

Forests—and the USDA Forest Service— at Work for Minnesota



United States
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Forest Service

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MINNESOTA: LAND OF 10,000 LAKES

To many, abundant water resources are at the heart of what makes Minnesota so special. Closely associated with the thousands of lakes dotting the landscape are forests, which play a vital role in protecting water quality and providing clean air, scenic beauty, and abundant fish and wildlife.

Forests provide critical services to landowners and surrounding communities. Individual trees, properly located, can reduce energy costs for cooling. Trees store carbon, a major component of climate change. Urban forests and trees save billions of dollars in storm water management costs. Forests support quality recreation and tourism opportunities, produce wood, bioenergy, medicines, and other products. Forest-based industries employ more than 22,000 Minnesotans.

Established in 1905, the mission of the U.S. Department of Agriculture, Forest Service, is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. The amount and importance of forests in Minnesota create numerous opportunities for the Forest Service and partners to work to ensure that the forestlands and Minnesotans continue to thrive.

Value of Minnesota's Forests: A Sampler



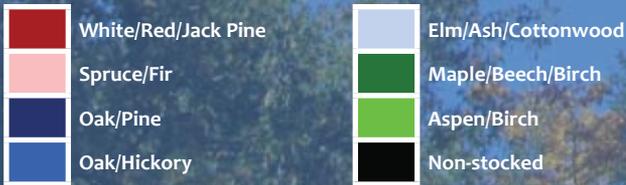
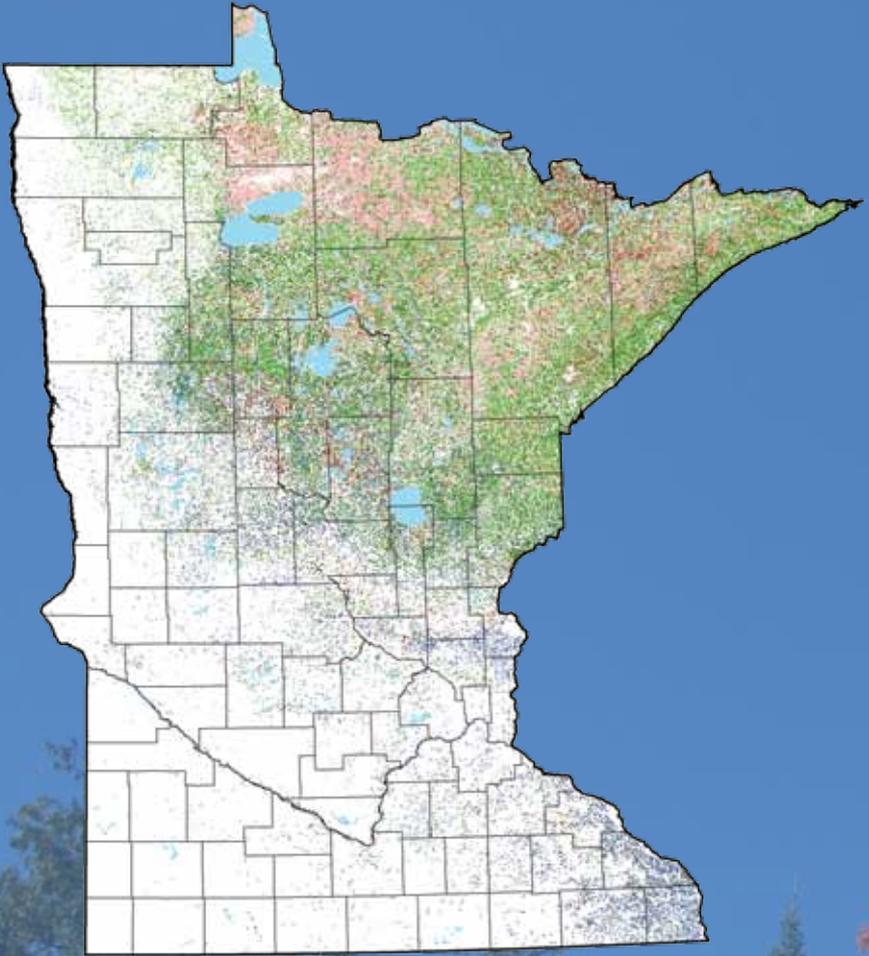
Rural and urban trees play important roles in Minnesota's economy. (Source of data: Cozzetto, Helen, compiler, with Nelson, John. 2010. Minnesota forest resource assessment, part 1. Minnesota Department of Natural Resources.)

