USDA Forest Service, U.S. Department of Agriculture
Northern Research Station

Wisconsin's Forest Resources, 2010

Research Note NRS-108

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 at the Northern Research Station of the U.S. Forest Service. These estimates, along with web-posted core tables, will be updated annually. For more information please refer to page 4 of this report.

Table 1 .—Annual estimates, uncertainty, and change for Wisconsin, 2010.

	2010 estimate	Sampling error (%)	Change since 2005 (%)
Forest land estimates			
Area (1,000 acres)	16,872	0.5	4.7
Number of live trees (million trees)	11,044	1.1	2.7
Dry aboveground biomass of live trees and saplings (1,000 tons)	616,287	0.8	5.8
Net volume in live trees (1,000,000 ft^3)	23,763	0.9	6.4
Annual net growth of live trees (1,000 $ft^{3/}$year)	602,696	2.0	-6.5
Annual mortality of live trees (1,000 ft^3/year)	293,050	2.3	16.7
Annual harvest removals of live trees (1,000 ft^3/year)	337,704	4.6	-15.2
Annual other removals of live trees (1,000 ft^3/year)	7,144	40.7	-43.2
Timberland estimates			
Area (1,000 acres)	16,591	0.5	4.5
Number of live trees (million trees)	10,855	1.1	2.2
Dry aboveground biomass of live trees and saplings (1,000 tons)	607,448	0.9	5.7
Net volume in live trees (1,000,000 ft^3)	23,427	1.0	6.4
Net volume in growing-stock trees (1,000,000 ft^3)	21,160	1.0	5.8
Annual net growth of growing-stock trees (1,000 ft^3/year)	562,803	2.1	-10.8
Annual mortality of growing-stock trees (1,000 ft^3/year)	223,306	2.5	28.3
Annual harvest removals of growing-stock trees (1,000 ft^3/year)	293,563	4.8	-13.9
Annual other removals of growing-stock trees (1,000 ft^3/year)	25,703	21.8	3.1

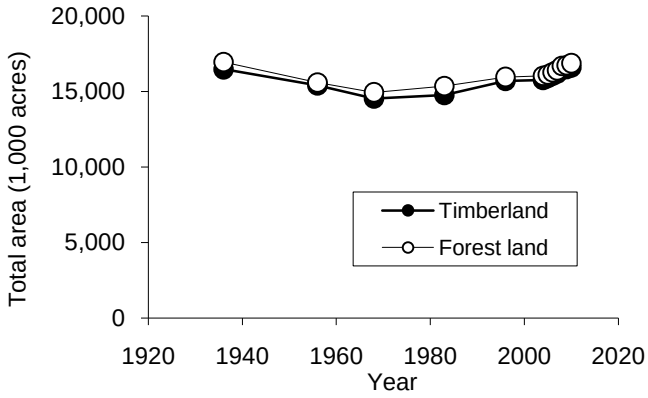


Figure 1.—Area of timberland and forest land in Wisconsin by year.

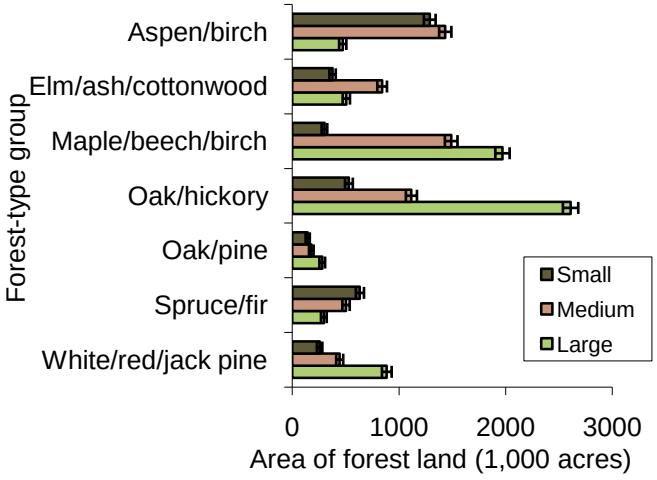


Figure 2.—Area of forest land by top seven forest-type groups and stand-size class, Wisconsin, 2010.

