

# Conserving Penn's Woods

## Pennsylvania's Riparian Forest Buffer Initiative

Agricultural Advisory Board

June 23, 2016

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[www.dcnr.state.pa.us](http://www.dcnr.state.pa.us)



# Outline

1. DCNR Chesapeake Bay work
2. Chesapeake Bay forest buffer goal
3. Statewide focus and current ideas



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# DCNR/Chesapeake Bay Work

1. Recreation and public access
2. Education and outreach
3. Land conservation
4. Urban tree planting (TreeVitalize)
5. Riparian Forest Buffers

# What is a riparian forest buffer?



1. 35 feet minimum width for full credit in Bay model
2. 10 to 35 feet = reduced credit

[www.dcnr.state.pa.us](http://www.dcnr.state.pa.us)

# RIPARIAN FOREST BENEFITS

- **Clean water**
- **Habitat (aquatic and terrestrial)**
- **All the co-benefits that trees provide including air quality, cooling, carbon sequestration, etc**
- **Need to review the science? See recorded webinar by Bern Sweeney:  
<https://usfs.adobeconnect.com/p1uc3sf8jj5>**



# RIPARIAN FOREST BUFFERS AND WATER QUALITY

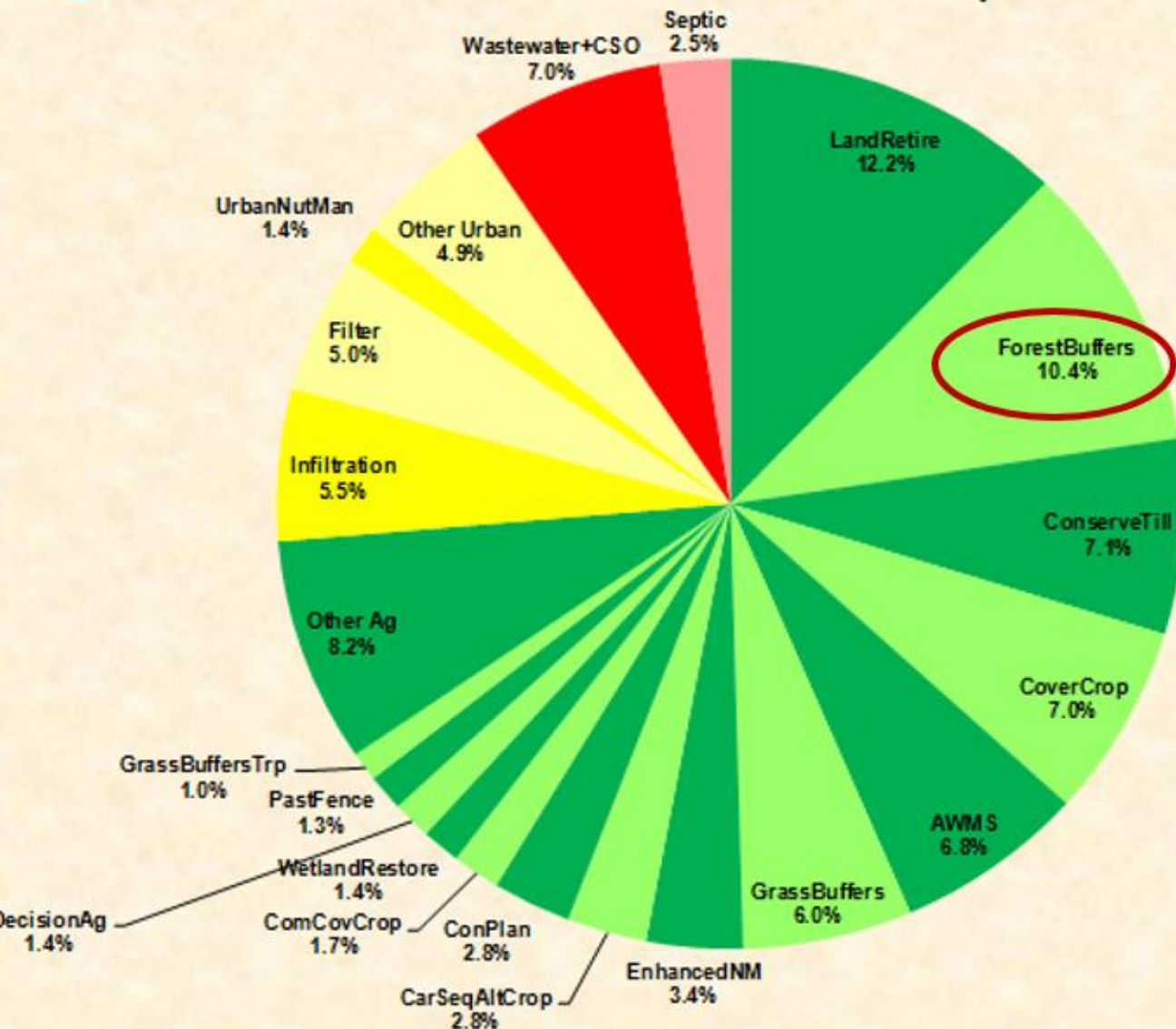
- Riparian forest buffers among most effective practices to reduce nitrogen, phosphorus, and sediment
- Credited in Chesapeake Bay Program models as “Forest Buffers on Fenced Pasture Corridor” and “Forest Buffers”
- Converts agriculture or urban land uses to forest land use
- Also reduces upland pollution
  - Each acre of “Forest Buffer” reduces nitrogen from 4 upland acres in agriculture

