered to Local PA Waterways
1985(Actual)	122.02	183.88	6.046	14.857
2017 (Actual)	107.31	161.94	3.801	9.640
2025 (Final TMDL Planning Target)	73.18	110.88	3.044	7.619
reductions remaining to be achieved through local planning goals*	34.31	51.06	0.757	2.021

*This table does not account for future (beyond 2025) pollution loads and potential impacts such as climate change, development and growth, and potential infrastructure or (cost of doing business) which may alter the amount of sediment reaching the Bay (currently held in place by the Conowingo Dam).

Local WIP is called a Countywide Action Plan (CAP)



- 43 Counties with watersheds draining to the Chesapeake Bay preparing CAPs
- Importance of local strategies to reduce pollutant loads
- Process organized by estimated pollutant load per county

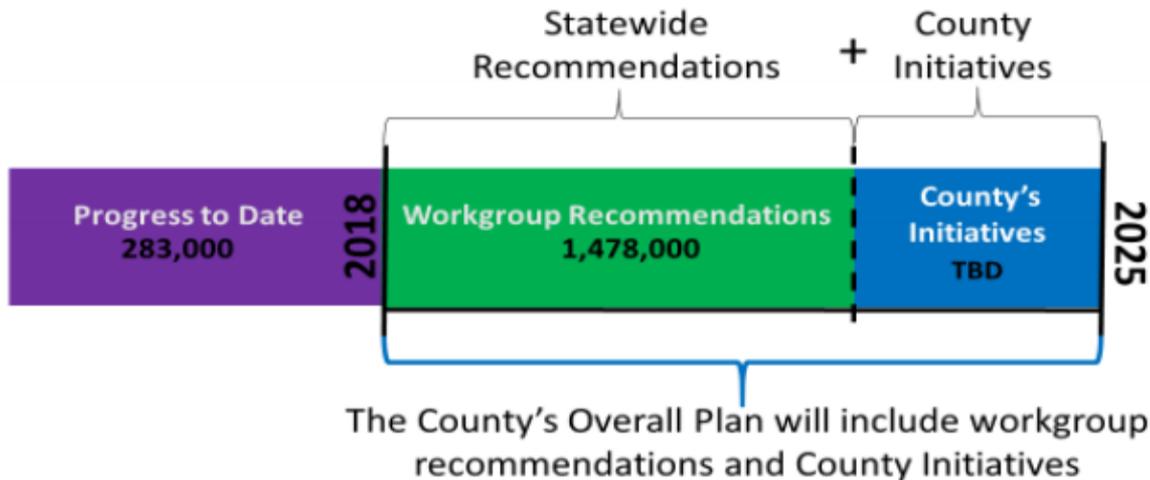
What are Cumberland County's goals?

