

Wisconsin's Forest Resources, 2007

Research Note NRS-26

This publication provides an overview of forest resource attributes for Wisconsin based on an annual inventory conducted by the Forest Inventory and Analysis (FIA) program of the U.S. Forest Service, Northern Research Station. These estimates, along with web-posted core tables, are updated annually. For more information please refer to page 4 of this report.

Table 1.—Annual estimates, uncertainty, and change for Wisconsin, 2007.

	2007 estimate	Sampling Error (%)	Change since 2006 (%)
Forest Land Estimates			
Area (1,000 acres)	16,408	0.5	0.8
Number of live trees 1-inch diameter or larger (1,000,000 trees)	10,784	1.1	-0.1
Biomass of live trees 1-inch diameter or larger (1,000 tons)	615,613	0.8	1.2
Net volume of live trees (1,000,000 ft ³)	22,787	0.9	1.3
Annual net growth of live trees (1,000 ft ³ /year)	601,287	2.7	-0.6
Annual mortality of live trees (1,000 ft ³ /year)	277,558	3.2	0.4
Annual removals of live trees (1,000 ft ³ /year)	372,166	6.0	-1.0
Timberland Estimates			
Area (1,000 acres)	16,182	0.5	0.9
Number of live trees 1-inch diameter or larger (1,000,000 trees)	10,640	1.1	-0.2
Biomass of live trees 1-inch diameter or larger (1,000 tons)	607,541	0.8	1.3
Net volume of live trees (1,000,000 ft ³)	22,484	0.9	1.4
Net volume of growing-stock trees (1,000,000 ft ³)	20,564	1.0	1.4
Annual net growth of growing-stock trees (1,000 ft ³ /year)	591,906	2.8	-2.0
Annual mortality of growing-stock trees (1,000 ft ³ /year)	201,238	3.6	4.4
Annual removals of growing-stock trees (1,000 ft ³ /year)	349,231	6.3	-0.9

Note: sampling errors and error bars shown in the tables and figures in this report represent 68% confidence intervals for the estimated values.

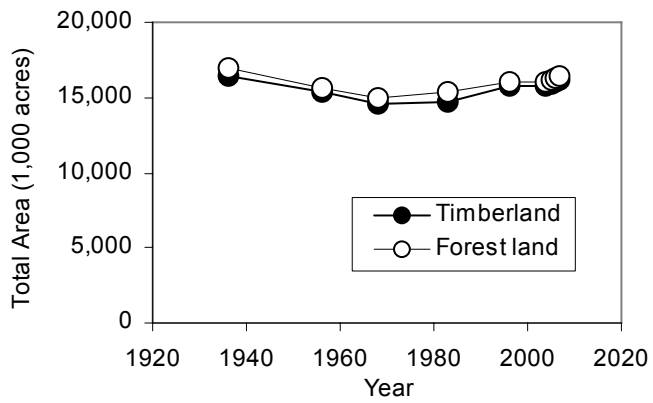


Figure 1.—Area of timberland and forest land in Wisconsin by year.

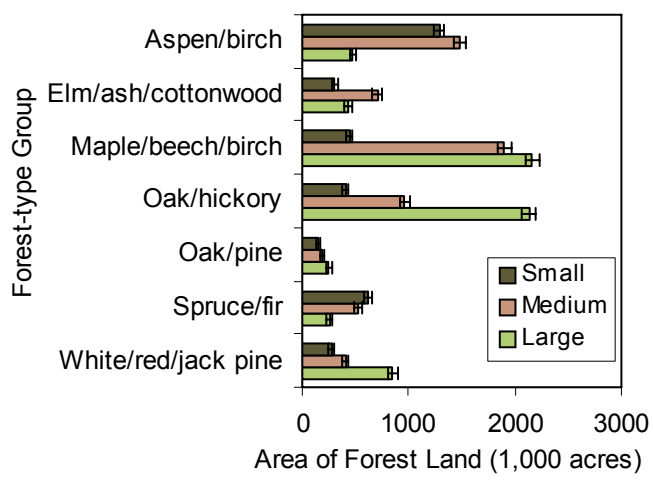


Figure 2.—Area of forest land by top size forest-type groups and stand-size class, Wisconsin, 2007.

Note: Large diameter trees are at least 11.0 inches diameter for hardwoods and at least 9.0 inches diameter for softwoods. Medium diameter trees are at least 5.0 inches diameter but not as large as large diameter trees. Small diameter trees are less than 5.0 inches diameter. Additional details are available in USDA Forest Service (2005).

Table 2.—Top 10 tree species by statewide volume estimates, Wisconsin, 2007.

