The Year in Forestry

State and Private Forestry in the Northeast and Midwest

Fiscal Year 2005

United States
Department of Agriculture
Forest Service
Northeastern Area
State and Private Forestry
NA-IN-06-06
Newtown Square, PA
April 2006

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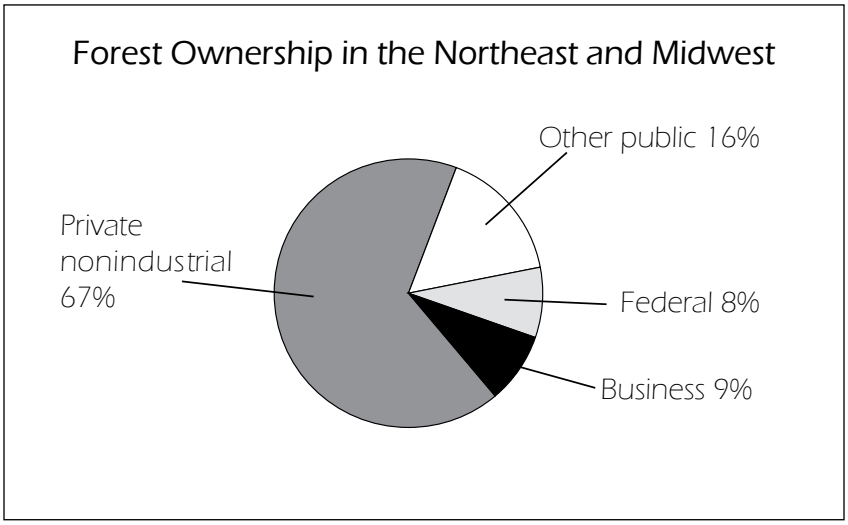
Introduction

The geographic region we call the Northeast and Midwest stretches from Maine to Minnesota, south to Missouri, and east to Maryland and the District of Columbia. Nearly half of the Nation's population lives here on slightly less than 20 percent of the Nation's land area. Representing one of the largest concentrations of privately owned forests in the world, more than 75 percent, about 128 million acres, is in private ownership.



Data source: Table 2. Forest resources of the United States, 2002. GTR-NC-241. USDA Forest Service. 2004.

Trees and forests are fundamental to the region's environmental, social, and economic health. Clean water, wildlife, rich soils, and life-giving vegetation are due in large measure to healthy forests and trees. Forests protect drinking water, filter pollutants, and hold water in forest soils, where it gradually makes its way to lakes, rivers, and underground stores.

The 20 Northeastern and Midwestern States are the Nation's leading producers of forest-based products and employment. Forest-related businesses rank in the top 10 in economic importance in every State except Rhode Island, where it ranks 12th. Region-wide, 777,000 workers harvest and process wood products, earning a combined annual payroll of nearly $28 billion.

About the Northeastern Area

The Northeastern Area, a unit of the State and Private Forestry branch of the USDA Forest Service, serves the 20 Northeastern and Midwestern States and the District of Columbia. We work with State forestry agencies and many other partners to influence the wise management, protection, and sustainable use of urban and rural forest resources. We provide financial support and professional expertise to States, private forest landowners, nonprofit groups, tribal nations, and communities, protecting and enhancing forest resources on both Federal and non-Federal forest lands. State and Private Forestry programs are voluntary and nonregulatory, although partners and clients must comply with Federal, State, and local laws.

The Northeastern Area is headquartered in Newtown Square, Pennsylvania, and has field offices in Durham, New Hampshire; Morgantown, West Virginia; and St. Paul, Minnesota. It also stations employees at other strategic locations such as the Chesapeake Bay and the Army Environmental Center in Maryland.

Technical and Financial Assistance

Northeastern Area specialists offer technical assistance that spans a wide range of disciplines, including forest management, insects and diseases, conservation education, remote sensing and mapping, sustainability and ecology, wildland fire prevention, forest products manufacturing, land conservation, and others. Most often, specialists provide services to State Foresters and their staffs, who in turn deliver direct assistance to landowners and communities. Last year, nearly 805,000 acres of privately owned forest land was brought under stewardship management via the Landowner Assistance Program, bringing the total to more than 12 million acres since the program began in 1990. More than 7,000 cities and communities participate in urban and community forestry programs, with over half that number receiving some form of assistance in Fiscal Year 2005.

In addition to its core programs, the Northeastern Area supports special initiatives such as the New York-New Jersey Highlands Project and the Chesapeake Bay Program. Here, targeted Federal funding and technical expertise make a real difference in people's lives and on the land. Lessons learned from these initiatives can be applied to similar situations elsewhere.

In Fiscal Year 2005, the Northeastern Area awarded $89 million in grants. Grantees use funds for activities as diverse as forest management plans, improving wildlife habitat, planting trees adjacent to streams, or enhancing firefighting capability. Grant recipients "match" Federal funds with money, materials, or time. Matching requirements extend the reach of Federal funds, bring more people into the projects, and help to ensure long-term interest and commitment.

Sustainability means meeting the needs of the present without "borrowing" from the future.

Because the decisions landowners make ultimately affect us all, the public has a vested interest in helping landowners and communities care for their forests. Credible information and targeted financial assistance are valuable tools for helping individual landowners meet their goals while providing public benefits.

Strategic Priorities and Selected Accomplishments

The Northeastern Area's mission statement defines our primary purpose: *Lead and help to support sustainable forest management and use across the landscape to provide benefits for the people of the 20 Northeastern and Midwestern States and the District of Columbia.*

The Northeastern Area uses a strategic plan, developed in cooperation with State Foresters and other key partners and customers, to guide its activities. The plan is based on 7 *criteria* and 67 *indicators* of *sustainability* developed in 1995 by representatives of 12 countries, including the United States. The Northeastern Area Association of State Foresters and the Northeastern Area adopted the 7 international criteria and selected 18 indicators that fit our region.

The Northeastern Area's strategic plan contains three goals and associated objectives. They are listed below with just a sample of the many Fiscal Year 2005 program accomplishments that support them.

Goal 1—Promote sustainable forest management

Sustainability has many facets: maintaining sufficient productive forest land, keeping it from being subdivided or fragmented to the point where it cannot sustain key ecological functions, and removing goods and services from the forest at a rate that does not exceed what nature can replace. Threats to sustainability include damaging insects and diseases, invasive plants, pollution, and other harmful human activities. State-of-the-art management and harvesting techniques safeguard forests—by minimizing soil erosion, for example—helping to ensure future productivity.

Objective: Maintain forest land area and reduce the rate of forest fragmentation

- *Backyard Woods*. The number of forest landowners who own 10 acres or less is growing rapidly. Nationally, 6 million landowners fall into this category, a number that is expanding by 25,000 per year. Traditionally, forest landowners who wanted management assistance received individualized contacts, an approach rendered impractical by the large and growing number of small ownerships.

Providing service to these property owners, who, by themselves, own small tracts, but together control substantial acreage, presents a challenge to State and Federal agencies. Last year, a team of experts from the Northeastern Area St. Paul Field Office developed *Backyard Woods*, a technical assistance campaign tailored specifically to small landowners. A cooperative project of the National Association of Conservation Districts, the National Arbor Day Foundation, and the Northeastern Area, *Backyard Woods* includes a comprehensive how-to guide for improving forest land, a series of in-depth tip sheets, suggestions for family activities, and a Web site for additional information. Project materials were distributed to State forestry agencies, cooperative extension offices, soil and water conservation districts, and promoted to more than 1 million members of the National Arbor Day Foundation.

- *Forest Legacy*. The Forest Legacy Program, which protects important forest land that is threatened by development, reached an important milestone this year: the States of Ohio and Missouri completed their Assessments of Need, which were approved by the Secretary of Agriculture. Now all 20 of the Northeastern and Midwestern States are eligible to participate in the program.

Objective: Increase public appreciation of the value of forests

- *The Benefits of Urban Trees*. In cooperation with the Pacific Southwest Research Station and the Minnesota Department of Natural Resources, the Northeastern Area Midwest Urban Forestry Center assisted in a Minnesota Arbor Day public awareness campaign promoting the benefits of urban trees. Trees growing around the State capitol were adorned with price tags that specified their economic value to the community. All of the major Minneapolis/St. Paul print and television media outlets covered the event, resulting in 7 articles, 3 radio spots, and 23 television teases and segments. The combined monetary value of this coverage—all focused on the benefits and importance of city trees and urban forestry—exceeded $35,000.

- *Anacostia River Environmental Fair and the 10th Annual Washington County Groundwater Festival*. Environmental education for youth is an investment in our Nation's future. The Northeastern Area supported many youth events in Fiscal Year 2005. At the Anacostia River Environmental Fair, we cooperated with the Monongahela National Forest and the District of Columbia Department of Health Education and Community Outreach Program, reaching more than 500 elementary and middle school students from Washington, DC. For many of these students, the event was their first exposure to environmental learning.

  In Pennsylvania, we also cooperated with the Washington County Watershed Alliance and Penn State Cooperative Extension to conduct the 10th Annual Washington County Groundwater Festival at California University of Pennsylvania. More than 900 sixth-grade students from 9 public schools learned about the many important functions of forest riparian buffers.

Objective: Reduce growth loss and tree mortality caused by damaging agents

- *Aerial Survey Map Viewer.* The Northeastern Area St. Paul Field Office has developed Web-based technology that allows users to quickly access, display, customize, and print maps from aerial survey damage data. Now landowners and managers have greater access to forest health information and can perform data analyses without having to use complex GIS software.

  In addition to current year damage reports, the Web site is also a repository for historical forest damage data, allowing year-to-year comparisons and development of predictive models. The time needed to convert survey data into maps has dropped from several months to 2 weeks.

- *Firewise Program*. Homeowners in 301 Maryland, Minnesota, New Jersey, Pennsylvania, West Virginia and Wisconsin communities are learning Firewise concepts to better protect lives and property in fire-prone forested areas. The program targets individual homes and communities in high-risk wildland/urban interface zones, offering assistance in developing wildfire protection plans that reduce property loss and improve conditions for wildlife and recreation.

Goal 2—Enhance the capacity of forests to provide public benefits

Forests contribute to environmental health and spur economic growth, values that benefit everyone. Landowners need the tools to manage forests wisely, including education, technical assistance, a reasonable regulatory environment, and the potential for a financial return on their investment.

Northeastern and Midwestern forests protect drinking water, shelter wildlife, support forest-based recreation, and provide thousands of jobs. Studies show that community forests reduce heating and cooling costs by at least 10 percent and significantly increase business revenue in shopping districts. Moreover, trees intercept a portion of air and water pollution, particularly in densely populated cities.

Objective: Increase the competitive edge of forest industry to meet the demand for forest products and energy

- *A Planning Guide for Small and Medium Size Wood Products Companies*. After many requests from wood products companies, universities, and State agencies, the Marketing and Utilization Specialist at the Northeastern Area St. Paul Field Office teamed up with Dovetail Partners, a private firm, to revise, publish, and distribute the second edition of *A Planning Guide for Small and Medium Size Wood Products Companies: The Keys to Success*. Based on a number of research studies that focused on the successful characteristics of small and medium size wood products companies, the publication provides information that will help businesses gain a competitive edge in the marketplace.

- *Wood Energy Assistance*. Staff at the Northeastern Area Durham Field Office assisted the Crotched Mountain Foundation rehabilitation center and the State of New Hampshire with plans to convert the center's oil-fired district heating system. The new wood-chip-fired system will heat 750,000 square feet of campus buildings, far surpassing the 200,000-square-foot heating capacity of the old system.

  Vermont converted its 26th school to wood-chip-generated heat. This environmentally friendly conversion to clean-burning wood chips will reduce emissions, improve indoor air quality, and dramatically lower costs. The average annual savings per school is $40,000—about the salary for one teacher.

Objective: Enhance the quality of urban life, environmental health, and water resources

- *Upper Mississippi River Forest Partnership.* The Upper Mississippi River watershed comprises 15 percent of the total Mississippi watershed but contributes more than 30 percent of the excess nitrogen. Too much sediment reaches the river, creating navigation problems and delivering harmful pollutants. Dredging costs more than $100 million annually.

