

Cerulean Warbler Appalachian Forestland Enhancement Project



Amanda Duren

PA Coordinator, Cerulean Warbler Appalachian Forest Enhancement Program

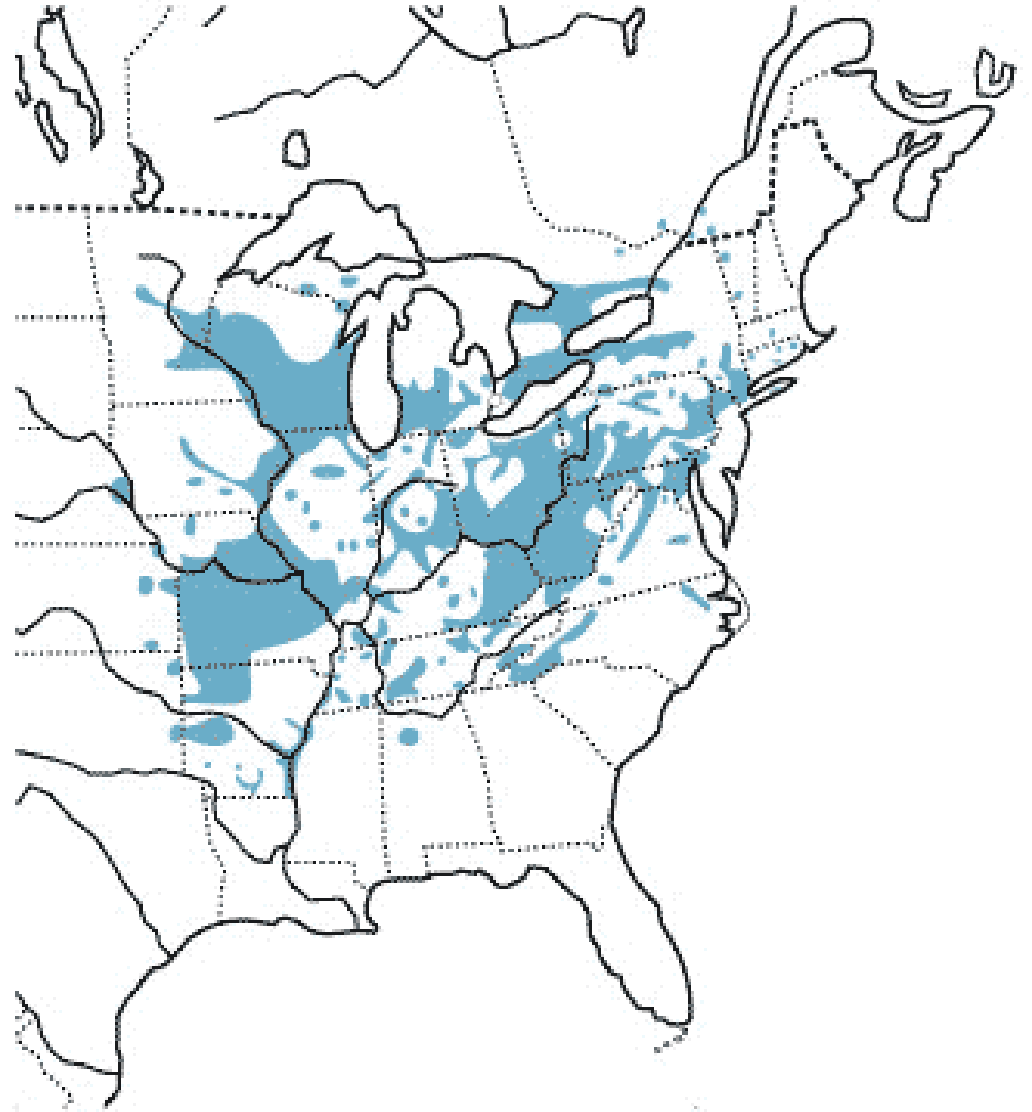
Cerulean Warbler

(*Setophaga cerulean*)



Photo courtesy of Frode Jacobsen

Breeding Distribution



Cerulean Warbler Breeding Habitat

- White oaks
- Canopy gaps
- High structural complexity
- Thick but patchy herbaceous layer
- Widely spaced, large trees



