



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION



Chesapeake Bay Program Office

Pennsylvania's Phase 3 Watershed Implementation Plan: Partners, Projects, and Progress

Citizens Advisory Council
February 15, 2022

Tom Wolf, Governor

Patrick McDonnell, Secretary



In a year of significant challenges related to the COVID-19 pandemic, when any partnership with as many moving parts as the Phase 3 WIP could've fallen apart, we achieved a record level of progress.

DEP SECRETARY PATRICK MCDONNELL



Agenda

- Pennsylvania's Partners
- Pennsylvania's Projects
- Pennsylvania's Progress

Pennsylvania's Phase 3 WIP Implementation Strategy

Chesapeake Bay Office

Statewide Leadership, Coordination & Support

**Implementation
State Team & Action Leaders**



Local Action



Reporting



**Communication
& Engagement**



**Programmatic
Actions**



**Monitoring
& Data Management**

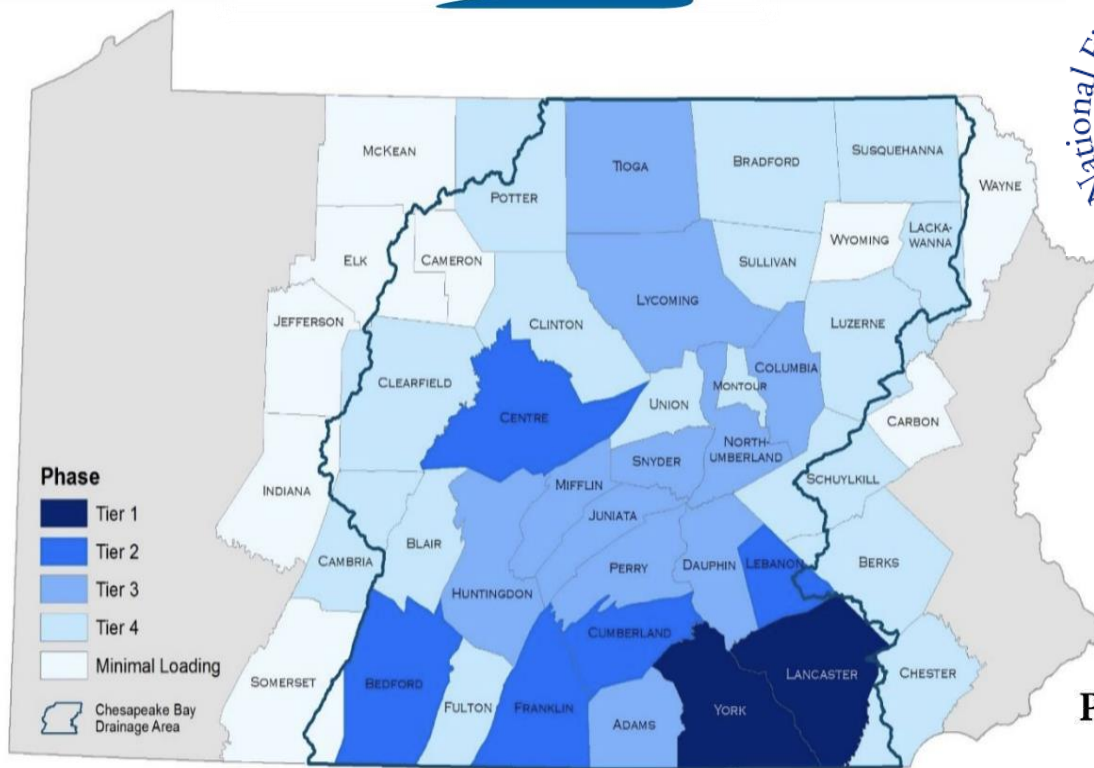
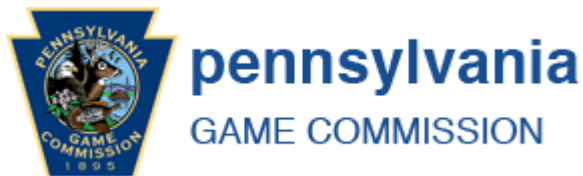


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Pennsylvania's Partners



Clean water:
Great for PA
Good for the Bay



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Pennsylvania's Projects

Phase 3 Watershed Implementation Plan

Agenda

- **What Success Looks Like**
- How We're Working Together To Succeed
- Where We Are Today
- What to Expect in the Future

What Success Looks Like

East Cocalico Township Completes Streambank Stabilization and Buffer Planting

East Cocalico Township in northern Lancaster County stopped erosion of Stony Run, a small stream near the township building. It is estimated the project will keep 30,475 pounds of sediment out of the stream each year.



Eroded streambank.



Stabilized streambank.

The Issues:

- Lack of vegetation along the stream caused the streambanks to wash away.
- The eroded streambank was up to three to four feet high.

The Solutions:

- Stabilized 265 feet of streambanks
- Planted 75 feet of riparian buffer

The location close to the township building means residents can see, enjoy, and learn about the work. As the new trees grow, live stakes will be cut for use in other tree planting projects.

The project was partially funded by the Clean Water Fund in 2019 and will count towards Lancaster's efforts to accomplish the CAP.

What Success Looks Like

Franklin County Farm Improves Horse Operation with Conservation BMPs

Franklin County CCD and a local horse operation with a creek worked on several clean water construction projects. The projects will keep nutrient pollution and sediment out of a creek on the property which drains downstream to Conodoguinet Creek.



The Issues:

- Muddy and eroding heavy use areas
- No manure storage
- Animal stream access

The Solutions:

- Fenced animal heavy use area
- Covered manure storage
- Off-stream watering
- Expanded riparian buffer

This project includes several BMPs that will significantly reduce nutrient and sediment runoff to local waterways.

CAP Implementation grant program funding covered a portion of the full project. The project will continue with additional funds provided by DEP's Growing Greener Plus program. The funding helped the operation to complete the more expensive structural practices while beginning more cost-effective projects on their own.

What Success Looks Like

Huntingdon County CD Stream Restoration

The Huntingdon County Conservation District finished over 2,800 feet of stream restoration at two sites in May 2021. Eighteen hundred feet of restoration took place on a section of waterway on Mower's Dairy Farm.



Mowrer's Dairy Farm Project - Before



Mowrer's Dairy Farm Project - After

The Issues:

- Streambank erosion
- Fishery and stream habitat decline
- Animals in waterway

The Solutions:

- 1,000 feet of in-stream erosion control and fish habitat structures
- 4,000 feet of new fencing
- 3.6-acre riparian buffer
- 800-foot reinforced cattle walkway/crossing

The Mower's Dairy Farm stream restoration project focused on a tributary to Shavers Creek, a high-quality coldwater fishery and a popular trout fishing stream.

The project was completed in partnership with the U.S. Fish & Wildlife Service, DEP, Chesapeake Conservancy, and Native Creations Landscaping.

What Success Looks Like

Union County: Native Wetland Reestablished

Union County Conservation District partnered with Donald H. Eichhorn Middle and U.S. Fish and Wildlife Service to reestablish a native wetland habitat next to the middle school in Lewisburg.



Project benefits include:

- Slows runoff from school roofs and parking lots;
- Filters pollutants out of runoff water;
- Allows rain to absorb naturally back into the ground;
- Benefits pollinators;
- Provides an outdoor learning area
- Promotes cross-curriculum educational opportunities

The group received a DEP Growing Greener grant in early 2019, wetland construction occurred in fall 2019. The native buffer was installed in spring 2020 with trees and shrubs donated by the Chesapeake Bay Foundation as part of its Keystone 10 Million Trees initiative.

What Success Looks Like

BEFORE:

Muddy roadside area on farm impacted by cows



AFTER:

Timber mats protect soil, water, and the cows!



Aldrich Farm in Susquehanna County

The Aldrich Farm in Susquehanna County is participating in a DEP pilot program involving timber mats.

62 mats were placed in a wet area along a road on the 628-acre farm. The mats float on the water and soil, providing a solid, safe surface for the cows to walk on. Not only do the mats help prevent the cows from polluting the water, but they are beneficial to the animals' health by preventing disease! The mats also create a bridge between two pastures, helping to provide uniform grazing of the pastures.

The farmer is pleased with the mats and this effort goes a long way in helping to protect Pennsylvania waterways!



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What Success Looks Like



Cumberland County: Young Soccer Players and Friends Plant 600 Saplings

The Keystone Football Club and a huge team of volunteers planted 600 native saplings at the Vincent Difilippo Nature Preserve in Silver Spring Township in June 2021. The Keystone 10 Million Trees Partnership and Conodoguinet Creek Watershed Association provided support.

The trees will help manage flooding, provide wildlife habitat, support the township's municipal stormwater goals, and contribute to CAP goals: win-win-win-win. They'll also add to the beauty of the park for years to come!



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Accelerate Implementation through Funding

Chesapeake Bay Office Funds Provided - December 2020 to January 2022:

October: Over \$1 million in Section 319 Grants awarded to Pilot and Tier 2 counties

November: Over \$6 million in CAP Implementation and CAP Coordinator Grants in Pilot and Tier 2 counties

December: More than \$32 million awarded in 2020 Growing Greener Plus Grants

Over \$16 million awarded in the Chesapeake Bay Watershed

January: \$1 million for 10 CAP Coordinator Grants awarded in Tier 3 & 4 counties

October: Approximately \$4 million in Section 319 non-point source management grants

December: More than \$17 million awarded in 2022 CAP Implementation and CAP Coordinator Grants in all 34 counties that developed CAPs

January: More than \$18 million awarded in 2021 Growing Greener Plus Grants

Over \$10 million awarded in the Chesapeake Bay Watershed

Accelerate Implementation through Funding

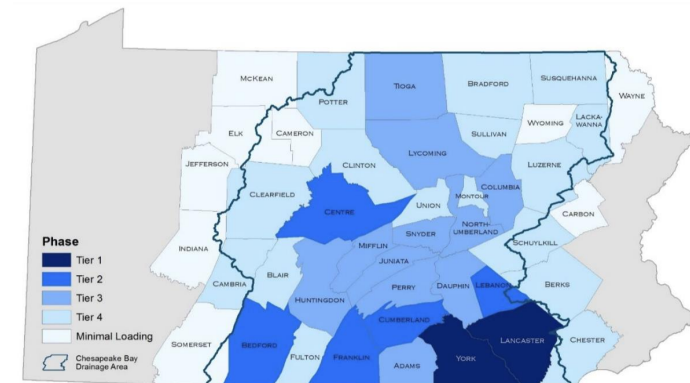
\$17+ Million in Block Grant Funding Awarded in December 2021:

Grants coordinate and implement CAP projects and verify BMPs:

- Adams County CD: \$177,900
- Bedford County CD: \$637,047
- Bradford County CD: \$510,779
- Centre County Government: \$590,500
- Chester County CD: \$569,954
- Clinton County Commissioners: \$344,505
- Cumberland County Commissioners: \$283,750
- Franklin County CD: \$1,184,222
- Lackawanna County CD: \$409,379
- Lancaster County CD: \$3,583,216
- Lebanon County CD: \$729,796
- Lycoming County Commissioners: \$527,391
- Montour County CD: \$729,331 for Montour, Columbia, and Sullivan counties
- Snyder County CD: \$966,491 for Snyder and Union Counties.
- Southern Alleghenies Planning and Development Commission: \$253,000 for coordination and verification in Blair, Cambria, Fulton, and Huntingdon counties
- Tri-County Regional Planning Commission: \$1,877,315 for Dauphin, Perry, Juniata, and Mifflin counties
- York County Planning Commission: \$1,329,517