  By helping to control runoff and sediment, sustainable forest management improves watershed health and has the potential to reduce dredging and other costs. State Foresters from Illinois, Indiana, Iowa, Minnesota, Missouri, and Wisconsin, and the Northeastern Area formed the Upper Mississippi River Forest Partnership. They are identifying critical areas for improving water quality, forest conservation, and wildlife habitat and are working with the National Fish and Wildlife Foundation to fund projects.

- *Urban Watershed Forestry Manual*. This new publication outlines the tools and techniques needed to predict future watershed forest cover and develop a plan to increase forest cover. After reviewing the manual and working with Northeastern Area staff, three cities, including Baltimore, committed to developing tree canopy goals during the coming year. To help implement these initiatives, the Northeastern Area established a partnership with the Chesapeake Bay Trust to provide $300,000 in private funds annually for tree planting as part of a new Chesapeake Community Greening Initiative.

Goal 3—Provide effective public service

The Northeastern Area's role is to promote effective forest policies, provide credible information about the region's forest resources, and provide technical and financial assistance to States, communities, landowners, and other partners. Both the Northeastern Area and its partners work hard to maintain their capacity to deliver forestry programs and to develop and maintain effective public and private partnerships.

The Northeastern Area is also committed to improving homeland security by collaborating with other Federal and State agencies, securing aircraft and facilities, and training others to use the Incident Command System for responding to emergencies, both natural and human-caused.

Objective: Promote consistent policies among Federal, State, and local governments to more effectively address forestry issues

- *Northern Forest Lands Council 10-Year Evaluation*. In 1990, the Governors of Maine, New Hampshire, New York, and Vermont convened a high-level, multistate panel of public and private interests. Their mission: to assess the economic, social, and environmental status of the "northern forests," which lie in a swath across the remote, northern reaches of each State, and recommend steps toward sustaining and improving them. After an intensive series of meetings, public input sessions, and research projects, the group released a regional assessment and key recommendations in 1994. Per the group's charter, they disbanded at the conclusion of the study.

  Recently, the Northeastern Area Durham Field Office provided financial and staff support to the Northeast State Foresters Association to analyze current conditions 10 years after the release of the study report, so that policy discussions could be based on sound data and trend analysis. Each Governor named representatives to participate in forums and public meetings. The final report includes four new recommendations that focus on the need to maintain conservation gains while stepping up actions to improve economic and social conditions in the region's communities.

Objective: Improve homeland security by collaborating with other Federal and State agencies

- *Emergency Support Functions*. Northeastern Area Staff and FEMA conducted two joint training sessions relating to Emergency Support Functions-4. ESF-4 funding covers a wide range of support services. A few examples include logistics, providing saw crews for removing downed trees and debris, supporting urban and wildland firefighting efforts, and contracting for catering and personal care services. The topic of these training sessions was "Detecting and Suppressing Wildland, Rural, and Urban Fires in the Eastern United States." Several staff members assisted with hurricane relief in the devastated Gulf Coast region.

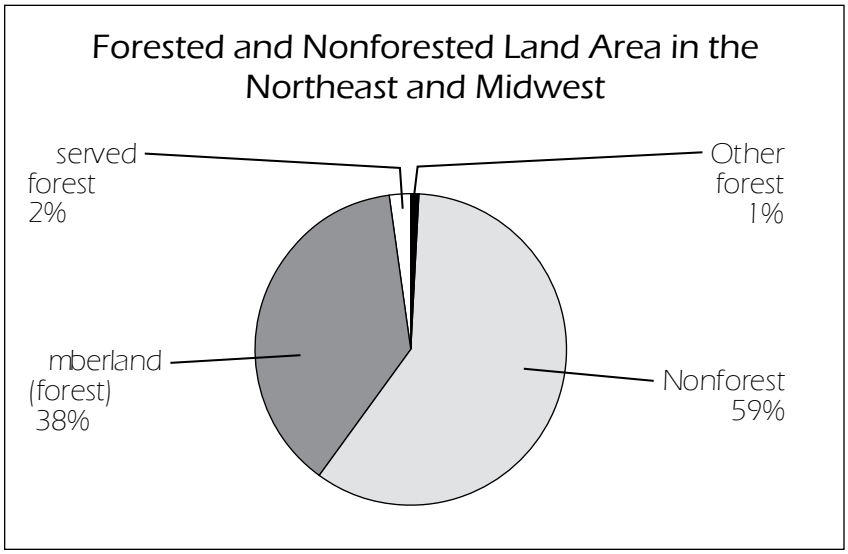
Objective: Help our partners maintain the capacity to effectively deliver forestry programs

- *Investing Where It Matters Most*. The Northeastern Area and the National Association of State Foresters began a joint project to identify regionally significant problems and opportunities, and to strategically invest human and financial resources toward addressing them. Key issues include exotic and invasive species, forest fragmentation and loss of forest land, public awareness of forestry, and improving and maintaining the forest products industry.

Forest Condition and Trends

Overview

erall, the region's forests are healthy and productive. The number of ted acres increased steadily during most of the 20th century, primarily e to farm abandonment. From 1997 to 2002, however, forested acres ned slightly, mostly as a result of development. About 41 percent of e land area in the Northeast and Midwest is forested, compared with 33 ent nationally.



a source: Table 1. Forest resources of the United States, 2002. GTR-NC-241. A Forest Service. 2004.

restry terms, *timberland* refers to forests that are capable of growing mercially valuable trees. Reserved forests may be capable of growing mercial crops but have been legally withdrawn from harvesting. mples include restrictive covenants or wilderness designations on national ts. Just 2 percent of Northeastern and Midwestern forests are in the ved category, compared with 11 percent of Western forests.

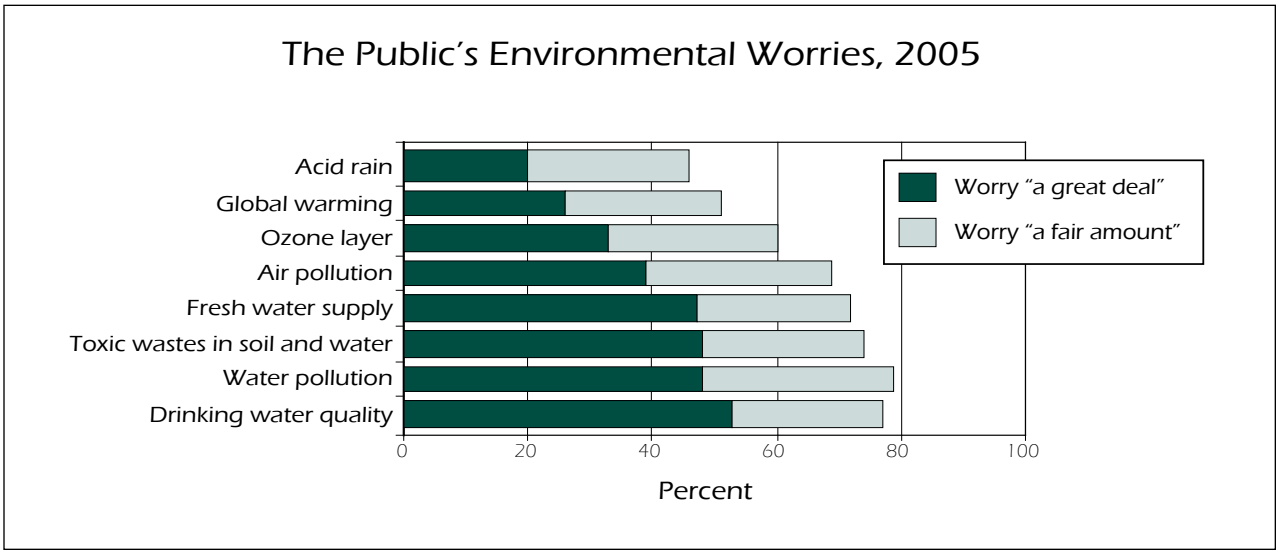
Other forest facts:

- Ninety percent of the region's plant and animal species being monitored are faring well, compared with 67 percent nationally.
- Northeastern and Midwestern forests store more carbon than any other region of the country.
- More than 20,000 companies in the region manufacture lumber and wood products, including furniture, paper, and related products.

Conservation Begins at Home

A majority of Americans say that the environment is among their most important concerns, so much so that 74 percent of the people who responded to a 2005 Harris Poll agreed with this statement: *"Protecting the environment is so important that requirements and standards cannot be too high, and continuing environmental improvements must be made regardless of cost."*

In a similar vein, a 2005 Gallup Poll showed that 63 percent of the respondents believe environmental quality is declining, and 43 percent doubt that the environment will be in better condition 20 years from now. Respondents were asked to rate their level of worry on a number of specific issues; the graph below shows what percentage of respondents worried "a great deal" or "a fair amount" about them (data source: www.pollingreport.com/enviro.htm).



Despite the high premium that most Americans place on the environment, about two-thirds say the general public isn't doing its fair share to improve it. Perhaps people are unsure about how to take action beyond the familiar "reduce, reuse, recycle."

One of the best ways to do so may be literally in their backyard—protecting and enhancing forests and trees. Forests offer at least a partial solution to many of the environmental issues that the public is most worried about.

The Issue	How Forests and Trees Help
Drinking water quality	Provide protective buffers for water supplies
Water pollution	Filter out pollutants, so less reaches water supplies
Fresh water supply	Hold water in soil, releasing it slowly to water bodies and underground stores
Air pollution	Capture pollutants, especially important in cities
Ozone layer	Use carbon dioxide, store carbon, and release oxygen
Global warming	Store carbon in wood and leaves, keeping it from entering the atmosphere

For landowners and citizens who are interested in forest conservation and want to "act locally," there are many sources of information and assistance. Federal and State agencies, county extension offices, nonprofit organizations, community groups, universities, private consulting foresters, and others have a variety of resources to offer.

USDA Forest Service State and Private Forestry programs support citizen-based, grass roots action as part of the Nation's overall efforts to maintain and improve environmental quality. Hundreds of public and private partnerships in the Northeast and Midwest—and their collective successes—demonstrate the validity of that concept. Here are just a few examples:

- *Urban and Community Forestry Councils and Community Grants*. Citizen-based, grass roots involvement is at the heart of this program. Council memberships represent a full range of stakeholders who work hard to bring underrepresented groups and different points of view to the table. Modest grants, administered by States and targeted primarily to neighborhood projects, provide a catalyst to nurture fledging projects. Nearly half a million volunteer hours were dedicated to improving community environments in 2005.
- *Forest Legacy Program*. A model of collaborative stewardship, this program emphasizes the use of conservation easements over Federal land purchases to protect important forest lands from development. Using this approach, conservation dollars go further and property stays on the local tax rolls.
- *Growing Native*. In the Potomac watershed, more than 5,000 volunteers collected 20,000 pounds of native tree seeds from nearly 250 sites. State nurseries grow the trees to plant in the watershed. More than a half a million trees have been planted since 2000. Growing Native will soon be part of fourth- and sixth-grade school curricula and is expanding beyond Maryland and the District of Columbia to Pennsylvania and Virginia.

- *Landowner Assistance Programs.* Private forest landowners control about three-quarters of the forest land in the Northeast and Midwest. Since the Landowner Assistance Programs began 13 years ago, the owners of roughly 12.5 million acres have developed Forest Stewardship Plans and identified management objectives, critical first steps toward sustainable forest management on their property.

Citizen-based, grass roots involvement in conservation is making an impression at the national level. In August 2005, the White House, the Council on Environmental Quality, and several Federal environmental agencies sponsored a national conference attended by nearly 1,200 citizen activists. The effort documented more than 500 local projects spanning everything from wetlands restoration to invasive species removals to "re-greening" of blighted neighborhoods. A Web site created for the occasion logged half a million visits.

A critical challenge is how to capitalize on the public's strong support of environmental programs and motivate people to take action. Small actions taken by many truly can make a difference. Programs that offer critical expertise and information to landowners, citizens, and communities can help each of us become part of the solution.