# STATES RELYING ON PAST AND FUTURE ACRES



## Nitrogen Relative Load Reductions

CB Watershed – as percent



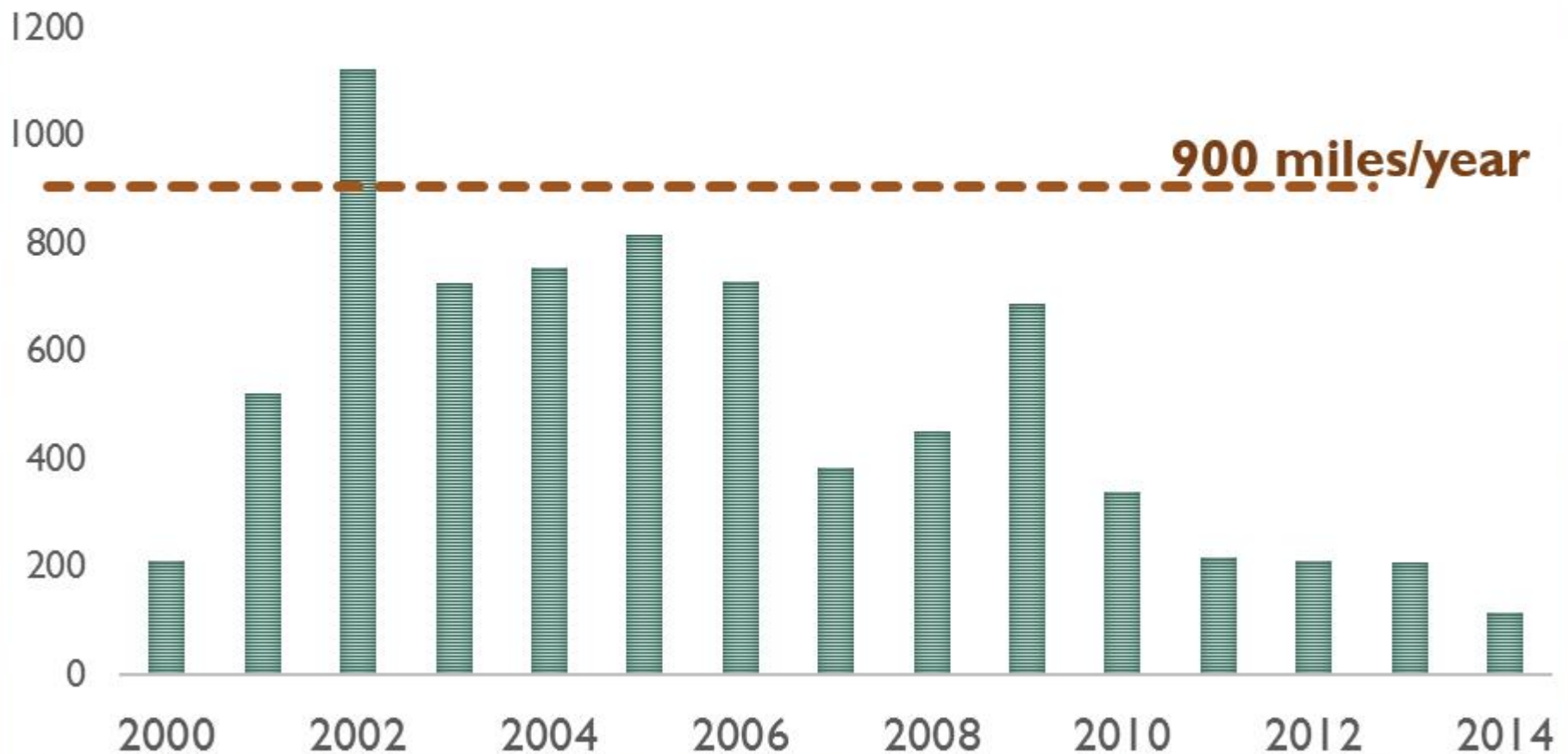
Forest Buffers rank second of all nonpoint source BMPs needed to meet TMDL targets for N according to state WIPs