Rank	Species	Volume of live trees on timberland (million cubic feet)	Sampling error (%)	Change since 2006 (%)	Volume of sawtimber on timberland (million board feet)	Sampling error (%)	Change since 2006 (%)
1	Sugar maple	2,482.0	3.1	1.0	5,548.9	4.4	3.0
2	Red maple	2,365.7	2.6	2.8	4,078.9	4.4	8.3
3	Northern red oak	1,826.6	3.8	0.0	6,554.3	4.4	1.7
4	Quaking aspen	1,776.7	3.0	-0.8	3,199.2	4.6	2.3
5	Red pine	1,485.8	5.3	0.9	5,835.0	5.9	1.9
6	Eastern white pine	1,388.9	5.7	2.5	6,456.8	6.3	3.2
7	American basswood	1,157.5	3.9	1.8	3,244.1	4.8	3.8
8	White oak	857.1	4.5	3.1	2,644.5	5.7	3.6
9	Northern white-cedar	774.5	6.2	0.8	2,120.4	7.5	-0.2
10	Bigtooth aspen	721.2	5.7	0.2	2,057.9	7.2	1.0
	Other softwood species	1,992.1	2.8	-0.1	5,334.4	4.0	-1.0
	Other hardwood species	5,958.5	1.7	2.2	12,242.2	2.8	4.3
	All species	22,786.5	0.9	1.3	59,316.5	1.5	2.9

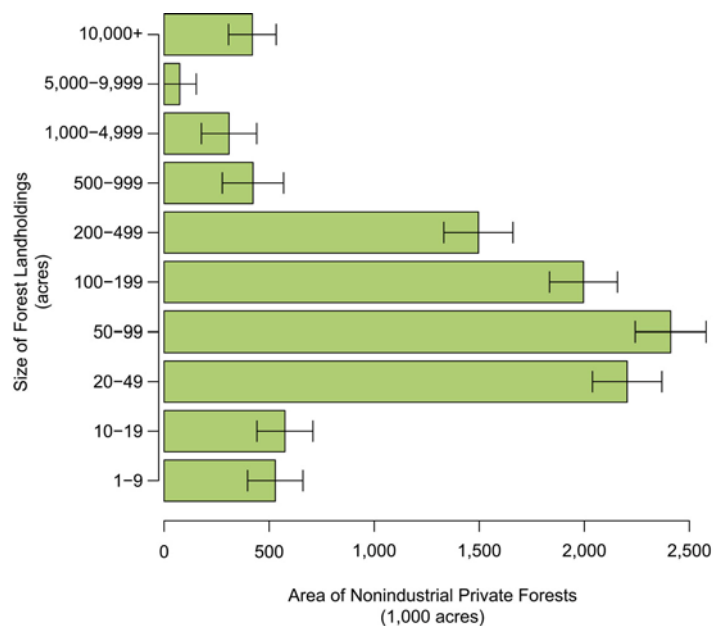
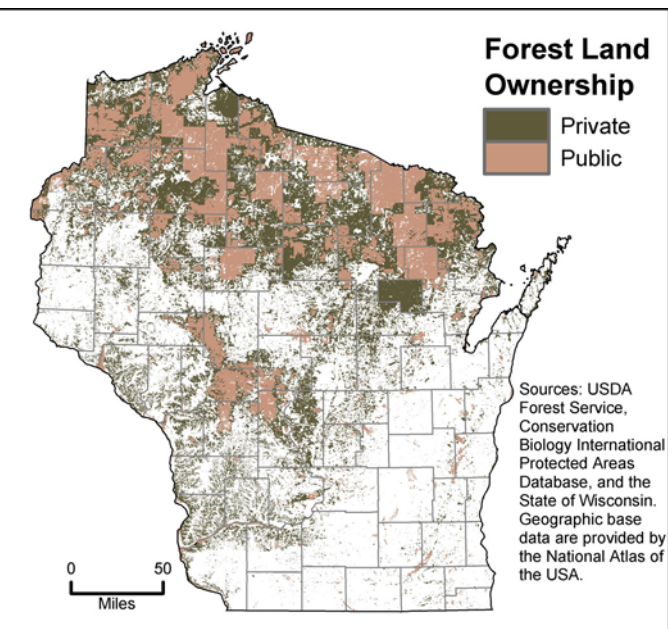


Figure 3.—Distribution of forest land by major owner group and size of nonindustrial private forest landholdings, Wisconsin. Data for nonindustrial private forest landholdings were derived from Butler (2008).

Issue Update: Emerald Ash Borer Arrives in Wisconsin!

