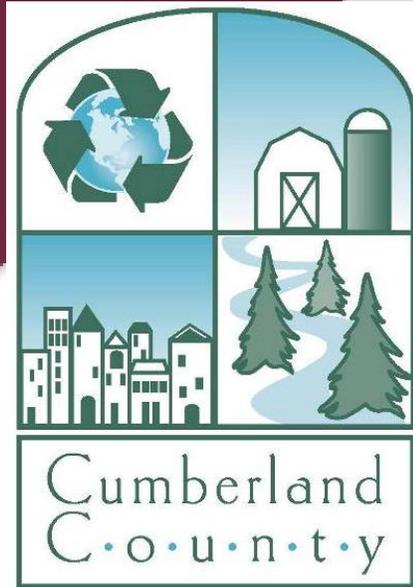


HRG

Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

AN EMPLOYEE-OWNED COMPANY



LOCAL PARTNER UPDATE – A WATERSHED GRASSROOTS APPROACH

WATERSHED ACTION TEAM MEETING

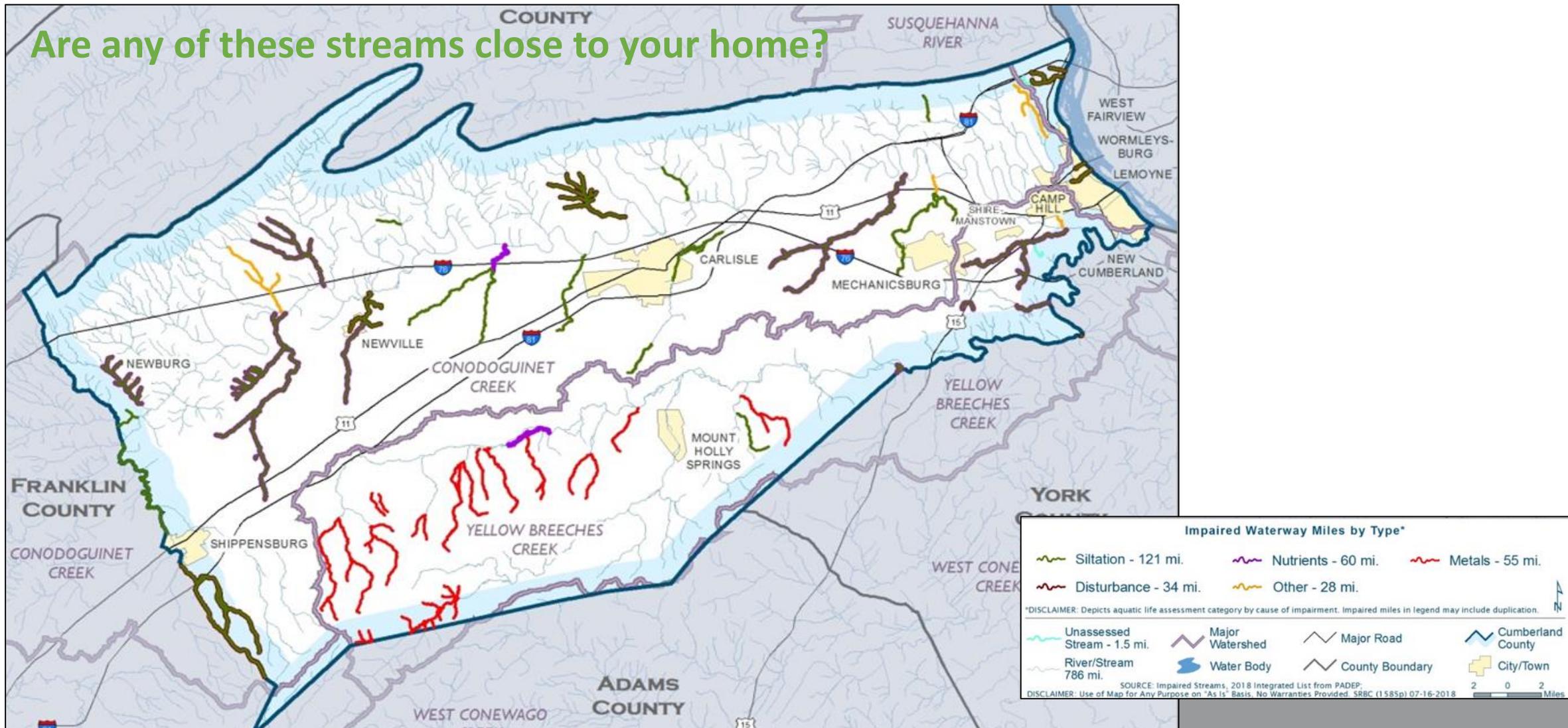
AUGUST 20, 2020

INTRODUCTIONS

- > Elizabeth Grant, AICP
 - Cumberland County Planning Specialist
- > Lori Glace
 - Cumberland County Conservation Analyst
- > Erin Letavic, P.E.
 - Civil engineer and project manager – stormwater/MS4 focus
 - Herbert, Rowland & Grubic, Inc. (Harrisburg, PA)

Pollution in Cumberland County Streams

Are any of these streams close to your home?