MINNESOTA'S FORESTS— DID YOU KNOW?

- Forests cover one-third of the State.
- Eighty-seven percent of Minnesota's forests are owned by private and non-Federal landowners.
- Over 125 million trees grow in Minnesota's cities and towns.
- More than 100 cities and towns have Tree City USA status.
- Native Americans from 11 tribes manage over 1 million acres of forest.
- Minnesota's forests are diverse, with aspen and birch (25%); softwoods such as pines, spruces, and firs (32%); and hardwoods such as oaks and maples (42%).



Forest Type Groups



Source: Miles, Patrick D.; Heinzen, David; Mielke, Manfred E.; and others. 2011. Minnesota's forests. RB-NRS-50. USDA Forest Service.



THE USDA FOREST SERVICE IN MINNESOTA

The Forest Service is organized into three branches, each with specific roles that contribute to healthy forests, and each with a role to play in Minnesota: National Forest System, State and Private Forestry, and Research and Development.

The **National Forest System** manages national forests and grasslands to provide clean water and continuing forest resources for today and future generations. Minnesota falls within the Eastern Region (Region 9) of the Forest Service and includes two national forests—the Chippewa and the Superior.

The **Chippewa National Forest** encompasses 1.6 million acres in north central Minnesota and shares boundaries with the Leech Lake Band of Ojibwe. The Forest has 400,000 acres of wetlands, 925 miles of streams, and 1,300 lakes—including Winnibigoshish, Leech, and Cass—all linked by the Mississippi River. Visitors come to the area to view one of the highest concentrations of nesting bald eagles outside Alaska.

The **Superior National Forest** encompasses 3 million acres in northeastern Minnesota and is valued for its boreal forest ecosystem, sparkling waters, diverse wildlife, abundant winter snow, alluring summer temperatures, and rich cultural history. The Superior is renowned for its vast remote settings including the 1-million-acre Boundary Waters Canoe Area Wilderness, noted as one of the 50 greatest international places to visit in a lifetime by the National Geographic Society.



Most Minnesotans do not live close to a national forest. The Region 9 **Urban Connections** program strives to connect an urban audience to the Forest Service through outreach efforts and involving urban residents in caring for the natural resources in their cities and towns.

State and Private Forestry encourages sustainable management of non-Federal forest lands. Because 87 percent of Minnesota's forests are owned by private individuals, the work of the **Northeastern Area State and Private Forestry** unit of the Forest Service is critical to supporting effective land stewardship across the landscape, from rural woodlots to trees along streets and in yards in cities and towns. The Northeastern Area State and Private Forestry works with the Minnesota Department of Natural Resources and other organizations to provide landowner and community assistance on sustainable forestry.

Research and Development conducts natural resources research and provides science results to all land managers and users. The research and development branch of the Forest Service is the world's largest forestry research organization. The **Northern Research Station** has field offices in St. Paul and Grand Rapids, MN. Research focuses on forest disturbances; urban natural resources stewardship; sustaining forests; providing clean air and water; and natural resources inventory, monitoring, and assessment.



MINNESOTANS CARE ABOUT THEIR FORESTS, AND THE USDA FOREST SERVICE DOES TOO

The Minnesota Forest Resource Assessment and Action Plan, completed by the Minnesota Department of Natural Resources in 2010, identified key forest resource issues in the State. Listed below are examples of how the Forest Service is helping to address them.

Sustaining Minnesota's Forests—tracking and managing today, while planning for the future

The Forest Inventory and Analysis Program delivers annual updates on the extent, ownership, and condition of Minnesota's forests. Online access to this data gives forest landowners and natural resource managers an invaluable source of current data.