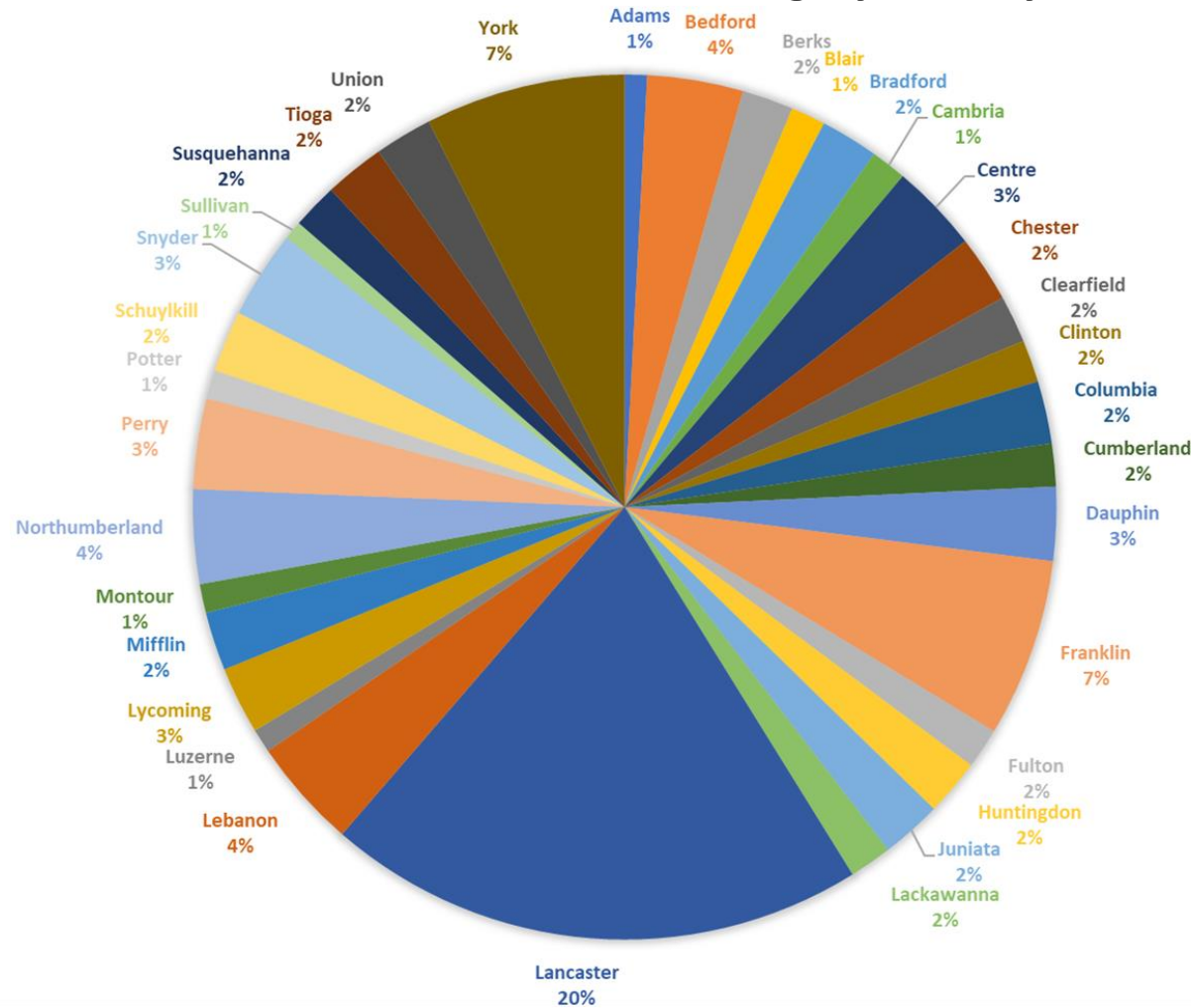
Grants to implement CAP projects:

- Blair County CD: \$166,470
- Berks County Planning Commission: \$277,083
- Cambria County CD: \$173,506
- Clearfield County CD \$248,691
- Fulton County CD: \$204,442
- Huntingdon County CD: \$311,526
- Luzerne CD: \$94,962
- Northumberland County CD: \$544,946
- Potter County CD: \$126,415
- Schuylkill CD: \$344,320
- Susquehanna County: \$239,011
- Tioga County CD: \$335,729

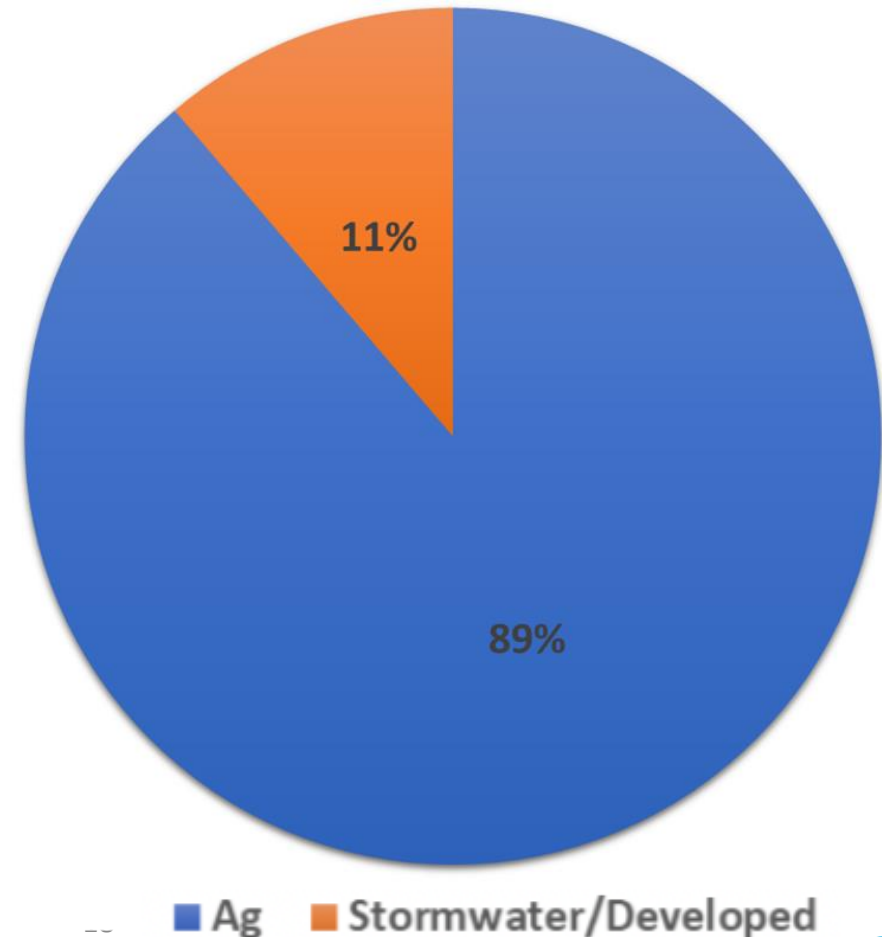


Supporting Local Action – 2022 Block Grant Funding

% Total Block Grant Funding By County



Implementation Funds By Sector



2021 Growing Greener Plus

\$18.2+ million awarded in the 2021 Growing Greener Plus Program

Key Highlights:

- \$10.2+ million in 2021 Growing Greener Grants awarded to 25 grants in the Chesapeake Bay watershed
- \$7.9+ million in 2021 Growing Greener Grants awarded to 40 grants in non-Chesapeake Bay counties
- \$9.9+ million in 2021 Growing Greener Grants awarded to 25 grants in Environmental Justice (EJ) areas
- Commonwealth Investment Criteria – 150 new jobs; 539 jobs retained



Accelerate Implementation through Funding

Chesapeake Bay Office 2022 Funding Opportunities

PA DEP

- 2022 Growing Greener Plus and Section 319 Grant RFPs to be released Spring 2022

NFWF and EPA

- Additional funds are allocated to NFWF every year from EPA for Most Effective Basin (MEB) and Local Government Implementation (LGI).
- NFWF works with the DEP and SCC to ensure that the PA-MEB and PA-LGI programs align with priority initiatives in Phase 3 WIP.

Supporting Local Action – 2022 Block Grant Funding

Innovative Highlights - Cover Crop Incentive Program:

- 12 counties included a cover crop incentive program in their application-yielding approximately 28,900 new acres of cover crops, with an estimated reduction of 315,610 pounds of nitrogen/year

Other examples of approved for funding programs include:

- Buffer incentive program
- Conservation landscaping incentive program
- Incentive based payments for the installation of field borders and pollinator strips
- Equipment rental program for no-till, cover cropping, and advanced manure spreading
- No-till corn planter program

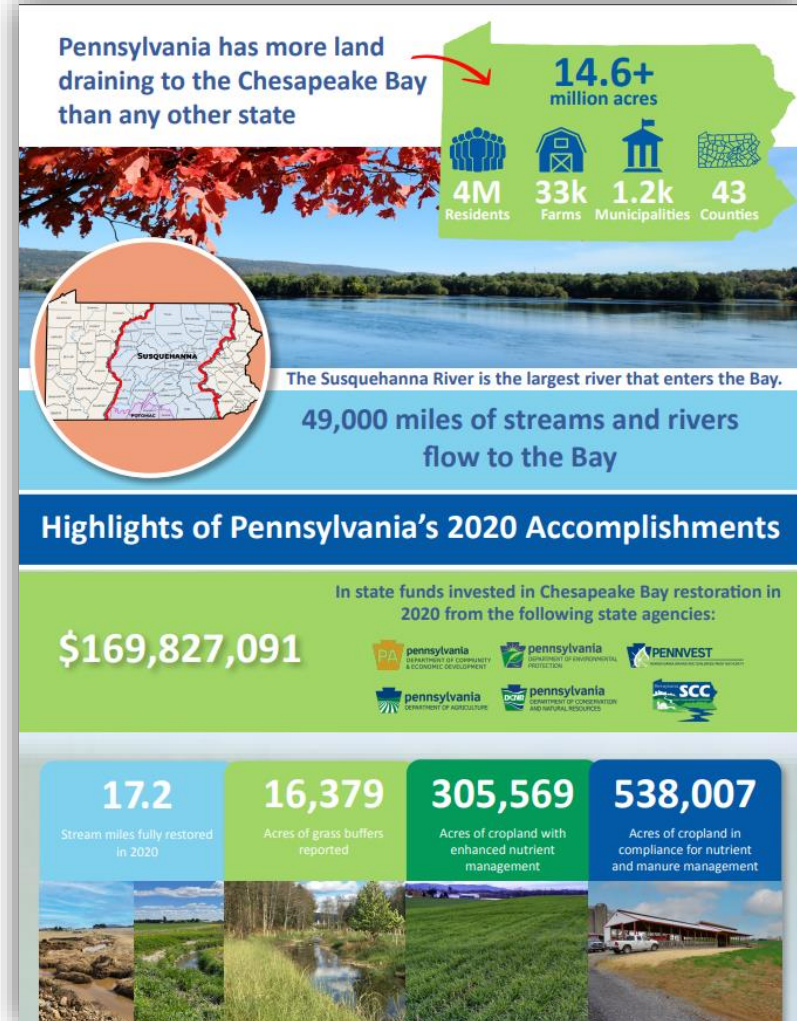
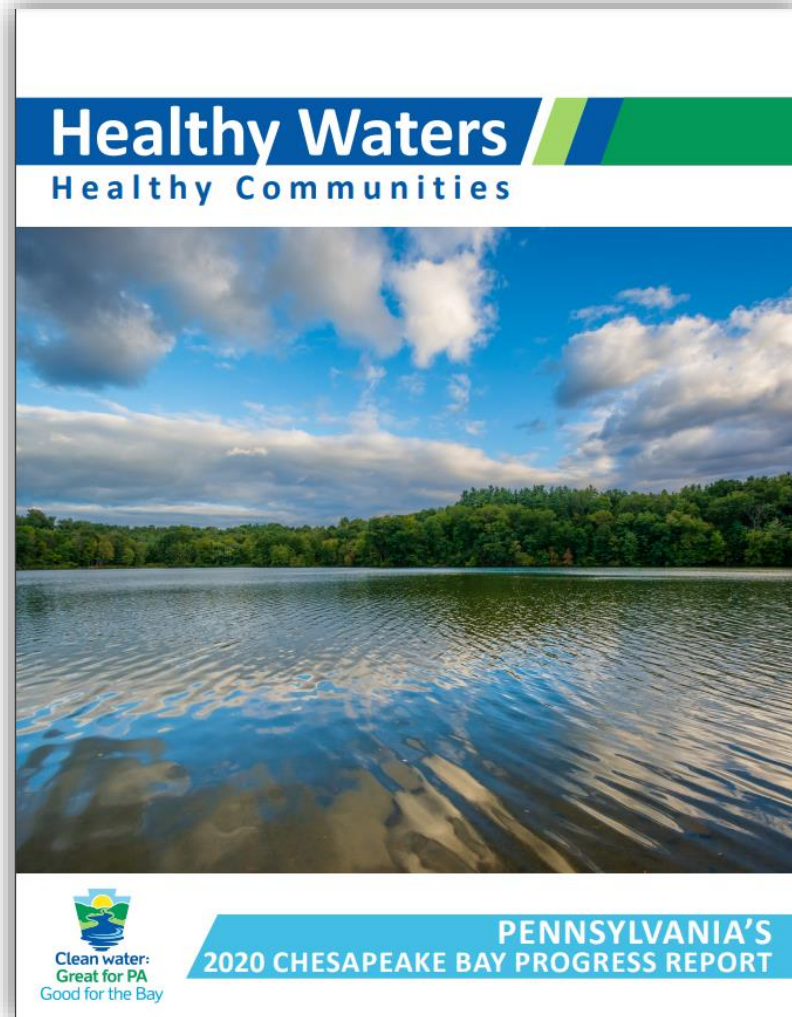
Multiple Partnerships:

