

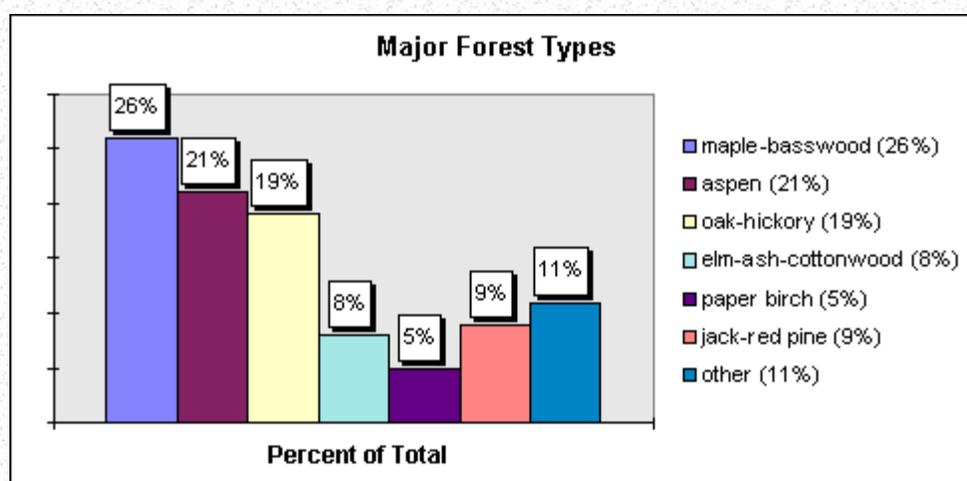
1995 Forest Health Highlights

Wisconsin

The Resource

Forests are important to the economy of Wisconsin. The primary and secondary wood products industry is the second largest employer in the state. Wisconsin is first in the nation in the production of fine paper, sanitary paper products, children's furniture and millwork. The value added of these products annually exceeds \$6.8 billion.

Other benefits provided by forests include recreation and wildlife. Deer populations in Wisconsin are among the highest in the country, and populations have been continually trending up for the past 30 years. There is an estimated fall population of about 1.5 million animals.



Special Issues

Efforts to eradicate the **gypsy moth** in Wisconsin continued as 25 sites totaling 29,685 acres were treated twice with the biological insecticide B.t.k, and 4 sites totaling 1,090 acres were mass trapped with 9 traps per acre. More than 48,500 delta traps were deployed for detection, delimiting, post treatment and mass trapping. Egg mass surveys were conducted in areas that yielded high numbers of trap catches. About 125 state and federal personnel assisted in all aspects of the program.

The mild winter and hot summer combined to produce the largest trap catch in Wisconsin's history. It is believed that a small proportion of the adult males were blown in from Michigan. Over 103,000 male moths were trapped in 44 counties. Over 500 egg masses or caterpillars, pupae, and adult females were found in 54 locations. The bulk of the trap catches and egg masses were in the counties bordering Lake Michigan and Green Bay. Outlying populations with egg masses were found in Portage County in central Wisconsin and in Eau Claire county in western Wisconsin.

The **jack pine budworm** infestation that erupted in 1992 and affected 90% of the 400,000 acres of jack pine type is now declining. In northwestern Wisconsin, only 17,000 acres of jack pine were moderately defoliated in 1995. In northern Wisconsin, approximately 20,000 acres of budworm killed jack pine were harvested. In western and central Wisconsin, approximately 5,000 - 7,000 acres were salvaged between 1992 to 1995. Most of this acreage has been replanted or regenerated to jack pine. The remaining mature jack pine resource is threatened by bark beetles that thrive on weakened trees. Harvesting dead and declining jack pine reduces the chances of bark beetle outbreaks.

The population of **introduced basswood thrips**, an exotic species, has been low for several years. However, in 1995, this insect was observed feeding in the buds and on newly emerging foliage of basswood on approximately 85,000 acres in northwestern Wisconsin. Basswood is a common component of the northern hardwood forests, although it is rarely a significant component in any particular stand.