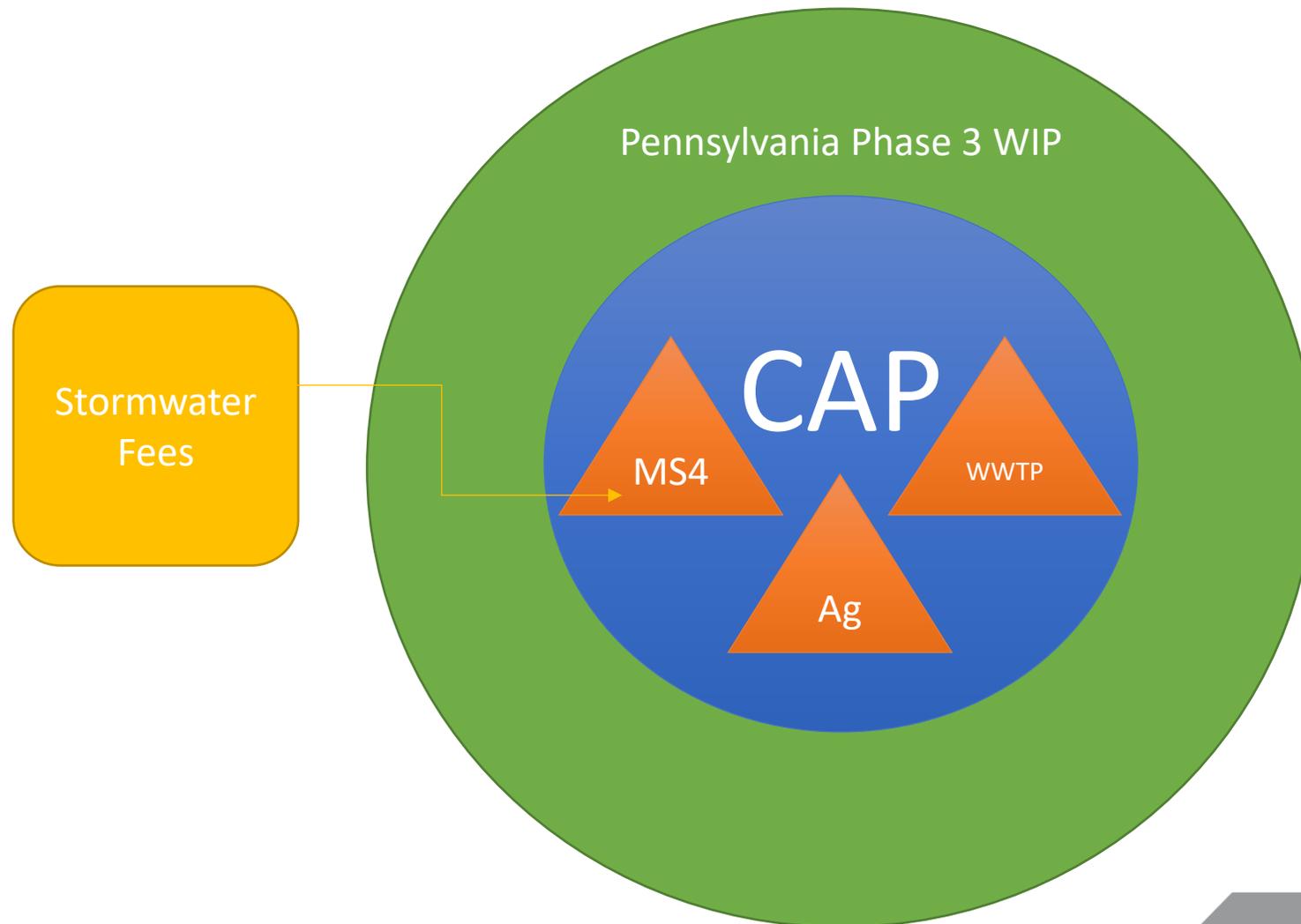


WATERSHED ORG. CHALLENGES/OPPORTUNITIES

HOW CAN WE HELP YOU
ACHIEVE YOUR GOALS?

- > Capacity
- > Grant admin./applications
- > Land maintenance
- > Municipal government relationships
- > Landowner relationship tracking
- > Membership intake information support

