

## Joint Chiefs' Landscape Restoration Partnership

# Appalachian Ecosystem Restoration Initiative

2017–2019



*The Nature Conservancy staff evaluating release of understory red spruce (Credit: Todd Miller)*

Located in central Appalachia—at the headwaters of the Potomac and Ohio rivers in West Virginia—lie five watersheds renowned for biodiversity and a legacy of mining. The high biodiversity of the region is owed in part to the many coldwater streams and forest types, including red spruce, oak-hickory, and northern hardwood forests. Restoring the waterways and forests in the project area is critical to helping at-risk species like the Cheat Mountain salamander. A major challenge to any restoration project in the region is the adverse impacts from surface mining of coal. The spoils from these surface mines were often heavily compacted and lack the soil characteristics needed for native plants to thrive. This Joint Chiefs' project, in conjunction with the OneUSDA partnership and the Monongahela National Forest, are turning the challenges into opportunities. Collaborative projects to restore soil health, forest health, and water quality are part of the new legacy that is being written for the region.

### PROJECT IMPACT:

**\$4,767,436**

Dollars contributed by partners to match JCLRP funding

USFS & NRCS JCLRP funds awarded 2017–2019: \$7,489,807  
Total USDA and partner project funds: \$11,514,150

## PROJECT RESULTS



*Non-native red pine are marked for removal to encourage the growth of native understory red spruce (Credit: Kelly Bridges)*



### Mineland restoration:

more than 1,200 acres of red spruce have been planted across its historic range on mine spoils.



### Grazing management:

excluded livestock from 1,500 acres and protected 6,900 feet of streambank.



### Improving forest health:

prescribed burns were used to restore a healthy balance of native plants and young forest habitat for wildlife.

USDA's Forest Service and Natural Resources Conservation Service are working together to improve the health of forests where public forests and grasslands connect to privately owned lands. Through the Joint Chiefs' Landscape Restoration Partnership, the two USDA agencies are restoring landscapes by reducing wildfire threats to communities and landowners, protecting water quality and enhancing wildlife habitat.

Photos in this document are public domain or stock imagery unless otherwise noted.

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## APPLALACHIAN ECOSYSTEM RESTORATION INITIATIVE



*The Nature Conservancy's Todd Miller explains spruce release techniques during a tour of the project area (Credit: Kelly Bridges)*

## Partnership Leads to Long-Term Stewardship Projects

As part of this Joint Chiefs' project, The Nature Conservancy and USDA Forest Service worked together to conduct restoration projects on public and private lands in West Virginia, leading to a long-term partnership that continues today.

"Joint Chiefs' funding was critical to our success," said Todd Miller, The Nature Conservancy's Director of Conservation Programs. "It was the boost we needed and has resulted in an evolving base of knowledge and practice which can be scaled up for use across the Forest and adjacent lands."

The Nature Conservancy's Ecological Restoration Team focused their work on restoration of the red spruce ecosystem that once blanketed the high elevations of the Allegheny Mountains. They used non-commercial thinning techniques across thousands of acres to release understory red spruce in hardwood-dominated sites. They also planted more than 39,000 red spruce seedlings on federal, state and private lands, and carried out non-native invasive plant control on more than 2,800 acres.

The Nature Conservancy has built on this early work and now manages timber harvests with the Forest to selectively thin red pine and hardwood stands. By improving forest health through timber harvests, income is generated and used to increase the scale of red spruce restoration. Timber harvest restoration activities on the National Forest also support local timber companies and local economies, providing additional benefits for people and nature.

Restoring large, connected patches of red spruce forest helps weave together a landscape in which native plants and animals can thrive into the future. These forests will continue to provide clean air and water, support jobs and serve as the setting for outdoor recreation opportunities that enrich our well-being and drive local economies. "Nature and a thriving economy do not have to be competing outcomes," Miller explained. "Careful forest management can achieve both."

For more information, please visit [nrcs.usda.gov/JointChiefsReports](https://nrcs.usda.gov/JointChiefsReports)



*2018 AmeriCorps Ecological Restoration Team (Credit: Ben Rhodes)*

### Key Partners

Trout Unlimited  
Appalachian Headwaters  
The Nature Conservancy  
WV DEP  
WV DNR  
Ruffed Grouse Society  
National Wild Turkey Federation  
West Virginia University  
GAVCC  
Appalachian Stewardship Foundation

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