Feeding

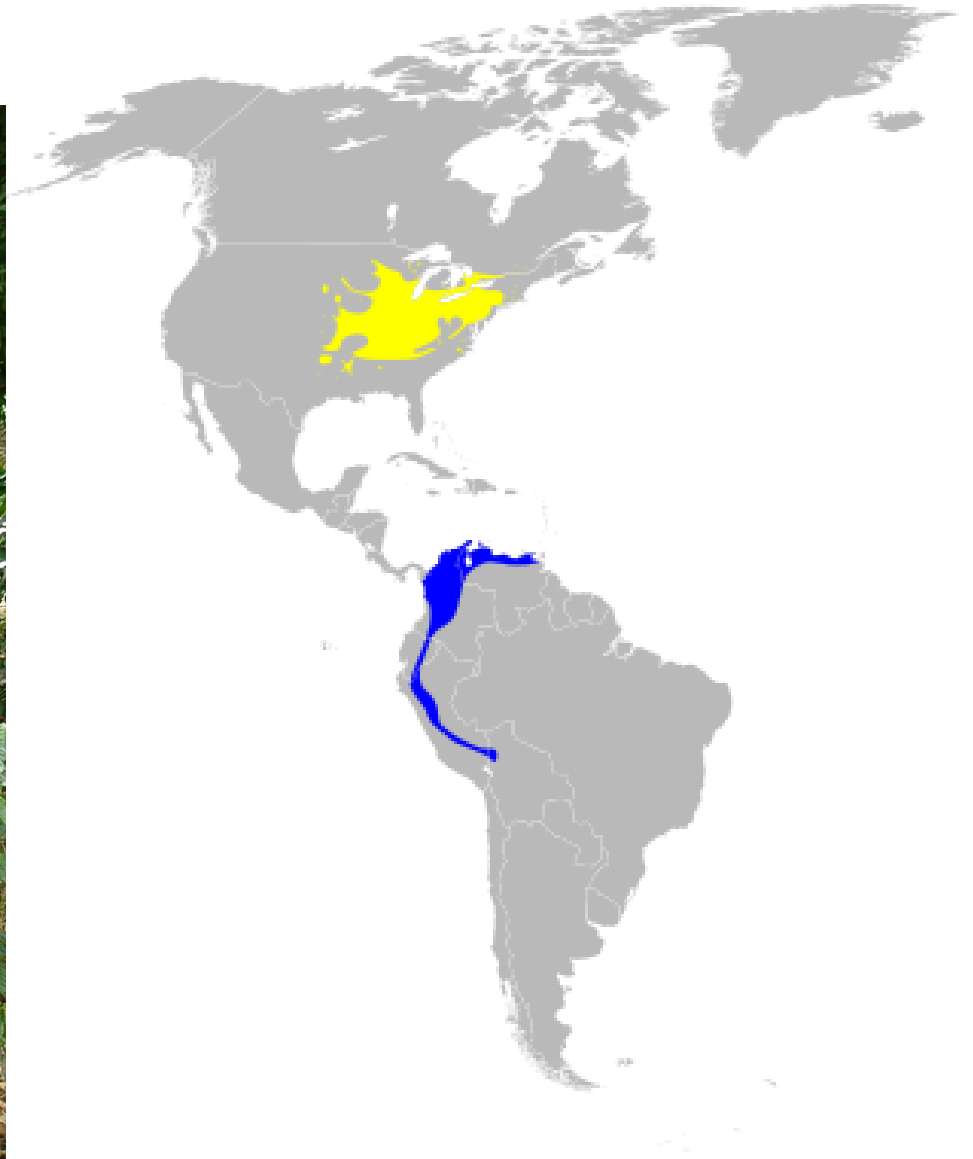


Photo by Ray Hennessy/Shutterstock

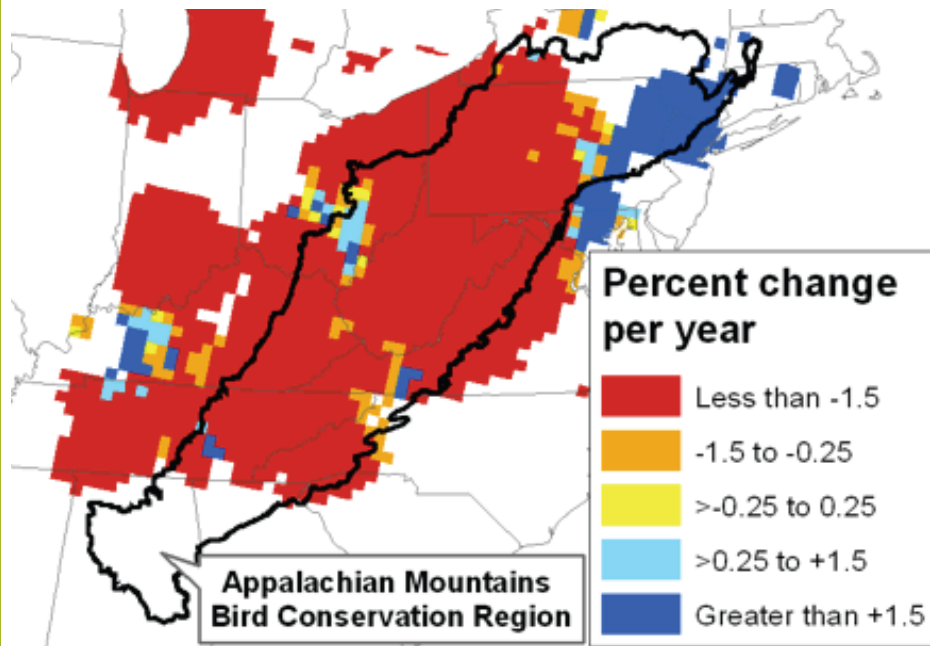
Nesting



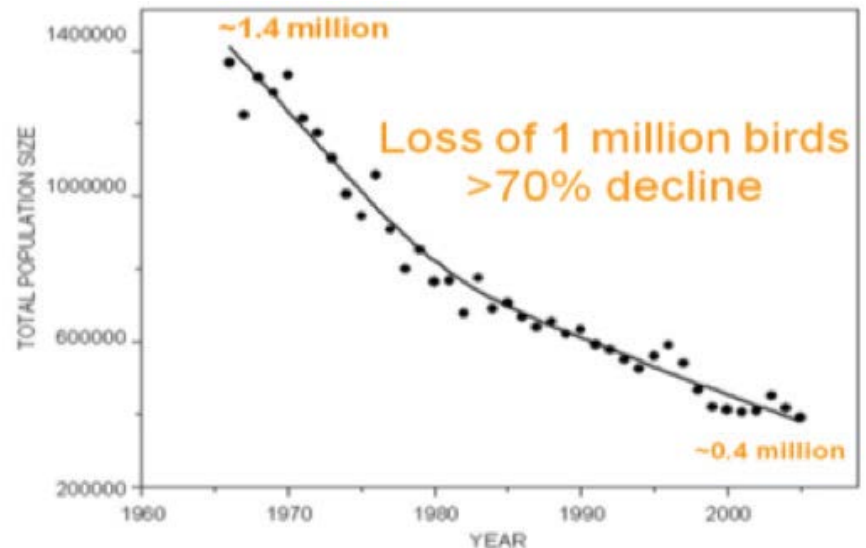
Migration



Population Trends: Cerulean Warbler



- ~70% of the population (1 million birds) lost since 1966.



Reasons for Decline

- **Main Reason: Habitat Loss**
- Nest parasitism by the Brown-headed Cowbird (*Molothrus ater*)



Habitat Loss: Decreased Habitat Quality



Unsustainable Timber Harvests ("High Grading")