Making a Difference

The Northeastern Area, its State partners, and other cooperators are making a difference across the Northeast and Midwest. Here is a sample of the innovative work that characterizes our public and private partnerships.

Trees Curb Urban Runoff

Baltimore's Watershed 263 drains a mix of industrial, institutional, and residential land. On about 75 percent of the watershed, runoff cannot filter through the soil because of buildings and pavement; instead, it rushes to storm drains, ultimately dumping pollutants into Baltimore Harbor and Chesapeake Bay. Although trees and green space can greatly reduce harmful runoff, they cover scarcely more than 5 percent of the land area.

To help revitalize these urban communities and create a healthier environment, the USDA Forest Service, the Stakeholder Council, and the Baltimore City Department of Public Works launched the Watershed 263 Project. The Parks and People Foundation of Baltimore took the lead, working with the city, Federal agencies, and scientists in the Baltimore Ecosystem Study to develop a stormwater management plan and landscape strategy. Projects are already producing measurable results:

Students stencil storm drains urging people to help keep pollution out of the Bay.

- Completed 40 public education and training workshops, and organized outreach campaigns and restoration projects at 11 schools, 10 neighborhood associations, and 5 businesses.
- Removed 2 acres of old schoolyard asphalt, planting trees and greenery in its place. Workers will replace 2 more acres of asphalt with greenery in 2006.
- Planted 600 street, park, and schoolyard trees. Many more were mulched and cared for by community volunteers and AmeriCorps youth crews.

Boston and Washington, DC, have requested similar assistance with their stormwater management plans.

Legacy Protects 30 Tracts Spanning 10 States in 2005

Those who seek to protect land are motivated by many ideals, whether it's stemming the tide of rampant development, protecting vital water supplies, or simply acting on the desire to save something rare and beautiful. Each tract is unique—a one-of-a-kind opportunity to secure something special that, once gone, may never be replaced.

The Forest Legacy Program has helped to secure the future of more than three-quarters of a million acres of special places since it began in the 1990. With the cooperation of dozens of public and private partners, the program protected nearly 23,000 acres in 10 States in Fiscal Year 2005.

- In Vermont, key acquisitions in the State's "Northeast Kingdom" could pave the way for reintroduction of the Canada lynx.
- In the small town of Freedom, New Hampshire, the State's largest remaining undeveloped tract—now conserved—helps protect the State's largest stratified drift aquifer.
- In Indiana, conservationists protected more than 1,300 contiguous acres of lush hardwood forests just 25 miles from Indianapolis.
- In Maryland, where burgeoning population growth threatens the remaining open space, the program helped to acquire a conservation easement along a creek flowing into Chesapeake Bay.

Maintaining and improving water quality is just one of the many benefits of protecting lands through the Forest Legacy Program (photo: Don VanHassent).

Early Detection the Key to Halting Exotic Pests

With advancing globalization and international trade, the risk of accidentally importing destructive insects and diseases continues to rise. Once a pest gains a foothold, its numbers can increase rapidly, launching a costly, potentially devastating ecological assault on our forests and communities. For example, in just the few years since it was introduced to the United States, the emerald ash borer has cost governments, forest and nursery industries, and citizens millions of dollars and killed millions of ash trees in several Midwestern States.

If detected early, invasive pests can be monitored, managed, and sometimes even eradicated. The Early Detection Rapid Response (EDRR) system is a new trapping program to detect invasive species soon after their introduction, offering natural resource managers their best chance to eradicate populations.

The detection of invasive insects through the Early Detection Rapid Response system, such as this tiny Asian bark beetle (*Xyleborus seriatus*) measuring only 3 mm long, enables resource managers to take steps before populations become widespread.

The Northeastern Area recently awarded the State of Massachusetts a grant to test the EDRR system for its ability to find invasive insects. As specialists searched for bark beetles, they detected a tiny Asian bark beetle, its first known occurrence in North America. Fortunately, the beetle had not killed any trees, but the long-term consequence to native ecosystems is unknown. Further trapping will determine the extent of the infestation and help resource managers assess the risk this insect poses to local forests. Best of all, the find has demonstrated the value of the EDRR system.

Greater Catastrophe Averted During a Devastating Wildfire

At first glance, the Cottonville Fire in Adams County, Wisconsin, which burned 3,410 acres in May 2005, seems anything but a success story. Driven by strong winds, it turned out to be one of the State's most devastating wildfires in nearly 25 years. In 11 hours, it destroyed 30 homes and damaged 15 others, burned 60 outbuildings and trailers, and destroyed timber valued at $4 million.

Despite the devastation, the damage would likely have been much worse if not for National Fire Plan (NFP) activities months before the fire. The Wisconsin Department of Natural Resources used NFP funds to reduce fuels, held mock exercises with local firefighters, and established Incident Management Teams to train and prepare for large fires. They also developed fire action plans for each of the State's nine fire areas. Public outreach included a fire prevention billboard, radio announcements, a Firewise workshop, a newsletter, a *Living With Fire* newspaper insert delivered to every residence, and a tax bill insert outlining ways to protect homes from wildfire.

A post-fire assessment reinforced the importance of education and preparedness, concluding that nearly 300 homes were saved, more than 125 people were evacuated safely, and there were no injuries or fatalities, thanks to NFP efforts. Three homes were saved because of specific Firewise actions taken by their owners.

The Cottonville fire, shown here burning perilously close to homes, would have been much worse if not for a coordinated preparation effort in the months before the fire.

Fiscal Year 2005 Accomplishments

Grey Towers National Historic Site

Grey Towers National Historic Site was the home of USDA Forest Service founder and first chief, Gifford Pinchot. Set on 102 acres in Milford, Pennsylvania, the French châteauesque mansion was donated to the public by the Pinchot family in 1963 and dedicated by President John F. Kennedy as the home of the *Pinchot Institute for Conservation*.

With legislation enacted in 2005, Grey Towers became the first and only national historic site administered by the USDA Forest Service. Grey Towers is managed by the Northeastern Area, serving local, regional, and national audiences. With a new director, organizational improvements, a comprehensive strategic plan, and much of a $14 million renovation complete, Grey Towers is setting the course for continued innovation and service.

Gifford Pinchot's conservation legacy is carried on today via public and private partnerships that emphasize education and interpretation, leadership development, and historic preservation and maintenance. Accomplishments are measured with feedback from program participants and by the numbers of visitors, program participants, partners, and conference center uses. In Fiscal Year 2005, the staff used focus groups, feedback, and evaluation forms to enhance its tracking program.

Accomplishments

Grey Towers Conference Center

- Hosted meetings and conferences for more than 800 participants in collaboration with Federal, State, and regional natural resource agencies and organizations.
- Hosted numerous special conferences, including the USDA Forest Service State and Private Forestry national meeting and the United Nations Forum on Forests.

National Leadership Program

- Coordinated 12 Forest Supervisors Leadership Program sessions for 102 participants in various locations nationwide, working through the USDA Forest Service Deputy Chief of National Forest System and the Forest Supervisors.
- Provided two Coach Training Programs for 28 participants.
- Reintroduced the National Policy Seminar after a hiatus, facilitating a program for 40 participants.

In 2005, Congress designated Grey Towers a national historic site. With this legislation and much of a $14 million renovation complete, Grey Towers offers new opportunities to serve the public as the Pinchot family intended.

Interpretation and Conservation Education

- Educated 17,000 visitors about the Pinchot conservation legacy, conducting more than 900 interpretive tours of the mansion and gardens.
- Demonstrated curriculum-based conservation education topics to nearly 3,500 children and adults. Introduced secondary school students to forest history and stimulated critical thinking on conservation issues through the new *A Day in the Life of a Forester* program. Expanded collaborations with the regional library, lands conservancy groups, and the Audubon Society.
- Generated nearly $18,000 in gross revenue through the Grey Towers Interpretive Outlet in cooperation with the Eastern National Forest Interpretive Association.
- Strengthened the link between the arts and nature by introducing field journaling, photography, music, and landscape painting programs.

Participants record their observations during field journaling workshops, enhancing the link between nature and art.

Volunteers and Community Outreach

Volunteers provide valuable services and are a vital link to the community. More than 50 volunteers donated over 1,600 hours of their time, worth more than $22,000, in efforts ranging from interpretive programs to landscape maintenance. In addition, Grey Towers hosted five Student Conservation Association interns, training them in interpretive skills. Community initiatives included helping the regional chamber of commerce secure a Heritage Tourism Marketing grant and participating in a local tree planting project.

Partnerships and Collaborations

- The Grey Towers staff cooperates closely with the Pinchot Institute for Conservation (PIC), a forest conservation nonprofit organization. The mission of the PIC is to promote leadership in conservation thought, policy, and action, and to facilitate communication and closer cooperation among resource managers, scientists, policymakers, and the American public. Using a concurrent strategic planning process, both organizations are currently engaged in an earnest dialogue to sharpen the focus on programs and projects that are beneficial to both organizations.

  In Fiscal Year 2005, Grey Towers and the PIC cofacilitated both the Conservation and the Arts program and a curriculum-based school program on forest conservation history. Grey Towers also provided support and a base of operations for the PIC's deer management policy study.
- Completed a cooperative agreement with the Forest History Society in Durham, North Carolina, publishing three books, compiling oral histories, adding to the Web page, and assisting with Forest Service Centennial activities.

Volunteers are a valuable resource at Grey Towers, assisting with tasks ranging from interpretive programs to landscape maintenance.

- Provided support services and a base of operations for the New York-New Jersey Highlands Study Program, which assists the region's communities, developers, and forest landowners who are facing development pressure.
- Provided public educational and interpretive programs with partners, including the Pennsylvania Department of Conservation and Natural Resources, the National Park Service, the Pinchot family, the Milford Experimental Forest, the National Audubon Society, The Nature Conservancy, the Student Conservation Association, and other regional entities, including the Pocono Arts Council, Penn State Cooperative Extension, the Milford Garden Club, the Milford Enhancement Committee, the Pike County Historical Society, and the Preservation Trust.

Special Initiatives

Forest Service Centennial Celebration

Grey Towers figured prominently in the commemoration of the Forest Service Centennial, offering an ideal foundation to reflect on the past 100 years and to plan and create a vision for the next 100 years.

- Organized and supported the Centennial Road Tour, a 30-program event featuring forestry historian Dr. Char Miller, exposing thousands of people to the environmental and political history that shaped the Forest Service and America's public lands.
- Recruited a local quilting guild for the Centennial Quilt Project, an artistic interpretation of Forest Service history, to construct the Heritage Block of the national Centennial quilt.
- Dedicated two employees to the Smithsonian Folklife Festival. They helped design and staff exhibits at the July festival, sharing heritage and forestry information with 1.1 million visitors.
- Planned and delivered a Centennial Regional Forum on Organizational History and Philosophy, 1 of 12 held nationwide in preparation for the national Centennial Congress.
- Participated in the Centennial Congress, sharing outcomes from the Regional Forum.
- Received the Chief's Award from Forest Service Chief Dale Bosworth. Grey Towers employee Lori McKean received the award recognizing her outstanding contributions to the Forest Service mission and exemplifying dedication to the New Century of Service vision.
- Participated in a Forestry Exchange Program, a two-part European/U.S. Forestry Symposium recognizing the role of the French National Forestry School and others in educating America's first professional foresters.

The Grey Towers historic collection includes items such as this reticulated china trade bowl with what is believed to be the Pinchot family crest on both sides.

Children build bluebird boxes at Grey Towers first annual Festival of Wood.

Literary Outreach

- Led an initiative in cooperation with *Highlights for Children* magazine to educate 15,000 school children across the country about Gifford Pinchot's contributions to conserving America's public lands.
- Facilitated the distribution of a new children's book, *Midnight Forests, a Story of Gifford Pinchot and Our National Forests*.

Festival of Wood

Launched the first annual Festival of Wood, a celebration of our natural and cultural heritage of wood. The festival raised awareness about how professional and scientific forestry helps meet society's need for wood, providing an event that benefited the regional commercial and tourism industry and offered opportunities for outreach to the Forest Service and its partners.

