



2017 Wild Trout Summit

Nate Reagle DCNR

Topics

- **Brook Trout Plan**
 - **Culverts (connectivity)**
 - Assessments
 - BMPs
 - **Habitat Improvement**
 - LWM
 - Partner with PFBC: Stream Prioritization



Continued

Topics

- **Hemlock Conservation Plan**
 - **Headwater Riparian Hemlock**
- **Aquatic Habitat Buffer Guidelines (AHBG)**
- **Pipeline Stream Crossing BMPs**
- **State Forest Resource Management Plan (SFRMP)**
- **Secretary's Water Initiative**

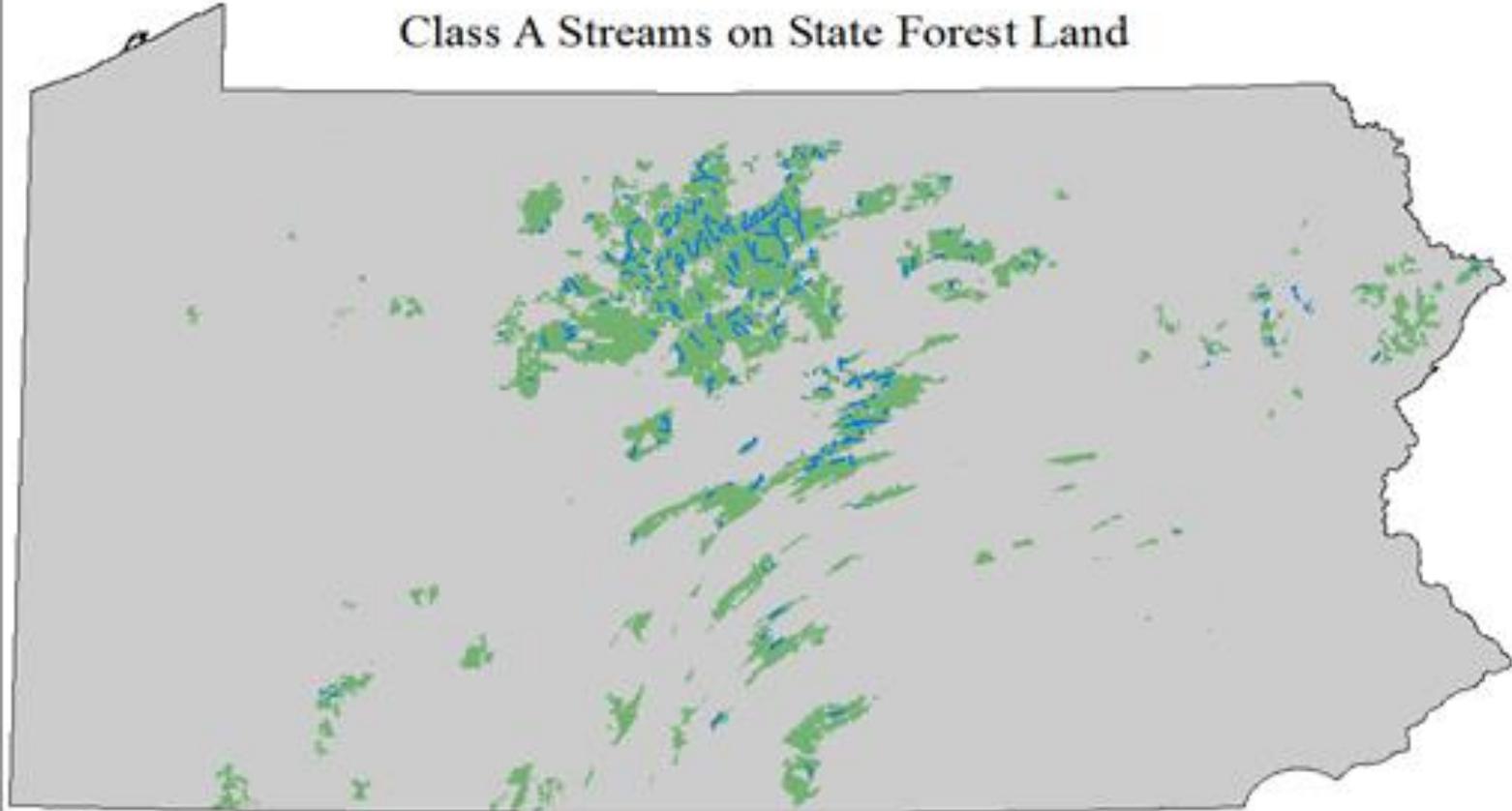




Bureau of Forestry Mission:

- The Bureau of Forestry's mission is to ensure the long-term health, viability and productivity of the Commonwealth's forests and to conserve native wild plants.
- The Bureau will accomplish this mission by:
- Managing state forests under sound **ecosystem management**, to retain their wild character and maintain **biological diversity** while **providing pure water**, opportunities for low-density recreation, **habitats** for forest plants and animals, sustained yields of quality timber, and environmentally sound utilization of mineral resources.

