



WYOMING

FOREST SERVICE RESEARCH AND DEVELOPMENT

STATE FUNDING HISTORY	Enacted FY 2003 (\$)	Enacted FY 2004 (\$)	Pres. Budg. FY 2005 (\$)
LARAMIE			
RMRS-4352 Sustain Fish/Water Comp of Aquatic/Riparian	694,000	683,000	683,000
WYOMING TOTAL	694,000	683,000	683,000

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 **Rocky Mountain Research Station (RMRS)**, headquartered in Fort Collins, Colorado, maintains forest and rangeland research and development programs and facilities in 10 states of the Interior West (AZ, CO, ID, MT, NE, NV, NM, SD, UT, and WY) and covers ND and KS. The FY 2005 President's Budget includes \$43,082,000 for the Rocky Mountain Research Station.

The Station currently maintains one research work unit in Laramie, Wyoming that employ 3 scientists, 3 other professionals and support personnel.

LARAMIE

RMRS-4352, Research on Sustaining Fish and Watershed Components of Aquatic and Riparian Ecosystems in the Central Rocky Mountains and Northern Great Plains. (Project is co-located at Fort Collins, CO and Laramie, WY). The unit mission is to develop guidelines to sustain

aquatic and riparian ecosystems by studying vegetation patterns, runoff, and stream characteristics and how nutrients and chemicals move through forested watersheds. Findings describe how these factors affect fish such as native cutthroat trout.

FY 2005 PROGRAM CHANGES:

- The President's budget maintains the Station ongoing program of research focused on sustaining healthy forests and rangelands in the Interior West. In response to the President's Healthy Forest Initiative, an additional \$1,725,000 is focused on improving watershed conditions to provide clean and abundant water from western forests and rangelands and funding is provided for addressing the threat invasive species pose to our native ecosystems.
- 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.

SIGNIFICANT RESEARCH PRODUCTS:

- Continued studies on the effects of brook trout invasions on native cutthroat trout populations and potential methods to reduce competition.

- Scientists are gaining a better understanding of the relationships between patterns of sedimentation and changes in aquatic communities following wildfire. The Boulder Creek watershed was evaluated for local and down-stream effects of fire-related sedimentation relative to baselines that were established previously.
- This research has been used to develop instream flow methodologies and as supporting documentation for water rights negotiations. The data have been useful for developing new models and testing pre-existing theories of bedload transport by Forest Service and university researchers.
- In general, physical and biotic processes within the burned watershed appear to be undergoing continual, dynamic adjustment in relation to hydrological events.
- Updated report on the ecology of ponderosa pine, including the role of disturbances, and management alternatives for wildlife habitat, esthetics, ecosystem restoration, biodiversity, and watershed management. This publication addresses many of the ecological and management challenges currently facing managers of ponderosa pine in southwestern South Dakota and northeastern Wyoming.

SOME CLIENTS/COLLABORATORS:

Colorado State University
Department of Justice
FS Rocky Mountain Region (R-2)
Medicine Bow-Routt National Forest
University of Wyoming
Wyoming Game and Fish Department