



# Forest Fun Facts

Adapted from the on-line Teachers Guide  
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MICHIGAN STATE  
UNIVERSITY  
EXTENSION



## **FOREST FACTS FOR MICHIGAN**

While “facts” can sometimes be calculated a number ways, the following collection will hopefully paint a picture about Michigan forests, as well as a bit about how they fit into the national scene. The collection is grouped into six categories. Some of them might be surprising. They’re great to use for discussion-starters.



***National Forest Facts***  
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### **National Forest Facts**

About one third of the United States -- 737 million acres -- is forested. About 490 million acres are classified as timberlands -- forests capable of growing commercial wood, and forests cover about 67% as much as they did in 1600, which is about 1/3 the area of the country. (Source 1, 4)

Foresters have done a magnificent job in restoring America’s forests. Our forests now grow nearly four times more wood each year than in 1920. (Source 4)

Most of America's timberland area and volume lies in the *eastern states*. (Source 3, 7)

Neither Michigan nor the USA are running out of trees or forest. In fact, indicators show just the opposite. (Source 1, 3, 4, 5, 7)

Approximately 59% (289 million acres) of the timberland in the United States is owned by 7 million private owners. Altogether, federal, state, and local governments own 27% (132 million acres) of timberland in the United States. The forest products industry owns about 14%

(69 million acres) of commercial timberland in the United States. (Source 1)

More than 270 million acres of federal land are set aside for use as wildlife refuges, parks, and wilderness areas. (Source 1)

The implications of changing ownership patterns are significant. The yearly transition to many new forest owners makes the communication of information difficult. Not to mention the amount of land being subdivided to build homes and loss of productive forest land. Nation wide 32% of owners expect to harvest some trees in the next ten years. They control 63% (256 million acres) of the private forest land. (Source 1)

In 1995, some 1.6 billion seedlings were planted in the U.S. -- more than 5 new trees for every American. The forest industry plants 43% of the trees planted annually in the United States. Private non-industrial owners plant 42% of the trees planted annually in the United States. Government plants 16% of the trees planted annually in the United States. (Source 1)

In 1992, our nation's timberlands a net annual growth of more than 21 billion cubic feet of timber (a cord pile over 200,000 miles long). When compared to an annual timber harvest of 16 billion cubic feet (a cord pile about 150,000 miles

long), net growth is surpassing harvest by 33 percent. (Source 1, 3)

There is enough standing timber volume in the USA to build a cord pile that would circle the Earth over 100 times. (Source 3, 7).

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## **Michigan Forest Facts**

There are about 11.5 *billion* trees in Michigan. (Source 3, 7)

The largest tree in Michigan is a black willow in Grand Traverse County. The tallest tree is a 179 foot red maple in St. Clair County. The former record-holder, a 201-foot white pine in Marquette County, recently died. The tallest tree in the world is a California redwood at 368 feet. (Source 8)

Michigan has the FIFTH largest area of timberland in the USA, exceeded only by Georgia, Oregon, Alabama, and North Carolina. And, yes, we have more timberland than Alaska! (Source 7)

Michigan has about 19.3 million acres of forest, covering about 53% of the State. This is an *increase* of over a million acres since 1980. (Source 7)

Michigan was about 95% forested prior to Euro-American settlement. The two main causes of deforestation have been agriculture and construction of towns & cities. Logging, fires, and pollution do not result in deforestation. (Source 3)

A well-stocked acre of northern hardwoods will have the equivalent of 30-40 cords. (Source 3)

The ten most common tree species in Michigan are: sugar maple, red maple, northern white cedar, red (Norway) pine, quaking aspen, northern red oak, white pine, bigtooth aspen, eastern hemlock, and basswood. Together, they make up 66% of the total timber volume in Michigan. (Source 7)

Although 30 million trees are planted in Michigan each year, many millions more are regenerated through forest management working in concert with natural processes. (Source 3, 6)

Michigan forests support 150,000 jobs and annually add nine billion dollars to the state economy. Another 50,000 jobs and three billion dollars are gained from forest-based recreation. (Source 6)