- Lancaster County proposed a riparian forest buffer initiative that will yield 200 acres and is a cooperative plan involving 11+ partners.
- Lackawanna County is proposing to do a streambank fencing and forest riparian buffer project. This joint effort with 25 landowners will result in approximately 2,500 ft of streamside exclusion fencing and 10 acres of buffers.



2020 Healthy Waters Healthy Communities Report

2020 Healthy Waters Healthy Communities Chesapeake Bay Progress Report



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Pennsylvania's Progress



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Phase 3 Watershed Implementation Plan



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The Phase 3 WIP Amendment was submitted to EPA and published to the DEP Website.

It outlines how PA will meet **100% of its 2025 targets** for Nitrogen, Phosphorus and Sediment reduction.

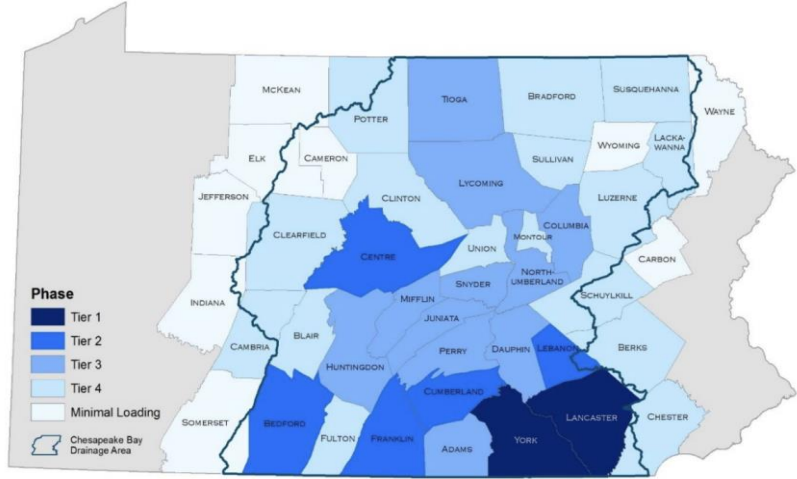
The Amendment updates the WIP to:

- **Identify funding needs and opportunities for state, county-level, and sector initiatives.**
- **Ensure EPA modeling is updated to accurately reflect pollution reduction measures already on the ground.**
- **Define more ways to reach clean water goals through state, regional, and county partners.**
- **Provide implementation support for Countywide Action Plans.**

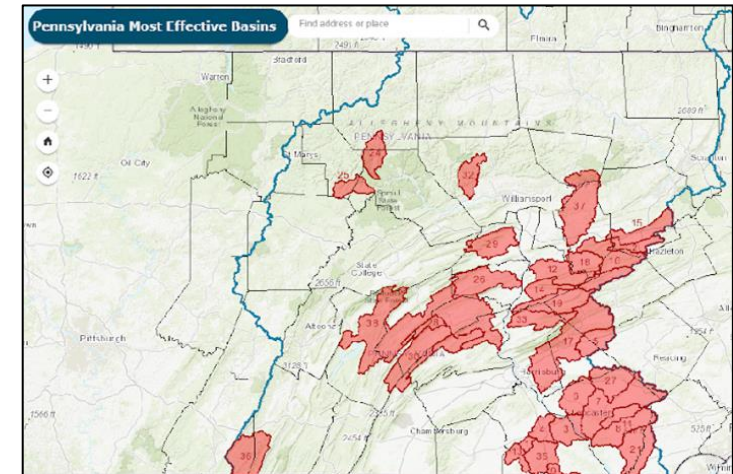
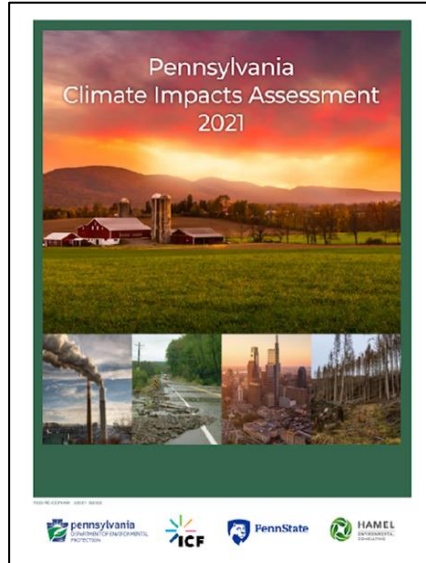
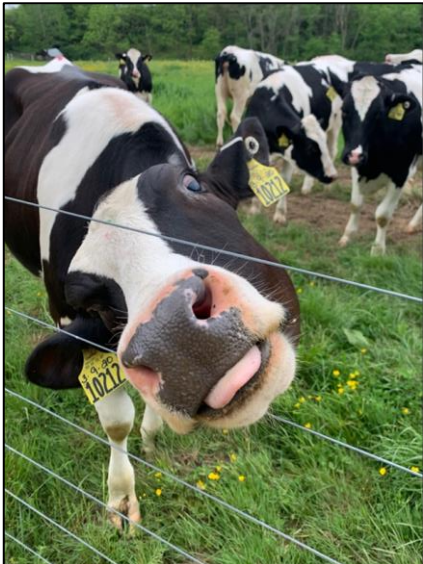


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Phase 3 WIP Amendment Highlights



- CAST-2019 was used instead of CAST-2017
- Pilot, Tier 2, Tier 3, and Tier 4 CAP reductions are included along with state recommendations
- Climate Allocation and Narrative Statement
- Minor updates to call out highlights from August 2019 through November 2021, which include:
 - Pennsylvania's Modeled Progress through June 30, 2020
 - Legislative Updates
 - Programmatic Updates
 - COVID-19 pandemic impacts and adjustments
 - State and Federal coordination

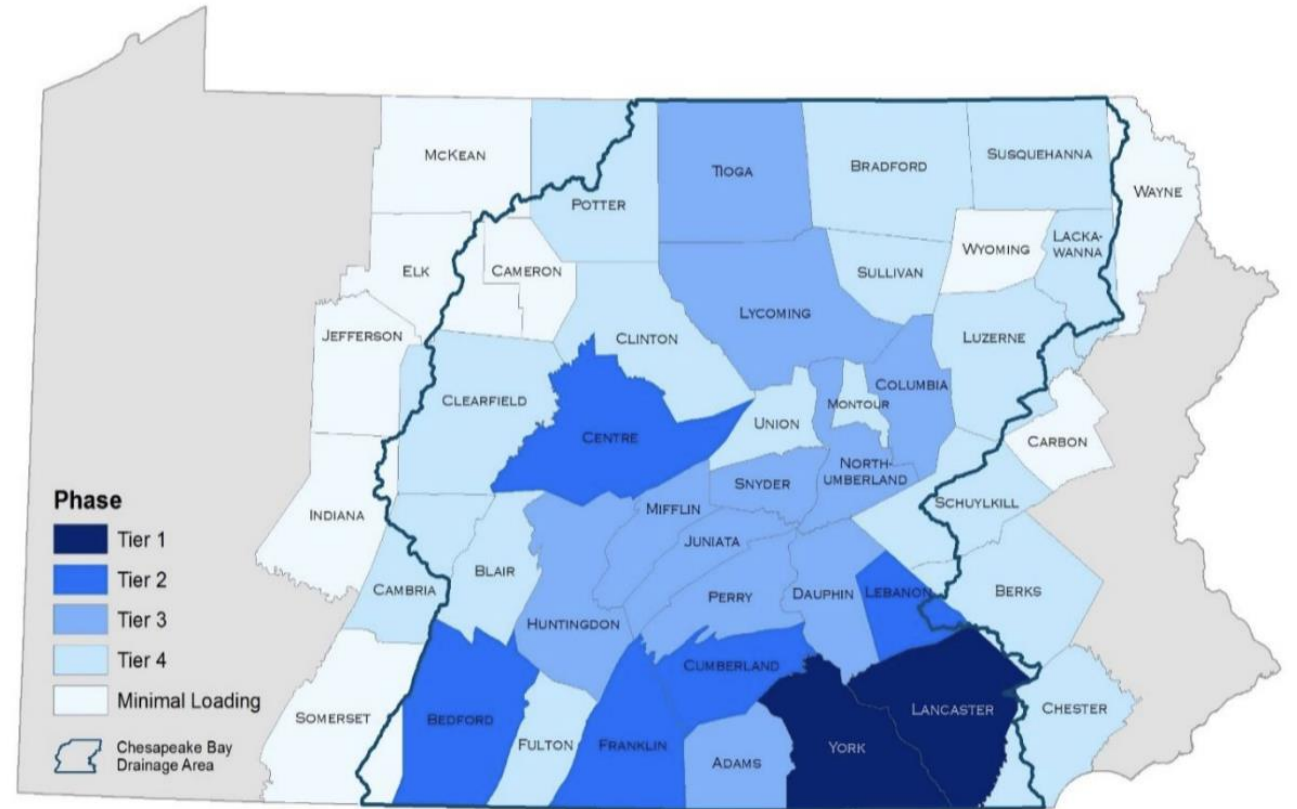


Phase 3 WIP Amendment Highlights

Countywide Action Plans (CAPs) are key to Pennsylvania's clean water strategy.

- All 34 Pennsylvania counties in the Chesapeake Bay watershed asked to complete plans have done so.
- County teams and partners have started implementing best management practices (BMPs) and other clean water efforts.
- Amended WIP expands CAP development, implementation, support and local engagement.

Continuing this work will achieve the largest nitrogen reduction, 16.8 million pounds.



Phase 3 WIP Amendment Highlights

- Factored in and quantified the cumulative effect of historic on-the-ground efforts through estimated reduction value of the excess/cutoff, credit duration, and existing non-reported programs.
- Added in total new implementation from Tier 1, 2, 3, and 4 counties, minimal loading counties, and state recommendations.
- Added new initiatives, like local rapid stream delisting, public-private partnerships and new climate change policies and programs, such as the Local Climate Action Program (LCAP) initiative



The WIP Amendment more accurately reflects on-the-ground nutrient reductions and progress towards Pennsylvania's 2025 Targets.