PH 3 WIP vs. CAP vs. MS4 vs. SW FEES



WIP = Watershed Implementation Plan

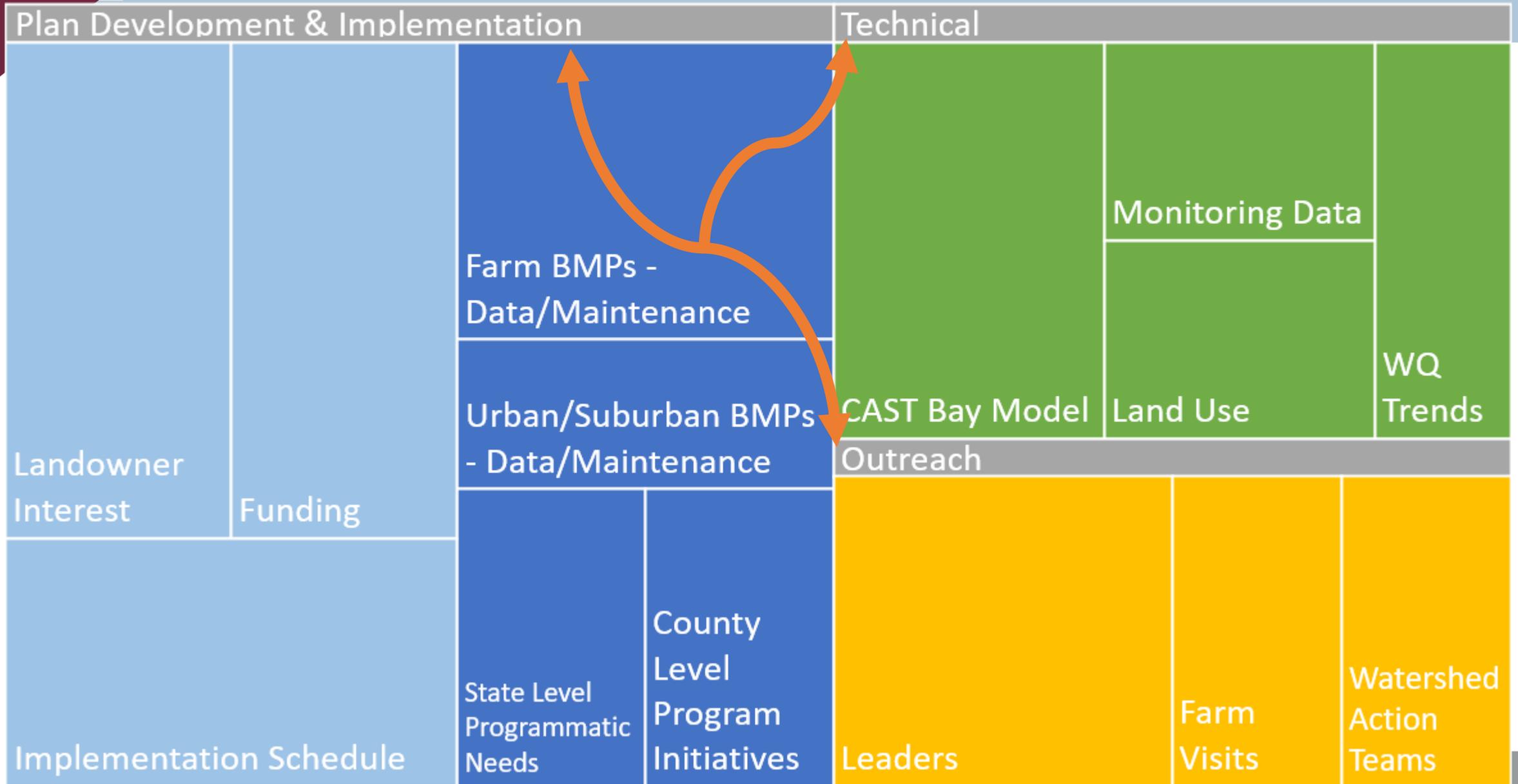
CAP = Countywide Action Plan

MS4 = Municipal Separate Storm Sewer System

WWTP = Waste Water Treatment Plant

CAP Planning Program

■ Technical ■ Plan Development & Implementation ■ Outreach



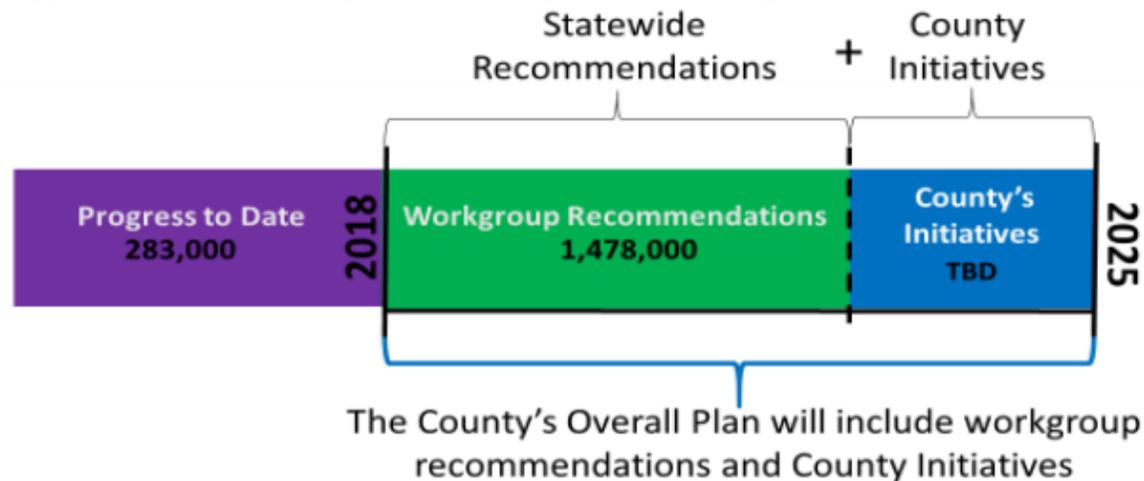
WHAT ARE CUMBERLAND COUNTY'S GOALS?