Each slice represents the percent of the total load reduction attributable to planned implementation levels for that BMP.

Slide courtesy Nick DiPasquale

# PAST PROGRESS

Miles of Riparian Forest Buffers Planted as Reported by Bay States

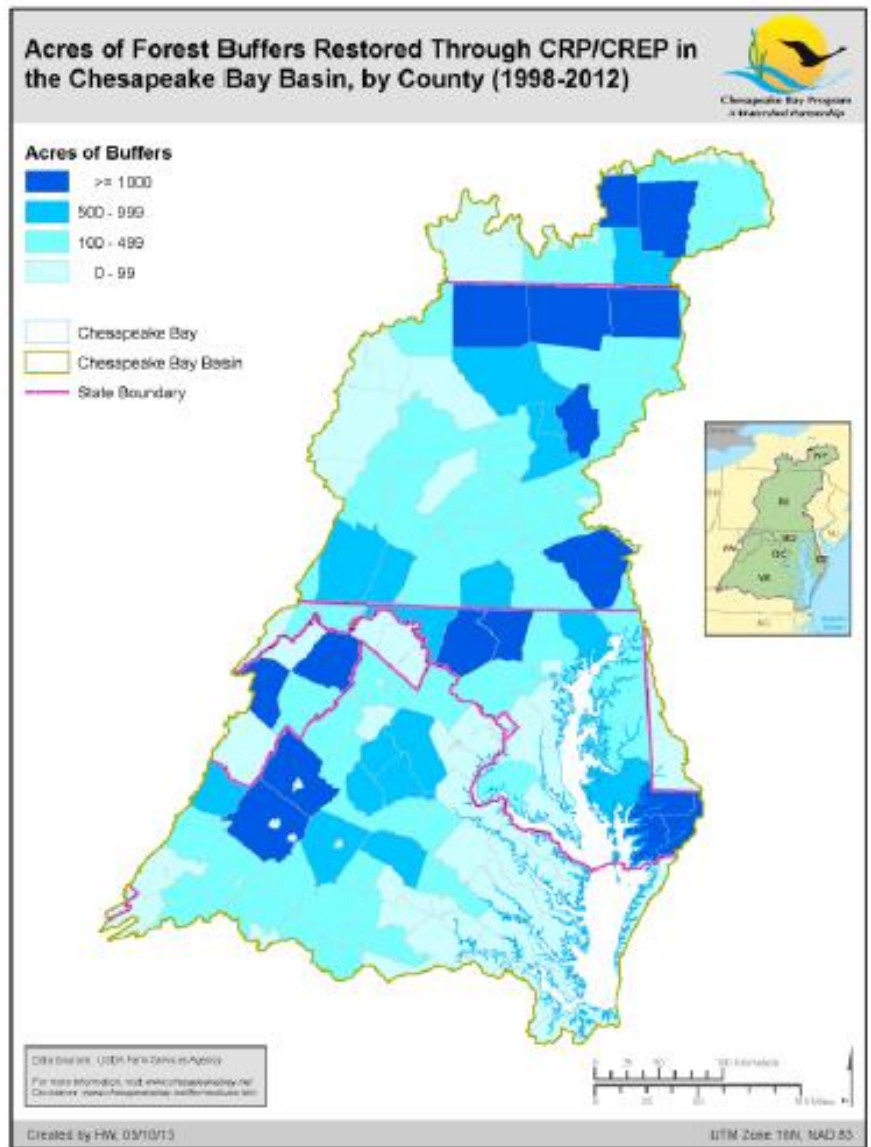




# PA Success story

- 54,000 acres of RFBs
- 24,000 acres established through CREP
- PA Stream ReLeaf
- Growing Greener
- Many partners
- Accomplished at the local level