Butternut canker is a devastating fungus disease of butternut. In Wisconsin, butternut canker has been reported in 46 of the 62 counties where butternut trees occur. This disease has been observed on 91% of the butternuts surveyed in 79 locations throughout Wisconsin. Activities are being focused on growing butternut on the sites best suited for rapid growth in hopes of growing the tree to a seed-bearing age and maintaining butternut as part of Wisconsin's forest ecosystems. A cooperative project between the USDA Forest Service, Wisconsin DNR and Menominee Tribal Enterprises was initiated to better define the silviculture of butternut.

This disease is spread to new locations by sap-feeding insects that are attracted to wounds on oak trees. Oak wilt has been previously reported in 50 of Wisconsin's 72 counties. There were no new county reports of this disease in 1995.

Oak pruning guidelines for arborists and homeowners:

For all counties where the presence of oak wilt has been confirmed (see map) plus Florence and Lincoln (where oak wilt borders the county):

1. April 15 - July 1: No pruning or cutting of oak except in emergencies. Pruning paint must be applied as soon as possible to all final cuts (branches and stumps).
2. July 2 - April 14: No restrictions are necessary.
3. For counties where oak wilt has not been confirmed, no restrictions are recommended.



Oak cutting guidelines:

For all counties where the presence of oak wilt has been confirmed (see map) plus Florence and Lincoln (where oak wilt borders the county).

1. April 15 - July 1: No pruning or cutting of oak except in low risk situations*.
2. July 2 - April 14: No restrictions are necessary.
3. For counties where oak wilt has not been confirmed, no restrictions are recommended.

* Low risk is where oaks (greater than or equal to 5-inch dbh) are < 10 percent of the forest tree composition in a fully or overstocked stand; or, clear cutting patches of oaks where adjacent forest cover types do not have a significant oak composition (oaks greater than or equal to 5-inch dbh are < 10 percent of the forest tree composition in a fully or overstocked stand).

Other Issues

About 3,000 acres of tamarack were defoliated by **larch case bearer** in southeastern Wisconsin. Areas hardest hit were in Sheboygan and Jefferson counties. Heavy parasitism reduced the adult population so that defoliation is not expected in 1996.

A **Kermisid scale** is damaging planted red oaks in Grant, Richland and Vernon Counties. It damages oak twigs by sucking sap from the twigs. Heavy populations are causing twig mortality and stunting of younger trees.

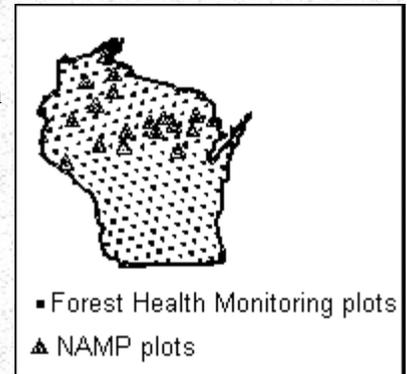
The numbers of adult female scales are very high in red oak plantations less than 5 years old. They decrease as the plantations grow older. Parasitism is very high in a Grant county plantation where three species of

parasitic wasp were recovered from adult female scales; they are being identified.

Regional Issues

Forest health remained stable based on data on crown conditions and damage assessments from the 89 **forest health monitoring** plots in Wisconsin. The Wisconsin Department of Natural Resources, in cooperation with the USDA Forest Service and the Lumberjack Resource Conservation and Development, monitored forest health throughout Wisconsin. This is Wisconsin's 2nd year in this program designed to monitor the current health and changes in forest health on a regional basis.

The Wisconsin Department of Natural Resources is a participant in the international **North American Maple Project** designed to evaluate the health of sugar maple forests. This project grew out of a concern that sugar maple decline and mortality was affecting the overall health of sugar maple and threatening the maple syrup producing industry. A total of 18 plots have been established in Wisconsin and trees are evaluated annually. Results indicate that sugar maples are in good condition and have recovered from the 1988 and '89 drought.



A reduction in maple syrup production in 1995 (down 25% from 1994) can be explained by the weather patterns in 1995. Temperatures in the mid-70's in March caused several problems with the maple trees. The warm temperatures caused early budding which caused a darker than normal sap and erratic sap flows. The fluctuating temperatures influenced some producers to lower their tap numbers and several did not even tap.

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