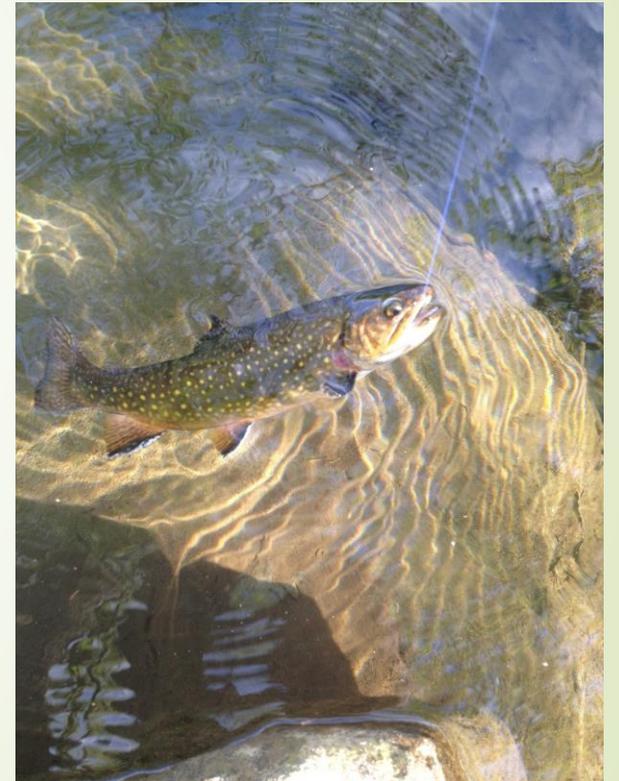
Class A Streams on State Forest Land



— Class A Streams ■ State Forest Land

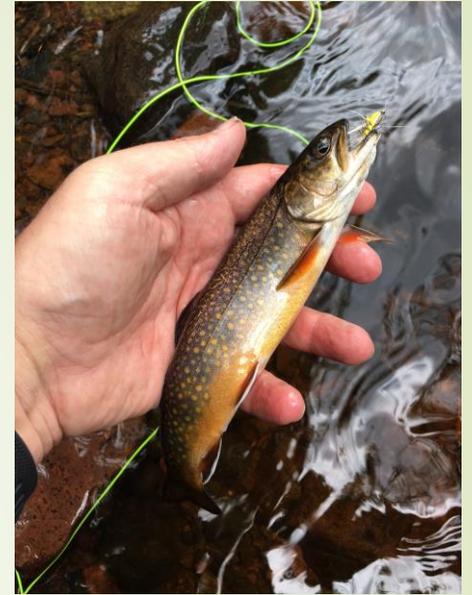
Brook Trout Conservation Plan

- **Written 2010**
- **Revised 2016**
- **Added culvert assessments and BMPs**
- **Added LWM habitat improvement**
- **On Bureau of Forestry website**



Brook Trout Conservation Plan: Contents

- Role of State Forests in Brook Trout Conservation
- Brook Trout History, Background, Life History
- Aquatic Classifications
- Significance of Water Classification to Resource Protection
- Existing Guidelines
 - Aquatic Habitat Buffer Guidelines
 - AOP and Culverts
 - LWM Habitat Improvement



Continued...



Brook Trout Conservation Plan: Continued

- **Stressors and Conservation Measures**
 - Land Management
 - Increasing Water Temperatures
 - Introduced Species
 - Sedimentation and Erosion
 - Pollutants
- 

Brook Trout Conservation Plan: Continued

- **Stressors and Conservation Measures**
 - **Issue 6: Lack of Instream Habitat**
 - **LWM Habitat Improvement**
 - **Issue 7: Barriers to Fish Passage**
 - **Assess (NAACC) and replace stream crossings (BMPs)**



Issue 7: Barriers to Fish Passage

- **Adopting NAACC protocol**
 - Cooperating with TU
- **Developed Culvert BMPs**
 - Aquatic connectivity
 - Sizing 1.2 X bank full width
 - Installation
 - Adopted by Bureau of Facility Design and Construction