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**Figure 3.** Acres of forest buffers restored through CREP and Conservation Reserved Program (CRP) in the Chesapeake Bay watershed by County (1998-2012).

# PA RFB Accomplishments

Year	Acres	
	Annual	Cumulative
<b>2009</b>	--	43,096
<b>2010</b>	1,129	44,225
<b>2011</b>	2,848	47,073
<b>2012</b>	948	48,021
<b>2013</b>	6,822	54,843
<b>2014</b>	3,616	58,459
<b>2015</b>	77	58,536
<b>2025</b>	<i>9,500</i>	<i>154,000</i>

# FACTORS WE CAN'T CONTROL

- **Fluctuation in commodity crop prices**
- **Inter-generational transfer of ag lands**
- **Loss of agricultural lands**
- **Congressional authority for Farm Bill**

# HIGH PRIORITY FACTORS

- Insufficient emphasis
- Insufficient technical assistance
- Interagency coordination
- Lackluster incentives
- Unused federal funds (lack of 20% match)
- Inflexible federal programs
- Outreach to landowners
- Understanding lack of re-enrollment
- Lack of information for landowners & assistance providers
- Unsatisfactory survival rate of buffer plantings
- Complicated process (application/implementation)
- Targeting areas where most effective
- Need for permanent protection

# Recent Federal and State Responses

- 2014 RFB Leadership Summit in D.C.
  - State Tasks Forces
  - Heavy focus on CREP
  - Asked for State RFB Leads
- 2014 Chesapeake Bay Agreement
  - Management strategy and 2-year work plans

# PA 2-Year Work Plan

## 1. Leadership and collaboration

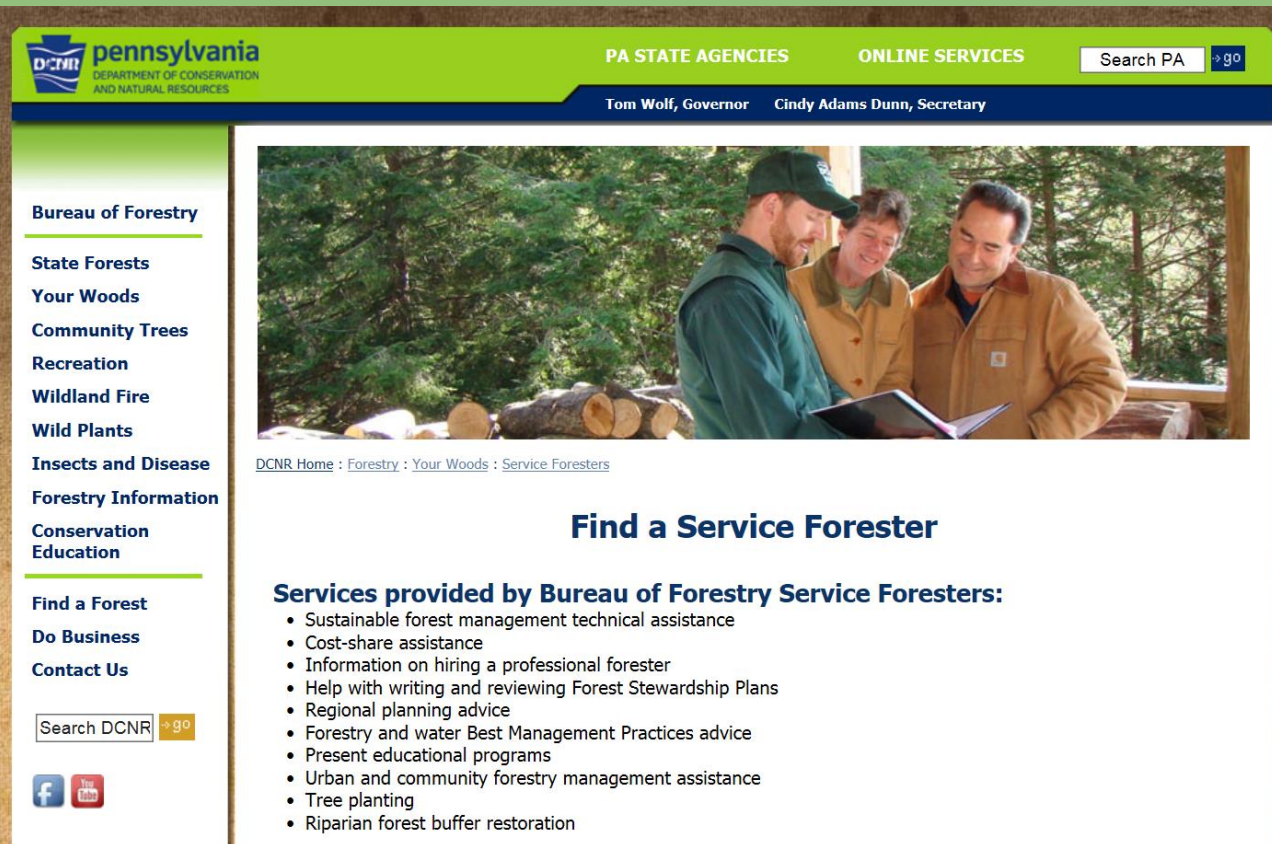
- *RFB Advisory Committee (March 28 and June 2)*