Nitrogen

2025 Planning Target 73.49M lbs

2025 Reduction Goal 32.5M lbs

Reductions in WIP Amendment

CAP Efforts 16.8M

Aging BMPs 7.8M

State Efforts 6.1M

Cutoff BMPs 0.784M

Non-reported 0.449M

PA will have the programs and practices in place to meet the Planning Target

Phosphorus

2025 Planning Target 2.9M lbs

2025 Reduction Goal 800K lbs

Reductions in WIP Amendment

CAP Efforts 570K

Aging BMPs 243K

State Efforts 271K

Cutoff BMPs 36K

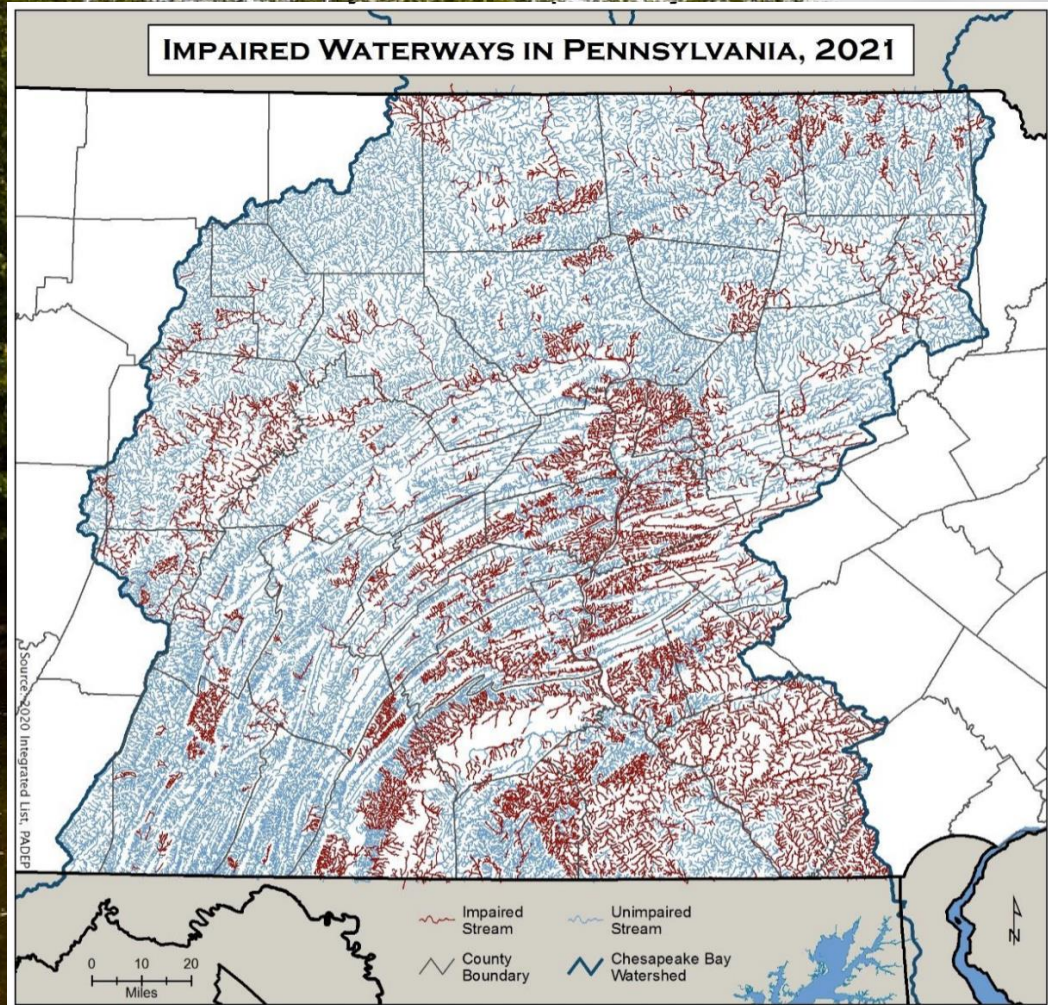
Non-reported 14K

PA will have the programs and practices in place to meet the Planning Target



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Phase 3 WIP Amendment Highlights



In 2019 there were 15,000 miles of impaired streams in Pennsylvania's Chesapeake Bay watershed.

This number is now less than 13,000 miles of impaired streams and rivers, according to the draft 2022 Integrated Water Quality Report.



Phase 3 WIP Amendment Highlights

The Amendment confirms the \$324.2 million annual funding needed to support Phase 3 WIP efforts.



Proposed federal and state programs would help meet this need:

- The USDA Chesapeake Resilient Farms Initiative (CRFI), would provide a new investment of \$737 million
- State investments of over \$750 million proposed in the Pennsylvania legislature:
 - Clean Streams Fund
 - Growing Greener III



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Numeric and Programmatic Milestones

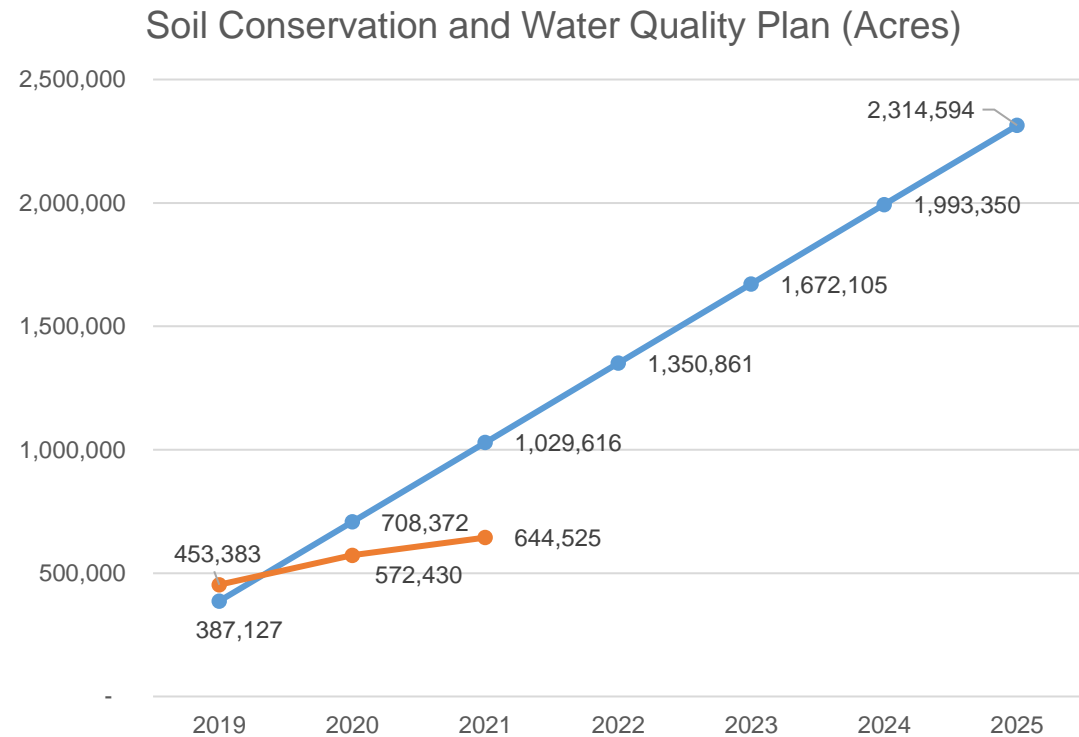
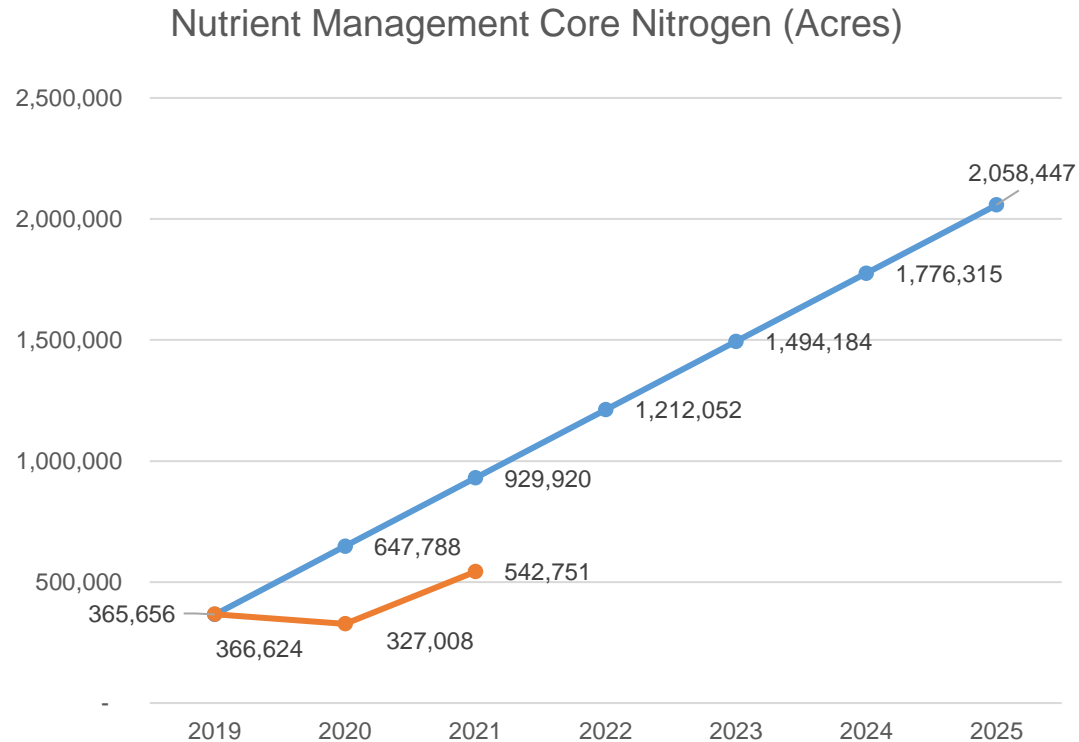
- 2021 Programmatic Progress Report and 2022-2023 Programmatic Milestone Commitments
- 2022-2023 Numeric Milestone Commitments

[DEP](#) > [Businesses](#) > [Water](#) >

[Pennsylvania's Chesapeake Bay Program Office](#) >

[Track Pennsylvania's Progress](#)