- The Forest Health staff conducts an annual health assessment of Minnesota's forests. The most recent assessment indicates that about 538,000 acres (3%) are affected by insect infestations, diseases, and weather-related events.
- The Chippewa and Superior National Forests both implement Land and Resource Management Plans based on the principles of multiple land-use, landscape ecosystem management, and public involvement. Forest managers monitor implementation of these plans annually and assess progress towards goals every 5 years.
- The Forest Legacy Program, a partnership between States and the Forest Service, identifies and helps to conserve environmentally important forests from conversion to nonforest uses, primarily through conservation easements. Over 79,000 acres of forest land in Koochiching County valued at \$14.4 million was protected in 2010, while still providing public access for hunting, fishing, snowmobiling, and other uses.
- Minnesota's forest landowners, as a group, are getting older. According to the National Woodland Owners Survey conducted by the Forest Service, 38 percent of Minnesota's forest landowners are age 55 or older. The Northeastern Area State and Private Forestry has developed products to help these landowners with estate planning options.
- Community Wildfire Protection Plans on the Chippewa and Superior National Forests identify activities that reduce the risk of wildfires. Residents, civic groups, lake associations, and local decision makers have collaborated with the Forest Service in developing and implementing these plans. In Itasca County, Firewise principles were applied, removing trees and brush that were growing too close to homes. During the first "chipper day" in 2009, 60 landowners removed 275 tons of woody biomass, which was chipped and sold to Minnesota Power Rapids Energy.

Ensuring Adequate Supplies of Clean Water

- The Northeastern Area State and Private Forestry Forests-to-Faucets project identifies forested areas in each State that produce the most clean water and those areas where the water quality is threatened by conversion of forest to other land uses. Northeastern Minnesota produces the greatest amounts of clean water in the State. The water from the Pine and Rum River watersheds, north of the Twin Cities, is threatened by development pressures.
- The Chippewa National Forest, Minnesota Department of Natural Resources, and the Leech Lake Band of Ojibwe partnered to reconstruct a channel through the Pigeon Lake impoundment, allowing for easier passage for spawning fish and other aquatic organisms.
- The Great Lakes Restoration Initiative is targeting aquatic invasive species, nonpoint source pollution, and contaminated sediments. The Northeastern Area State and Private Forestry is working in the Lake Superior watershed to reduce storm water runoff and to increase canopy cover, replace ash trees lost to emerald ash borer, reduce toxic substances in brownfield sites, and develop markets for ecosystem services. The Superior National Forest is working on wetland restoration to benefit wood turtles and removing a small dam and other stream restrictions to benefit upstream passage of brook trout.



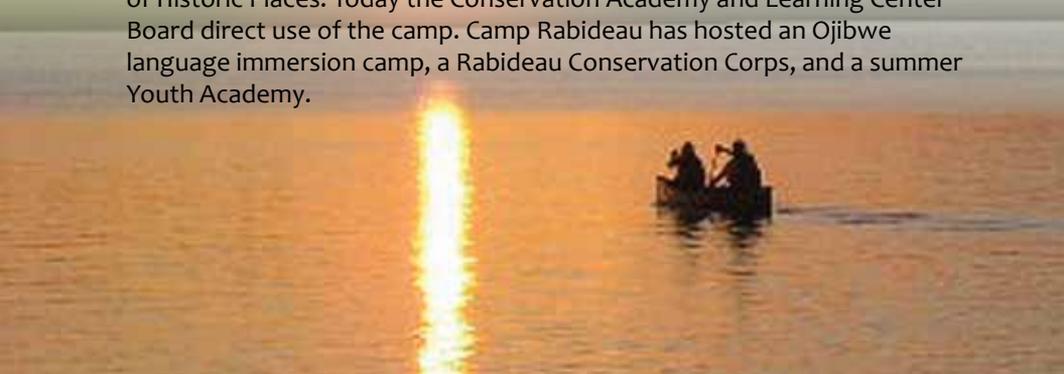
Forests and clean water are intertwined. Trees take up water and trap water pollutants in their cells and slow water as it moves across the landscape lessening erosion. Forests also keep rivers cool with their shade. The ability of forests to produce clean water was one of the three main reasons for the Organic Act of 1897, which established the forest reserves, now the national forests.