Preservation and Resource Management

- *Visitor Services Project*: Continued progress and oversight of the new visitor pavilion, parking area, and pedestrian walkways, although the project could not be completed in Fiscal Year 2005. Setbacks included weather, contract implementation, and issues with materials. Partners include the National Park Service, the Denver Service Center, the Pennsylvania Department of Transportation, the Pike County Industrial and Commercial Development Authority, and the Commonwealth of Pennsylvania Redevelopment Assistance Capital Program.
- *Maintenance Facility*: Completed construction of a new maintenance facility, providing a more suitable location away from the Grey Towers historic core and the adjacent Family Trust homes.
- *Landscape Restoration*: Continued maintenance and refurbishing of the Long Pool, walled cutting garden, historic apple trees, and other garden features.
- *Curatorial and Historic Artifacts*: Continued ongoing care of museum spaces, and assessment and cataloguing of the 11,000 artifacts, photographs, and archival materials in the collection. Accepted additional curatorial artifacts into the collection, including a large collection of Pinchot family items dating back to the mid-1800s and a taxidermied hawksbill sea turtle that was harvested by Gifford Pinchot in 1929.

Forest Health Management Program

Forest health describes the overall condition of forests and trees and how well they recover from stress. Many factors affect forest health. Some are natural, such as insects, diseases, ice storms, tornadoes, or droughts. Human-caused stressors include air pollution, soil erosion, and climate change. Combinations of stressors are potentially the most harmful, much as we are more likely to become sick when our resistance is low.

Many stressors come and go, making forest health difficult to assess at any one time. For example, insect damage varies from year to year and decade to decade, depending upon weather, natural population cycles, and other factors. A clear picture requires long-term monitoring, looking at factors such as tree age and species, growth and death rates, tree condition, the number and frequency of stressors, and the condition of soil, water, and wildlife.

Modern life may be introducing stressors faster than forests can respond to them. Exotic invasives—harmful insects, diseases, plants, or animals that were introduced by humans, either deliberately or by accident—are a particular concern, often spreading unchecked in the absence of their natural enemies.

The ***Forest Health Management Program*** monitors and assesses long-term forest health to detect native pest outbreaks and exotic pest introductions early, and provides technical assistance to land mangers so they can respond to these threats. The program provides services directly to States, national forests, other Federal land managers, and tribal governments. The program has five components:

- *Cooperative Lands Forest Health Management*: to detect, monitor, evaluate, and report on forest pests on non-Federal public and private lands and to improve pest management technology.
- *Cooperative Lands Pest Prevention and Suppression*: to control forest insect and disease outbreaks on non-Federal public and private lands.
- *Federal Lands Forest Health Management*: to detect, monitor, evaluate, and report on forest health, and to improve pest management on national forests, other Federal lands, and tribal lands.

Outreach to partners is a critical component of all of the Northeastern Area's programs, such as this risk tree training session for New York DOT employees.

- *Federal Lands Prevention and Suppression*: to control forest insect and disease outbreaks on Federal and tribal lands.
- *Forest Health Monitoring*: to monitor and report on overall forest conditions on a national basis.

Accomplishments

Surveys and Assessments

- Completed pest surveys on 207.1 million acres of non-Federal public and private forest land and 23 million acres of forest land on national forests, other Federal sites, and tribal lands.
- Provided training and continued to incorporate digital sketchmapping technology into aerial surveys.
- Implemented an aviation management plan and an automated flight following system for aerial surveys in all Northeastern Area field offices.
- Completed a biological evaluation for Dutch elm disease in Minneapolis.
- Trained cooperators in Illinois, Kansas, Michigan, Ohio, and Wisconsin on sampling procedures for sudden oak death.
- Cooperated on surveys to detect the recently discovered *Sirex noctilio* wasp in New York. Surveys

Surveys in Massachusetts were the first in the country to detect and document an exotic beetle, Xyleborus seriatis.

included contacting local businesses that may have unknowingly imported infested materials, aerial detection flights, ground surveys, and setting traps.

Assistance to Customers and Partners

Exotic Insects

The ***Asian longhorned beetle*** (*ALB*), a wood boring insect, entered the United States in solid wood packing material. In Fiscal Year 2005, we:

- Joined with the New Jersey Forest Service and USDA APHIS to begin replacing trees in ALB-affected areas in and around Carteret, New Jersey.
- Distributed a case study called *Chicago vs. the Asian Longhorned Beetle: a Portrait of Success*, presented it at national conferences, and promoted it as a planning guide for future exotic insect pest emergencies.
- Provided USDA Forest Service smokejumpers and other certified tree climbers for surveys in Illinois, New York, and New Jersey.
- Cooperated with the University of Vermont to revise and reprint *The Landscaper's Guide to Asian Longhorned Beetle and Its Host Trees*.
- Cooperated with USDA APHIS and Trees New York, a nongovernment organization, to help them gain access to New York properties for ALB surveys.
- Provided support and expertise to California following the discovery of Asian longhorned beetles near a Sacramento warehouse.

The ***gypsy moth*** entered the country in 1869 and now occurs in 19 States from Maine to Wisconsin and south from Illinois to North Carolina. In FY 2005, we:

- Treated 415,000 acres in seven States to slow the spread of gypsy moth and treated 7,300 acres in three States to reduce gypsy moth damage.
- Conducted gypsy moth detection on 2.3 million acres of national forest lands and on 700,000 acres of other Federal lands.
- Continued work with the Canadian Forest Service to develop a gypsy moth decision support system.
- Continued to develop a national supplemental EIS for gypsy moth management in the United States in cooperation with USDA APHIS.
- Completed a draft revision of gypsy moth project participation guidelines, a reference for partners who plan gypsy moth projects.

The ***hemlock woolly adelgid*** (HWA), which infests eastern and Carolina hemlocks, appeared in the United States in 1924 and now occurs in 15 Eastern States. In FY 2005 we:

- Treated trees or soils with insecticides to reduce or eliminate infestations on Federal, State, and private lands in six States.
- Conducted detection surveys and monitoring in 10 States.
- Coordinated the rearing, release, and evaluation of HWA predators and continued to evaluate remote sensing tools to define high-risk hemlock stands.

Forest Service employees work together to gain the upper hand on invasive plants at a Pennsylvania park.

The ***emerald ash borer*** *(EAB)*, an insect native to eastern Asia, was discovered in the Detroit metropolitan area in 2002. EAB has also been found on lands in Ohio and Indiana, and in nursery stock in Maryland and Virginia. In FY 2005, we:

- Implemented a 3-year project with Ohio partners to reduce the number of ash in high-risk areas in the EAB-affected region. The program facilitates commercial use of the wood, thereby reducing the cost of treatments and encouraging communities to remove infested trees.
- Participated in two tristate initiatives in Michigan, Ohio, and Indiana: an EAB management team including the USDA Forest Service, APHIS, and State foresters and plant pest regulatory officials from Michigan, Ohio, and Indiana; and an EAB communications team in cooperation with APHIS and the three States, which developed EAB outreach tools and events.
- Conducted trap tree surveys on 120 national forest, State park, and other forest sites in Michigan and northern Wisconsin in cooperation with the Michigan DNR and Michigan Technical University.
- With Michigan State University and the North Central Research Station, evaluated new methods and technology to improve EAB survey and control techniques.
- Conducted EAB surveys on Federal lands in the Northeast and Midwest, and on private and non-Federal public lands in cooperation with State foresters and State plant pest regulatory officials in 17 States.
- Developed and distributed new information products such as the EAB ID card, and reprinted existing EAB information products such as the EAB pest alert, brochure, firewood posters, *The Green Menace* DVD, and others.

Diseases

Sudden oak death *(SOD)* was first identified in California in 2000. Quarantine areas were established in California and southern Oregon. In 2004, large numbers of infected nursery plants were shipped from suppliers within the California quarantine area throughout the United States and Canada. In FY 2005 we:

- Coordinated with State foresters, State plant pest regulatory officials, universities, and APHIS to conduct SOD surveys in high-risk/high-priority areas in the 20 Northeastern and Midwestern States.
- Provided training to cooperators in the collection, handling, and submission of plant samples for analysis.

Oak wilt is a native pathogen that kills oaks from Missouri across the Lake States to Pennsylvania, West Virginia, and western New York. In FY 2005, we:

- Completed biological evaluations on several Federal sites for management of oak wilt disease.
- Conducted oak wilt treatments on 30 acres on the Nicolet National Forest in Wisconsin.
- Treated 622 acres to control oak wilt in cooperation with the Minnesota DNR.

Researchers found that debarking can remove enough bark and wood to completely eliminate emerald ash borer in sawlogs, therefore retaining much of the logs' commercial value.

Framed by the Manhattan skyline and tethered by a climbing rope, a Forest Service smokejumper straddles the limbs of a tree in Central Park looking for signs of Asian longhorned beetle.

International Assistance and Trade

- Delivered a 5-day course on the identification of tropical tree diseases in Southeast Asia to forest health specialists from Malaysia, Indonesia, Laos, Vietnam, China, and Thailand.
- Surveyed forests in Malaysia for *Phytophthora ramorum*, the cause of Ramorum blight and sudden oak death.
- Provided a keynote address and training session at urban tree risk management seminars in Brisbane, Sydney, and Melbourne, Australia.

Other Activities

- Trained Federal and New York State cooperators on Sirex woodwasp and participated in ground surveys of potentially affected pine stands near Oswego, New York.
- Prepared a poster and pest alerts on Sirex woodwasp for State and Federal partners.
- Conducted a biological assessment to determine the condition of red pine stands on the Allegheny National Forest.
- Provided the New Jersey Forest Service with technical assistance and supplies for southern pine beetle surveys.
- Organized the eighth annual Exotic Forest Pest Workshop for the Midwestern States, and hosted the Northeast Forest Pathology Workshop, which included Federal, State, and university forest pathologists from the Eastern States and Canadian Provinces.

Publications

- Revised *The Landscaper's Guide to Asian Longhorned Beetle and Its Host Trees*.
- Produced Web-based newsletters: 3 issues each of the *Great Lakes Forest Health Watch* and the *Central States Forest Health Watch*; 52 issues of the *Weed of the Week*; and quarterly issues of an ALB newsletter to support the ALB eradication program in New York.
- Produced plastic identification cards for ALB and EAB early detection.
- Produced an EAB brochure for the Pennsylvania Bureau of Forestry.

Cooperative Fire Protection Program

In May 2005, driven by strong winds, the Cottonville Fire in Adams County, Wisconsin, ripped through three towns in less than 12 hours, burning a swath of residential property nearly 7 miles long and nearly a mile wide. More than 125 people were evacuated as Governor Jim Doyle declared a state of emergency. Although the fire burned 3,410 acres and destroyed 30 homes, firefighters saved 300 homes, averting $6 million in resource and property damage.

The region had been identified as a wildland/urban interface wildfire risk prior to the blaze. National Fire Plan funds were used to create fuel breaks, reduce wildland fuel build-up, and fund wildland/urban interface education and outreach. Assistance to local fire departments allowed them to purchase equipment and attend wildland fire training. While the loss of 30 homes is tragic, the measures taken in advance helped protect many more homes that may otherwise have been lost.

Fires are a natural component of ecosystems—in fact, some ecosystems cannot sustain themselves without occasional fires to return nutrients to the soil and clear growing space for new vegetation. Because natural fires have been suppressed in the past, many of our forests are dense and overgrown, allowing wildfires to rage out of control. To make matters worse, more people are moving into forested regions, placing a growing number of lives and property at risk.

The ***Cooperative Fire Protection Program*** stresses prevention, and, when wildfires strike, a strong initial attack to keep fires small. The program has several parts:

State Fire Assistance offers grants and technical assistance to States and local fire organizations to:

- Boost wildland firefighting capacity,
- Reduce fire hazards by actions such as removing excess fuels,
- Target programs to hazardous areas, and
- Acquire small equipment.

Volunteer Fire Assistance provides cost-share grants to communities with fewer than 10,000 people. Funds help these volunteer fire departments:

- Secure fire and safety equipment,
- Train their volunteer firefighters, and
- Organize new departments in unprotected communities.

Through its *Federal Excess Personal Property Program*, the USDA Forest Service acquires equipment and loans it to State forestry agencies and partners such as rural fire departments. The Northeastern Area distributes millions of dollars in equipment each year.