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 U.S. Forest Service (2007).

Note: When available, sampling errors/bars provided in figures and tables represent 68 percent confidence intervals

Table 2.—Top 10 tree species by statewide volume estimates, Wisconsin, 2010.

Rank	Species	Volume of live trees on forest land (million cubic feet)	Sampling error (%)	Change since 2005 (%)	Volume of sawtimber on timberland (million board feet)	Sampling error (%)	Change since 2005 (%)
1	Sugar maple	2,559.4	3.3	3.3	5,902.0	4.4	12.1
2	Red maple	2,475.2	2.6	8.0	4,354.4	4.1	19.2
3	Northern red oak	1,906.8	4.0	5.3	7,038.9	4.6	12.5
4	Quaking aspen	1,778.4	3.1	-1.5	3,230.1	4.7	3.6
5	Eastern white pine	1,608.9	5.7	21.4	7,518.6	6.3	23.2
6	Red pine	1,596.6	5.3	11.5	6,329.7	6.0	14.0
7	American basswood	1,214.9	4.0	7.6	3,618.4	4.7	20.0
8	White oak	849.2	4.8	3.4	2,619.6	5.9	5.2
9	Northern white-cedar	830.1	6.4	8.9	2,157.5	7.6	4.3
10	Bigtooth aspen	682.3	6.0	-4.4	1,897.0	7.5	-4.9
	Other softwood species	2,074.8	2.9	5.1	5,345.0	4.3	0.2
	Other hardwood species	6,186.6	1.7	7.0	12,911.1	2.7	12.1
	All species	23,763.2	0.9	6.4	62,922.3	1.5	11.6

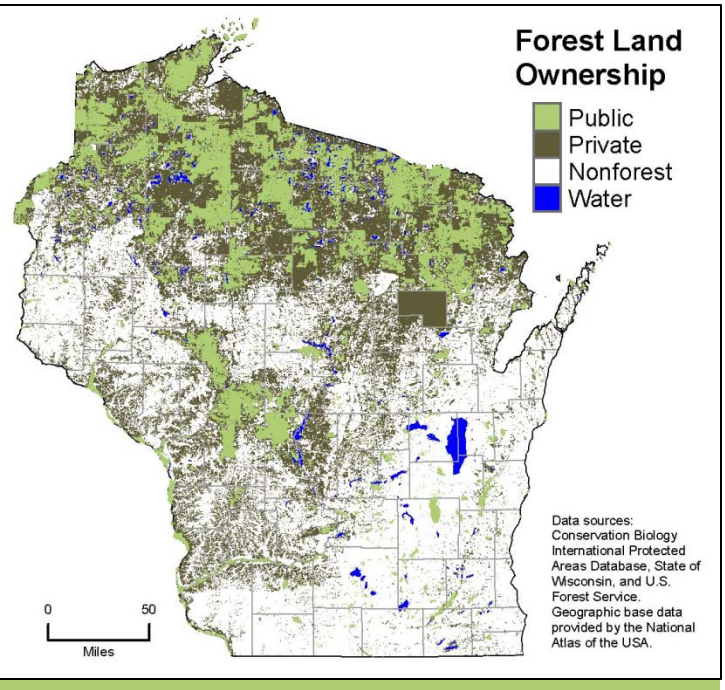


Figure 3.—Distribution of forest land ownership, Wisconsin, 2010.