Cumberland County's Clean Water Goal

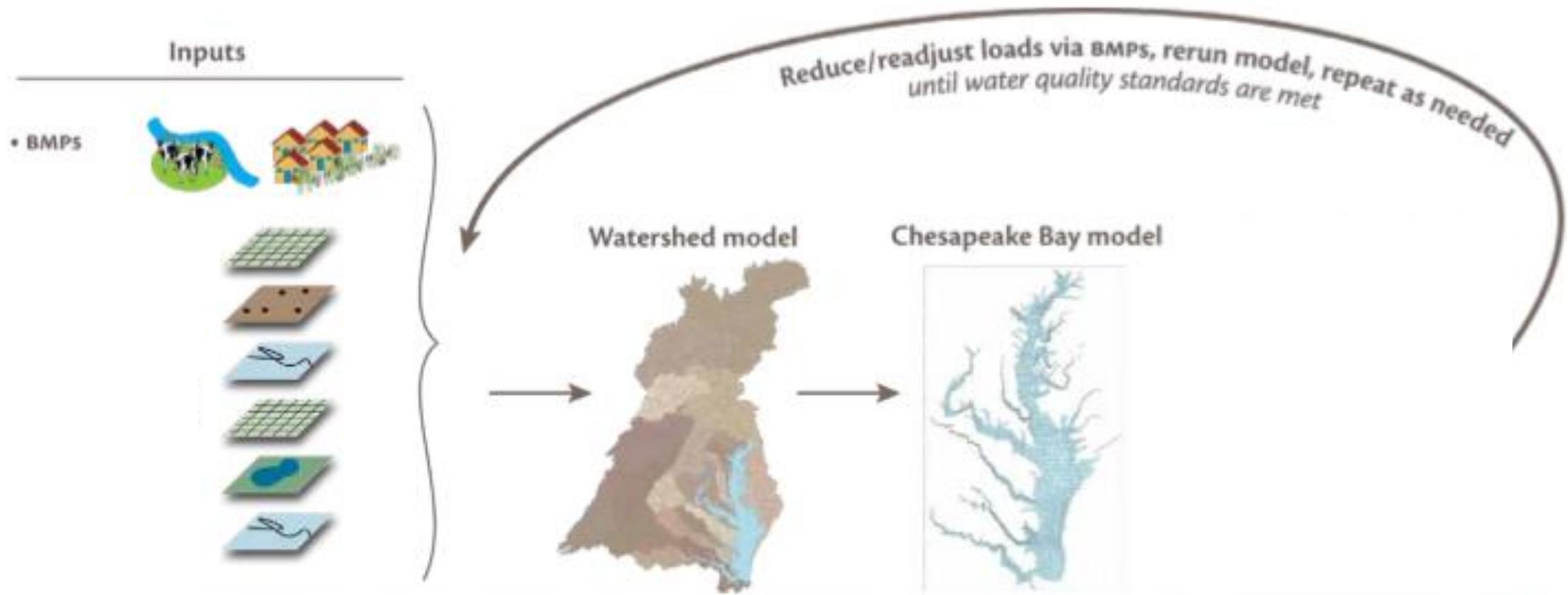
Figure 2. Countywide Goal for Cumberland County

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)



CAST BAY MODEL



BMPs THAT CAST LIKES

Sector	BMP	Unit	TNLbsReducedPerUnit
Developed	Forest Buffer	Acres in Buffers	9.0976
Developed	Infiltration Practices w/o Sand, Veg. - A/B soils, no underdrain	Acres Treated	7.78711
Developed	Forest Planting	Acres	6.87495
Developed	Bioswale	Acres Treated	6.81345
Developed	Impervious Surface Reduction	Acres	5.4586
Natural	Non Urban Stream Restoration	Feet	0.0505
Natural	Urban Stream Restoration	Feet	0.0505