## 2. Funding and resources for new and innovative approaches

- *Complement existing programs*
- *Flexibility and simplicity*
- *Importance of maintenance*

# PA 2-Year Work Plan

## 3. Communication, outreach, and technical assistance – *Messaging, DCNR Foresters, social science*



The screenshot shows the Pennsylvania Department of Conservation and Natural Resources (DCNR) website. The header includes the DCNR logo, navigation links for 'PA STATE AGENCIES' and 'ONLINE SERVICES', a search bar, and the names of the Governor (Tom Wolf) and Secretary (Cindy Adams Dunn). The main content area features a photograph of three people (two men and one woman) in a forest setting, looking at a laptop. Below the photo is the heading 'Find a Service Forester' and a list of services provided by the Bureau of Forestry Service Foresters. The left sidebar contains various navigation links such as 'Bureau of Forestry', 'State Forests', 'Your Woods', 'Community Trees', 'Recreation', 'Wildland Fire', 'Wild Plants', 'Insects and Disease', 'Forestry Information', 'Conservation Education', 'Find a Forest', 'Do Business', and 'Contact Us'. A search bar for DCNR is also present in the sidebar.

**Find a Service Forester**

**Services provided by Bureau of Forestry Service Foresters:**

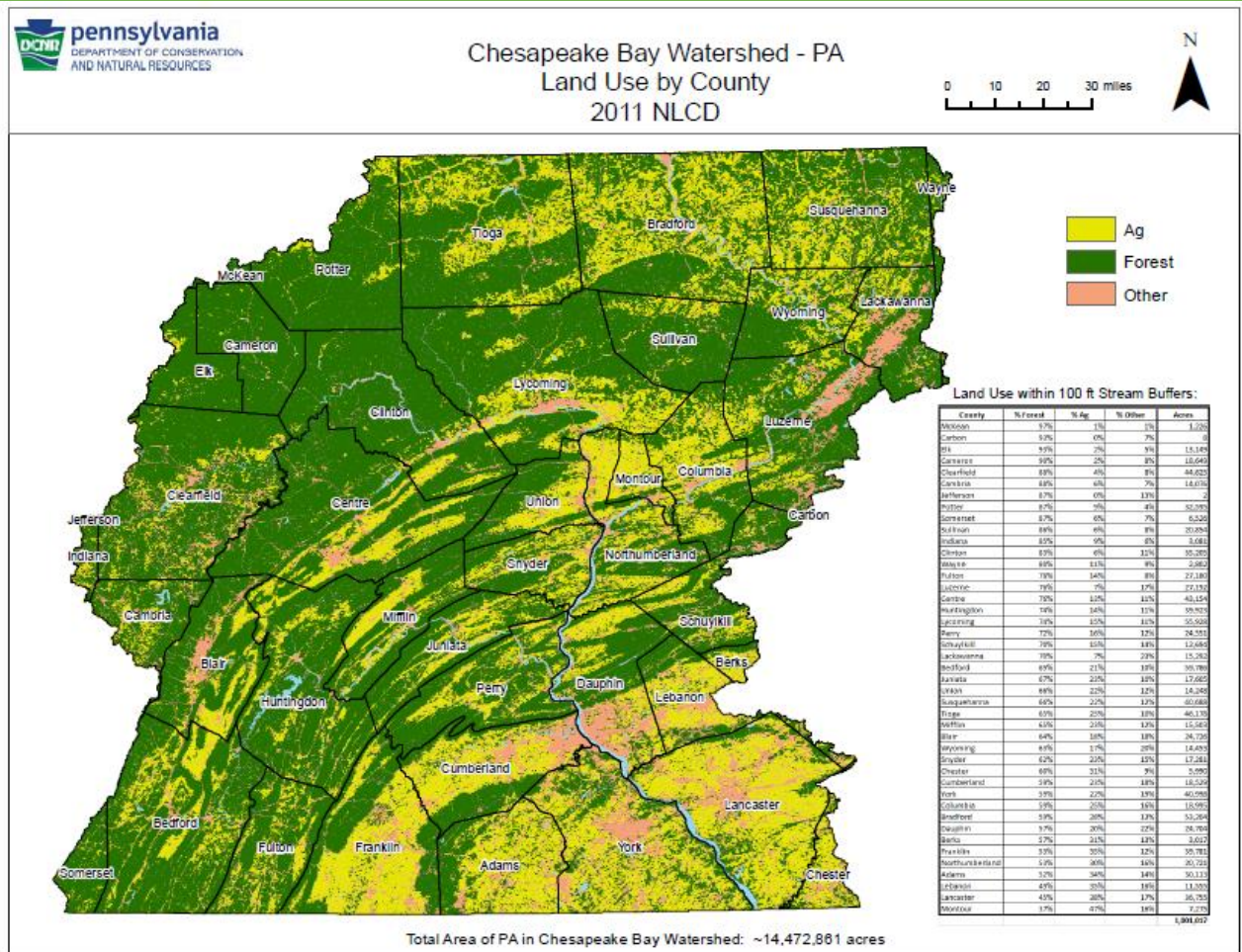
- Sustainable forest management technical assistance
- Cost-share assistance
- Information on hiring a professional forester
- Help with writing and reviewing Forest Stewardship Plans
- Regional planning advice
- Forestry and water Best Management Practices advice
- Present educational programs
- Urban and community forestry management assistance
- Tree planting
- Riparian forest buffer restoration