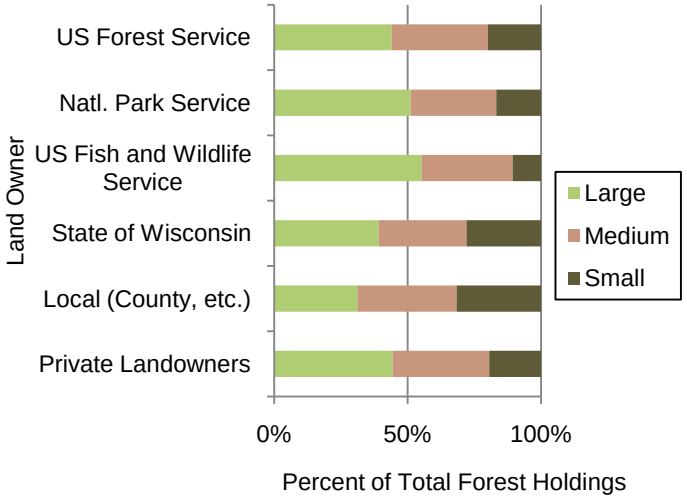
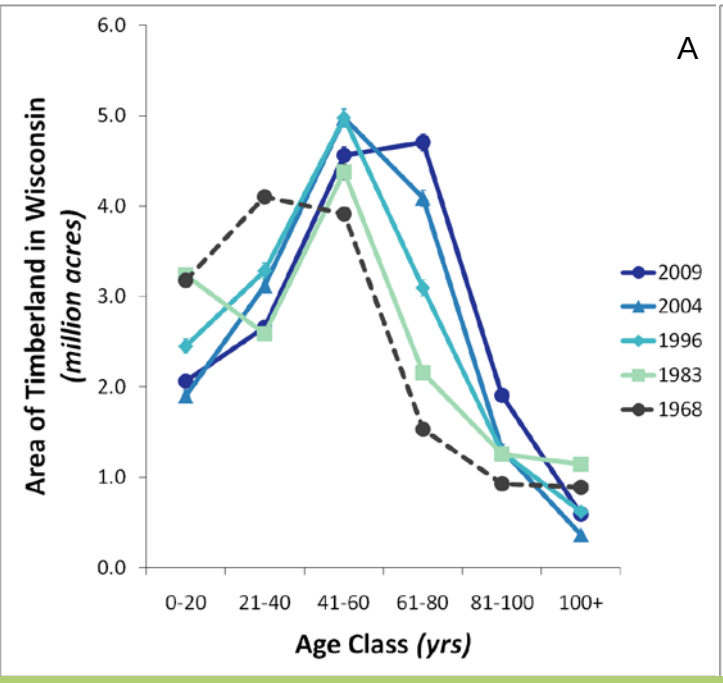


Figure 4.—Distribution of stand-size class across forest land owners, Wisconsin, 2010.

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 U.S. Forest Service (2007).

Wisconsin's forests are maturing, and the percentage of land occupied by young forests is on the decline.