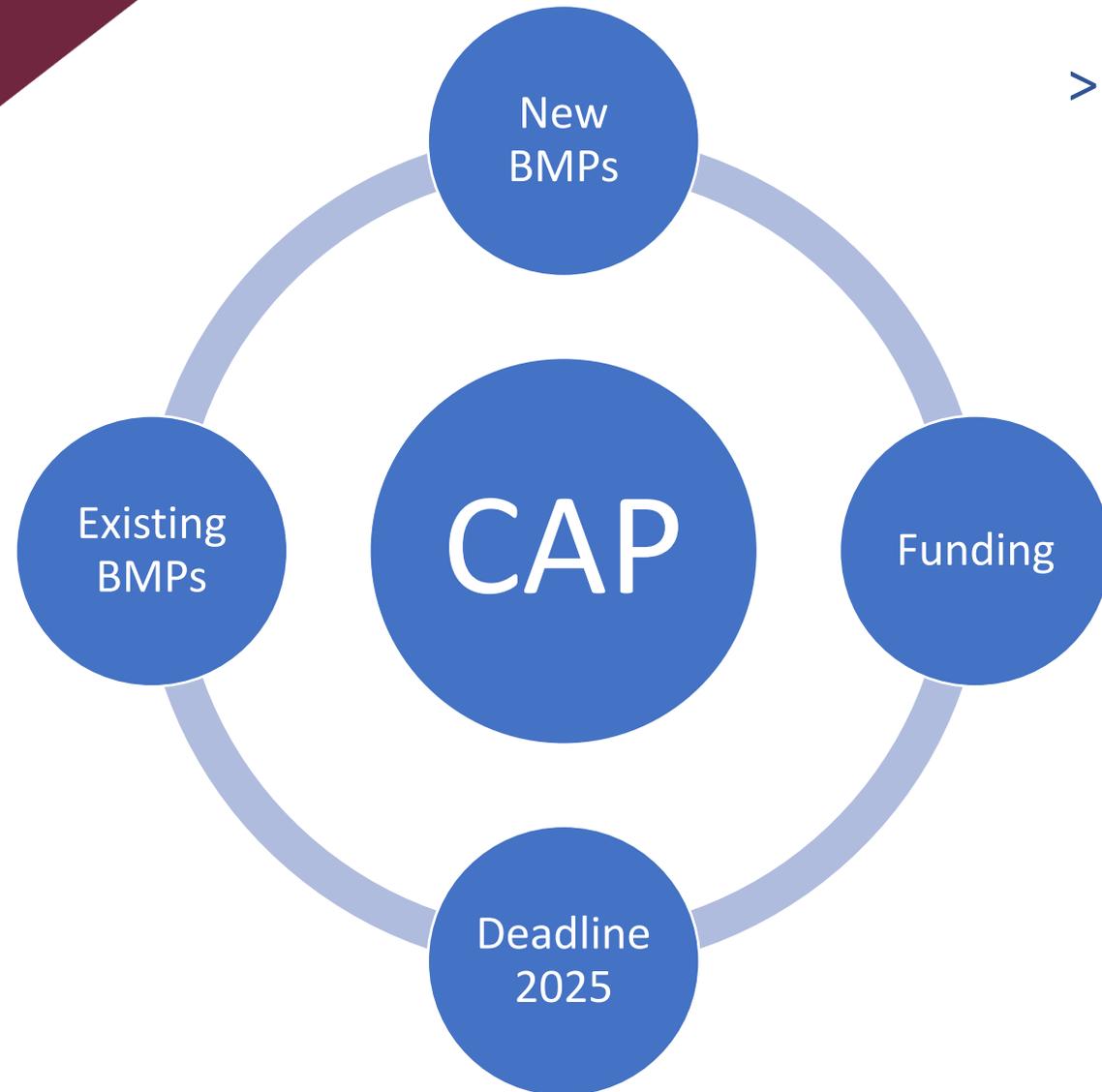
<https://www.ccpa.net/DocumentCenter/View/35040/Cumberland-County-Toolbox-11-14-2019>

WHAT ACTIONS ARE PROPOSED FOR CUMBERLAND COUNTY?

Land Preservation Goals

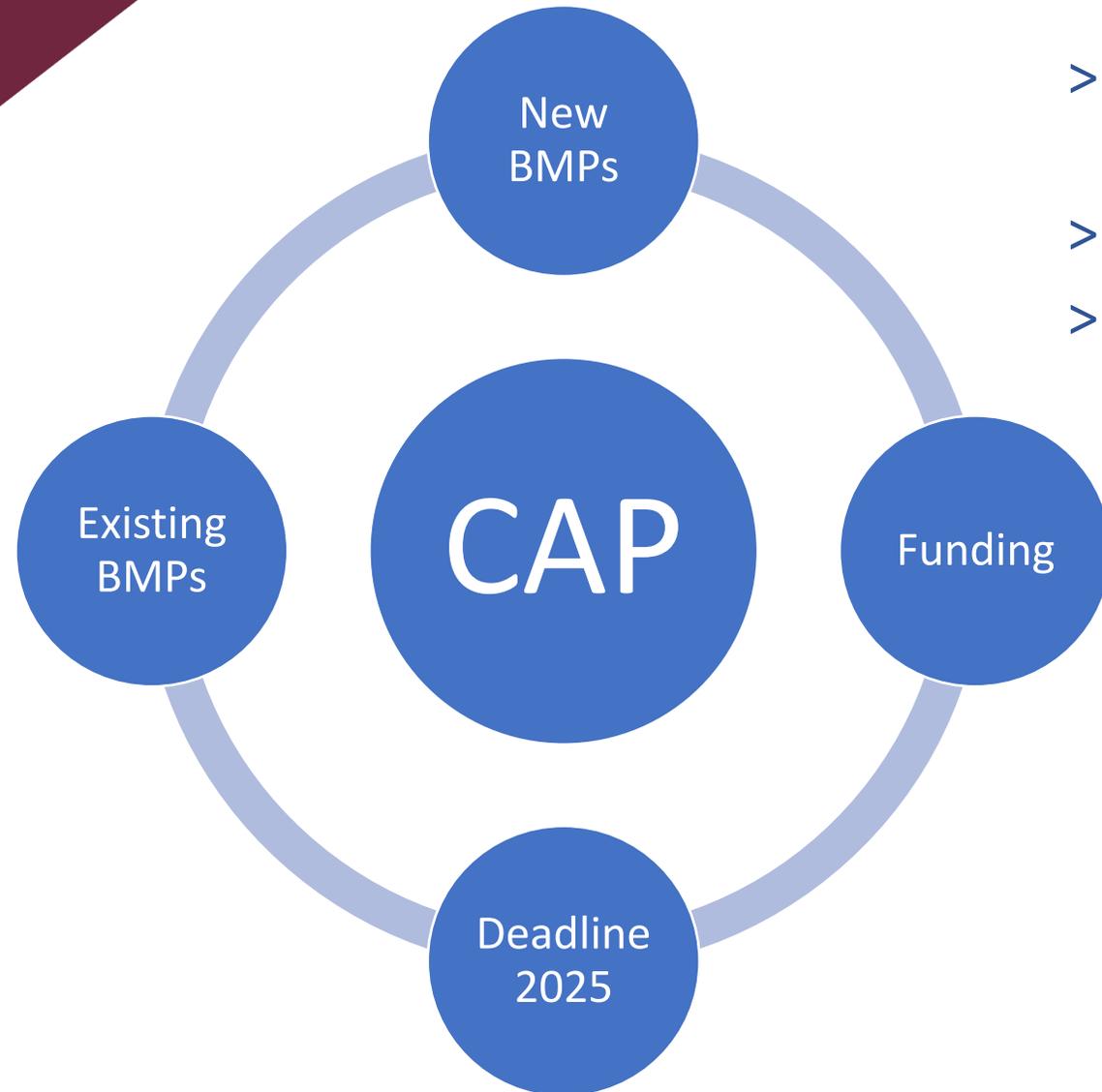
Forest, Farm and Natural Areas Conservation		
Farmland Conservation	2,900	Total Acres
Forest Conservation	3,200	Total Acres
Wetland Conservation	90	Total Acres