Website  
Factsheets  
Programs  
Partners  
Applied research

# PA 2-Year Work Plan

## 4. Planning to prioritize efforts

- *Technology and partners*
- *Improve efficiency*





# Thinking about alternative RFB Designs

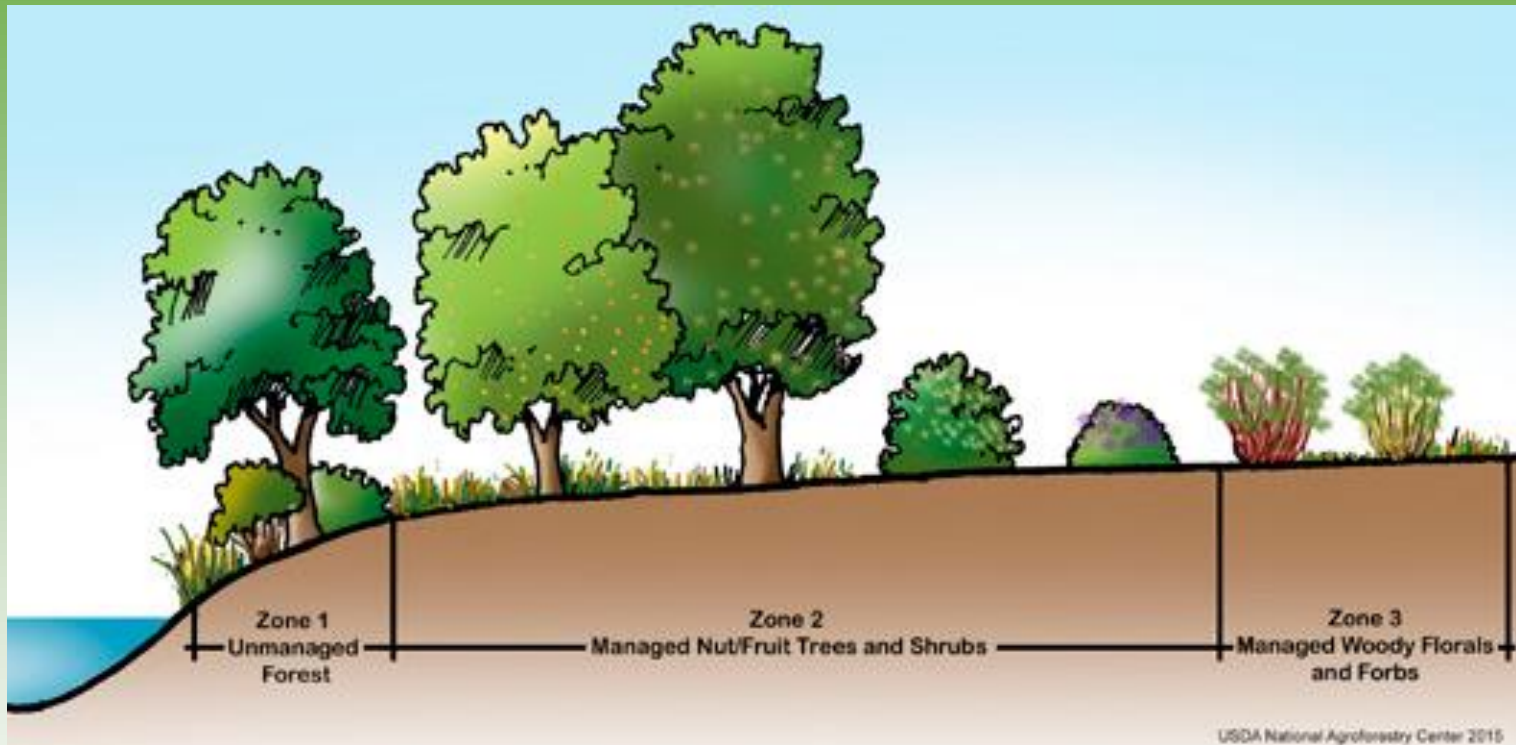


Illustration by Zoe Roane-Hopkins

# Purpose

- Help PA improve local water quality and reach the Bay goal of 95,000 new acres of RFBs by 2025
- Complement, but not duplicate, existing programs – CREP, EQIP
- Hallmarks include greater flexibility in landowner eligibility, buffer designs, widths, and plant species
- Income-producing opportunities will be explored

# Multi-use Riparian Forest Buffer Design



Zones 2 and 3 can be planted with different species and at expanded widths to incorporate perennial crops of fruits, nuts, and floral trees and shrubs.

# Potential Funding Sources

1. Grants – direct grants to third parties, no rental payments and no payback requirement
  - Current and future Growing Greener and Keystone funding
  - Private foundation funding
2. Revolving fund or investment funded – requires income generation with payback of principal and/or interest
  - State revolving funds
  - Third-party investors
  - Program-related investments (PRIs) – third-party vendor guarantees payback
3. Credits – downstream neighboring states, carbon credits, nutrient credits, stormwater credits

# Pros and Cons

## Pros:

- Additional tool in the toolbox
- Wider landowner applicant pool
- Landowner motivated by plant-generated income – better care and maintenance
- “Designer” buffers can be shaped to landowner preference
- Variable widths adjust to parcel

## Cons:

- Contract is voluntary
- Income and results may vary
- Payback process may be hard



Source: NAC

# Riparian Forest Buffer Initiative

## Goals

Statewide

- Implement a collaborative, comprehensive, flexible and community-based initiative
- Provide technical assistance for buffer establishment and maintenance
- Build and enhance community partnerships
- Complement the approach by DEP & the Natural Resources Conservation Service (CREP)
- Connects landowners and partners to funding opportunities



# Riparian Forest Buffer Initiative

## Outcomes

- 95,000 additional riparian forest buffer acres by 2025
- Enhanced conservation benefits
- Improved partnerships
- Improved local water quality