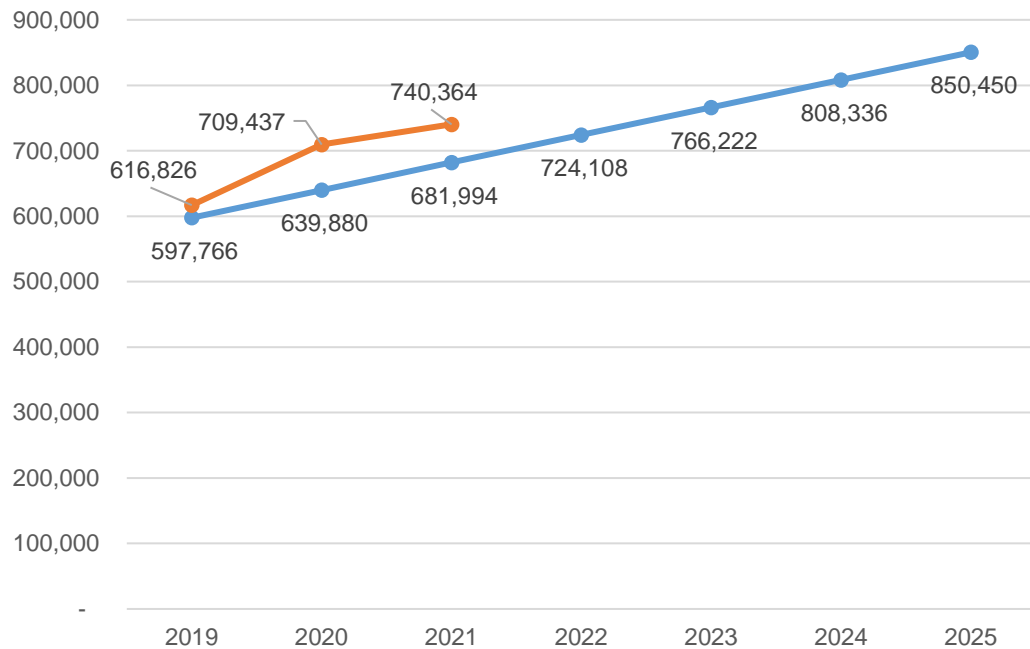
Numeric Milestones



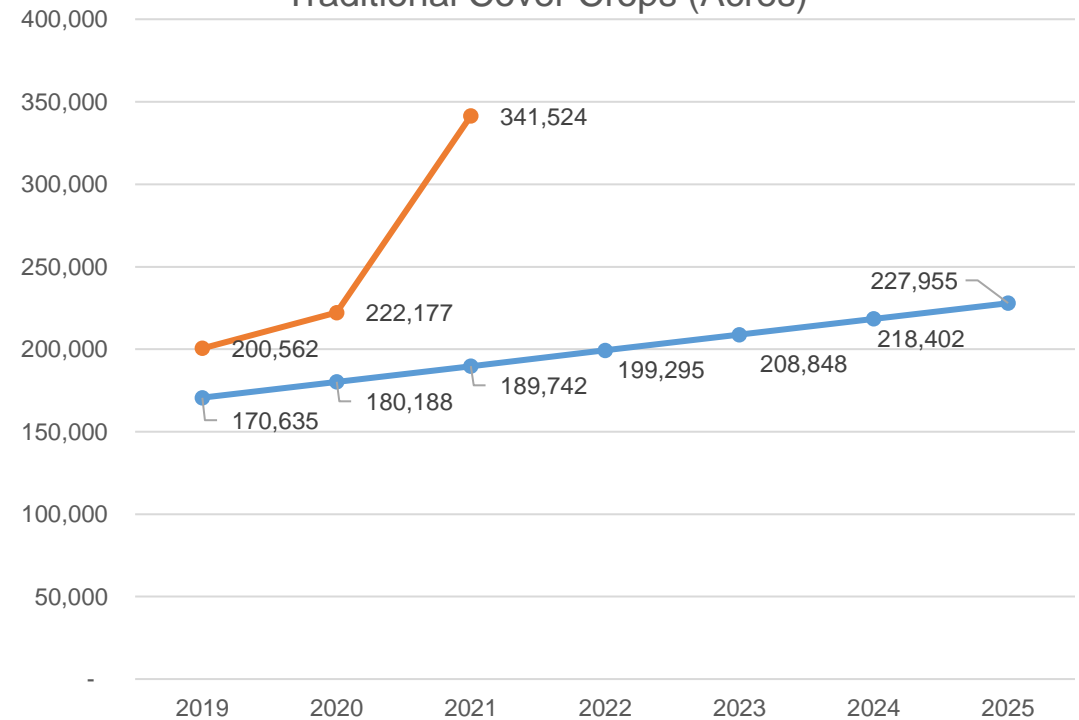
Orange Line depicts BMPs submitted plus BMPs lost to credit duration expiration that year (e.g. 2019, 2020, 2021)
Blue Line depicts annual interim goals toward 2025.

Numeric Milestones

High Residue Tillage Management (Acres)



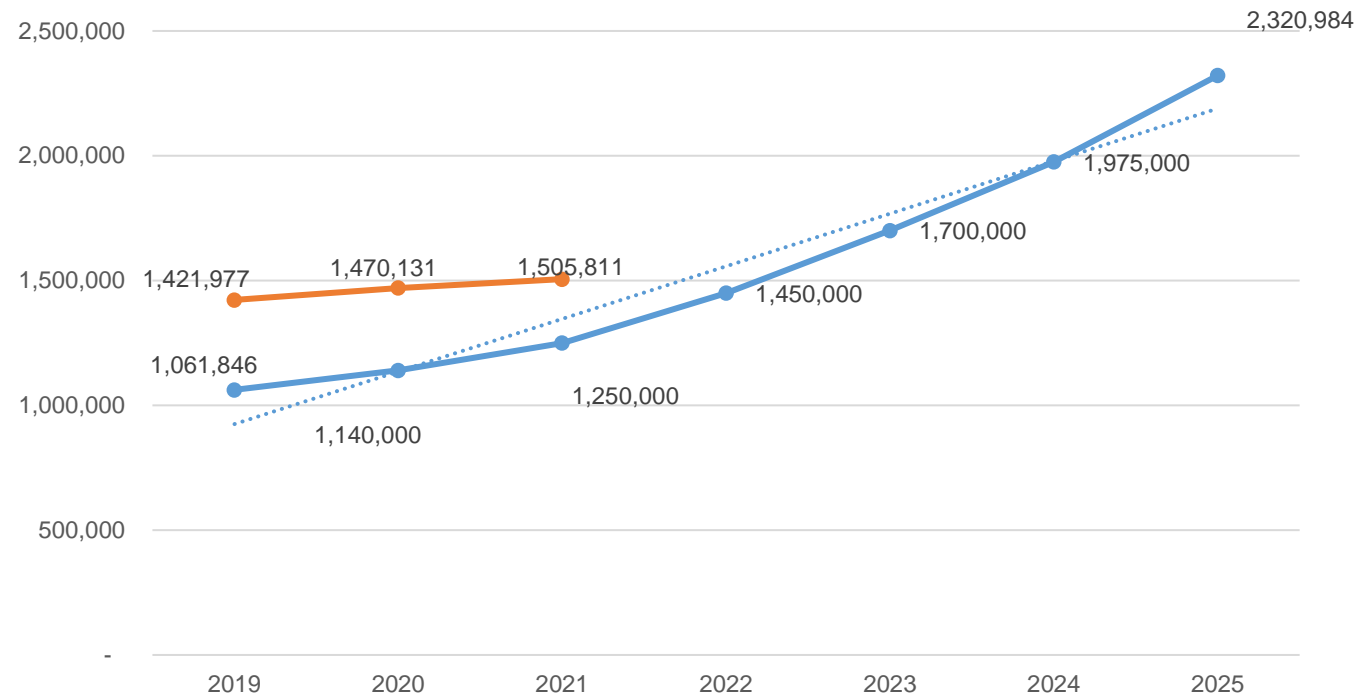
Traditional Cover Crops (Acres)



Orange Line depicts BMPs submitted plus BMPs lost to credit duration expiration that year (e.g. 2019, 2020, 2021)
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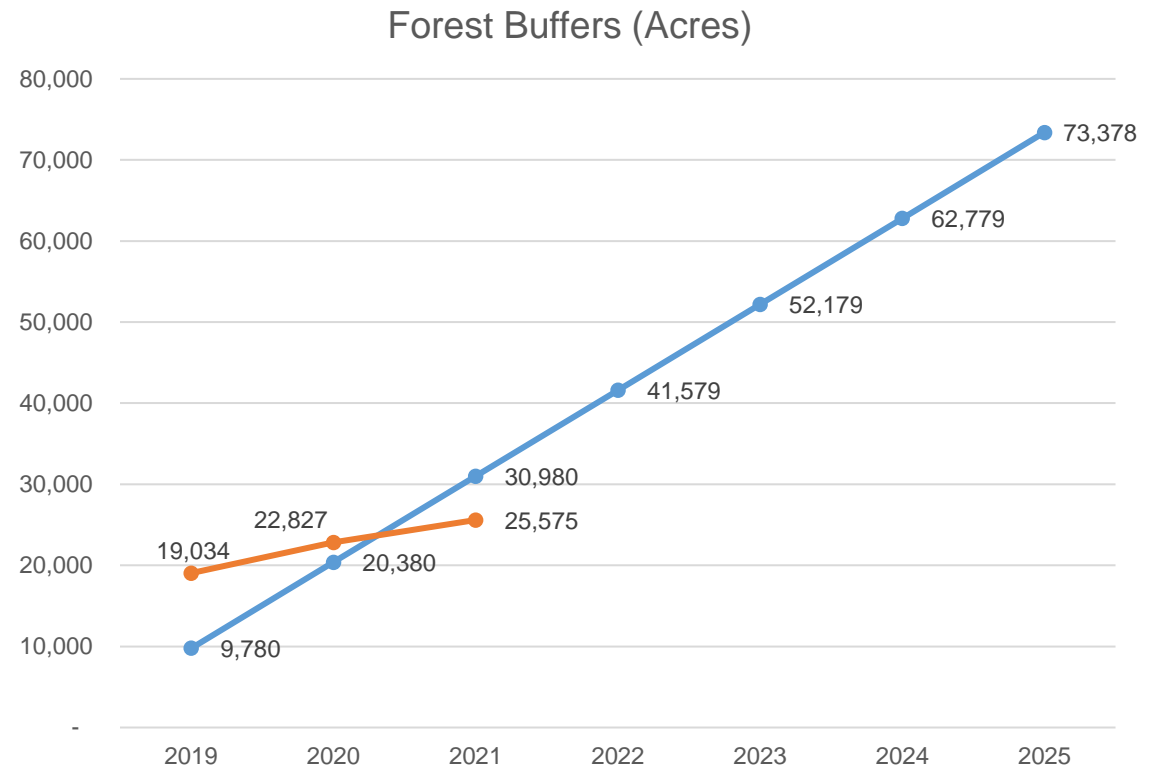
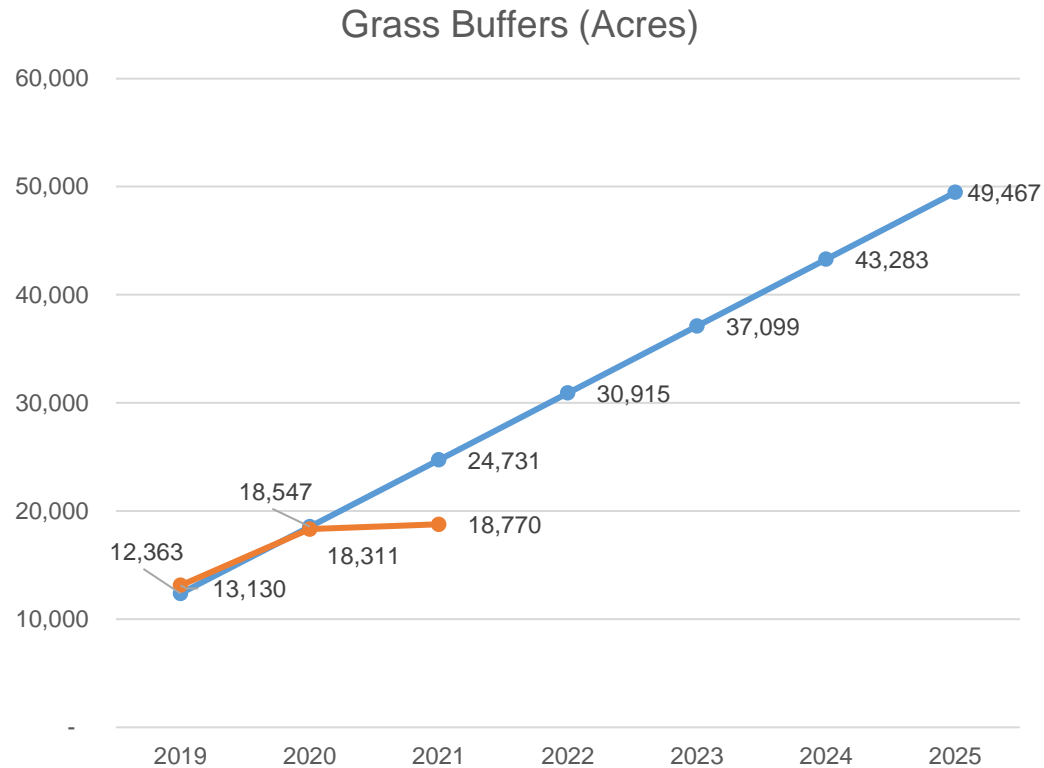
Numeric Milestones