PROGRESS UPDATE



- > Focused on developing an implementable plan
 - BMPs that make sense
 - Funding matrix with match sources and implementation partners
 - Schedule (2025 deadline)

PROGRESS UPDATE



- > Outreach
 - Local leader small group Zooms
- > Utilize County staff resources
- > Corridors of Opportunity
 - Highest nitrogen per catchment acre
 - Highest ag land use acre per catchment
 - MS4s
 - Stormwater fees/authorities/utilities
 - Preserved farms
 - Plain sect

CAP COMPONENTS

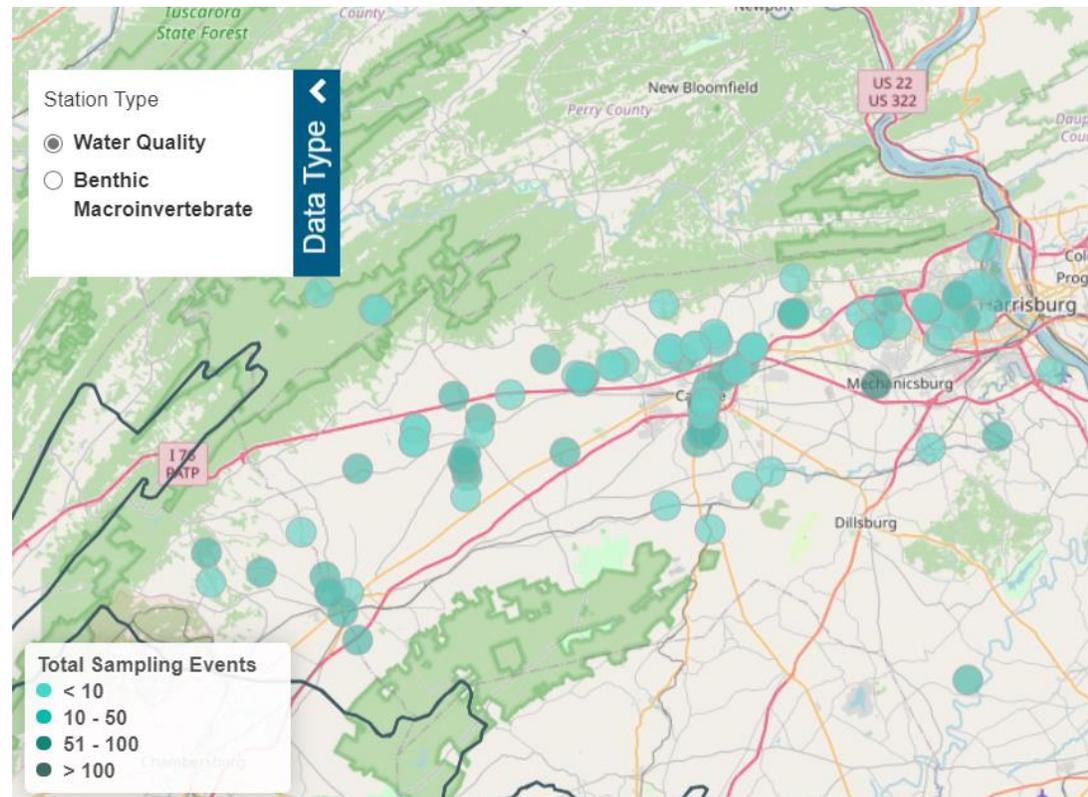
Project

- [Burd Run Stream Channel / Riparian Zone & Wetlands Restoration Project](#)
 - Growing Greener
- [Agricultural BMP's for TMDL Sub-Watersheds of the Conodoguinet Creek Watershed](#) (pdf)
 - Section 319 Program
- [Agricultural BMP's for the Mount Rock Spring Watershed](#) (pdf)
 - Growing Greener
- [Agricultural BMP's for the Bore Mill Run Watershed](#) (pdf)
 - Growing Greener
- [Agricultural BMP's for the Bulls Head Branch Watershed](#) (pdf)
 - Section 319 Program
- [Rain Barrel Project](#)
 - PA Chesapeake Bay Educational Mini-Project Program

