



VIRGINIA

FOREST SERVICE RESEARCH AND DEVELOPMENT

STATE FUNDING HISTORY	Enacted FY 2003 (\$)	Enacted FY 2004 (\$)	Pres. Budg. FY 2005 (\$)
BLACKSBURG			
SRS-4202 Coldwater Fisheries	586,361	581,094	678,221
SRS-4702 Wood Proc / Recycling	495,022	490,575	499,042
VIRGINIA TOTAL	1,081,383	1,071,669	1,177,263

RESEARCH & DEVELOPMENT, a division of the USDA Forest Service (FS R&D), strives to be the "go to" organization for information and solutions to sustain forests and rangelands and the values they provide people. FS R&D has the flexibility to address today's issues effectively and to respond to tomorrow's needs. Among the world's leaders in forest conservation research, scientists contribute to the stewardship of land, real property and society by providing research results that help create jobs and affordable homes, and improve the health of trees, forests and forest ecosystems. Innovative research products permit the Forest Service and other public and private land managers to monitor and manage forest responses to environmental change, contributing significantly to the sustainability of the nation's forests and rangelands and improving human health.

FS R&D operates six research stations, the Forest Products Laboratory, and the International Institute

of Tropical Forestry located in Puerto Rico. It employs over 500 scientists and hundreds of technical and support personnel at 67 field sites throughout the nation. The FY 2005 President's Budget includes \$280,654,000 for Forest and Rangeland Research.

The **Southern Research Station**, with headquarters in Asheville, NC, and 26 Research Work Units in 11 States, conducts forest research and development in laboratories, on university campuses, and at experimental forests in the 13 Southern States (i.e., FL, LA, OK, NC, KY, GA, SC, TN, MS, TX, AR, AL, and VA). The Station maintains two Research Work Units in Virginia, both located on the Virginia Tech campus in Blacksburg.

The FY 2005 President's Budget includes \$50,640,000 for the Southern Research Station, an increase of \$1,304,000 over the FY 2004 Final Appropriation.

BLACKSBURG

SRS-4202, Coldwater Streams and Trout Habitat in the Southern Appalachians.

Scientists in this unit study factors that influence the distribution, abundance, and productivity of trout and other coldwater fish in the Southern Appalachians. Their research provides the technical basis for protecting, enhancing, and restoring coldwater streams and their fauna.

SRS-4702, Forest Products Conservation. This unit's research encourages wood resource conservation and the sustainability of forest resources by reducing waste, promoting wood recycling, and improving utilization and management of non-timber forest products. Their research improves timber analysis techniques for forest inventory, improves scanning technology for wood processing, promotes the recovery, reuse, and recycling of wood products (like pallets and decking materials), and promotes the sustainability of non-timber forest products.

RELATED RESEARCH

Forest Inventory and Analysis Research.

Forest Inventory and Analysis is administered in Knoxville, TN, Asheville, NC, and Starkville, MS. The Forest Inventory and Analysis Unit develops, analyzes, and maintains forest resource information for the Southern States, Puerto Rico and the Virgin Islands; and conducts research to provide improved inventory and evaluation techniques. The Forest Inventory and Analysis program includes plot-based forest health indicators along with comprehensive forest inventory data to provide information on the status, trends, and condition of forest resources.

Annualized forest inventories are currently being implemented across the South. Researchers in the Forest Inventory and Analysis unit are conducting annual inventories in Virginia, in collaboration with the State. The within-State costs for annual inventory field data collection amount to approximately \$417,000.

PROGRAM CHANGES

- The FY 2005 President's Budget calls for increased research in areas associated with the President's Healthy Forests Initiative, including invasive species impacts, and the expansion of technology transfer activities. The FY 2005 President's Budget also provides new funding for research on water quality and quantity issues; and funding to cover inflationary fixed cost increases.
- Forest Service Research and Development will lead an Agency-wide effort to optimize the delivery and practical use of research findings. This is essential to successful implementation of Forest Service priorities, including the President's Healthy Forest Initiative. Opportunities have been identified that leverage current science and technology applications efforts in healthy forests applied science, watershed management, invasive species, hazardous fuels utilization and management, and community preparedness. New funds in FY 2005 will be targeted to leading-edge technical assistance on a competitive basis.
- An increase of \$87,000 for the Coldwater Streams and Trout Habitat Unit (SRS-4202) will be used to expand research on how

changes on water quality and the management watersheds affect aquatic habitat.

- Funding increases of \$10,028 for SRS-4202 and \$8,384 for SRS-4702, Forest Products Conservation Unit will be used to cover fixed cost (facilities, salaries, utilities, etc.).

SIGNIFICANT RESEARCH PRODUCTS

- Studied the abundance, habitat use, growth, and daily and seasonal movements of American eels in the headwater tributaries of the James River in Virginia. These results have important implications for how streams that provide habitat for American eels are managed.
- Developed and tested an advanced hardwood sawmill edging and trimming prototype system to improve lumber yields and value when converting hardwood logs to lumber in sawmills.
- Documented attitudes and perceptions of forest managers regarding non-timber forest products and determined critical issues that affect efforts to manage for these products on a sustainable basis.
- Developed a regional evapotranspiration model for watersheds to predict the effects of land-use and climate changes on water quality and abundance. Extensions of this work have

identified potentially problematic areas of water stress over the next 100 years that relate to climate change and human population dynamics.

- Developed information on the fish community in the Smith River, regarding abundance, diversity, and distribution related to the water environment, such as water flow and temperature. This information will be useful to fisheries resource managers and operators of hydroelectric dams.

KEY CLIENTS/COLLABORATORS

Blue Ridge Parkway
George Washington-Jefferson National Forest
Mead-Westvaco
Michigan Technological University
Mississippi State University
National Council for Air & Stream Improvement
National Hardwood Lumber Association
National Wood Pallet and Container Assoc.
Shenandoah National Park
Southern Region, USFS
Trout Unlimited
University of Virginia
Virginia Tech
Wood Education and Resource Center