Animal Waste Management Systems (Animal Units)



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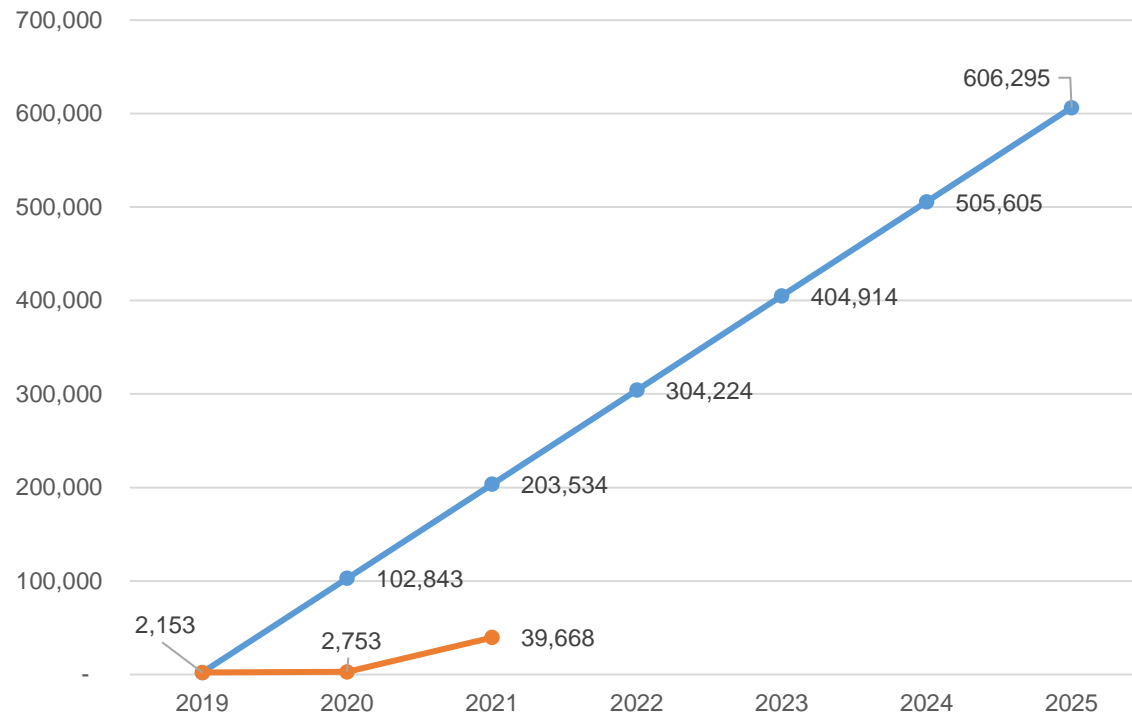
Numeric Milestones



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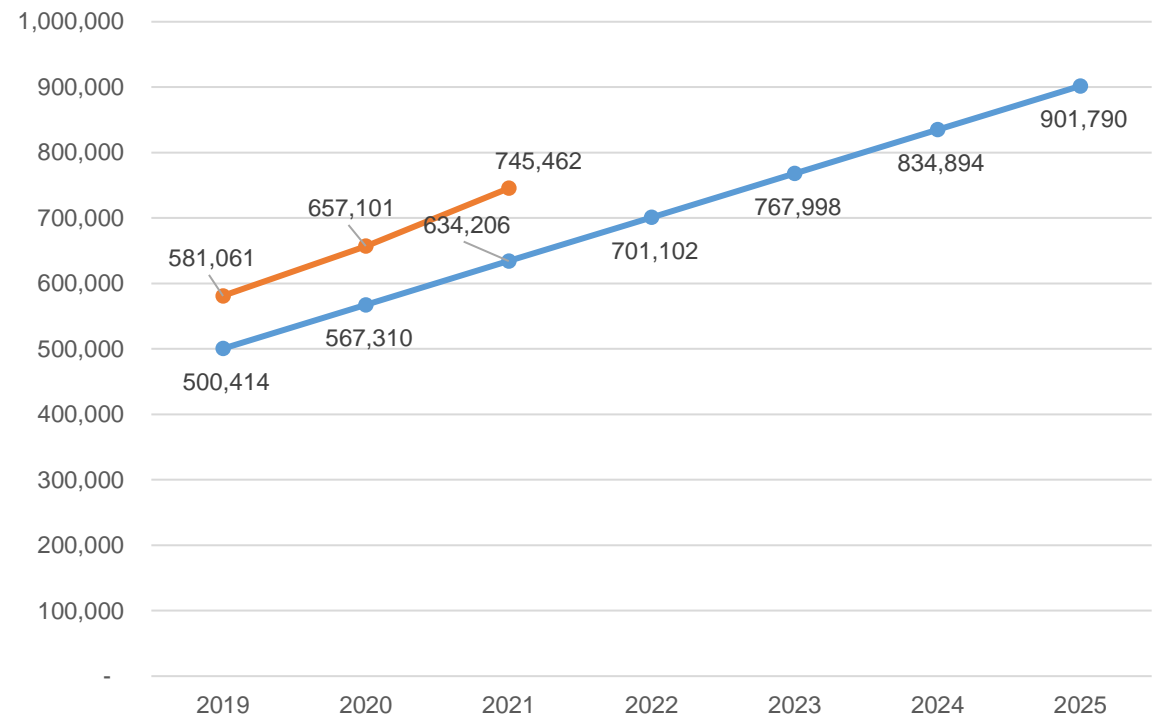
Numeric Milestones

Urban Stream Restoration (Linear Feet)



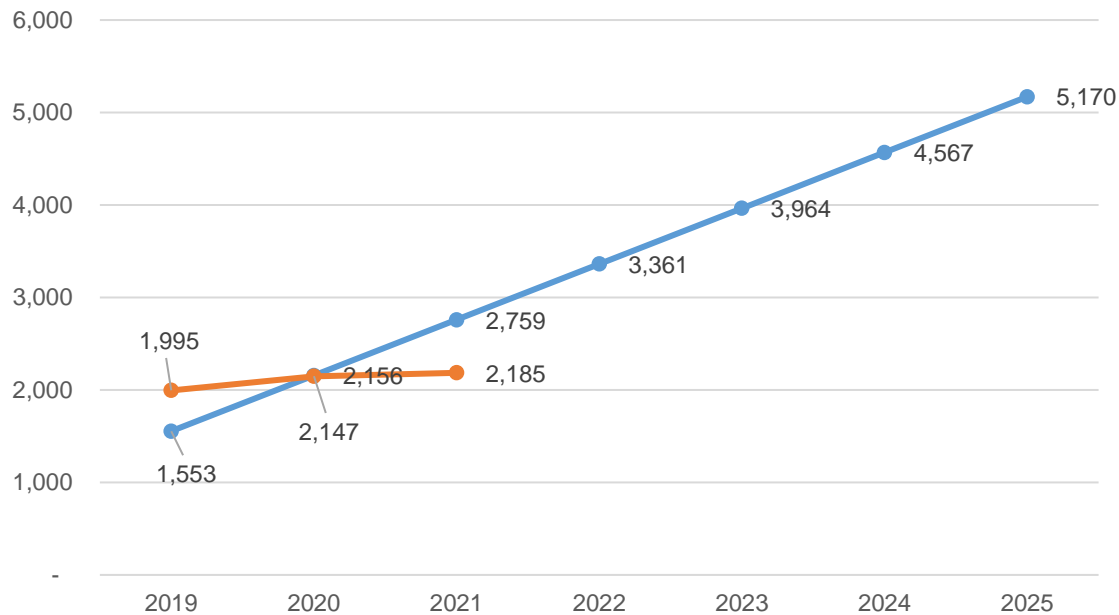
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Non-Urban Stream Restoration (Linear Feet)



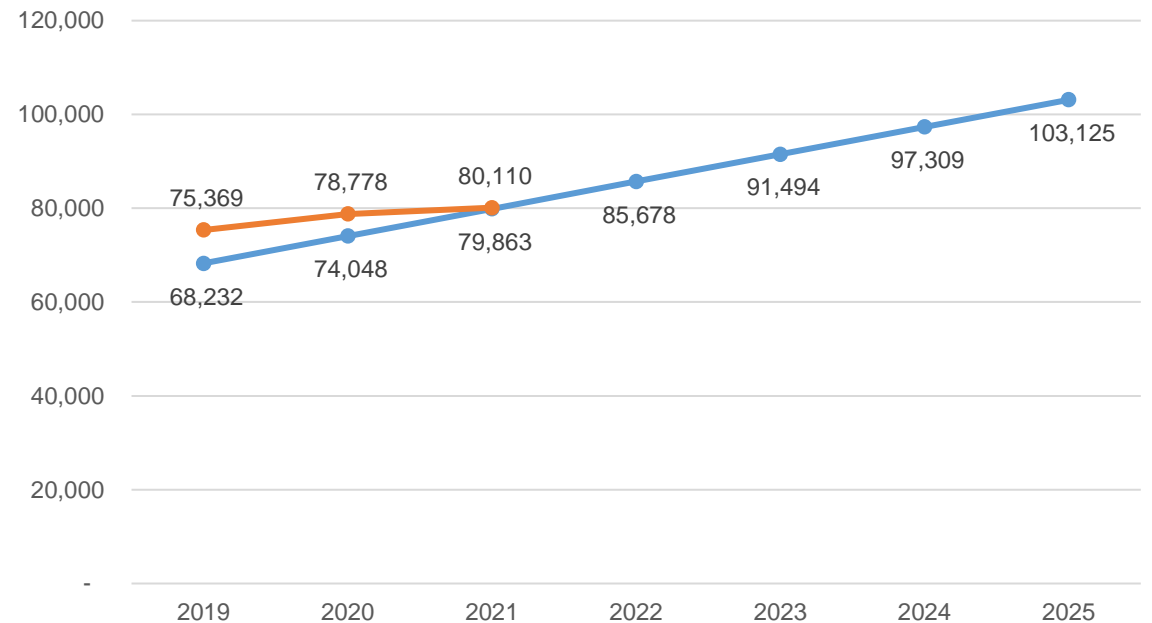
Numeric Milestones

Wetland Restoration (Acres)



Orange Line depicts BMPs submitted plus BMPs lost to credit duration expiration that year (e.g. 2019, 2020, 2021)
Blue Line depicts annual interim goals toward 2025.