Fire is a natural component of many ecosystems. It returns nutrients to the soil, clears space for new vegetation, and prepares seedbeds for regeneration.

Prescribed burns reduce hazardous fuels and encourage regeneration of oak and other species.

Aviation Management supports fire programs that use fixed-wing aircraft and helicopters. The program provides safety inspection and oversight for projects using Federal Excess Property aircraft and manages aviation missions involving forest damage assessments, aerial photography, and pesticide applications.

The Cooperative Fire Protection Program helps support several multistate/Canadian Province fire protection *compacts*. These compacts have "mutual aid" agreements—arrangements to help each other with equipment and personnel in the event of a catastrophic wildfire.

Congress first funded the *National Fire Plan* in Fiscal Year 2001 to provide additional resources for reducing hazardous fuels, controlling wildfires, restoring burned landscapes, and assisting communities.

The Northeastern Area has an interagency agreement with the *U.S. Army Environmental Center* to help the Army and the other military services provide training, enhance mission readiness, and improve natural resources through forest stewardship. Military lands are managed to provide realistic training and conserve ecosystems.

Accomplishments

In Fiscal Year 2005, wind-driven fires burned 45 homes and 166 outbuildings in 58 wildfires across 10 States. In Pennsylvania, three homeowners died from heart attacks at separate wildfire incidents.

	FY 2005	10-Year average
Number of fires	11,207	20,624
Number of acres burned	73,899	175,701

The Northeastern Area continued to promote the Incident Command System (ICS), a highly effective emergency response structure that allows personnel from diverse agencies and missions to work seamlessly together. The Northeastern Area helped FEMA deliver specialized training for emergency response; more than 150 FEMA personnel attended ICS training in the Northeastern Area.

In 2005, State Fire Assistance provided funds that helped train more than 13,720 firefighters in specialized wildfire suppression and safety. Well-trained State wildland firefighters support one another, local fire agencies, and even Federal wildland fire agencies when the need arises.

The Northeastern Area assisted States with more than 1,800 Volunteer Fire Assistance grants for rural fire departments. The grants, which reached more than 3,400 communities throughout the 20 States:

- Provide $3.6 million in new equipment,
- Train more than 10,000 firefighters in wildland fire suppression, and
- Organize five new departments.

The Northeastern Area loaned more than $16 million in excess government vehicles and equipment to 20 State forestry agencies and volunteer fire departments through the Federal Excess Personal Property Program. The States acquired 16,569 items for rural and local fire services.

In 2005, all aerial fire detection and fire suppression missions were accomplished without accidents or incidents. The Northeastern Area Aviation Program Manager supervised the operation of aviation flight following systems located at all three Northeastern Area field offices. These systems greatly improve flight safety on all missions by showing suppression aircraft location at all times.

The U.S. Army Environmental Center provided approximately 200 USDA Forest Service experts, who provide land management and planning assistance on more than 60 military installations. The Army and other military services funded these activities on a reimbursable basis. Other types of assistance provided included NEPA and cultural resource projects on several Army, Army National Guard, Air Force, and Marine Corps installations.

Forest Fire Compacts

The *Big Rivers Compact* and the Missouri Fire and Rescue Training Institute:

- Presented the fourth annual Midwest Wildfire Training Academy in Jefferson City, Missouri. More than 1,500 State, local, and Federal firefighters have received fire training at the academy since 2002.
- Conducted prescribed fire and smoke management training to promote the use of fire to reduce hazardous fire situations near homes.

The *Great Lakes Compact:*

- Completed a comprehensive internal aviation management plan to improve aircraft coordination on wildfires.
- Supported State fire supervisors in their efforts to educate their in-state counterparts about emergency operations and better resource coordination during emergencies.

The *Northeast Compact:*

- Continued its initiative to permanently establish the Northeastern Interagency Coordination Center for the mobilization of local, compact, and national fire resources.
- Refined the process for mobilizing fire resources across the Canadian border when fire threatens either country.

The *Mid-Atlantic Compact:*

- Conducted a Firewise workshop for 75 participants from across the region to educate policymakers about involving communities in wildfire prevention measures.
- Cosponsored a Wildland Firefighter Training Academy for more than 440 participants from 13 States and Puerto Rico.

National Fire Plan Assistance to States

States and cooperators used National Fire Plan funds to enhance wildland firefighting preparedness. Funds were used to:

- Treat 18,800 acres of hazardous fuels via prescribed fire,
- Treat 2,050 acres via mechanical means, and
- Deliver 4,331 fire prevention, Firewise, and educational programs.

Other deliverables included dry hydrant installations to improve rural fire water supplies, wildfire firefighter training, and economic action projects.

The Eastern Area Coordination Center dispatched 443 people in Fiscal Year 2005: 289 for wildfire support and 154 for emergency response in the aftermath of Hurricanes Katrina and Wilma. State personnel made up 35 percent of the workers.

Landowner Assistance Programs

The Northeast and Midwest have more than 128 million acres of privately owned forest land, the highest percentage of private versus public lands in the country. Privately owned forest lands provide many goods and services that Americans depend upon, including recreation, drinking water protection, wildlife habitat, and forest products.

The collective decisions made by thousands of private forest landowners profoundly influence the amount, quality, and cost of the goods and services we've come to expect from our forests. Sprawling development, poor farming or forestry practices, wildfires, or neglect—all have the potential to degrade our living environment and to affect our pocketbook, for example, by increasing drinking water treatment costs after the forest's natural cleansing capacity has been degraded by development or poor management.

Because of the strong public stake in healthy forests, ***Landowner Assistance Programs*** promote sound forestry on private lands. The *Forest Stewardship Program*, which is voluntary and available to all private forest landowners, helps owners manage their property for multiple benefits. Professional foresters assist landowners in developing a written Forest Stewardship Plan, setting management objectives, and providing recommended actions for achieving them. Studies show that compared with owners without plans, forest owners who have Forest Stewardship Plans double their timber sale income, leave twice the number of trees for the future, and do a better job of enhancing wildlife habitat.

Created under the 2002 Farm Bill, the *Forest Land Enhancement Program (FLEP)* provides landowners with educational, technical, and financial assistance for managing their forests on a sustainable basis. States develop a State Priority Plan and cost share up to 75 percent of the cost of management activities, such as thinning or wildlife habitat improvement. Although demand in most States exceeds available funds by several times, program funding has been uncertain, leading some States to revise their priority plans, reducing funds dedicated to education and increasing funds dedicated to cost share.

Accomplishments

Special Initiatives

The ***Spatial Analysis Project*** (*SAP*), in its fourth year of development and implementation, is a GIS-based tool that allows participating State forestry agencies to identify and display important forest lands, tracts currently under Forest Stewardship Plans, and areas where future efforts could best be focused for maximum benefits. In the past, the Forest Stewardship Program was delivered primarily on a first come-first served basis. While this approach benefited many landowners, managers could not target limited resources to important forest landscape features and resource values, or effectively track management impacts.

Sixteen of the 20 States served by the Northeastern Area are currently participating in the SAP, with full participation expected in early Fiscal Year 2006. In

Successful regeneration after a harvest can be challenging. A review team considers options for this property, where bears are destroying the tree tubes and using them as toys.

Fiscal Year 2005, five States worked on historical databases and statewide assessments, six States began statewide assessments, and two States started their historical plan databases. Statewide assessments provide State forestry specialists with new tools for managing their workforce and adjusting priorities as they work with private forest landowners to address State, regional, and Federal forest resource issues and opportunities.

The SAP has helped to change the way the Forest Stewardship Program is delivered nationally. It is the foundation for the performance measures identified in the Forest Service's new Performance Accountability System initiative and is the cornerstone for the revised Forest Stewardship Program Standards and Guidelines.

The ***Web-Based Data Entry Tool*** *(Web-DET)* is an outgrowth of the Spatial Analysis Project. Begun in the Northeastern Area in cooperation with the Colorado State Forest Service, it is a national Web-based data entry and report writing application tied to the Forest Stewardship Program. With Web-DET, field foresters will be able to create electronic maps and Forest Stewardship Plans, maintain a standardized relational database, and report State and Federal accomplishments once via the Internet, without the need for desktop GIS software or software expertise.

National information resource specialists are managing the Web-DET project with the close cooperation of Northeastern Area specialists and program managers to ensure technical functionality and performance. After testing, a prototype was released in April 2005. The initial rollout is expected during Fiscal Year 2006.

Invasive plants change ecosystems by displacing native species, degrading wildlife habitat, and limiting forest reproduction, costing billions of dollars every year for chemical and biological control, labor, restoration, research, and monitoring. Early detection and rapid, coordinated responses are needed to eradicate or contain invasive plants before control becomes technically and/or financially impossible. Awareness is often lacking, and management activities are inconsistent or nonexistent.

Addressing invasive plant species on nonindustrial private forest land was a particular focus in Fiscal Year 2005. Northeastern Area Forest Stewardship Program Leaders, in cooperation with State partners, delivered numerous workshops and established demonstration sites to raise public and professional awareness and competency. Highlights include the following:

- Worked with State forestry agencies in Delaware, Maryland, New Jersey, Ohio, Pennsylvania, and West Virginia, developing a 2-day workshop to highlight invasive species common to all six States. More than 170 attendees left armed with the latest information on specific invasive plants, a network of contacts for working toward common goals, and knowledge of the latest control techniques.

This small group selection opening was created to enhance ruffed grouse habitat and control beech.

Resource specialists completed new Forest Stewardship Plans on 804,577 acres, bringing the 13-year total to 12.6 million acres under written plans—9.8 percent of the region's nonindustrial private forests.

Foresters remove invasive plants from around an apple tree to increase fruit production for wildlife on an experimental plot in Maine. Plots such as this are used to educate landowners and resource professionals on invasive plant control methods.

- Worked with the Vermont Department of Forests, Parks and Recreation and the Maine Forest Service to develop invasive plant control demonstration sites, technical training and awareness workshops, and a guide to controlling invasive plants.

Publications

Publications put better management tools in the hands of landowners and resource managers.

- *Diameter-Limit Cutting and Silviculture in Northeastern Forests*—A joint Northeastern Research Station and Northeastern Area publication, this document highlights the negative economic and ecological consequences of poor harvesting practices and offers recommendations for managing forests sustainably.
- *Backyard Woods: Bring Your Vision to Life*—A growing amount of private forest land is held in ownerships of less than 10 acres. This publication addresses the need for new resources and tools to help these landowners understand their management options.

Making a Difference on the Land

USDA Forest Service studies show that 86 percent of landowners complete at least one practice in their Forest Stewardship Plan. A majority of landowners said their contact with natural resource professionals greatly influenced how they manage their property.

- Tree planting and other actions taken to enhance natural forest regeneration on more than 151,000 acres will provide future generations with clean water, clean air, wildlife habitat, timber, and other values.
- Management activities enhanced more than 35,000 acres of wildlife habitat. Landowners created food plots, saved den trees, controlled deer damage, established shrubs to attract birds and other animals, and improved biodiversity.
- Landowners improved 85,000 acres of forests for timber production and completed harvests on more than 159,000 acres.

In addition to the many environmental and social benefits of private forests, Landowner Assistance Programs generate economic benefits for landowners and communities.

- Private consultants handled more than 10,000 referrals to oversee timber sales, generating about $15 million in income.
- The Northeastern Area provided tax and estate planning information to more than 170 tax preparers, landowners, and professional foresters. As a result, landowners realized average tax savings of $1,000 to $2,500. As tax preparers and forestry consultants work with new and existing clients, total tax savings will continue to grow.

Forest Land Enhancement Program: Studies have shown that cost-share funds are an important motivator for some private landowners who otherwise would not have accomplished their objectives. In Fiscal Year 2005, landowners responded aggressively to the availability of FLEP cost-share funds, receiving payments of more than $1.6 million for completed work. Projects included creating 36,000 forest management plans and completing 8,000 acres of forest stand improvement.

In the Northeast and Midwest, more than 50 million people drink water from rivers and reservoirs protected by forest land.