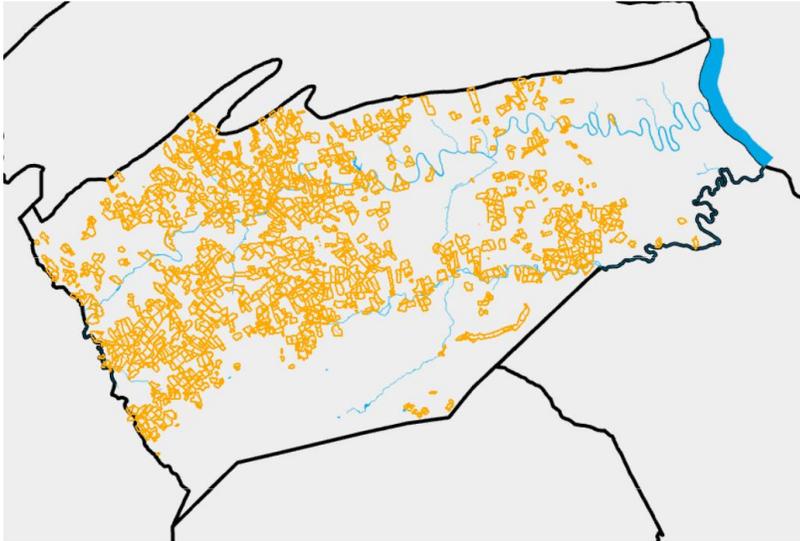
- > Are you helping to implement existing watershed plans?
- > Are any new watershed plans worth pursuing?
 - Cold water conservation

CAP COMPONENTS

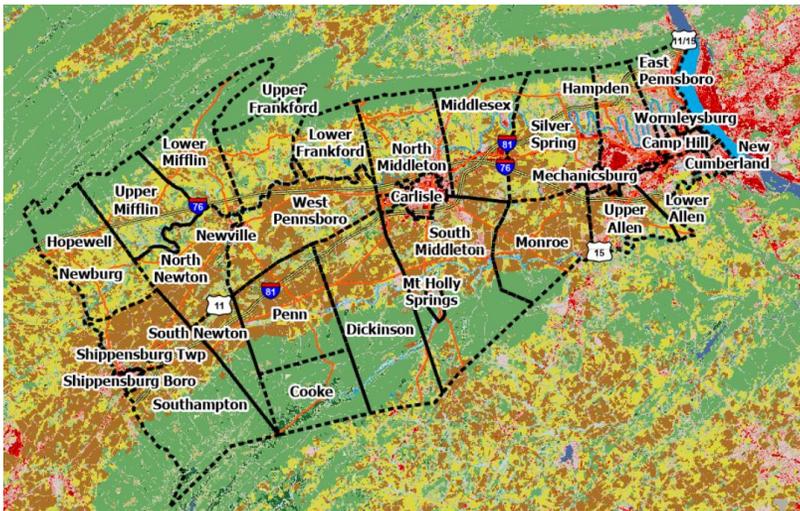
> Water Quality Monitoring



CAP COMPONENTS



- > Do you participate in municipal comprehensive plan updates?
- > Do you review ordinances as they are updated?
- > Do you participate in zoning hearing boards or planning commissions?



> INFLUENCE LAND USE RECOMMENDATIONS AND LAND PRESERVATION

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

HOW DO WE REDUCE NITROGEN POUNDS?

Get more BMPs into CAST model



Document Existing BMPs

- Farms
- Urban/Suburban/MS4

Build more BMPS

- Landowner willingness
- \$\$\$
- Time

IDEAS TO INCENTIVIZE??

CAP COMPONENTS



Wetlands (USFWS)