Runoff Reduction Stormwater Performance Standard (Acres Treated)



Chesapeake Bay Office Transparency and Reporting

- Public Transparency and Reporting

- January

- 2021 Programmatic Milestone Progress Report Submission to EPA and publication
 - 2022-2023 Programmatic and Numeric Milestone Commitments Submission to EPA and publication
 - Chesapeake Bay Regulatory Accountability Program (CBRAP) and Chesapeake Bay Implementation Grant (CBIG) Semi-Annual Progress Report Submission to EPA

- February

- Phase 3 WIP State Team Meeting
 - Draft 2021 Section 319 Nonpoint Source Management Annual Report Submission to EPA
 - Section 319 Semi-Annual Progress Report Submission to EPA
 - DEP Citizens Advisory Council Meeting

Phase 3 Watershed Implementation Plan

Agenda

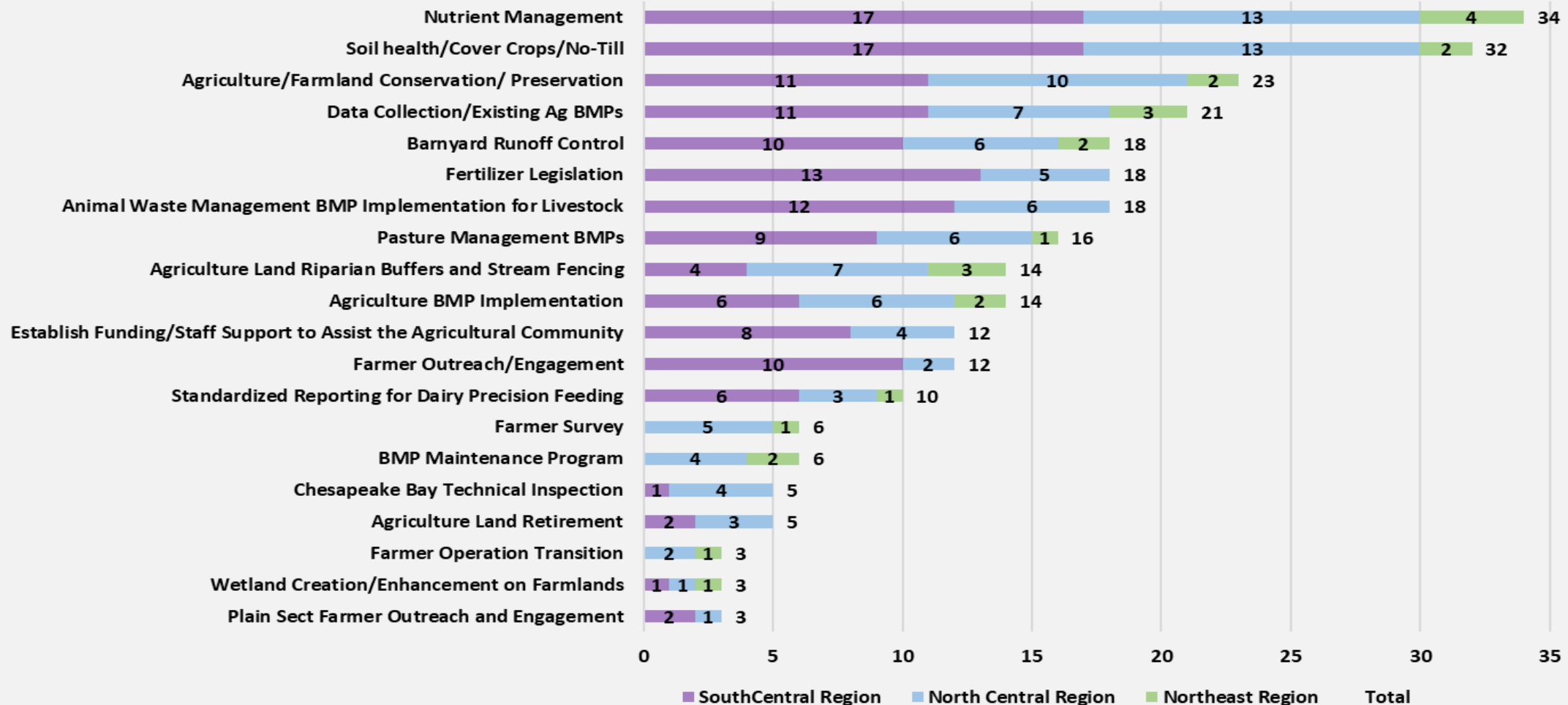
- What Success Looks Like
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County CAP and State WIP Progress

- **Pilot Counties** completed their second year of CAP Planning and Progress Updates (2021) and updated their two-year CAP Milestone Plans and Goals (2022-2023) and State Programmatic Recommendations
- **Tier 2 Counties** completed their first CAP Planning and Progress Updates (2021)
- **Tier 3 and 4 Counties** completed their CAPs and have transitioned to CAP implementation in Fall 2021
- **State WIP Action Leaders** provided programmatic and numeric WIP Progress Updates (2021), responded to county Programmatic Recommendations, and updated their two-year WIP Milestone Plans and Goals (2022-2023)
- **Chesapeake Bay Office** coordinated CAP and WIP reporting efforts, provided updates to counties on State Programmatic Recommendations and is incorporating progress into Phase 3 WIP Amendment.