The adult emerald ash borer (EAB) is dark metallic green insect, ½ inch long and ⅛ inch wide. The female lays her eggs on the bark of ash trees. The larvae hatch from the eggs and chew into the tree, feeding just beneath the bark. This disrupts the flow of water and nutrients to the leaves and roots, leading to decline and eventual death of the tree. EAB is native to Russia, Japan, Korea and China; all of Wisconsin's native ash species are susceptible to infestation.

On August 1, 2008, EAB was positively identified in southeast Wisconsin. The beetle along with larvae, the immature stage of the beetle, were discovered by forest health specialists investigating a citizen report of dying ash trees in a private woodlot in Ozaukee County, near the village of Newburg.

Estimates using 2007 data highlight the scale of the problem. There are more than 760 million ash trees in the Wisconsin. Black ash, generally found in swampy woodlands, is by far the most common species of ash (Fig. 4). Green ash trees also tend to be found naturally along streams and river banks. White ash is the most useful native ash when it comes to making wood products and it grows best on rich, moist, well-drained soils.

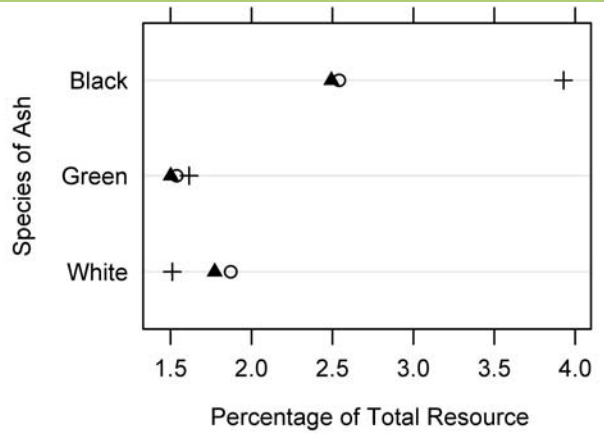
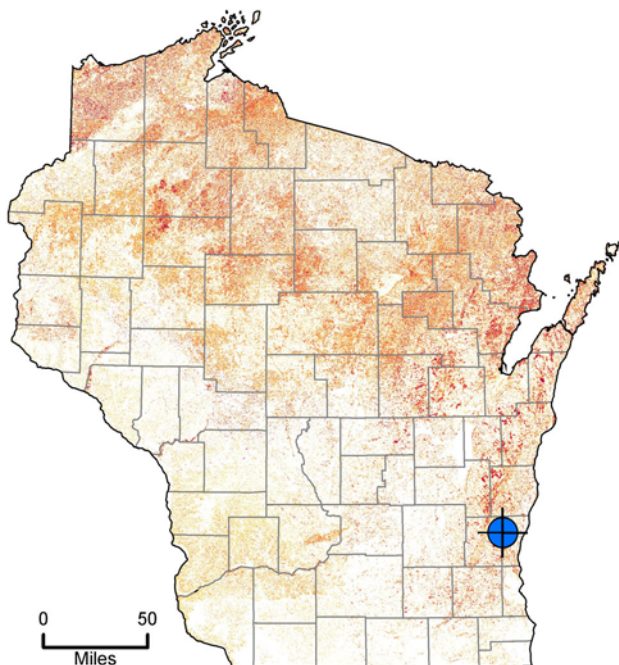


Figure 4.—Relative contributions of three ash species to the total forest resource, Wisconsin, 2007. Growing stock volume is represented by open circles, live volume on forest land by triangles, and the number of trees by plus symbols.

Taken together, the ash resource accounts for nearly 6 percent of the State's forest volume (Fig. 4), and ash trees can be found throughout the state (Fig. 5).

The State will now implement a response plan, updated in July, 2008. You can learn more about this pernicious invasive insect and the State's response on several websites: <http://emeraldashborer.wi.gov/> or <http://dnr.wi.gov/forestry/fh/ash/>



Total Basal Area of Ash

(square feet per acre)



 EAB discovery (Newburg, WI)

Processing note: This map was produced by linking plot data to MODIS satellite pixels (250 m) using gradient nearest neighbor techniques.

Sources: USDA Forest Service, Forest Inventory & Analysis program, 2002-2006 data. Geographic base data are provided by the National Atlas of the USA. FIA data and mapping tools are available on-line at <http://fiatools.fs.fed.us/>.
Date: August 7, 2008.

Figure 5.—Distribution of ash resource in Wisconsin and known locations of emerald ash borer (EAB).

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Estimates, tabular data, and maps from this report may be generated at <http://fiatools.fs.fed.us>
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