Cumberland County's Clean Water Goal

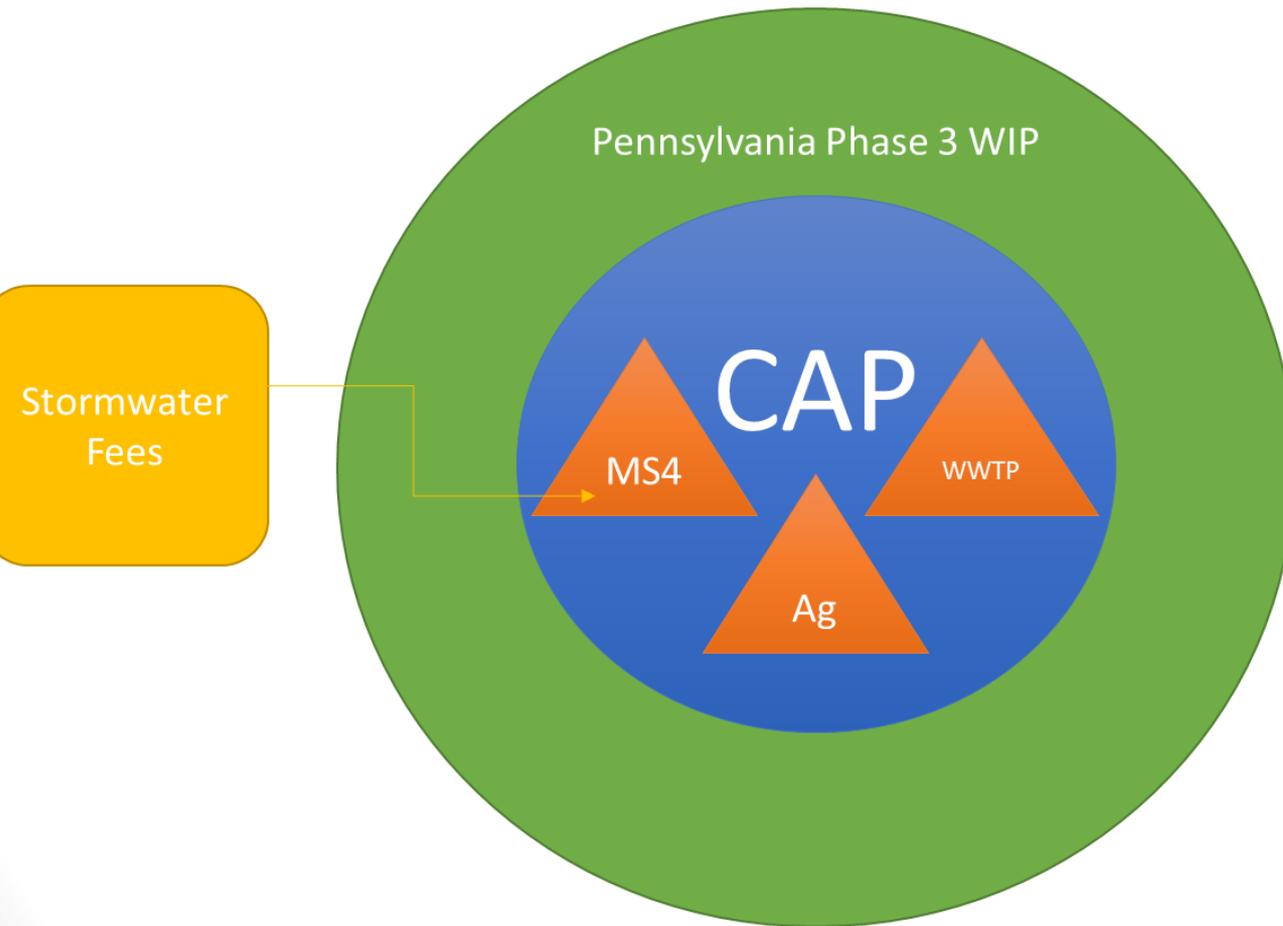
Figure 2. Countywide Goal for Cumberland County

Year	Nitrogen (pounds/year)	Phosphorus (pounds/year)
	Delivered to Local Cumberland County Waterways	Delivered to Local Cumberland County Waterways
1985	6,582,942	388,974
2018	6,299,522	273,851
2025 (Final TMDL Planning Target)	4,094,563	237,038
Remaining Load to be Achieved Through Local Planning Goals	2,204,959	36,813

Hypothetical Journey to a County Goal (Nitrogen)



