



Forestry Best Management Practices for

PENNSYLVANIA

Pennsylvania is working alongside neighboring states to clean up our local waters that flow to the Chesapeake Bay. This effort is Pennsylvania's Phase 3 Chesapeake Bay Watershed Implementation Plan (Phase 3 WIP).

The path to success for Pennsylvania's Phase 3 WIP starts locally with landowners and local governments. This document summarizes five forestry practices that reduce nutrient and sediment pollution to local waters and to the Chesapeake Bay.



RIPARIAN FOREST BUFFERS

Action: Plant trees and shrubs or grassy vegetation along streams.

For accreditation buffers must be a minimum of 35 feet in width up to 300 feet in width from the edge of the stream.

Goal 1: 83,000 acres of forested riparian buffers on agricultural lands

Goal 2: 2,650 acres of forested riparian buffers in developed areas

Riparian forest buffers (RFBs) are trees and shrubs planted along streams to capture water and pollution that flows from the land into the stream. They are cost-effective for reducing pollution, help reduce flooding, and provide wildlife habitat. There are many programs to help landowners plant and maintain buffers in agricultural and developed areas. Buffers can be planted on cropland, pastures, backyards, community parks, schools and businesses, and more.

Action Steps to reach these goals:

1. Leaders commit to making buffers a priority
2. Education and outreach highlight the benefits/challenges of planting RFBs
3. Financial assistance and incentives
4. Farmers have access to technical assistance
5. Programs include site prep/maintenance
6. Outreach highlights success stories/annual progress
7. Buffers planted wide as possible for maximum benefit
8. Effort is made to keep existing buffers in place

TREE CANOPY

Action: Plant trees in developed areas.

Goal 1: 50 acres of urban tree canopy planted (15,000 trees)

Tree canopy is increased by planting trees along streets, in yards, and in other developed areas. Trees catch stormwater and reduce flooding, and help keep pollution from reaching local waterways. Co-benefits of tree canopy include improved air quality, increased wildlife habitat, reduced erosion, cooler temperatures in urban areas, increased property values and improved human health.

Action Steps to reach these goals:

1. Offer more technical/financial assistance
2. Expand citizen engagement and education
3. Invest in community tree conservation/maintenance
4. Leverage other tree programs such as MS4, county planning, and local zoning to encourage tree planting

WOODS AND POLLINATOR HABITAT

Action: Convert lawn and turf areas to woods and meadows.

Goal 1: 5,000 acres of lawns to woods.

Goal 2: 5,000 acres of lawns to meadows.

Woods and meadows planted with native plants reduce pollution, create habitat for pollinators, sequester carbon, and provide opportunities to interact with nature. Pollinators (bees, butterflies, birds, and other insects) are critical for food and flowers. Pennsylvania's Chesapeake Bay watershed contains over one million acres of turf grass. Homeowners or landscapers can easily restore a lawn to woods or meadows. Doing so reduces fertilizer, fuel and maintenance costs. They also take less time to maintain.

Action Steps to reach these goals:

1. Communicate benefits of planting trees/meadows
2. Provide funding opportunities for communities and property owners
3. Expand capacity and create jobs by providing training for contractors
4. Provide basic training to maintenance staff and homeowners
5. Leadership/tech assistance by Agencies/non-profits

FOREST, FARM AND NATURAL AREA CONSERVATION

Action: Provide credits for land conservation and revise zoning and ordinances to conserve existing natural areas.

Goal 1: 20,000 acres of land conserved annually.

Forest and natural area conservation is an important step in improving water quality and restoring habitats valued by local communities. Working lands such as farms and forests are deeply rooted in Pennsylvania's cultural heritage and contribute significantly to the rural economy. The Phase 3 WIP includes a basic framework for "crediting" land conservation actions, programs and policies.

Action Steps to reach these goals:

1. Invest in state-level programs for conserving and managing forests
2. Support local land conservation efforts
3. Local governments use comprehensive planning to include forests and natural areas in the community
4. Help landowners/farmers with long-term conservation planning

STREAM AND WETLAND RESTORATION

Action: Support efforts to restore local streams and wetlands.