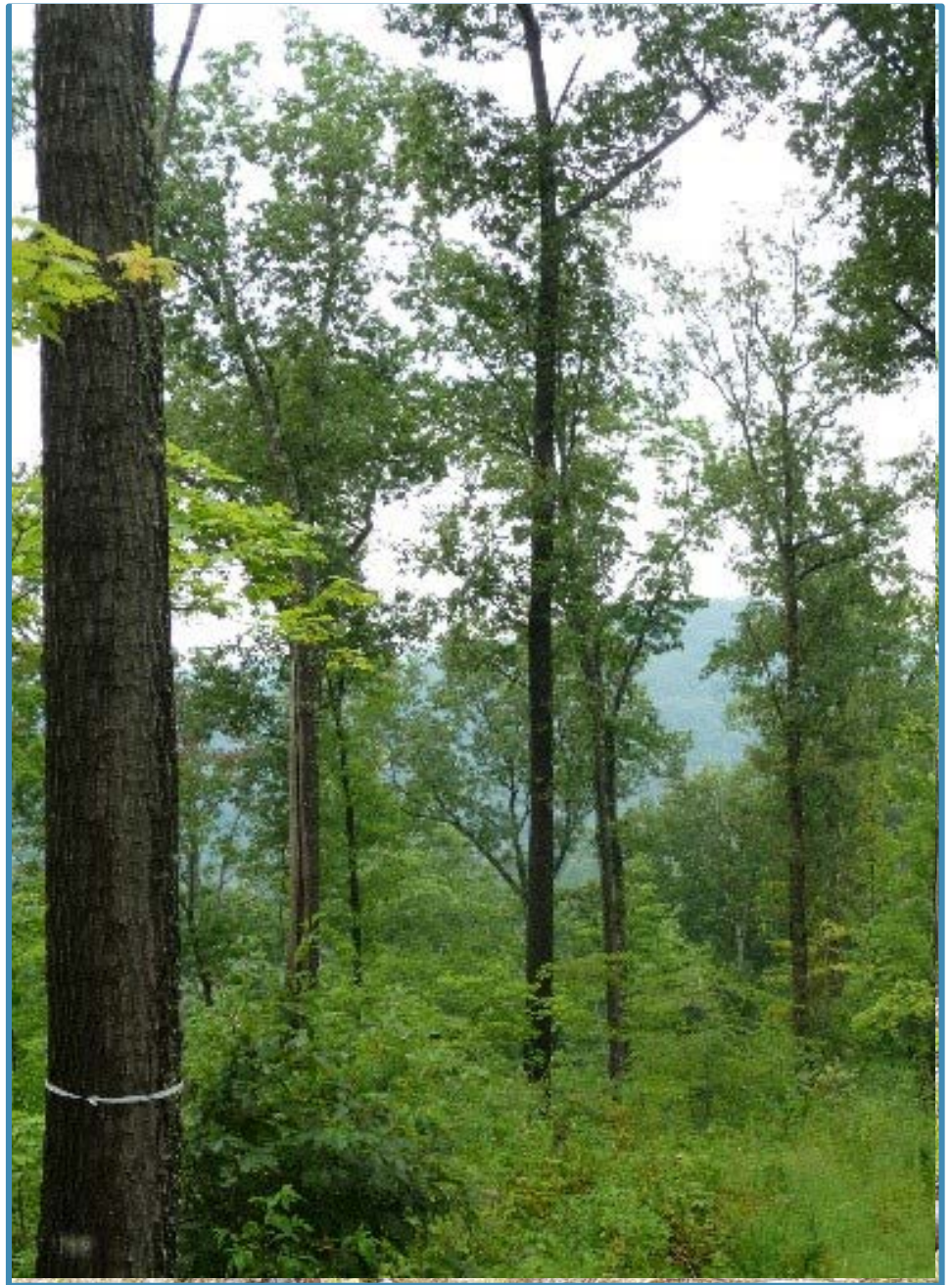


Sustainable Timber Harvests

- Even though **Cerulean Warblers** utilize **mature** forest...
 - Timber harvesting can enhance forest habitat for Cerulean Warblers