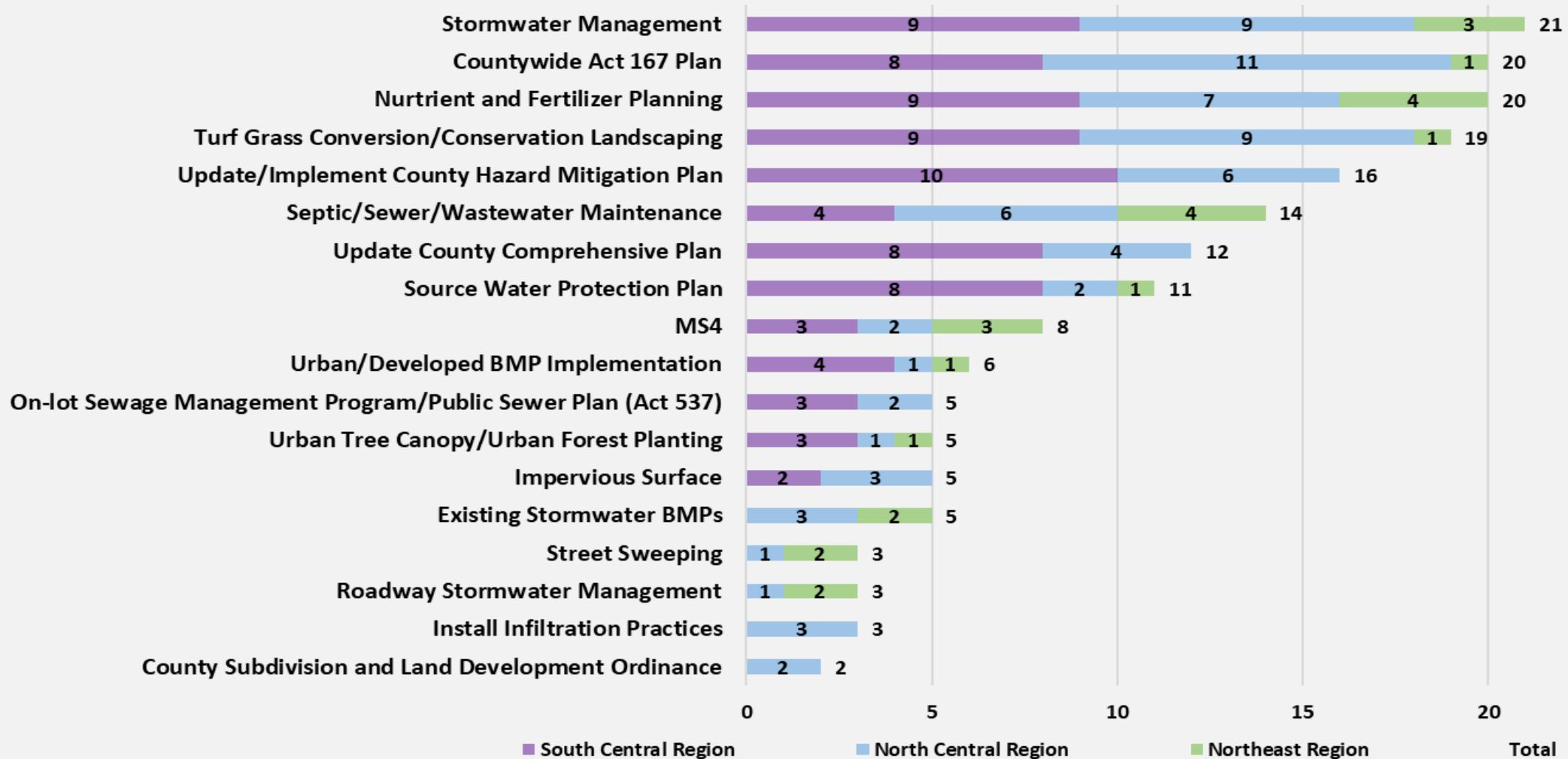
Supporting Local Action

Agriculture Trends

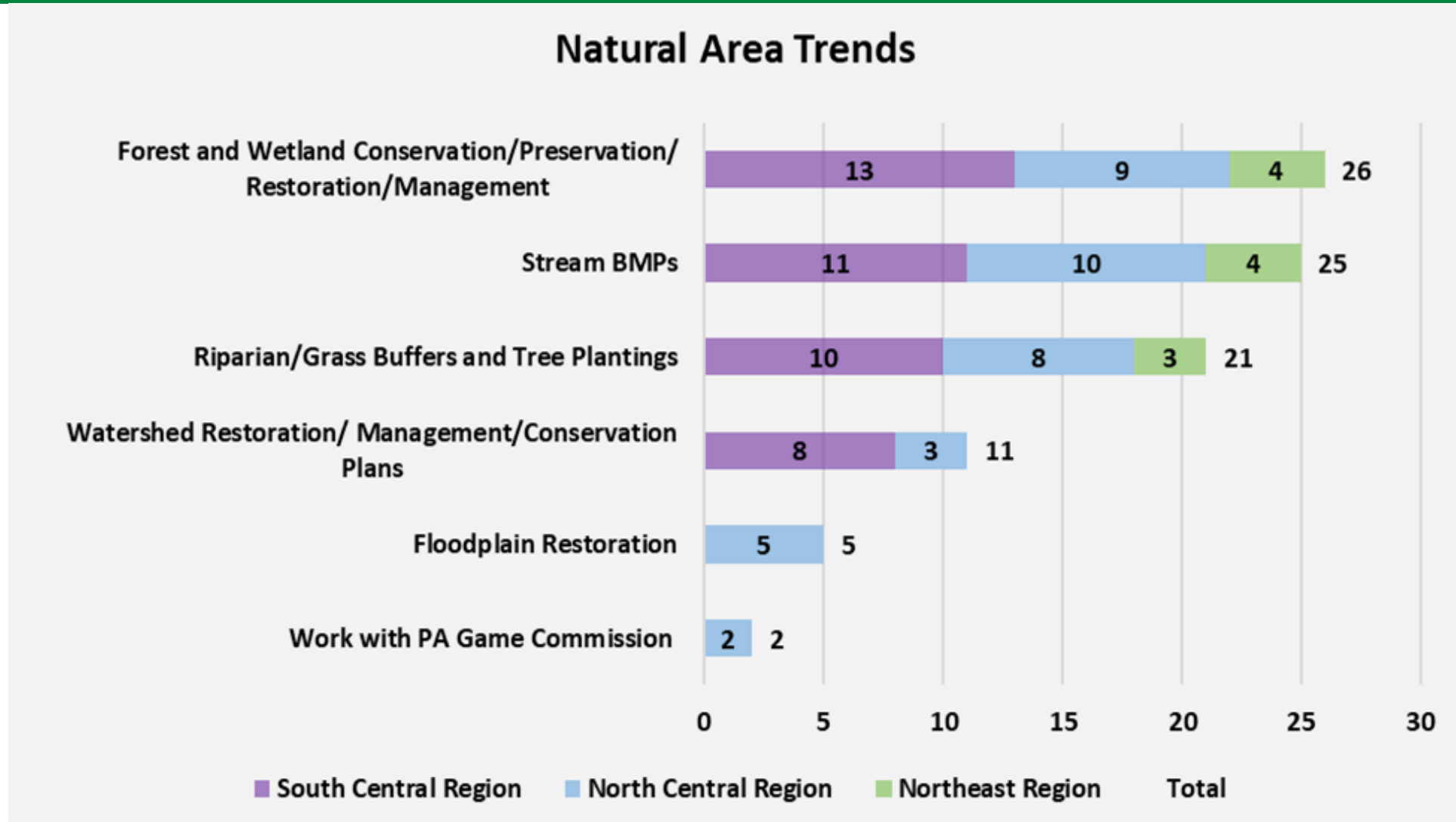


Supporting Local Action

Stormwater/Urban/Suburban Trends

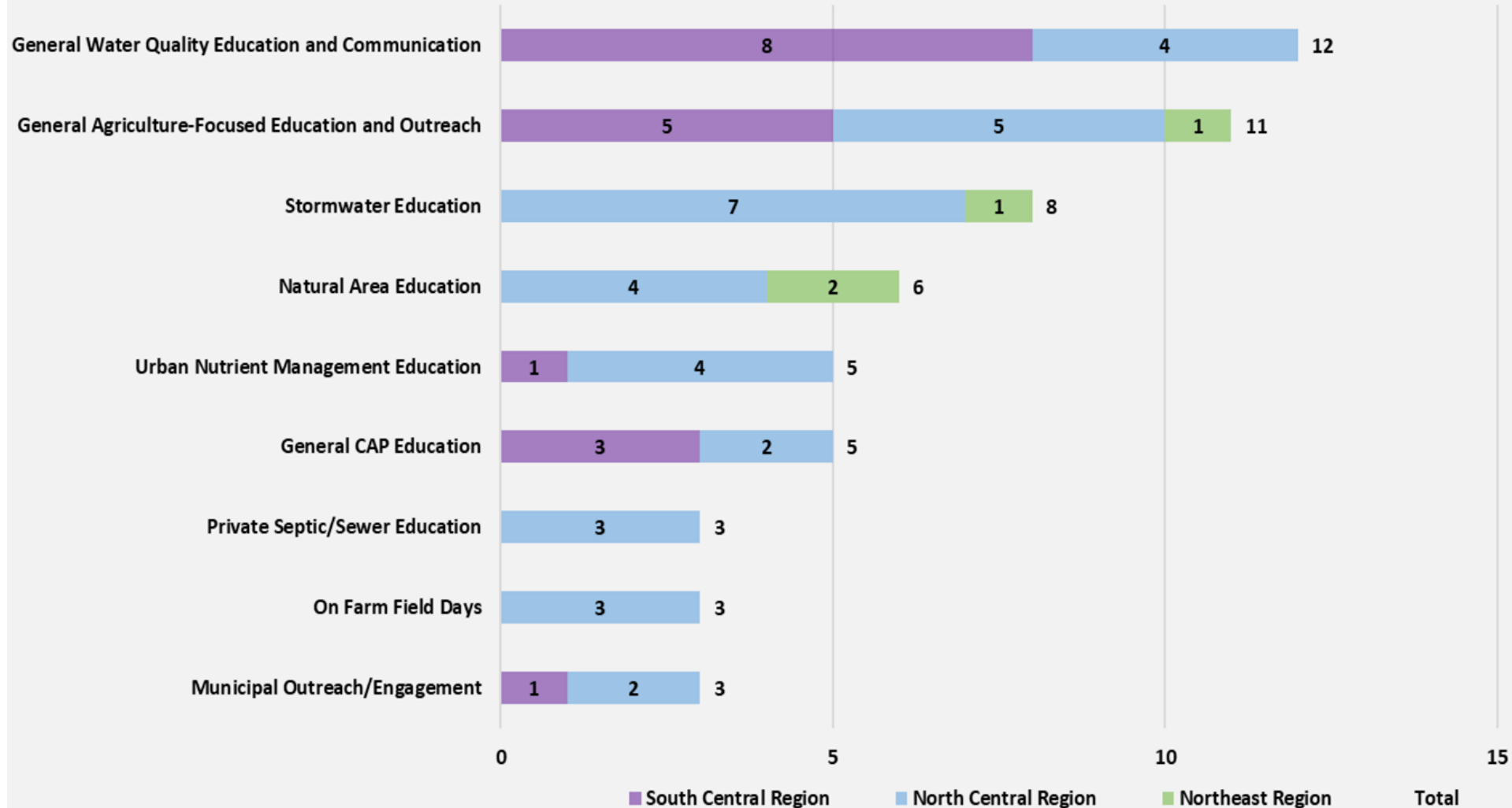


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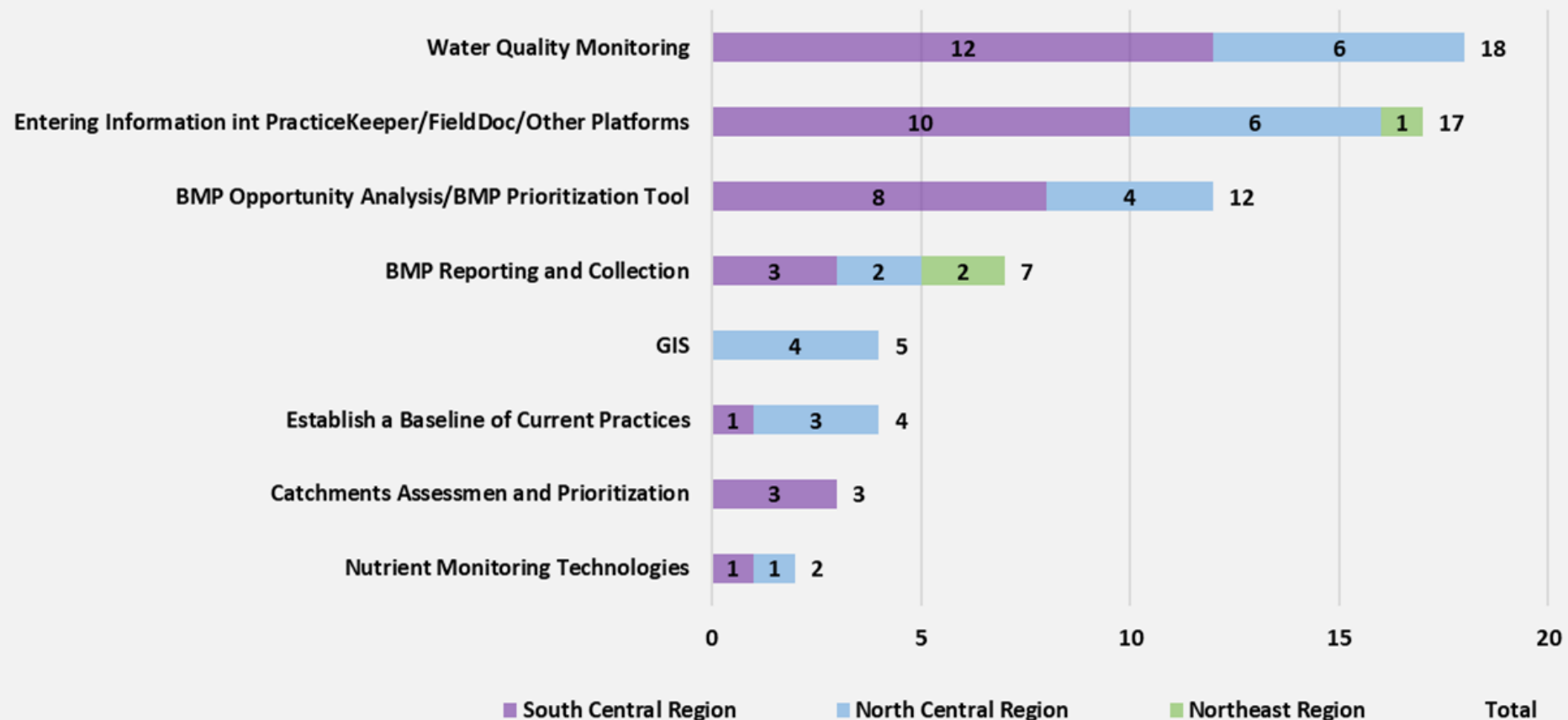
Supporting Local Action

Education and Outreach Trends



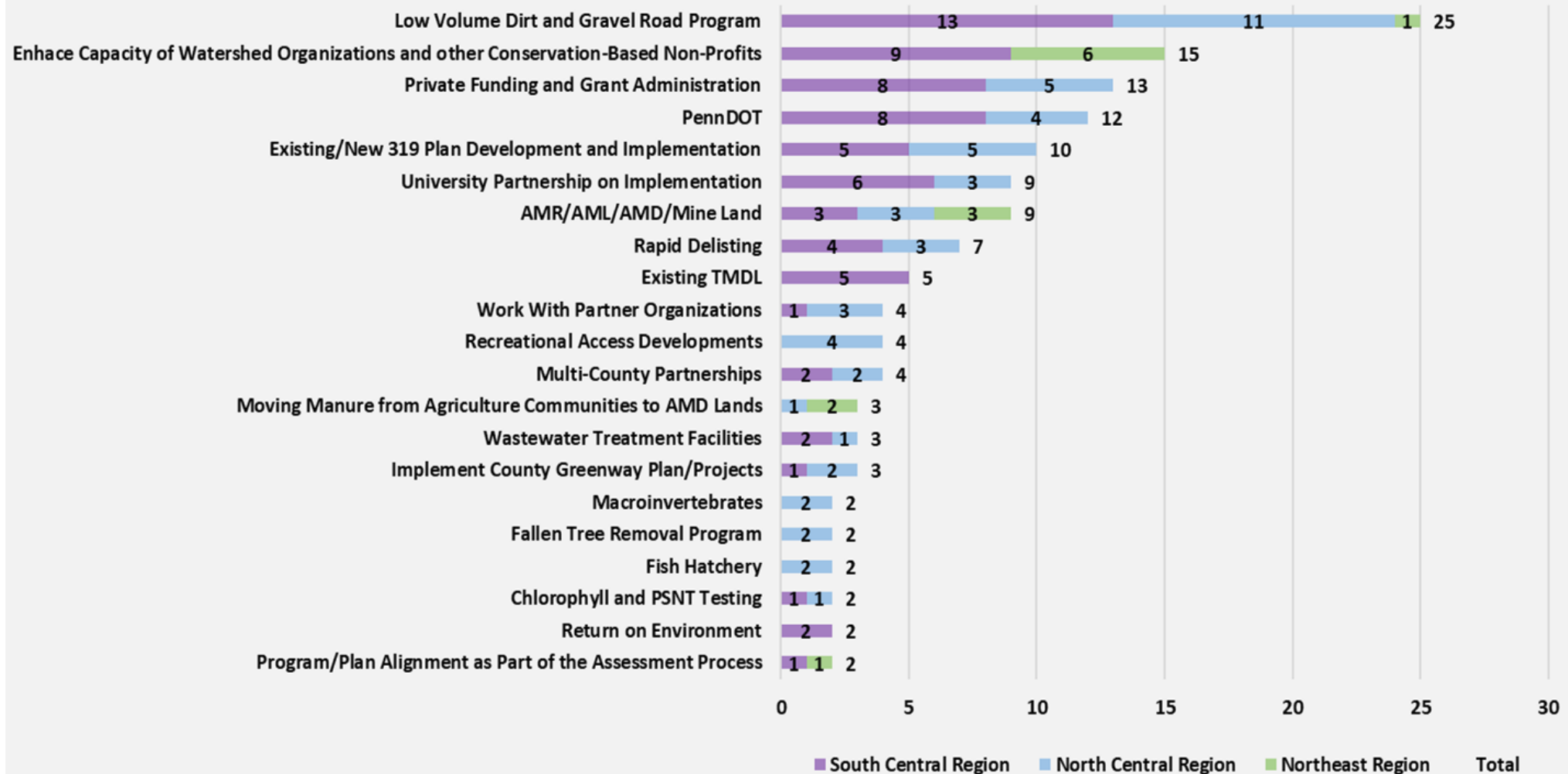
Supporting Local Action

Data Collection/Tools/Management Trends



Supporting Local Action

Miscellaneous Trends





Summary

Summary

- Pennsylvania continues to show success through programmatic, policy, legislative, and local action.
- Funding for additional human resources and projects is essential to implement the programs and priority initiatives called for in the CAPs and Phase 3 WIP.
- Nutrient and sediment reductions are estimated using modeling tools and scenarios were developed to demonstrate cumulative effect of Pennsylvania's watershed restoration efforts.
- DEP continues to add reporting sources and communicates with EPA and stakeholders on a regular basis.
- DEP thanks all Pennsylvania citizens, county lead entities, conservation districts, clean water coordinators, and legislative, state, federal and nonprofit organizations for the efforts that you have put forth over 2021 and we look forward to 2022.



Questions



Clean water:
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pennsylvania
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PROTECTION



Chesapeake Bay Program Office

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