The Upper Peninsula holds 45% of Michigan's forest, with 39% in the northern Lower Peninsula, and 16% in the southern Lower Peninsula. (Source 7)

On the average, Michigan's trees have been getting older and larger for over 50 years. While this is true overall, there are important differences among tree species and forest types. (Source 3, 7)

Annual harvest in Michigan would form a cord pile 3,500 mile long. Annual growth would form a pile 8,000 miles long. If all the timber in Michigan were laid in that cord pile, it would stretch over 250,000 miles . . . roughly the distance to the Moon! (Source 3, 7)

The three most serious threats to Michigan forests are probably intensive browsing by deer, invasive exotic species,

and forest ownership parcelization. (Source 3).

Among the Lake States of Michigan, Wisconsin, and Minnesota, Michigan timberlands are the least productive, in terms of timber harvest. The least productive Michigan forest ownership category is private, non-industrial forest owners. (Source 3, 7)

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## **Wood Use Facts**

The average single-family home (2,000 sq.ft.) can contain 16,900 board feet of lumber and up to 10,000 square feet of panel products. In Michigan, that much wood might be equivalent of 3-7 acres of forest. (Source 1, 3).

Every ton of paper recycled leaves 3.3 cubic yards of free space in landfills. Producing paper from recycled fibers reduces air pollutants by as much as 74% and water pollutants by as much as 35%. A wood fiber can only be recycled 5 - 7 times before it loses its usefulness for papermaking. Virgin fiber must continuously be added. As paper products are recycled again and again they must go into papers requiring little strength. Recycled material must be blended with primary (virgin) filler to add strength. (Source 5)

Aluminum siding requires four times more energy and brick veneer 22 times more energy to produce and transport to the building site than do equivalent wood sidings. Concrete floors need 21 times more energy to produce than do wood floors. (Source 5)

Inch to inch, wood is 16 times more efficient as an insulator than concrete, 415 times as efficient as steel, and 2,000 times as efficient as aluminum. It's also cheaper to produce, has much less negative environmental impact, and is renewable. (Source 1, 2).

Each person uses wood and paper products equivalent to what can be produced from one 18" in diameter 100-foot tree every year. On daily basis, that's 4 to 4.5 pounds of wood, or the equivalent of roughly half a two-by-four. (Source 1, 3)

Each day, Americans recycle enough used paper to fill 15 miles of boxcars. In 1995, that totaled more than 43 million tons of paper and paperboard, an average of 329 pounds per person. (Source 5)

We read over 350 million magazines, 2 billion books, and 24 billion newspapers a year. Corrugated boxes are used to ship 95% of all manufactured goods in the United States. (Source 5)

We use more wood by weight than all other raw materials combined (i.e. plastics, steel, aluminum, concrete). Wood products make up 47% of all industrial raw materials manufactured in the U.S., yet uses only 4% of the energy

needed to manufacture these industrial materials. (Source 5)

Wood is the third largest globally traded commodity, behind petroleum and natural gas. (Source 9)

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## **Economic Facts**

The forest industry ranks among the top 10 employers in 40 of the 50 states. (Source 4)

About 45 percent of the paper consumed in the United States is recovered for recycling. Recycled paper, however, is not "pure" so it must contain some new wood fiber for strength. (Source 4)

1993 was the first year in history in which more paper was recycled than was buried in landfills. Paper can be recycled only 5 to 8 times before the fibers in the paper become too short and weak to be reused. Old newspapers are commonly used to make tissue and cardboard, while magazines are often recycled into newsprint. (Source 5)

Fire protection. At the turn of the century, wildfires annually burned across 20 to 50 million acres of the country, with devastating loss of life and property. Through education, prevention, and

control, that amount has been reduced to about 2 to 5 million acres a year -- a reduction of 90% -- while fire's contributions to forest health have also been studied and better understood. (Source 4)

Today, advanced technology allows us to use every part of the tree for products useful to society. In addition to lumber and paper coming from the trunk of the tree, bark, resins, cellulose, scraps, and even sawdust are turned into products that range from camera cases to medicines to rugs. (Source 4)