Mitigating and Adapting to Climate Change

- The Northwoods Climate Change Response Framework is helping land managers to understand the potential impacts of climate change on Minnesota's forests and is illustrating how to integrate climate change considerations into forest management decisions.
- The Marcell Experimental Forest in north central Minnesota is the site of the Spruce-Peatland Responses Under Climatic and Environmental Change (SPRUCE) Project. At Marcell the response of northern peatland ecosystems to increases in temperature and atmospheric carbon dioxide will be assessed—an important step in understanding the potential magnitude of the effects of a changing climate because peat bog stores about one-third of the world's carbon.
- To understand how forests of northeastern Minnesota will respond to changing climate, the Northern Research Station, the Superior National Forest, and the University of Minnesota have teamed up to develop a monitoring and assessment project.

Protecting and Enhancing Significant Ecological and Cultural Features

- The lake sturgeon is listed by the Forest Service's Regional Forester as a sensitive species and by the Minnesota Department of Natural Resources as a species of concern. Fisheries biologists have netted, measured, and installed acoustic telemetry equipment in 60 lake sturgeon from the Namakan Reservoir. Data collected will help in developing management strategies.
- Blueberries, wild rice, and black ash trees are all important cultural resources for the Leech Lake Band of the Ojibwe. Chippewa National Forest managers mapped blueberry bush locations to help managers decide where openings might be needed to bring more sunlight to the ground, to aid fruit production. A black ash symposium brought together land managers facing the challenge of sustaining black ash in the face of the threat by the emerald ash borer.
- The Civilian Conservation Corps Camp Rabideau on the Chippewa National Forest opened in 1933, and in 2006 was placed on the National Register of Historic Places. Today the Conservation Academy and Learning Center Board direct use of the camp. Camp Rabideau has hosted an Ojibwe language immersion camp, a Rabideau Conservation Corps, and a summer Youth Academy.



Providing for Recreational Use of Forests and Associated Waters

- Recreation activities on national forests and grasslands have large economic impacts on America's rural communities. According to the Forest Service report on the "State and national economic effects of fishing, hunting, and wildlife-related recreation on U.S. Forest Service-managed lands," from 2000 to 2003 the average annual economic impact of hunting, fishing, and wildlife viewing in communities adjacent to the Chippewa and Superior National Forests was more than \$85 million.
- Ce Tempoxcalli is a community organization dedicated to promoting success, well-being, and cultural integrity for all, with a focus on Latino, Native American, and immigrant communities and their youth. The Superior National Forest has partnered with Ce Tempoxcalli to develop outdoor recreation and leadership skills through family-based experiences. In return the Forest Service is learning about the relationship these communities have with nature and their feelings about the role they can play in caring for natural resources.



Youth from Ce Tempoxcalli core a tree to find out its age and growing conditions. Photo by Jerry Lopez

Maintaining and Expanding Urban Tree Cover

- Healthy trees absorb carbon dioxide and pollutants, trap rain water, save money on air conditioning and heating costs, increase property values, reduce crime, and help those who are ill recover faster. According to the USDA Forest Service brochure "Trees Pay Us Back" (NA-IN-11-06), one healthy 20-year-old tree provides a net benefit to the homeowner or city of \$60 per year. Publications such as the "Tree Owner's Manual" and "How to Prune Trees" help individuals plant and care for their trees.
- Foresters and forest researchers provide advice on how to maintain urban tree cover in the face of threats such as oak wilt and the emerald ash borer.

As you can see, the Forest Service is an active player in addressing Minnesota's forest resource issues and helping to sustain the many benefits the forests provide today and into the future.



HOW TO CONTACT THE USDA FOREST SERVICE IN MINNESOTA:

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