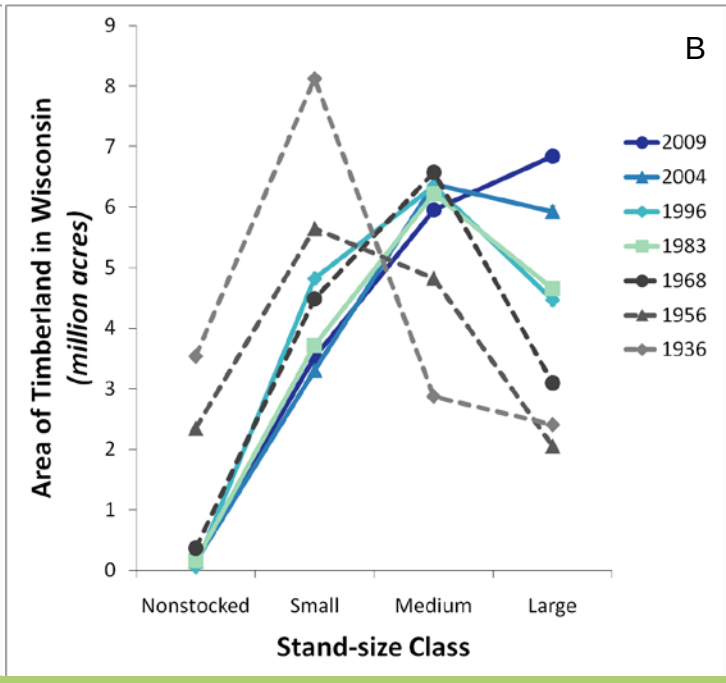


Figure 5.—Stand age class (A) is closely approximated by stand-size class (B) in Wisconsin. By using stand-size class as a surrogate, more historical data is available for analysis.

Timberland in Wisconsin is increasingly dominated by older age classes (Fig. 5A). Since 1968, the area of timberland occupied by young age classes has declined. At the same time, the area of timberland occupied by older age classes generally has increased.

Stand-size class can serve as a useful surrogate of age class. Mimicking age class estimates, the area of land in small stand-size classes declined since the 1968 inventory while the area of timberland occupied by medium and large stand-size classes grew (Fig. 5B). One advantage of using stand-size class as a surrogate for age class is the period of record; stand-size class has been recorded since the earliest inventories of the state.

The distribution of stand-size classes (Fig. 6) is important for ecological and economic reasons. While the values of large, "old-growth" stands are widely recognized, younger forests with small-stand sizes are also essential. Many game and non-game species greatest conservation need[1] are adapted to live in young forest habitats (e.g., American woodcock and golden-winged warbler).

[1]As identified by the Wisconsin Bird Conservation Initiative, http://www.wisconsinbirds.org/plan/index.htm, accessed 4 April 2011.

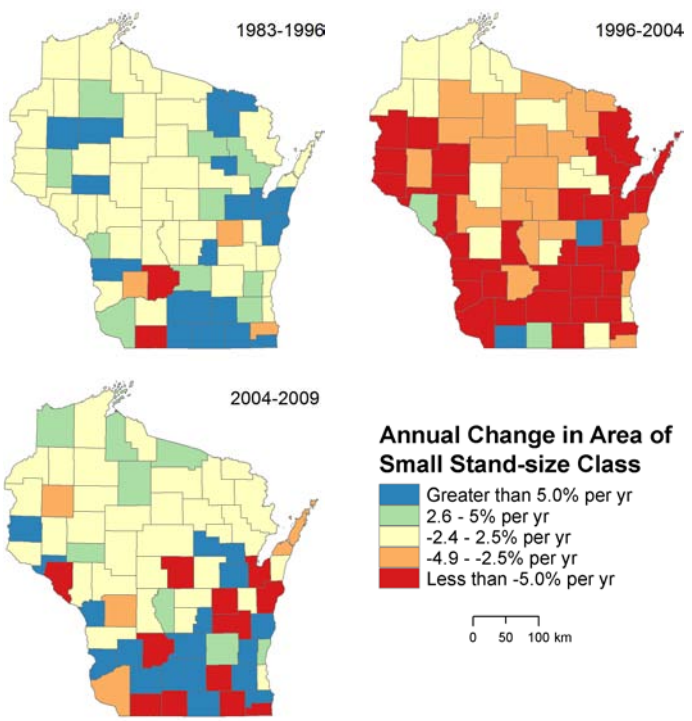


Figure 6.—The annual rate of change in the area of small stand-size class is not constant. Some of the greatest change occurred between 1996 and 2004.

Citation for this Publication

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FIA Program Information

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Additional Wisconsin Inventory Information

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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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Information published in this report and in related tables is based on data collected between 2005 and 2009, stored in the Forest Inventory and Analysis Database (FIADB), and processed using National Information Management System (NIMS) version 4.0, November 2009. Due to periodic changes to FIADB and NIMS, trend analyses should be made using FIA's online estimation tools, not by comparing published reports or tables. FIA estimates, tabular data, and maps may be generated at http://fiatools.fs.fed.us/.

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