Goal 1: 60,000 linear feet of urban and non-urban streams restored per year utilizing appropriate measure for the site such as stabilization, natural stream channel design, floodplain restoration, etc.

Goal 2: 400 acres of wetlands restored per year.

Streams and wetlands across Pennsylvania's landscape have been drained, diverted or altered. Agriculture and urban development have played a major role in this. Restoring streams and wetlands will reduce pollution, increase wildlife habitat, provide recreation opportunities, and reduce flooding.

Action Steps to reach these goals:

1. Renew efforts to conserve/protect wetlands
2. Integrate with BMP use on farms/developed areas
3. Integrate stream/wetland restoration into MS4
4. Update local planning/zoning to conserve streams and wetlands during development

Resource Needs

To reach these goals, the state, local governments and landowners will need additional support:

1. **Technical assistance for riparian buffers, tree canopy, and converting lawn to trees and meadows will need to significantly increase.** To meet WIP goals by 2025, DCNR is going to need an additional 24 people to add to the eight people already devoted to this effort. In addition it is estimated an additional 20 people are needed for conservation districts above the five people already committed to this effort.
2. **Financial assistance for BMP design and implementation.** Significant funding is needed to support the implementation of forestry BMPs. Easy access to this funding and flexibility is needed to encourage BMP implementation.



Action Steps

Pennsylvania will take the following action steps to support nutrient pollution reduction efforts associated with forestry:

Communications and Outreach

- Implement a comprehensive communication/outreach strategy to engage farmers/landowners in planting and maintaining riparian forest buffers.
- Implement a communication/outreach program to engage a variety of turf owners to plant trees and meadows on their properties.
- Communicate the importance and values of forests to facilitate and encourage state and local land conservation programs.
- Emphasize the full range of benefits and co-benefits of stream and wetland restoration to facilitate additional implementation.

Funding and Resources

- Maximize existing funding sources for riparian forest buffer implementation in Pennsylvania.
- Expand TreeVitalize and utilize other programs to facilitate community tree planting and maintenance.
- Create additional flexible funding options for riparian forest buffers.
- Ensure that riparian forest buffers are adequately maintained to ensure survival by developing a maintenance funding source for NGOs to develop their own maintenance programs.
- Continue and increase urban tree canopy grants to communities and non-governmental organization's partners.
- Leverage existing funding sources for stream and wetland restoration.
- Develop funding opportunities for turf conversion programs.
- Continue to implement stream restoration, emphasizing creditable, load-reducing projects. Pair stream restoration projects with tree planting BMPs, whenever possible. Identify areas that may have a high cost-to-benefit ratio for load reductions for legacy sediment removal and associated ecosystem restoration.

Expanding Capacity for Technical Assistance

- Increase technical assistance available to landowner's interest in implementing riparian forest buffers.
- Increase Urban Forestry technical assistance available to communities and citizens.
- Create a turf conversion technical assistance program.
- Provide informed technical assistance for stream and wetland restoration projects to ensure they are completed in an adequate, reportable manner.
- Determine feasibility of expanding the PA Fish & Boat Commission Stream Restoration Initiative, implementing stream restoration projects resulting in load reductions with habitat co-benefits, to counties in the southcentral region of the state, starting with one or more of the four pilot counties (Adams, Franklin, Lancaster, York).

Reporting and Tracking Progress

- Ensure adequate tracking of partner-implemented forestry BMPs including forest buffers, tree canopy, conservation landscaping, urban forest expansion, stream wetland restoration.
- Celebrate successful implementation and maintenance of forestry BMPs through reporting successful efforts.

For more information or to get involved in local planning efforts, please visit www.dep.pa.gov/chesapeakebay/phase3.

Produced and distributed by the PA Department of Environmental Protection through a U.S. Environmental Protection Agency Chesapeake Bay grant.