An increasing population, the prevalence of the automobile and more leisure time have combined to increase demands for places to go for all types of recreation in a forest -hiking, birding, off-road vehicle riding, and much more. Visitor days (1 person for 12 hours) to federal sites, alone, totaled 600 million in 1989. (Source 4)

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## **Environmental Benefit Facts**

Fall color timing is based mostly on photoperiod (actually the increasing number of night-time hours). Color intensity and persistence is influenced by

forest health conditions, frosts, other weather factors. (Source 3)

An average, large, healthy tree could have about 2,000 leaves. During 60 years of its

life, such a tree could grow and shed approximately 3,600 pounds of leaves. Those leaves return about 70 percent of the nutrients to the soil. (Source 1)  
A large tree in full leaf can "lift" well over a ton of water a day from the soil and carry it along an elaborate system of pipelines to every leaf. Most of this water is returned to the air through a process called transpiration. On that same day, the same tree may transpire several hundred gallons of water into the air, cooling as much air as would six window-unit air conditioners. (Source 1)

Wind is estimated to cause about 30% of annual soil erosion, on agricultural cropland. Wind erosion is primarily due to tilled fields lying exposed for long periods between growing seasons. Forest crops are rotated over decades rather than annually, so wind is not a major erosive factor for forests. (Source 5)

A typical tree uses nearly a pound-and-a-half of carbon dioxide and gives off more than a pound of oxygen to grow one pound of wood. An acre of trees might grow 4,000 pounds of wood a year, use 5,880 pounds of carbon dioxide and give off 4,280 pounds of oxygen in the process. One mature tree absorbs approximately 13 pounds of carbon dioxide a year. For every ton of wood a forest grows, it removes 1.47 tons of carbon dioxide and replaces it with 1.07 tons of oxygen. (Source 1, 4)

Three well-placed mature trees around a house can cut air-conditioning costs by 10-50 percent, while trees and other landscaping can increase property value by 5-10 percent. (Source 2)

Clearcutting is the only effective means to regenerate forest types adapted to catastrophic disturbance and are intolerant of shade. (Source 3)

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## **Wildlife Facts**

Species such as whitetail deer, wild turkeys, and wood ducks were almost extinct at the turn of the century. Wildlife conservation and habitat enhancement has resulted in flourishing populations of these and other species we now take almost for granted. Now foresters are working with other professionals to improve habitats and ensure survival of other wildlife species. (Source 4)

Every action, or lack of action, has consequences for wildlife. Every action, or lack of action, results in winners and losers. The choice belongs to forest

owners and resource managers, whether intentional or unintentional. (Source 3)

In the 1970s, scientists knew of only 200 pairs of spotted owls. By early 1992, they had found over 3,510 owl pairs. By 1994, researchers found over 600 pairs of spotted owls in a single small section of private forestland in Northern California, suggesting that California alone could be home to as many as 8,000 pairs of spotted owls. (Source 5)

Over the past decade, forest products companies have spent more than \$100 million on wildlife and environmental

research. They employ more than 90 wildlife biologists. Hundreds more biologists are employed by public agencies, conservation groups, and others. (Source 3, 5)  
Wildlife habitat is best manipulated through forest management. Not only can most habitat objectives be met, but they can be met without taxpayer or forest owner expense. (Source 3)

Michigan has nearly 600 species of vertebrate wildlife. Birds are the most numerous taxonomic group. (Source 3)

There are probably more deer in Michigan today, than there were in all of North America 300 years ago. (Source 3)

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Source 1: American Forest Foundation ([www.affoundation.org](http://www.affoundation.org))

Source 2: [Jim Bowyer](#), University of Minnesota

Source 3: Michigan State University Extension, U.P. Tree Improvement Center

Source 4: Society of American Foresters ([www.safnet.org](http://www.safnet.org))

Source 5: Temperate Forest Foundation ([www.forestinfo.org](http://www.forestinfo.org))

Source 6: Michigan DNR

Source 7: U.S. Forest Service Forest Inventory and Analysis Unit

Source 8: Michigan Botanical Society and Zahn, Paul A., 1964. National Geographic 126 (1): 10-51.

Source 9: Deforesting the Earth by Michael Williams.



*Documents prepared by Michigan State University Extension.  
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