Watershed Forestry

Clean water is one of the most valuable products that flows from forested watersheds. Forests are living filters that capture, store, and slowly release precipitation as they trap and transform chemicals and nutrients deposited by rain or runoff. The extent of forest cover is directly related to a watershed's ability to produce clean water for human consumption, fish and wildlife, and other uses.

Many watersheds and streams remain impaired from past land use; others are threatened by land clearing, development, and poor agricultural or forestry practices. In many fast-growing locations, more than 100 acres of forest is being converted to development or lawn every day.

Ultimately, thousands of landowners and communities make decisions that either sustain or undermine watershed health. These decisions can have significant financial consequences in addition to environmental effects (see table below).

Effect of Forest Cover on Water Treatment Costs

Percentage of watershed that is forested	Daily treatment and chemical costs per million gallons	Daily treatment cost for average size water supplier (22 million gallons per day)
60%	$37	$814
50%	$46	$1,012
40%	$58	$1,276
30%	$73	$1,606
20%	$93	$2,046
10%	$115	$2,530

Data from the Trust for Public Land and the American Water Works Association.

The ***Watershed Forestry*** staff is building partnerships to reach an ever-growing audience, a critical strategy for sustaining the clean, abundant water we need. It works with States, communities, and nonprofit groups to help landowners use trees and forests to enhance watershed health and avoid costly cleanup and restoration. The staff finds innovative ways to enhance watersheds using demonstration projects; grants and incentives; education, training, and technology; management strategies; and coordination across watersheds or political jurisdictions.

Accomplishments

New Tools and Technology for Watershed Partners

- Completed testing of a new, innovative system for monitoring Best Management Practices (BMPs) that protect water quality on timber harvests. State foresters can now produce reports based on reliable data that is consistent across the region. Foresters collected data from more than 600 field sites in 8 States during Fiscal Year 2005. A guidance manual, management information system, and reporting software to store, handle, and evaluate the data will be published and delivered to States in 2006.
- Provided Geographic Information Systems (GIS) tools that allow users to identify and set priorities on watershed forests that need protection, and to identify lands most vulnerable to development (see www.wetpartnership.org).
- Completed the *Urban Watershed Forestry Manual* in cooperation with the Center for Watershed Protection and urban foresters from around the region. The manual demonstrates the importance of trees in urban watersheds and provides tools for including trees and forests in land use planning, storm water management, and urban revitalization.
- Finished a riparian forest buffer design and maintenance guide, which includes state-of-the-art information on all aspects of urban trees, from site selection and preparation to species selection, planting, protection, and maintenance. Guidelines were developed from field trials and lessons learned by hundreds of field practitioners.
- Completed maps to show areas with sedimentation and sand deposition in steams that feed Lake Superior in order to study the relationship between these factors and the health of trout and salmon populations. Partners in the Great Lakes region completed the work and trained local managers to use the information for decisionmaking.
- Completed a Watershed Forestry Program Web site to serve as a gateway to Northeastern Area watershed activities, tools, and information (www.na.fs.fed.us/watershed/).

Stream flow and the quality of drinking water are measures used to advise landowners on the merits of different forest stewardship strategies.

sources. A total of 4,606 miles of riparian forest has been planted in Pennsylvania, Maryland, and Virginia since 1996.

- Launched urban watershed forestry projects in Baltimore and Annapolis, Maryland. Both cities' mayors support aggressive goals for increasing urban tree canopy to improve air and water quality and public health.

Drinking Water Supply Protection

- Completed a Forest Stewardship Plan to protect the water supply for the city of Frederick, Maryland. The plan will help the city improve forest conditions and prevent wildfires in its watershed. Initiated a similar process for the city of Hagerstown, Maryland.
- Finished the *Source Protection Handbook* and continued development of a watershed forest management handbook in partnership with the Trust for Public Land and the University of Massachusetts to help communities and water providers improve forest protection and management in watersheds that supply drinking water.
- Created a Residential Stewardship Initiative to increase forest cover and protect streams in watersheds that supply drinking water to Baltimore County. The initiative targets suburban landowners with large lawns, where the use of fertilizers and chemicals can adversely affect ground and surface water. Homeowners committed to planting trees on more than 120 acres in the pilot program's first year.
- Developed an educational program for the Cuyahoga Watershed in Ohio, highlighting riparian forests, wetlands, and drinking water supplies. Three 1-day workshops were held for local public officials to promote community watershed stewardship.

Stream and Forest Restoration

- Planted trees along 815 miles of streams and shorelines, keeping more than 300,000 tons of nitrogen and 4,000 tons of sediment out of water
- As part of the Revitalizing Baltimore project, the city school system will create more green space on all asphalt school yards. Schools will help design the green space and collect data; teachers will be trained on the process and results so that they can incorporate the information into school curricula. Partners include USDA Forest Service Research and the Parks and People Foundation.
- Completed a forest wetlands restoration project on the Eastern Shore of Maryland, establishing more than 250 acres of declining Atlantic white-cedar and bald cypress bottomland.

Collaboration at the Large-Watershed Scale

The staff coordinated or led watershed partnership projects in 13 States. Partners added more than $5 million in matching contributions. Highlights include the following:

Chesapeake Bay Program

- Launched a new initiative with the Chesapeake Bay Foundation to reach farmers in the Lower Susquehanna River of Pennsylvania, an area critically in need of pollution control. The initiative will accelerate riparian forest and wetland restoration using the Conservation Reserve Enhancement Program (CREP) and test new restoration techniques.
- Developed a *Community Greening Program* with the Chesapeake Bay Trust that will provide $300,000 per year in private support for urban tree planting projects. The first grants will be announced on Arbor Day 2006.

Partners discuss a restoration project for the White River in Vermont.

- In partnership with the National Fish and Wildlife Foundation, USDA Forest Service investments in small watershed grants topped $500,000 in 2005 while non-Federal matches exceeded $1.7 million. Since 2000, the Northeastern Area has invested over $2.5 million in support of 52 projects by local and nonprofit partners that have restored 35 miles of stream, protected 2,600 acres of forest land, and supported numerous education and landowner outreach programs.
- Launched new riparian awareness programs in Delaware and Virginia. In Delaware, the *Got Trees?* initiative will raise awareness of water quality issues and encourage restoration in the Nanticoke and Inland Bays watersheds. In 2005, over 275 acres of trees were planted on public and private lands. In Virginia, the *Got Buffer?* campaign encourages shoreline landowners to use natural vegetation instead of turf lawns.

Potomac Watershed Partnership

- Secured a private grant of $150,000 for planting buffers and restoring streams in Bennett Creek in the Monocacy Watershed.
- Hosted the *Goods From the Woods* and *Healthy Farms and Streams* conferences, bringing new land management strategies to rural landowners to help them protect local streams. Workshops and tours highlight Best Management Practices, providing a broad package of environmental and business techniques to keep lands working while protecting water quality.
- Opened the *Potomac Living Laboratory*, an interactive river education program for youth. Students learn to identify and remove nonnative plants that threaten biological diversity, collect water quality data from local streams, and restore eroding streams by planting hundreds of native trees, shrubs, and grasses.
- *Growing Native* mobilized more than 5,000 volunteers who collected 20,000 pounds of native tree seeds from nearly 250 sites. State nurseries grow the trees for future watershed plantings. Growing Native, which will soon be part of fourth- and sixth-grade school curricula, is expanding beyond the Potomac to Pennsylvania and Virginia. Visit www.growingnative.org for more information.

White River Partnership in Vermont

- Through its *Trees for Streams* program, the White River Partnership, joined by more than 250 volunteers, planted 3,000 trees along 3 miles of the White River and its tributaries.
- The Forestry Work Group conducted a watershed-wide survey on forests and land use issues, using the results to enhance public awareness and understanding of forestry issues and to develop a long-term vision for the watershed's forests.
- Trained volunteers and coordinated monitoring with 5 citizen stream teams and with teachers and students from 35 schools.

New York City Watershed

- Completed 61 Watershed Forest Stewardship Plans covering 7,557 acres, including 54 custom plans to improve and protect riparian areas on 2,500 acres. This brings the total to 485 plans and more than 65,000 acres under stewardship.
- Continued a successful timber bridge loan program, resulting in the use of 39 bridges and the construction of 40 more through private investment.
- Hosted 40 bus tours via the *Model Forests* project, bringing more than 1,000 students and teachers to the watershed to learn about forestry. In addition,

140 teachers participated in a weeklong Watershed Forestry Institute.

Upper Mississippi River Watershed

- Established a new partnership with the Upper Midwest Environmental Sciences Center to help seven States target activities in the Upper Mississippi River watershed. Using GIS-based analysis, the project will help users evaluate water quality hot spots, set priorities for restoring riparian forest buffers, protect critical forests from development, and identify migratory bird habitats.
- Designed and launched a new Web site for the Upper Mississippi River Forest Partnership.
- The Upper Mississippi River Forest Partnership initiated 10 new projects in six States, linking migratory bird habitat and watershed restoration. Projects will increase the forested habitat sites included in Iowa's Important Bird Area program by 20 percent, control invasive species, close critical forest gaps on 150 acres, add 3,000 acres of stewardship plans and 1,500 acres of improved forests, and provide leadership for bird conservation in the Driftless region.
- Established a partnership between KARE–11 TV and Twin Cities Watershed Partners to produce a *Water for Life* initiative, including a Web site, eight in-depth water-related news stories, and a public service announcement by the station meteorologist. The *Watershed Network News* partnership is aimed at increasing environmental literacy using television weather broadcasters to cover nationally and regionally important science concepts. Visit kare.iewatershed.com.

This community tree planting effort will protect a designated trout stream in Minnesota.

The Northeastern Area's Forest Legacy Program has helped to protect almost three-quarters of a million acres of important forests since the program began in the early 1990s.

Forest Legacy Program

Large forested tracts offer values that small forests cannot—a sense of remoteness or an expansive scene, a forest land base sufficient to support forest-related industries and recreation, protection for drinking water, or the deep woods some wildlife species need.

When development pressure is high, rising land values often increase the cost of holding and managing land. Economic incentives for selling land are strong. When development pressure is reduced, landowners can often sustain a level of forest-related income that allows them to continue owning and enjoying their land.

The ***Forest Legacy Program*** *(FLP)* is a partnership between participating States and the USDA Forest Service. Working in partnership with State and local governments, nonprofit groups, and willing landowners, the program focuses on protecting forests with special environmental, social, and economic values that are threatened by development, preventing their conversion to nonforest uses. Only parcels where these values can be protected long term are eligible.

Once States elect to join the program, they complete an *Assessment of Need*, establishing Forest Legacy Areas—regions that have exceptional forests threatened by development. Federal, State, or local governments negotiate with willing landowners, buying the right to permanently restrict development on their land. The Federal government may fund up to 75 percent of program costs, with at least 25 percent coming from private, State, or local sources.

Maintaining water quality through the preservation of forests and wetlands, a compatible nonforest use, is promoted through the Forest Legacy Program.

Conservation easements are the main tool used to protect important forests. Under a conservation easement, the landowner continues to own and use the land, paying taxes on its remaining value. The landowner develops and follows a Forest Stewardship Plan to ensure that the land is properly cared for.

Accomplishments

In Fiscal Year 2005, the Forest Legacy Program protected 30 tracts across 10 States—exceptional places that harbor the rare, the beautiful, and the pristine. In Iowa's Loess Hills, soils on one tract are so unique they are found only in Iowa and China. In rural New Hampshire, a forested tract will become part of a town forest. In Indiana, a 1,300-acre tract within an hour's drive of Indianapolis was protected. This year's accomplishments bring the total number of protected acres in the Northeast and Midwest to 730,513.

The Federal share for this year's projects totaled $15.7 million, well below the required 75 percent maximum for the Federal share of total project costs.

Iowa made its first Forest Legacy acquisition, protecting five tracts totaling 707 acres. Wisconsin's Baraboo Hills Project secured the future of 11 tracts with conservation easements. Delaware added 448 acres to the Redden State Forest through a fee acquisition.

In August 2005, the Secretary of Agriculture approved both the Ohio and Missouri Forest Legacy Assessments of Need. All 20 States served by the Northeastern Area are now eligible to receive Forest Legacy Program funds.