Restorable Wetlands



Wetlands

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

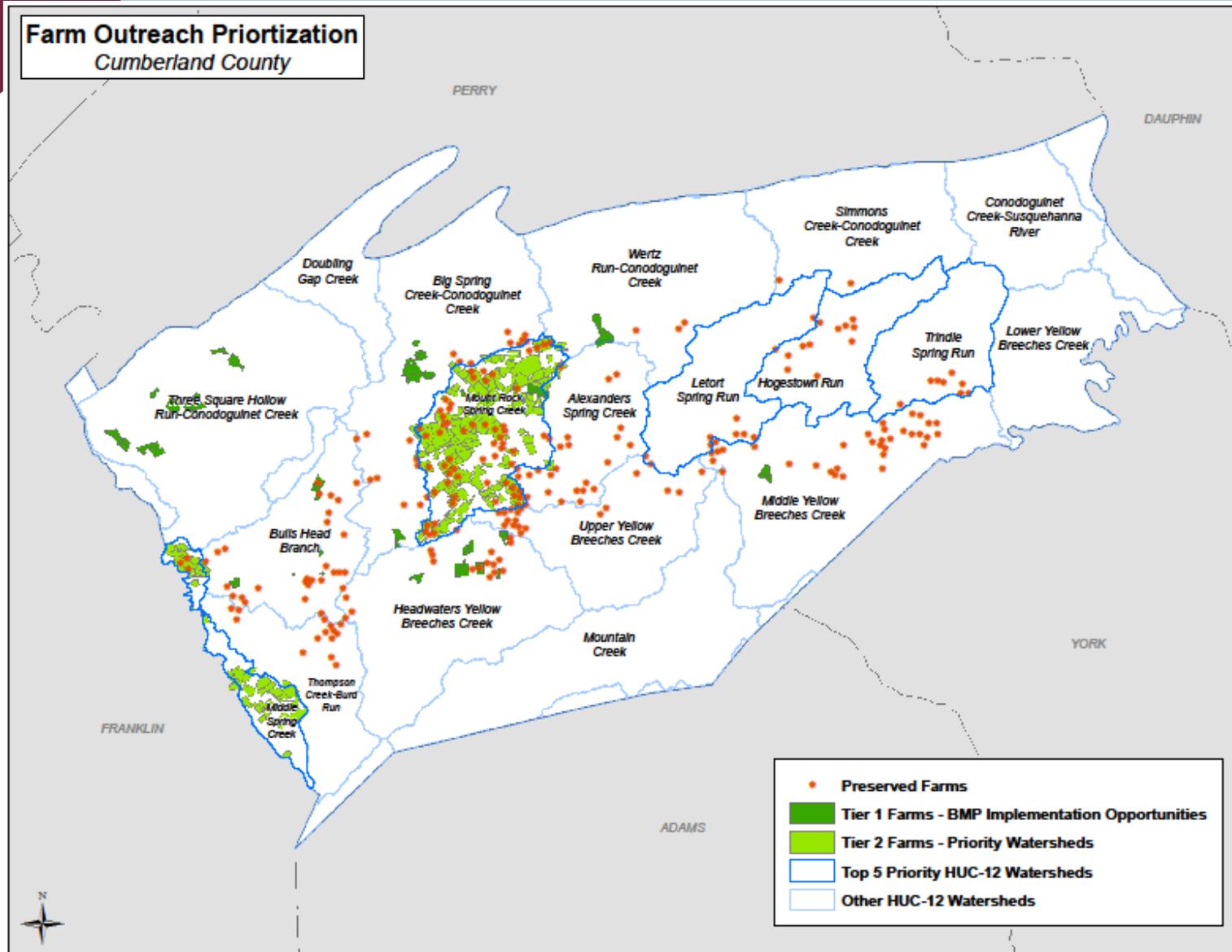
Other

Riverine

- > Riparian buffers
 - Protection
 - Maintenance
 - Easements

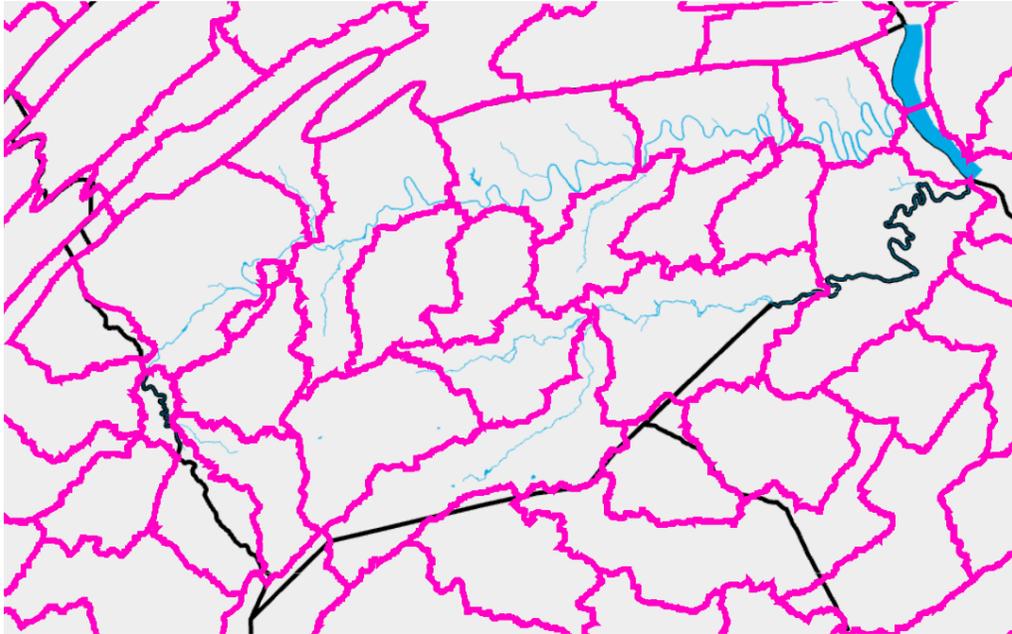
PRIORITIZE

> FARM OUTREACH EXAMPLE



PRIORITIZE

HUC-12s



> Potential Variables for Prioritization?

- Existing watershed group
- Existing volunteers
- Existing conservation groups
- Existing plans
- Outreach
- Projects
- Data collection
- WQ need

WATERSHED ORG. CHALLENGES/OPPORTUNITIES

This isn't just about the
CAP →

HOW CAN WE HELP YOU
ACHIEVE YOUR GOALS?

- > Capacity
- > Grant admin./applications
- > Land maintenance
- > Municipal government relationships
- > Landowner relationship tracking
- > Membership intake information support

NEXT STEPS

- > Plan writing
- > CAST BMP mixes
- > Funding and partner matrix

- > Do you want to reconvene the Watershed Orgs. Of CC group bi-annually?

