



ARKANSAS

FOREST SERVICE RESEARCH AND DEVELOPMENT

STATE FUNDING HISTORY	Enacted FY 2003 (\$)	Enacted FY 2004 (\$)	Pres. Budg. FY 2005 (\$)
MONTICELLO			
SRS-4106 Upland Forest Ecosystems	1,768,000	1,752,118	1,777,586
ARKANSAS TOTAL	1,768,000	1,752,118	1,777,586

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, maintains 26 Research Work Units in eleven 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 one Research Work Unit in Arkansas, headquartered in Monticello, with subunit locations in Crossett, Hot Springs, Jasper, and Jessieville.

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.

MONTICELLO

SRS-4106, Managing Upland Forest Ecosystems in the Midsouth. The mission of this Unit is to provide scientific information to realize the full range of benefits from the major upland forest types found in Arkansas and surrounding states. These upland forests include Coastal Plain mixed loblolly-shortleaf pine and pine-hardwood forests, Ouachita Mountains shortleaf pine and pine-hardwood forests, and Ozark Mountains upland oak-hickory and oak-pine forests.

University of Arkansas, Monticello. The Chamberlin Forest Resources Complex of the University of Arkansas houses the headquarters of the Upland Forest Ecosystems research work unit. Two unit scientists and three support staff members are located in Monticello. The scientists located here conduct research primarily on the Coastal Plain forest types.

CROSSETT

Crossett Experimental Forest. The Crossett Experimental Forest is a 1680-acre experimental forest in the upper West Gulf Coastal Plain that has been managed for research purposes since 1934, making it one of the oldest active experimental forests in the U.S. One professional forester and two of the Unit's technical staff members are located on this forest. The buildings at the Crossett EF are shared with the Ashley County office of the Arkansas Forestry Commission.

HOT SPRINGS

Ouachita National Forest. Three scientists, two professional staff members, and one technical staff member of the Unit headquartered at

Monticello are stationed in Hot Springs, in a building owned by the National Park Service. Their location in Hot Springs facilitates close working relationships with the staff of the Ouachita National Forest. These scientists and technical support staff are primarily responsible for research on the Ouachita and Ozark forest types.

JASPER

Koen Experimental Forest. The Koen Experimental Forest is a 720-acre experimental forest in the Ozark Mountains that has been the center of Ozark upland hardwood silviculture research since 1948. Three technical staff members are located at the Koen Experimental Forest, which is affiliated with the Buffalo Ranger District of the Ozark-St. Francis National Forest.

JESSIEVILLE

Alum Creek Experimental Forest. The Alum Creek Experimental Forest is a 2000-acre experimental forest in the Ouachita Mountains that has been managed for hydrology research since 1948.

RELATED RESEARCH

Ecosystem Research on the Ouachita and Ozark National Forests. The Southern Research Station and the Ouachita and Ozark-St. Francis National Forests are working with local universities, State agencies, and forest industry to conduct a research/management program to evaluate the effects of a broad array of ecologically sensitive silvicultural practices as alternatives to clear-cutting. The objective is to provide the scientific basis to support sustainable forest management in diverse pine and pine-

hardwood ecosystems in the Ouachita and Ozark Mountains at the stand-level and landscape scale.

Forest Inventory and Analysis Research (FIA).

Forest Inventory and Analysis is administered in Knoxville, TN, Asheville, NC, and Starkville, MS. The FIA 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 FIA 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 FIA unit are conducting annual inventories in Arkansas, in collaboration with the State. The within-State costs for annual inventory field data collection amount to approximately \$486,000.

FY 2005 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 \$25,218 for SRS-4106 will be used to cover fixed cost (facilities, salaries, utilities, etc.).

SIGNIFICANT RESEARCH PRODUCTS

- Described the pre-settlement vegetation of forests in the Upper Western Gulf Coastal Plain.
- Provided landowners with information on the benefits of pre-commercial thinning in enhancing growth and increasing sawlog production from loblolly and shortleaf pine stands.
- Completed an initial survey of red oak borer damage in the Arkansas Interior Highlands.
- Contributed a chapter on forest management principles to a book that is destined to be a widely used introductory college textbook on forest management and stewardship.
- Prepared an overview of the status of silvicultural research in the United States and research needs for the future.
- Developed new models to predict the survival of red oak seedlings underplanted in shelterwood stands. Scientists then developed a web-based interface for practicing foresters to apply the model in oak stands under their management.
- Determined the impacts of streamside management zones on small mammals in the Ouachita Mountains of Arkansas.

- Characterized diurnal roost characteristics of male and female red bats in the Ouachita Mountains of Arkansas.

SOME CLIENTS/COLLABORATORS:

Arkansas Agricultural Experiment Station
Arkansas Cooperative Extension Service
Arkansas Forestry Association
Arkansas Forestry Commission
Arkansas Game and Fish Commission
Deltic Timber
Green Bay Packaging
Ouachita National Forest
Ozark-St. Francis National Forest
Pottlatch
The Nature Conservancy
University of Arkansas, Monticello
University of Arkansas, Fayetteville
Weyerhaeuser