Shelterwood Harvest

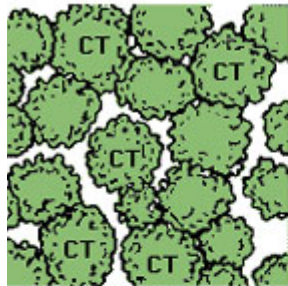


Group Selection Cuts

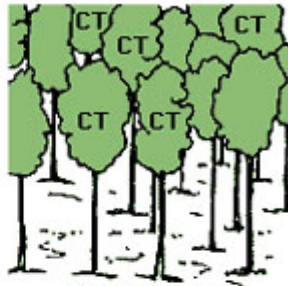


Crop Tree Release

Before treatment

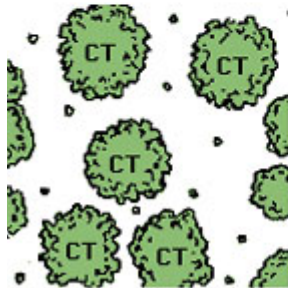


View from above

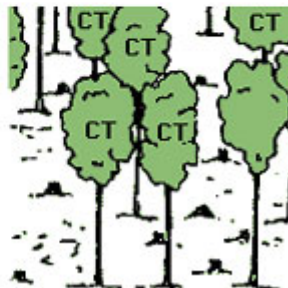


View from side

After treatment



View from above



View from side



Thinning



Heavy thinning



Moderate thinning



Light thinning



Unthinned stand



High Deer Browsing Pressure

Deer fencing



Competing and Invasive Vegetation

Herbicide applications

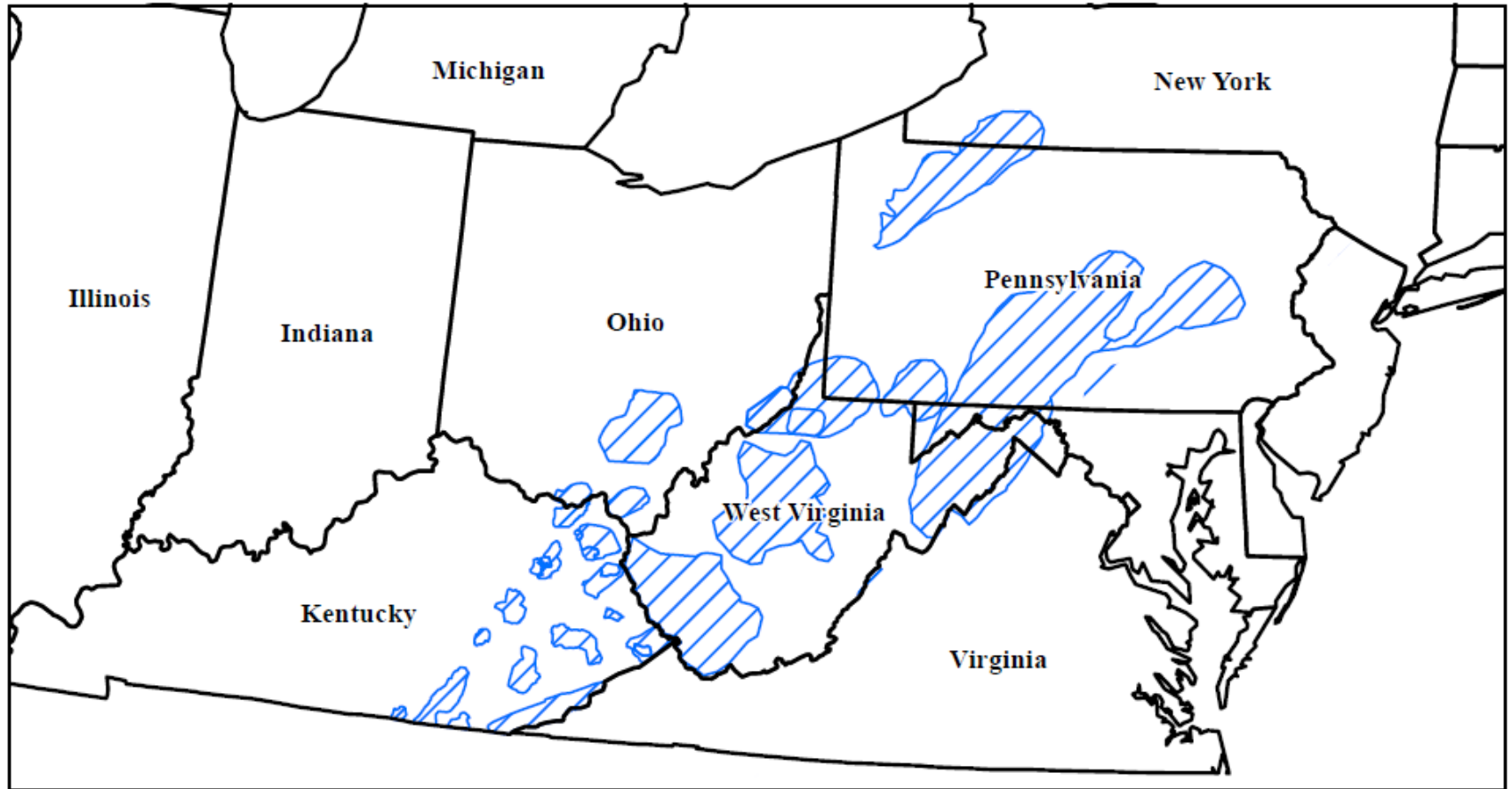


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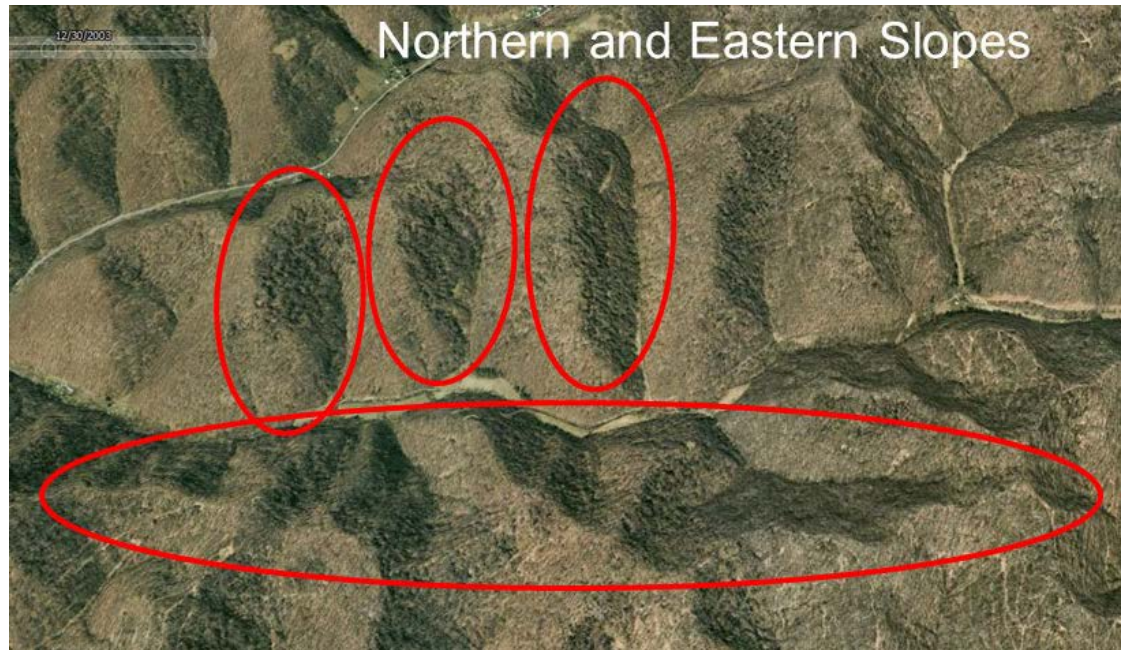
Photo by Ed Schneider/Shutterstock

Cerulean Warbler Focal Areas



Ideal Sites for Cerulean Warbler Projects

- Forested Landscapes
- Near known populations
- Terrain



Common Cerulean Warbler Management Practices

- Shelterwood harvest
- Thinning (mechanical or chemical)
- Herbicide application
- Deer fencing



PA RCPP Totals

Total	
Contracts Awarded	129
Financial Assistance Awarded	>\$3 million
Acres Contracted	5,289

Progress Toward PA RCPP Goals

	Current Total	RCPP Goal (PA)	Remaining
Financial Assistance (\$)	\$2,190,649	\$2,946,734	\$756,085
Habitat Implementation (acres)	3,674.2	7,000	3325.8

Thank you!

Amanda Duren

PA Cerulean Warbler Partnership Coordinator

(570) 317-9485

Amanda.Duren@pa.usda.gov

Partners contributing to the Cerulean Warbler Appalachian Forestland Enhancement Project include:

American Bird Conservancy, Appalachian Regional Reforestation Initiative/Green Forests Work, Indiana University of Pennsylvania-Research Institute, KY Department of Agriculture State Apiarist, KY Department of Fish and Wildlife Resources, MD Department of Natural Resources Forest Service, National Wild Turkey Federation, Office of Surface Mining, Reclamation, and Enforcement, Ohio Division of Forestry, PA Dept. of Conservation and Natural Resources Bureau of Forestry, PA Game Commission, The American Chestnut Foundation, The Nature Conservancy, U.S. Fish and Wildlife Service, University of Kentucky, WV Division of Natural Resources, WV Division of Forestry, West Virginia University.

Emily Heggenstaller contributed slides to this presentation.