



NEW YORK

FOREST SERVICE RESEARCH AND DEVELOPMENT

STATE FUNDING HISTORY	Enacted FY 2003 (\$)	Enacted FY 2004 (\$)	Pres. Budg. FY 2005 (\$)
SYRACUSE			
NE-4952 Urban Forest-Human Interactions	1,252,515	1,308,550	1,324,818
NEW YORK TOTAL	1,252,515	1,308,550	1,324,818

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 **Northeastern Research Station**, headquartered at Newtown Square, Pennsylvania, maintains forest and rangeland research and development programs across 13 northeastern states (i.e. CT, DE, MD, MA, NJ, NY, NH, ME, OH, PA, RI, WV, and VT). The FY 2005 President's Budget for the Northeastern Research Station is \$34,697,000. The Northeastern Research Station maintains one research work unit in New York, located at Syracuse with research scientists located in Baltimore, Maryland.

SYRACUSE

NE-4952, Effects of Urban Forests and Their Management on Human Health and Environmental Quality. Researchers in this unit work with numerous cooperators to: (1) measure the structure and health of urban forests, their variation across the United States, and change through time; (2) assess how urbanization is affecting the structure, function, and health of forests within and around urban areas; (3) to quantify the net effects of urban

forest structure and its management on the environment; and (4) develop management tools and guidelines that can be used to optimize the environmental benefits of urban forests to improve human health and environmental quality in and around urban areas.

FY 2005 PROGRAM CHANGES:

- **Science-based Technology Transfer.** 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:

- An assessment of the indicators of the condition and use of urban and suburban areas was conducted as part of the state of the nation's ecosystem report.
- Research results show that urbanization influences nitrogen sinks and cycling in urban areas, as well as carbon storage in urban soils. Improved management to mitigate or enhance these effects could improve tree health in urban and urbanizing areas.
- Research continues to provide information about how trees reduce atmospheric concentrations of carbon dioxide (a dominant greenhouse gas)

through tree growth. This information will enable policy-makers to consider urban forests in management strategies to effectively manage greenhouse gases.

- An investigation of urban soils data revealed that soil organic carbon can be directly and indirectly affected by urbanization. An understanding of carbon levels and dynamics in urban soils is essential for understanding and quantifying ecosystem effects on the global carbon cycle and global warming.
- An easy-to-use field data collection manual for use with Urban Forest Effects (UFORE) model was completed and placed on a Forest Service web-page for easy distribution. This manual provides a means for anyone to collect data on their own urban forest (e.g., city area or neighborhood) that can be analyzed by the UFORE model. This model quantifies urban forest structure, functions (e.g., air pollution removal) and value. The information collected by the user and analyzed by the model can be used to improve urban forest management and consequently environmental quality and human health in urban and urbanizing areas.

SOME CLIENTS/COOPERATORS:

Brooklyn Borough President's Office
Cornell University
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City University of New York
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