Completed Acquisitions

- Connecticut protected the first parcel in a multi-tract project in the northeastern part of the State, one of seven parcels that will protect Stonehouse Brook and the forests located in its watershed. The remaining six tracts are expected to be acquired in Fiscal Year 2006.
- Delaware completed its second Forest Legacy acquisition with the purchase of 448 acres that has been added to the Redden State Forest. As the second phase of the Green Horizons project, it will help extend a corridor of protected lands in the central Delmarva Peninsula from Chesapeake Bay to Delaware Bay.

- Illinois acquired a conservation easement in the Great Rivers Bluffs Forest Legacy Area, just downstream from the confluence of the Illinois and Mississippi Rivers. The 25-acre tract adds to State and local initiatives to protect the bluffs overlooking the Mississippi River.
- Iowa protected five Forest Legacy tracts in its first year in the program. The four conservation easements and one fee acquisition are all adjacent to State or federally held lands.
- Indiana completed conservation easements on two properties in the Shawnee Hills/Highland Rim Forest Legacy Area. The 108-acre Indian Creek II tract is adjacent to the Indian Creek Forest Legacy tract. The Hurricane Hills tract protects 1,351 acres of hardwood forests less than 25 miles from downtown Indianapolis.
- Maryland protected 186 acres on two adjacent tracts in the Elk Neck Forest Legacy Area in the northeastern part of the State, along the Chesapeake Bay. The tracts are adjacent to the Elk Neck State Forest and provide a forested corridor from the State forest to the Elk River.
- New Hampshire protected 15,592 acres on three Forest Legacy-funded tracts, meeting the cost share by using other funds to acquire and protect three additional tracts. One project protects the highlands around a State park; the other two are now town forests.
- New Jersey completed the requirements for Forest Legacy funds reimbursement for a tract that the State acquired in 2004. The Crown Towers tract in the New Jersey Highlands protects 611 acres of forested habitat.
- Vermont focused on the "Northeast Kingdom" region of the State, where it protected several tracts totaling 2,920 acres. They join several tracts already protected by acquisitions and conservation easements under the Forest Legacy Program, including the State's first FLP acquisition in 1993. The forests are potential habitat for the reintroduction of the Canada lynx.

Landowner-implemented stewardship practices resulted in this property in Iowa being considered a priority for the Forest Legacy Program.

- Wisconsin protected 671 acres with conservation easements on 11 tracts, all located in the Baraboo Hills Forest Legacy Area. The Baraboo Hills contain one of the continent's most ancient rock outcrops and provide unique habitats for both forest types and wildlife.

Forest Legacy Acquisitions, Fiscal Year 2005

	Acres protected	Value of interests	Federal payment
Connecticut	16	$35,000	$35,000
Delaware	448	3,030,000	1,975,000
Illinois	25	156,000	117,000
Indiana	1,459	2,660,000	2,360,000
Iowa	707	1,477,700	718,886
Maryland	186	630,000	630,000
New Hampshire	15,592	9,746,425	5,323,000
New Jersey	611	7,350,000	3,176,000
Vermont	2,920	756,272	744,000
Wisconsin	672	951,415	713,561
Total	**22,636**	**$26,792,812**	**$15,792,447**

Looking ahead, the Fiscal Year 2006 Department of the Interior, Environment, and Related Agencies Appropriations Act identifies 40 Forest Legacy projects in 32 States. The Forest Legacy Program budget will include roughly $60 million in Fiscal Year 2006 funds and $3 million in prior year funds.

Urban and Community Forestry Program

The steady expansion of urban areas and suburban sprawl, and the associated decline of natural environments is a national problem that jeopardizes the basic ecological functions essential to society. Healthy trees and forests improve air and water quality, watershed function, energy conservation, and social well-being. Moreover, studies show that improving the quality of trees, forests, and parks in distressed communities can have a particularly important effect, not only on natural resources, but on public health, economic development, and the overall quality of city life.

The ***Urban and Community Forestry Program*** provides technical, educational, and financial assistance to improve the management of community trees and forests where people live, work, and play. In Fiscal Year 2005, more than 70 million people living in 3,727 communities—76 percent of the region's population—benefited from Federal assistance through State forestry agencies. These services included direct grants to communities and nonprofit organizations, training and technical support, project coordination and facilitation, tree and forest health assessments, landscape design, tree inventories, resource planning, and technology transfer.

Accomplishments

Regional Training and Education

Northeastern Area staff provided training to State and local partners that covered a wide range of skills: how to reach diverse audiences, build effective partnerships, prepare for storms, design and build trails for universal access, set goals and increase tree cover in built-up watersheds, implement and manage inventory software and data, and identify hazard trees. Publications and resource materials developed and transferred among cities and States included titles such as *Urban and Community Forestry Appreciation Toolkit, Lessons Learned in the Inner City, Collaborative Design for Living Memorial Projects, Backyard Woods: Bring Your Vision to Life* (in partnership with the National Arbor Day Foundation), and an *Urban Watershed Forestry Manual*.

Technology

The city of Minneapolis became a regional model for demonstrating data collection and application. Activities included a tree inventory and forest assessment involving city volunteers and private sector support that produced data for use in the city's investment and management decisions. The project catalogued 979,000 trees worth more than $760 million, which are removing nearly 423 tons of air pollutants each year.

Technology developed in New York City that allows residents to quickly view and access information on tree cover, natural areas, parks, and open space at the neighborhood and citywide level was transferred to the District of Columbia.

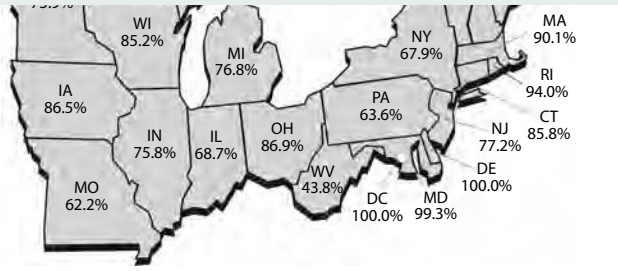
Support to Nonprofit Organizations

Activities generated at the State level, in partnership with the private sector and diverse advisory councils and supported by Federal assistance, provided most of the community and nonprofit outreach. Technical assistance and small grants led to thousands of hours of contributed services at the State level and more than 460,000 hours (209 person-years) of documented volunteer time for tree stewardship activities. As a result, thousands of communities have hired professional staff, developed advanced shade tree committees and commissions, passed local tree protection ordinances, and launched plans to improve the management of public trees and forests.

Focus on Inner Cities

Six cities along the Northeast corridor—Boston, New Haven, New York, Pittsburgh, Baltimore, and Washington, DC—joined forces to study and implement outreach techniques to inner city residents. As a result, the social network among and within these cities deepened significantly; projects and events are enjoying greater community participation and cultural interaction.

In a separate collaboration with the USDA Forest Service Eastern Region, high school students from Boston urban neighborhoods participated in *Pathways to the Future*, a natural resource career exploration



day that introduced students to potential careers in entomology, wildlife biology, urban forestry, and park management.

Long-Term Successes

As a result of Federal funding ($6.5 million over the past 15 years) and heavy matching contributions from the city, Mayor Daley's Chicago *GreenStreets* program has been responsible for planting more than 25,000 trees on school grounds, along transportation corridors, around public housing, and in vacant lots. As a result, Chicago's now-vibrant downtown and welcoming gateway corridors highlight the best Chicago has to offer and are a contributing factor in the city's influx of new residents and businesses.

Since its launch in April 1996, Chicago Wilderness has helped fund more than 230 collaborative projects across Illinois and Indiana. Many projects, such as Ecosystem Restoration in the Illinois Nature Preserves, the Green Infrastructure Vision Project, the Linking Watersheds conference, and Sustaining and Expanding Regional Volunteer Monitoring, have increased awareness, support, and coordination among urban communities for recovery of the region's biodiversity. In 2005, among many small grants and on-the-ground accomplishments, Chicago Wilderness completed an on-line Ecological Planning and Design Directory, formed a corporate council to assist in diversifying its funding, and held a Great Lakes Restoration conference. Chicago Wilderness was highlighted as a model at the White House Conference on Cooperative Conservation held in St Louis, Missouri, in August 2005. Visit on-line at www.chicagowilderness.org.

Since 1995, the *Northeast Pennsylvania Community Forestry Program* has involved more than 2,450 local partners in 245 projects on degraded mine lands; in parks; along streets, highways, trails, and river corridors; in commercial and cultural districts; and at schools and tourist attractions throughout northeastern Pennsylvania. The program has fostered community awareness and participation in stewardship-related activities in a region that encompasses three watersheds and supports 1.1 million residents. One of many small projects in 2005 centered on Tunkhannock Borough, where a new shade tree committee, tree protection ordinance, and business district revitalization took root with trees planted in state-of-the-art manufactured soils. These activities will ensure that trees planted today will be shading the streets of tomorrow. For more information, visit on-line at http://nepaforestry.org/.

Since 2001, a partnership among the Northeastern Area, the Northeastern Research Station, and the Maryland Department of Natural Resources Forest Service has been developing tools to assess tree cover and planting opportunities, enabling cities to set and achieve tree cover goals. As a result, in 2003 the *Chesapeake Bay Executive Council* recognized that urban tree cover can significantly contribute to slowing storm water and protecting the bay's water quality. The Maryland Department of Environment plans to include tree cover as a strategy to achieve air quality goals. In support of this, the cities of Annapolis and Baltimore committed to setting tree cover goals, and the Chesapeake Bay Trust created a new annual challenge grants program to fund strategic tree planting.

Professionals and volunteers work together to improve the urban forest one tree at a time.

Economic Action Programs

The region's forests supply a bounty of goods and services—everything from timber and mushrooms to recreation and water. Market forces are the dominant influence on these goods and services, but nonmarket forces—such as the desire to sustain biological diversity or the opportunity to dwell in or visit a natural place—are important factors, too.

Production of wood and nonwood products depends on the supply of raw materials, the demand for finished products, and the ability to convert raw materials to desired products. Changes in one factor—economic conditions, social factors, or biological conditions—affect all other factors. For example, if a local processing mill closes, landowners may lose markets for their forest products, making forest management too expensive for them to continue, thus lowering the supply of raw materials.

More than half of the region's rural manufacturing jobs are forest based. Forest-related recreation and tourism, and products such as maple syrup and herbs, bring the total forest-related payroll to $23 billion.

A silk purse from a sow's ear? The Northeastern Area is working with partners to safely turn wood from trees infested with emerald ash borer into viable commercial products, such as this rake handle.

The ***Economic Action Programs*** *(EAP)* support conservation and promote the sustainable use of forests and related natural resources. Working cooperatively with State forestry agencies and other partners, programs help rural and urban residents generate diverse, sustainable economic opportunities in their communities.

The EAP has several components:

- The *Wood Education and Resource Center (WERC)* supports managerial and technical innovation to keep businesses competitive. It provides state-of-the-art training, technology transfer, networking opportunities, applied research, and information.
- *Rural Community Assistance*[1] provides technical and financial assistance to strengthen and diversify rural economies through the balanced use of renewable natural resources. Efforts are coordinated among the USDA Forest Service and State and local partners.
- *Forest Products Conservation and Recycling*[1] facilitates the wise use of forest resources to strengthen and enhance local economies and encourage better forest resource stewardship. Assistance is available to improve markets, reduce or utilize waste products, extend product life, generate energy from wood waste, and publicize the value of forest resources.
- *Market Development and Expansion*[1] provides support to develop and expand both domestic and international markets for forest resources.
- The *Wood in Transportation Program*[2] promotes wood for projects such as bridges, erosion control, guardrails, and sound barriers. Wood resists road salt, has excellent engineering properties, comes from a renewable resource, and creates an attractive, durable product.

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[1] Congress eliminated funding for this program for Fiscal Year 2006. The Northeastern Area will continue to offer vital assistance to forest products manufacturers and producers via the Wood Education and Resource Center (WERC).

[2] This program has been discontinued.