Phase 3 WIP vs. CAP vs. MS4



WIP = Watershed Implementation Plan

CAP = Countywide Action Plan

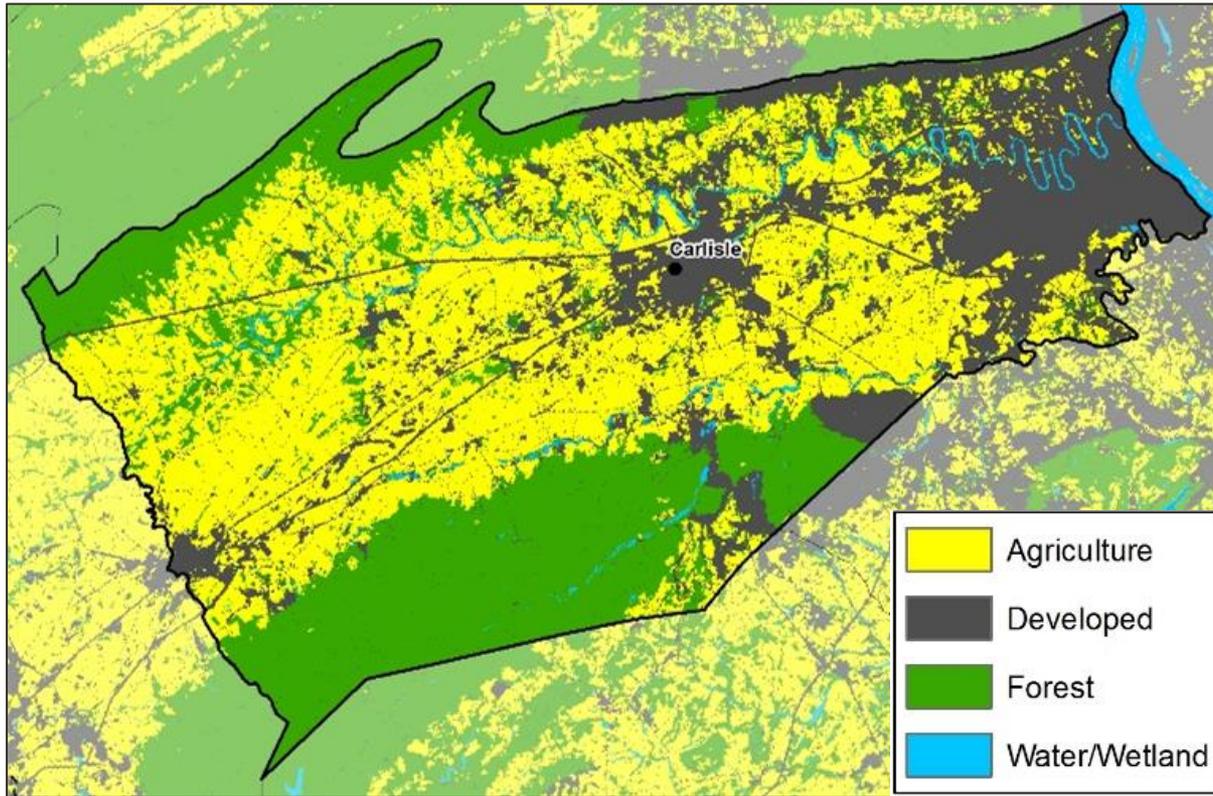
MS4 = Municipal Separate Storm Sewer System

WWTP = Waste Water Treatment Plant

Cumberland CAP Approach

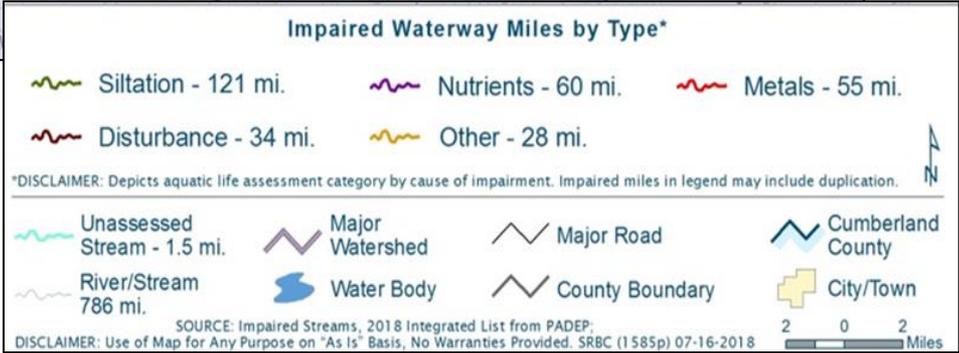
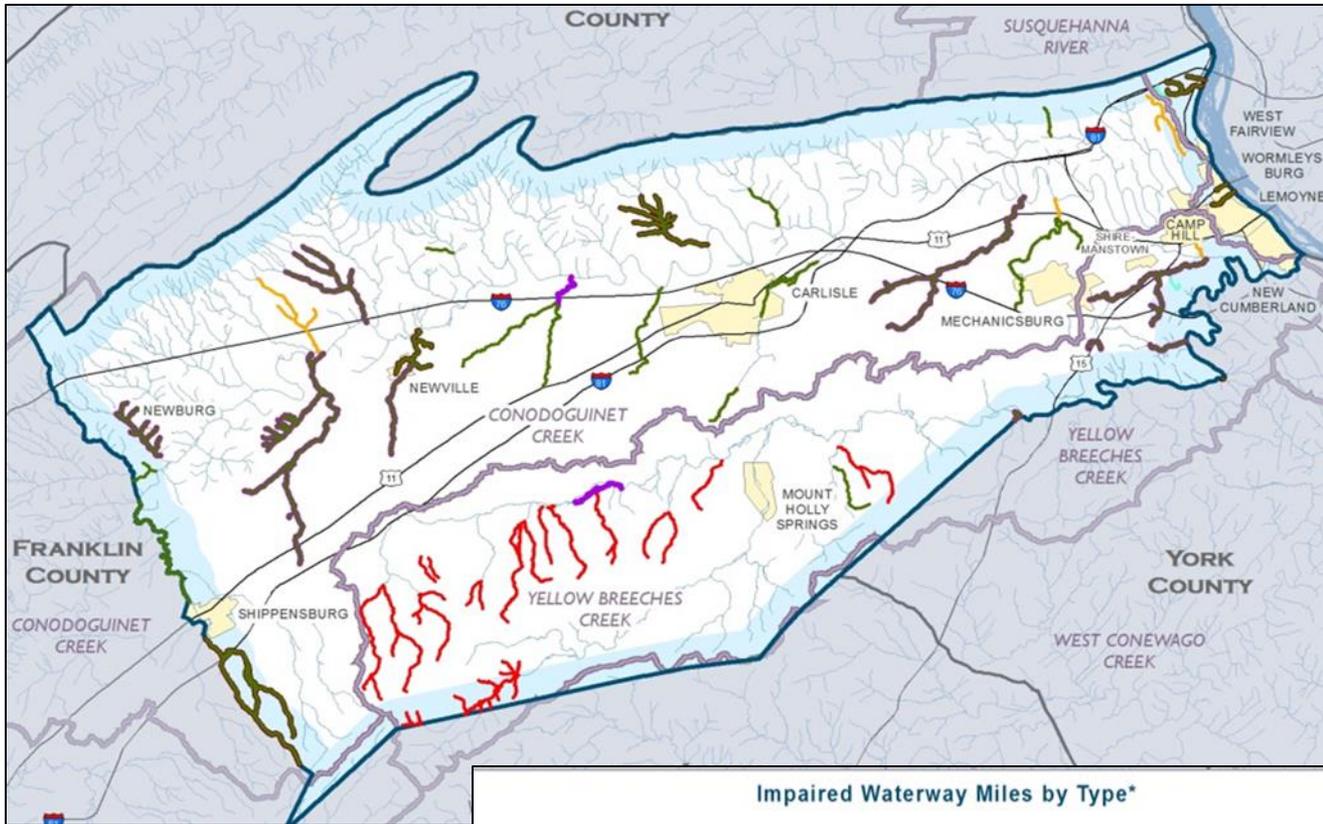
- Co-lead entities – Conservation District and Planning Department
- CAP Coordinator – HRG in partnership with Lancaster Farmland Trust
- Sector based – Opportunity to form Action Teams
 - Agriculture has greatest potential for nutrient reduction
 - Prioritize projects based on previous outreach efforts, willingness to implement practices and impaired streams data
 - Review statewide recommendations and determine feasibility and capacity
 - Identify existing/needed resources and pursue funding opportunities for projects
 - Solicit existing practice information

