



## IDAHO

### FOREST SERVICE RESEARCH AND DEVELOPMENT

STATE FUNDING HISTORY	Enacted FY 2003 (\$)	Enacted FY 2004 (\$)	Pres. Budg. FY 2005 (\$)
<b>BOISE</b>			
RMRS-4353 Watershed & Aquatic Ecosys	\$1,928,000	\$1,898,000	\$2,098,000
<b>MOSCOW</b>			
RMRS-4155 Forest Ecosys. Dev. & Mgmt.	\$1,433,000	\$1,411,000	\$1,411,000
RMRS-4552 Root Diseases/Soil Biology	\$1,039,000	\$1,023,000	\$1,023,000
RMRS-4702 Engineering Technology	\$1,043,000	\$1,057,000	\$1,257,000
<b>MOSCOW TOTAL</b>	<b>\$3,515,000</b>	<b>\$3,491,000</b>	<b>\$3,691,000</b>
<b>IDAHO TOTAL</b>	<b>5,443,000</b>	<b>5,389,000</b>	<b>5,789,000</b>

**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 four research units at Aquatics and Forestry Sciences Laboratories in Idaho—one in Boise and three in Moscow that employ approximately 18 scientists and 45 technical and support personnel.

#### **BOISE**

**RMRS-4353, Watershed and Aquatic Ecosystem Research.** The unit mission is to conduct research on aquatic and terrestrial processes and the effects of disturbances resulting in interdisciplinary decision support models and tools to assist managers in selecting alternatives that lead to diverse, resilient, and sustainable aquatic and associated terrestrial ecosystems.

#### **MOSCOW**

**RMRS-4155, Forest Ecosystem Development and Management.** The unit mission is to conduct research on ecological processes and forest dynamics that expands our understanding of Interior West forest biology and ecological genetics in support of forest science and management.

**RMRS-4552, Root Diseases and Soil Biology.** This unit mission is to conduct research and technology transfer on microbial processes that regulate forest ecosystem function in support of sustaining and enhancing productivity in the western USA.

**RMRS-4702, Engineering Technology.** The unit mission is to devise management tools and practices to help reduce on-site soil erosion and off-site sedimentation resulting from forest disturbances, including roads, management operations, and fires. Work enhances use and

application of best management practices across the west.

**FIRE RESEARCH IN IDAHO SUPPORTS THE NATIONAL FIRE PLAN.** National Fire Plan funding continues the long tradition of Forest Service Research and Development building and leading federal, state, and local partnerships (the guiding principle of the 10-year Comprehensive Strategy) to develop and deliver the scientific foundation of modern management practices.

National Fire Plan funding for research in Idaho has already produced the following results:

- Research has provided sampling tools to guide design of effective monitoring programs to evaluate fire and management effects on native/threatened and endangered stream fishes that are important to forest planning.
- A science synthesis paper on the effects of fuel treatments on modifying fire behavior is helping to support fuels treatment strategies.
- The Fire and Fuels Extension to the Forest Vegetation Simulator forecasts the effectiveness of fuel treatments. Hundreds of forest managers are using the model to plan effective fuel treatment program.

#### **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.

- RMRS is working cooperatively with the University of Idaho to carry out the provisions of legislation (S.3039) authorizing federal cooperation with the University to develop the Idaho Water Center, a multi-agency research and education facility in Boise. The President's budget provides \$3,900,000 to complete purchase transactions.
- RMRS-4353 is increased by \$200,000 and will provide integrated efforts among biological and physical scientists to understand the resilience of aquatic ecosystems subject to natural and human disturbance and environmental change. This will assist managers understand linkages of aquatic ecosystems to the dynamics and history of entire landscapes, watersheds and streams.
- RMRS-4702 is increased by \$200,000 to improve watershed analysis and hill slope hydrology modeling, so that managers can make better predictions of soil erosion from management activities and disturbance impacts, such as fire. This analysis tool is available on the internet.
- 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:**

- Proceedings of a national workshop on Fire and Aquatic Ecosystems, published as a special issue of Forest Ecology and Management, have been widely distributed and applied in regulatory consultation for threatened and endangered fish species, forest planning, and fire management plans.
- The watershed erosion prediction software is a heavily used tool for many forest managers to estimate soil erosion from fires, forest management activities, or forest roads.
- Monitoring of fire impacts to watersheds have been established in California, Colorado, Montana, and Washington. Results from these studies have caused a major shift in post-fire rehabilitation strategies.
- Scientists in Moscow, in collaboration with Campbell Scientific, Inc., and the Missoula Technology and Development Center, have developed a portable duff moisture meter. It will be useful in predicting fire behavior and fire effects, thus contributing to safe and effective prescribed burning.

## SOME CLIENTS/COLLABORATORS

American Forest and Paper Association

Bonneville Power Authority

Forest Management Service Center

FS Missoula and San Dimas Technology

Development Centers

FS Stream Systems Technology Center

University of Idaho

Idaho Department of Fish and Game

Nez Perce and Spokane Tribes

Oregon State University

Panhandle, Clearwater, Boise, and Payette

National Forests

University of Montana

University of Nevada-Reno

USDI, Bureau of Land Management

USDI, Bureau of Reclamation

USDI, Fish and Wildlife Service

Utah State University

Washington State University