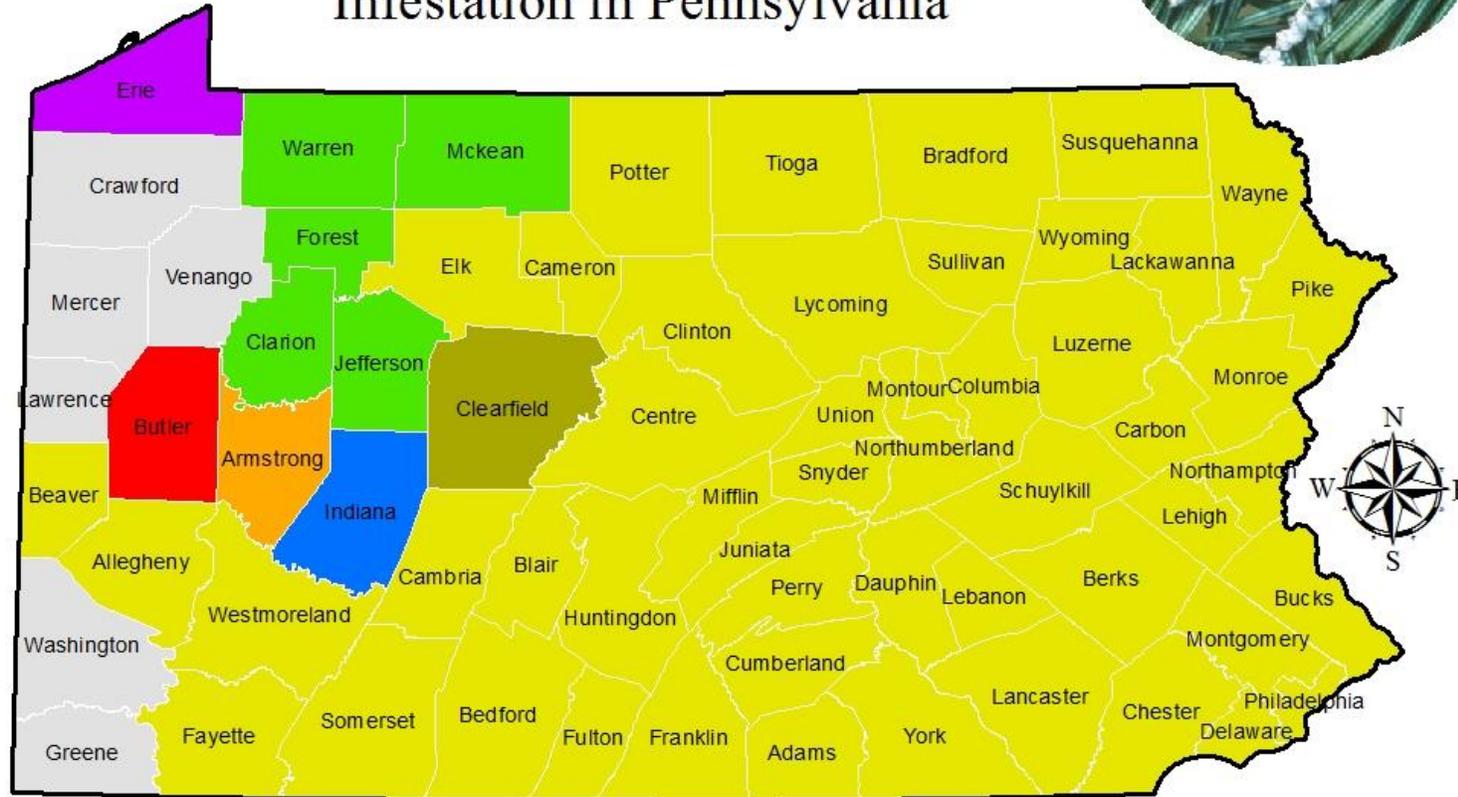


Issue 6: Lack of Instream Habitat

- **Large Woody Material (1000 ft reaches)**
 - Michaux, Susquehannock (2017)
 - Michaux, Susquehannock, Tiadaghton, Elk, Bald Eagle (2018)
 - Scour pools
 - Leaf pack
 - Cover
 - Diversity of habitat
 - Reconnected floodplain (**Explain**)
- **Partnering with PFBC: Habitat improvement prioritization**



Hemlock Woolly Adelgid Infestation in Pennsylvania



Not Found 2010 2013 2016
1979-2009 2011 2015 2017

(61 out of 67 Counties Infested by 05/01/2017)

Hemlock Options

- Pesticide Treatment
- Bio-controls
 - Beetle
- Resistant Hemlock
- Underplant declining stands
 - Native trees



Aquatic Habitat Buffer Guidelines

- Being revised
- Expected complete by end of 2017
- Revising buffer widths
- Defining acceptable activities within buffer zones



Pipeline Stream Crossing BMPs

- Based on Guidance from PFBC, DEP, and FERC
- Seasonal Restrictions
- Erosion and Sedimentation Issues
- Riparian Vegetation



State Forest Resource Management Plan

- Revised 2016
- Water Chapter
 - Added priorities to assess and replace stream crossings
 - Supports Brook Trout Conservation Plan
 - Issue 6: Lack of Instream Habitat
 - Issue 7: Barriers to Fish Passage



DCNR Secretary's Water Initiative

- Dam Removal
- Culvert Assessments and Replacement
- Habitat Improvement
- Forest Buffers





Partners

- ▶ **Pennsylvania Fish and Boat Commission**
 - ▶ **Trout Unlimited**
 - ▶ **Western Pennsylvania Conservancy**
 - ▶ **Allegheny National Forest**
 - ▶ **Conservation Districts**
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Questions??