Land use and stream pollution are linked



Agricultural Lands and Developed Lands are the sources of most nutrient and sediment pollution in Cumberland County.

Pollution in Cumberland County Streams

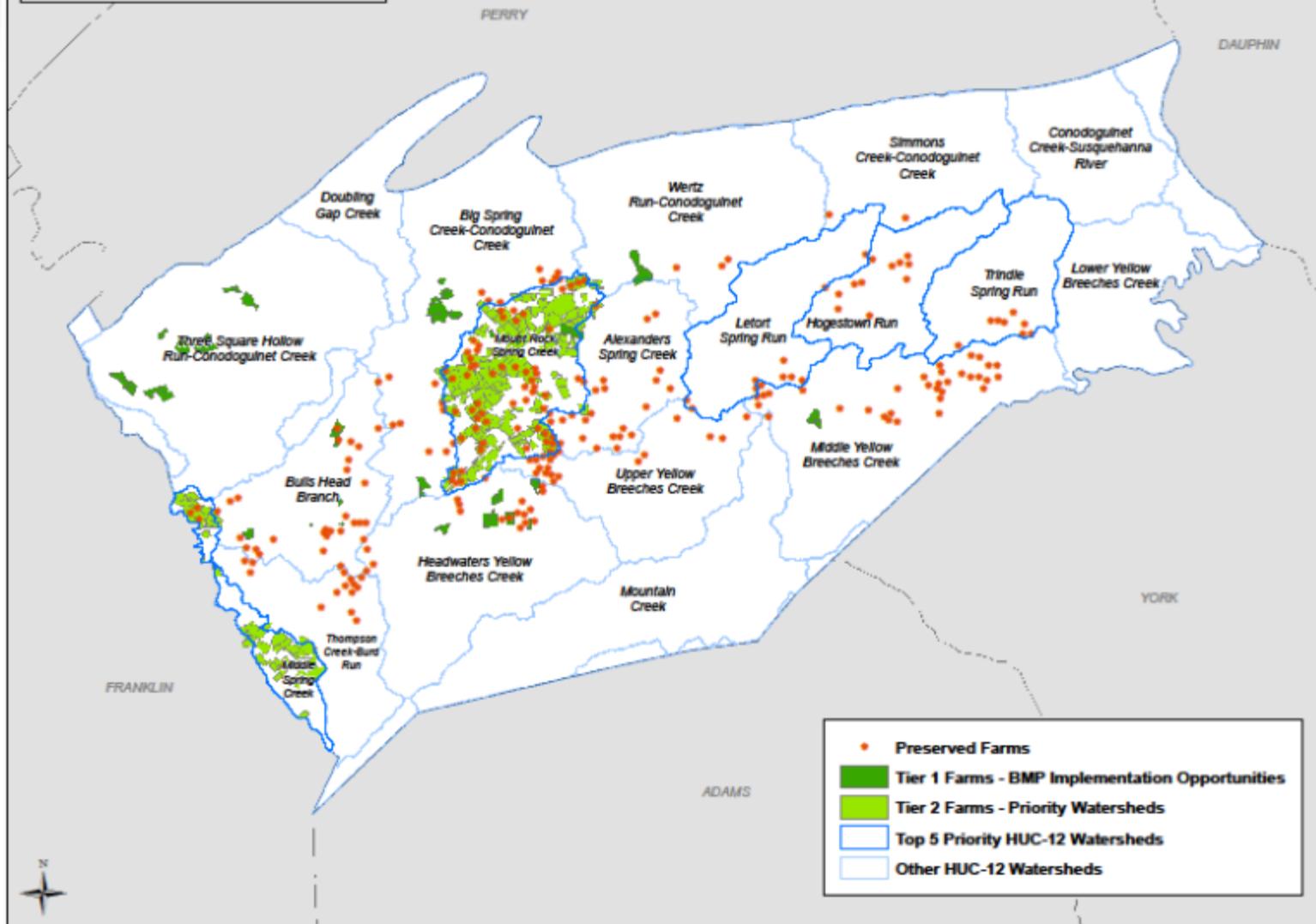


What about those BMPs?

- They can be structural or practice-based
 - Manure storage facilities, riparian buffers, cover crops
 - Rain gardens, street sweeping, applying advanced nutrient management practices, practicing no-till agriculture
- May be documented in agricultural conservation plans, in stream assessments, pollutant reduction plans for MS4 permittees
- Each practice has a life cycle and a nutrient reduction value
- BMP installations must be implemented and verified to get credit for nutrient reductions



Farm Outreach Prioritization Cumberland County



Priorities for Farm Outreach Strategy

What actions are proposed for Cumberland County?

Land Preservation Goals

Forest, Farm and Natural Areas Conservation		
Farmland Conservation	2,900	Total Acres
Forest Conservation	3,200	Total Acres
Wetland Conservation	90	Total Acres

BMP Goals - Agriculture

Soil Health		
High Residue Tillage	35,000 (42,300)	Acres per Year
Conservation Tillage	13,000	Acres per Year
Traditional Cover Crops	7,000 (14,400)	Acres per Year
Cover Crops with Fall Nutrients	25,000	Acres per Year
Prescribed Grazing	5,000	Total Acres
Agriculture Riparian Zone		
Forested Riparian Buffers	2,750	New Acres
Forested Riparian Buffers with Exclusion Fencing	750	New Acres
Grass Riparian Buffers	1,900	New Acres
Grass Riparian Buffers with Exclusion Fencing	250	New Acres
Agriculture Compliance		
Conservation Plans	93,000	Total Acres
Nutrient Management (Core N) Manured Acres	79,000	Total Acres
Nutrient Management (Core P) Manured Acres	24,000	Total Acres
Barnyard Runoff Controls	44	New Acres

Land Preservation Considerations

- Reactions to proposed conservation acreage?
 - Are these practical goals?
 - What progress is underway/what is your organization doing that we need to count towards these goals by 2025?
- Are there any statewide program/policy recommendations that we need in the plan to facilitate your work?
 - How can PA DEP or other agencies increase conservation practices on preserved land?
 - BMP requirements for state investment in program
 - Grass or forest buffers along waterways
 - What are your recommendations for strengthening state agricultural preservation guidelines to increase conservation/BMP practices on agricultural lands?
- What about local land policy tools?

Next Steps

- Do you have any recommendations?
- Who else should we talk with?
- Draft Plan timeline – end of September/early October
- Further opportunities for collaboration to meet 2025 deadline