USDA Forest Service
U.S. DEPARTMENT OF AGRICULTURE

Southern Research Station | April 2024

FIRE



WATER



MARKETS



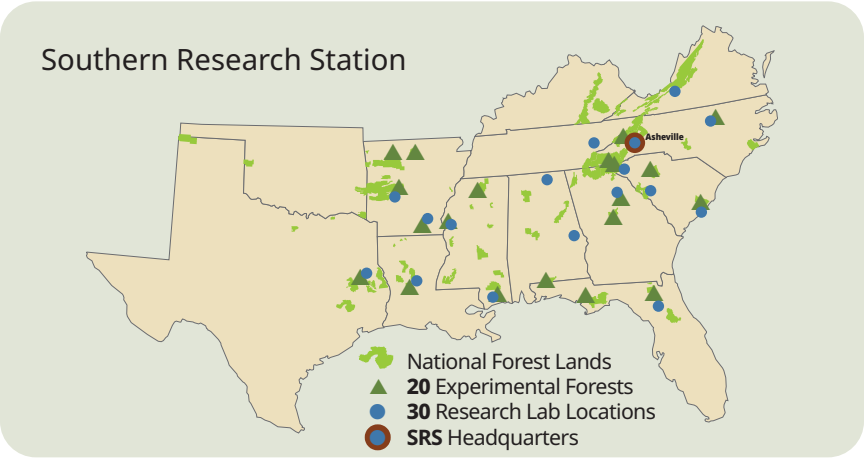
RESTORATION



Our mission is to create and communicate the science and technology needed to sustain and enhance forest ecosystems and the benefits they provide in the South.

Our research priorities include Fire, Water, Markets, and Restoration.

- **The Center for Forest Assessment and Synthesis** researches and assesses current and future threats to southern forests to protect landscapes and the services they provide, like drinking water supplies.
- **The Center for Forest Economics and Social Science** analyzes the connections between communities and forests, including social vulnerability, forest product markets, and ecosystem services.
- **The Center for Forest Health and Disturbance** leads research on prescribed fire planning, fire behavior, and smoke, along with invasive species detection and management.
- **The Center for Forest Restoration and Management** focuses on pine and hardwood silviculture, forest operations, forest products, wildlife habitat, and markets for small diameter trees and biomass.
- **The Forest Inventory and Analysis Program** implements the South's forest census and provides data that underpin research on land use and ownership, wood production, and forest area, growth, and health.



These research priorities are supported by growth areas:

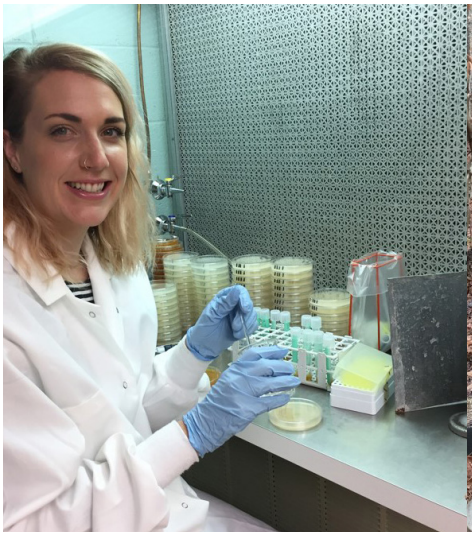
- **Genetics** for species restoration, climate adaptation, and forest health resilience
- **Watershed science** to sustain and improve forest resilience and restoration
- **Climate science** to understand ecosystem changes, carbon cycling, and carbon sequestration and to strengthen adaptation options
- **Social science** to identify people, places, and markets where Forest Service science can have greater benefits
- **Forest operations** to support hazardous fuels treatments and a bio-based economy
- Improving **accuracy** of Forest Inventory and Analysis survey data for counties and other small area estimations

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With partners, we develop and deliver research that informs natural resource management across all southern forest lands.

Bipartisan Infrastructure Law & forest research in the South

The Bipartisan Infrastructure Law focuses on reducing wildfire risk and enhancing restoration. Several projects in the South work to streamline the harvest of woody biomass—before it becomes fuel in fire-prone landscapes. Others improve prescribed fire safety and control invasive species.

Research that supports the Wildfire Crisis Strategy

With managers, we develop tools that address real-world operational needs, including next generation models of fire behavior, fuels, and smoke. More than 80% of U.S. prescribed burning happens in the South. We are part of the Eastern Innovation Landscape Network and work with many partners, including the Department of Defense, to field- test and improve models for use nationally. We operate the only dedicated mesoscale combustion research facility in the U.S.—an incubator for advancing prescribed fire science.

Forests supply clean, abundant drinking water for millions of U.S. residents

In the South, forests provide more than 50% of the region's drinking water, serving over 90% of the population. Our Forests to Faucets project identifies forest lands that need restoration or protection in order to continue supplying clean, plentiful drinking water to people downstream.

Forest carbon, climate, and economics network

Forests mitigate climate change by storing carbon. Our new network brings together partners to study how prescribed fire and wildfire affect carbon markets across the nation, as well as how private landowners, who control 86% of southern forestland, can maximize income from timber harvesting and carbon markets. Forest Inventory and Analysis underpins this research collaboration.

White oak genetics & silviculture

White oaks are abundant and commercially valuable trees, important to Native American communities and used to make flooring, furniture, and barrels for Kentucky's $9 billion bourbon industry. However, they are facing an 'oak bottleneck' in which seedlings do not reach maturity. To maintain the white oak product supply chain for the global spirits industry, we research white oak genetics, nursery and silviculture practices, and the social and economic aspects of white oak forest management.

Southern research coalition addressing pine needle pathogens

The South is the nation's wood basket, producing nearly 60% of U.S. timber. Needle blight is infecting commercial loblolly pine stands, and we initiated a new research coalition to detect, mitigate, and manage pathogens – and protect this critical economic resource. The coalition includes experts from Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and North Carolina.

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