The Northeastern and Midwestern States produce 42 percent of the Nation's manufactured wood products.

Accomplishments

Economic Action Program grants went to 18 projects in 8 States.

Economic Action Program Grants, Fiscal Year 2005

Project	Purpose	Amount
Alexander County, IL	Information signs	$8,600
Pulaski County, IL	Visitor cabins	30,000
Clarke Township, MI	Nature tourism development	31,000
Huron Pines RC&D, MI (3 county projects)	Maps, signs, Web site	93,000
Lake Superior Partnership, MI (3 projects)	Supporting economic diversification	30,000
Southeast Michigan RC&D Council, MI	Emerald ash borer utilization pilot project	173,000
Blackduck, MN	Wastewater system study	3,500
Cass Lake, MN	Establishing a tourism economy	24,000
Edge of Wilderness, MN	Community coordinator/plan update	12,000
Iron County, MO	Leadership 2005 training program	2,000
AceNet, OH	Expanding markets for Appalachian forests	30,000
Monday Creek Township, OH	Community center improvement	16,000
Forest County, PA	Hunting and fishing museum/visitor center	130,000
Kane, PA	KARE revitalization projects	30,000
Fifield, WI	Community profile and welcome signs	16,000
Florence County, WI	Economic development strategy	29,000
Nicolas County, WV	ATV trail planning	15,000
Richwood, WV	Tourism facility feasibility study	25,000
Total		**$698,100**

Wood Education and Resource Center

The Wood Education and Resource Center (WERC) is the former Robert C. Byrd Hardwood Technology Center located in Princeton, West Virginia. The center was transferred to the USDA Forest Service in Fiscal Year 1999 and is managed by the Northeastern Area. Since its inception, WERC has defined its strategic direction and Federal role; identified key partners and issues; developed, evaluated, and launched distance learning technologies; and initiated collaborative projects focusing on the following:

- Environmental protection and resource use efficiency
- International competitiveness
- Technology transfer using advanced technologies
- Public and professional education
- WERC income generation

In Fiscal Years 2004 and 2005, the Northeastern Area made some strategic decisions regarding the management and operation of WERC. The range of services was narrowed to focus exclusively on wood manufacturing industries. In 2005, a federally employed Director and Deputy Director were selected; they reported for work at the center mid-year. After completing a charter and establishing a work plan, they began to implement projects. The following are significant 2005 accomplishments.

WERC awarded a total of $2.8 million to grant applicants in Fiscal Year 2005.

Training Annex

A new 3,500 square-foot training annex is complete. The facility seats approximately 50 people for training, meetings, and special events. The first training session, "Lean Manufacturing," was held in August 2005.

Annual Competitive Grants Program

WERC initiated and implemented an annual competitive grants program, awarding a total of 41 grants. The selected projects focused on the following priorities:

- Maintain the economic competitiveness of the primary and secondary hardwood industries.
- Bring information and technology to existing and emerging businesses involved in the development and manufacturing of wood products.
- Bring information and technology about marketing and business-related skills to existing and emerging businesses.
- Encourage the adoption of new technology to improve competitiveness and profitability.
- Provide support and key information to entrepreneurs and start-up businesses.
- Address global issues such as phytosanitation of wood packaging materials, assisting communities and industries facing threats from invasive species such as the emerald ash borer.

USDA Secretary Mike Johanns announced the successful grant applicants in Duluth, Minnesota, in August 2005. These projects will provide technical assistance, training sessions, industry publications, and applied research results focused on maintaining jobs within the wood products industry.

Strategic Partnership With the Sloan Wood Products Center

WERC and the Sloan Wood Products Center at Virginia Tech University developed a partnership that will assist WERC in meeting its training goals. Fiscal Year 2006 training plans include workshops on lean manufacturing and diversity management.

Strengthened Existing Partnerships and Developed New Partnerships

WERC strengthened existing partnerships with organizations such as State forestry agencies, wood products extension programs, and key industry groups. New partnerships were forged with organizations such as Dovetail Partners, Minnesota Wood Campaign Inc., and a number of universities and businesses.

Competitive Program To Lease Rough Mill

A prospectus was developed for a competitive program to lease the center's 43,000-square-foot rough mill facility. The request for proposals announcement was advertised nationally in wood products magazines and industry newsletters as well as on the WERC Web site, and four viable proposals were received. Robert Kincaid of San Marino, California, was awarded the lease and will start up a new business tentatively named Accurate Millworks. The contract was finalized in January 2006. Mr. Kincaid will eventually employ about 40 people at the facility.

The WERC facility houses a numerical control router that automatically cuts parts out of panels according to computer-programmed design specifications. These machines are used extensively in the furniture industry.

Wood in Transportation Program

The Wood in Transportation (WIT) Program was established by Congress in 1989 to improve local transportation networks and revitalize local economies by using wood for bridge construction and other transportation-related structures. Congress did not authorize funding for Fiscal Year 2005; however, a number of projects funded previously were completed in Fiscal Year 2005.

Five of the seven projects that formally closed in Fiscal Year 2005 resulted in the construction of 22 structures—17 vehicular bridges and 5 pedestrian bridges. The two remaining projects yielded designs for several high profile pedestrian bridges.

Wood in Transportation Program Projects Closed, Fiscal Year 2005

State[1]	County	No. of structures	Structure type	Cooperator funds	USDA Forest Service funds
Connecticut	New Haven	3	Pedestrian	$60,441	$42,700
Michigan	Crawford	1	Vehicular	86,879	46,500
Nebraska	Lancaster	2	Pedestrian	189,782	100,000
Nebraska	Otoe	0	Pedestrian bridge design	30,000	30,000
Ohio	Knox	3	Vehicular	412,548	100,742
Pennsylvania	Cambria	0	Rail-trail bridge design	30,000	30,000
West Virginia	Kanawha	13	Vehicular	103,548	90,000
Total		**22**		**$913,198**	**$439,942**

[1]Since WIT is national in scope, it includes States outside the Northeastern Area's 20-State service area.

Demonstration Projects

Information on demonstration projects is available at www.fs.fed.us/na/wit. Web-site visitors can view project information in a variety of formats and generate customized reports by selecting criteria from lists of project types and structural specifications. The following is an example of a customized report generated from the Web site.

***Sample Report*—Wood in Transportation Project Funding: Fiscal Years 1989 thru 2005**

Project type	Projects funded	Projects completed	Federal funding	Cooperator funding
Commercialization projects	31	24	$4,679,951	$8,551,600
Other projects	12	11	444,955	0
Pedestrian bridges	40	38	484,625	1,661,140
Special projects	117	104	2,208,013	3,684,438
Vehicular bridges	214	210	7,383,149	16,332,588
Total	**414**	**387**	**$15,200,693**	**$30,229,767**

Publication Shopping Cart

Library documents that are available in electronic format may be viewed or downloaded from the WIT Web site at http://spfnic.fs.fed.us/wit/WITpubs/PubSearch.cfm.

Annual Student Design Competition

The WIT Program has cosponsored an Annual Student Design Competition with the Southwest Mississippi RC&D Council and other partners for more than 10 years. The contest provides an opportunity for college students to design and build a model bridge structure primarily from wood. The contest demonstrates that wood can be a cost-effective, viable bridge material; generates innovative bridge designs; and fosters an appreciation of wood's engineering capabilities and structural qualities. Additional information about the competition can be viewed at www.msrcd.org/bridge.htm. The contest has funding for one additional year.

Appendixes

Appendix I. Investment in State and Private Forestry Programs by the Northeastern Area

	FY 2003[1]	FY 2004	FY 2005
		(Dollars in millions)	
Cooperative Programs			
Forest Health Management			
Federal Lands	$6.4	$10.4	$7.6
Cooperative Lands	16.4	21.3	17.8
Subtotal–Forest Health	22.8	31.7	25.4
Cooperative Fire Protection			
State Fire Assistance	6.5	7.7	6.9
Volunteer Fire Assistance	2.3	2.0	2.3
Subtotal–Cooperative Fire	8.8	9.7	9.2
Cooperative Forestry			
Forest Stewardship	15.4	14.1	11.5
Urban and Community Forestry	20.9	14.3	10.9
Forest Legacy	44.3	31.2	27.6
Economic Action	10.3	9.5	7.8
Subtotal–Cooperative Forestry	90.9	69.1	57.8
National Fire Plan	19.2	11.8	8.9
Subtotal–Cooperative Programs	**$141.7**	**$122.3**	**$101.3**
Other Programs Administered by NA			
Grey Towers	5.1	2.5	2.3
Forest Health Technology Enterprise Team	1.6	1.3	1.3
Reimbursable Funded Projects	6.0	2.2	2.8
Subtotal–Other Programs	12.7	6.0	6.4
Total, All Programs	**$154.4**	**$128.3**	**$107.7**

[1]FY 2003 funds include funds restored from fire borrowing in FY 2002.

Appendix II. Fiscal Year 2005 Selected Facts and Accomplishments

Selected Facts

Population (2000 Census)	121,238,747
Acres of Forest Land [1]	170,370,000
Acres of Non-Industrial Private Forest (NIPF) Land [1]	93,900,000
Number of NIPF Landowners [1]	4,800,000
Total Acres of Land Under State Fire Protection	221,625,000
Number of Rural Fire Departments	13,544
Number of Cities and Towns (population > 1,000)	11,323
Forest Based Employment [2]	701,122
Forest Based Earnings (thousands) [2]	$37,099,923
Average State Economic Impact of Forestry (by rank) [2]	4
State Forestry Budget (20 States and DC) [3] (2002)	$266,761,000

Selected Accomplishments

Stewardship Plans Prepared (current year)	8,776
Acres Under Stewardship Plans (current year)	804,577
Acres Under Stewardship Plans (all years)	12,617,446
Technical Assists to Landowners	59,751
Rural Fire Departments Assisted	3,428
Communities Assisted State Fire Assistance	15,138
Acres Surveyed for Forest Health	230,133,000
Acres Protected from Insect Disease and Damage	291,425
Communities Participating in Urban and Community Forestry Programs	3,727
Urban and Community Forestry Volunteer Days	465,196
Acres Protected by Forest Legacy (all years)	730,513

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[1] Butler, Brett J.; Leatherberry, Earl C. 2004. America's family forest owners. Journal of Forestry. 102(7): 4-9.

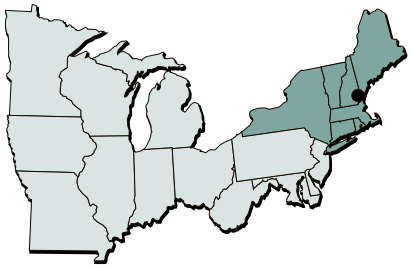
[2] U.S. Department of Commerce

[3] National Association of State Foresters. 2002. National Association of State Foresters 2002 report: state forestry statistics. Washington, DC. 28 p.

Northeastern Area State and Private Forestry USDA Forest Service

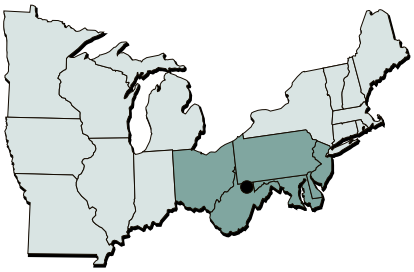
Headquarters Office

11 Campus Boulevard, Suite 200
Newtown Square, PA 19073
610-557-4103

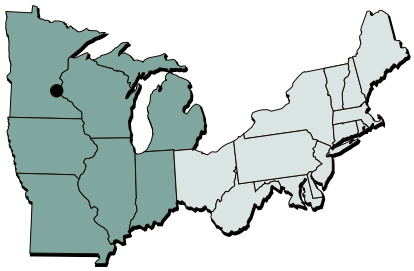


Field Offices

Durham, New Hampshire
271 Mast Road
Durham, NH 03824
603-868-7600



Morgantown, West Virginia
180 Canfield Street
Morgantown, WV 26505
304-285-1541



St. Paul, Minnesota
1992 Folwell Avenue
St. Paul, MN 55108
651-649-5243

Grey Towers National Historic Site

151 Grey Towers Drive
Milford, PA 18337
570-296-9634

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