

# Illinois' Forest Resources, 2008

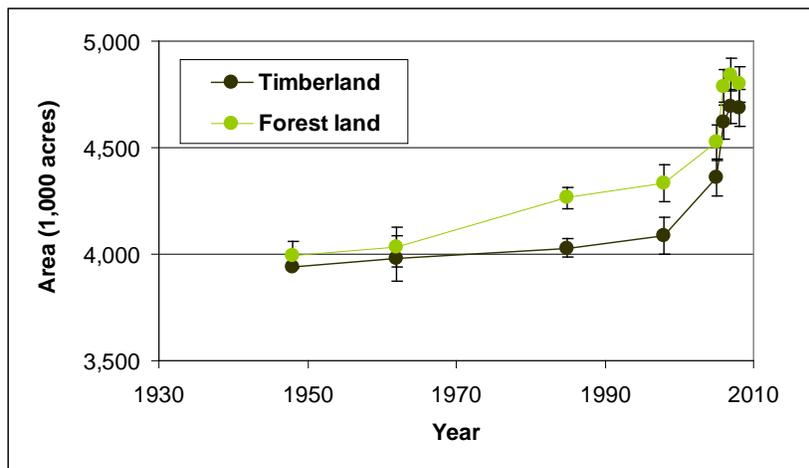
Research Note NRS-72

This publication provides an overview of forest resource attributes for Illinois based on an annual inventory conducted by the Forest Inventory and Analysis (FIA) Program of 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.

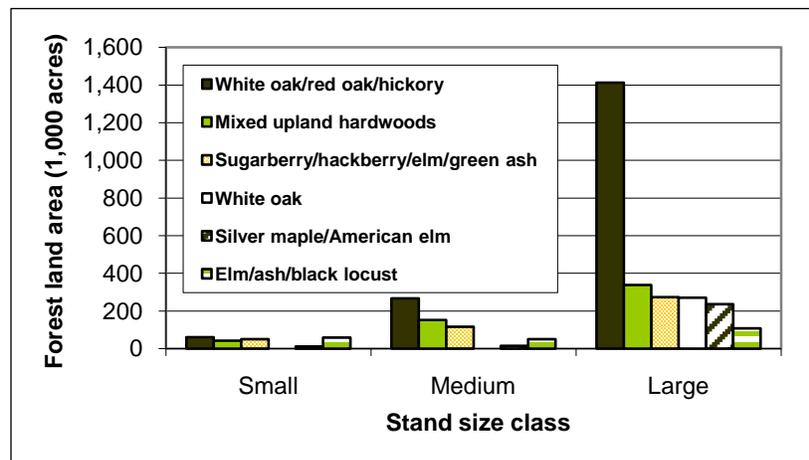
**Table 1.—Annual estimates and uncertainty, Illinois, 2008**

	2008 estimate	Sampling error (%)
<b>Forest Land Estimates</b>		
Area (1,000 acres)	4,797.7	1.7
Number of live trees 1-inch diameter or larger (1,000,000 trees)	2,105.9	2.8
Biomass of live trees 1-inch diameter or larger (1,000 tons)	235,259.9	2.5
Net volume in live trees (1,000,000 ft <sup>3</sup> )	8,651.7	2.7
Annual net growth of live trees (1,000 ft <sup>3</sup> /year)	211,038.1	11.4
Annual mortality of live trees (1,000 ft <sup>3</sup> /year)	124,029.0	11.1
Annual harvest removals of live trees (1,000 ft <sup>3</sup> /year)	35,903.2	32.3
Annual other removals of live trees (1,000 ft <sup>3</sup> /year)	14,320.7	30.4
<b>Timberland Estimates</b>		
Area (1,000 acres)	4,687.1	1.8
Number of live trees 1-inch diameter or larger (1,000,000 trees)	2,069.7	2.9
Biomass of live trees 1-inch diameter or larger (1,000 tons)	228,758.7	2.5
Net volume in live trees (1,000,000 ft <sup>3</sup> )	8,399.2	2.8
Net volume of growing-stock trees (1,000,000 ft <sup>3</sup> )	7,244.7	3.0
Annual net growth of growing-stock trees (1,000 ft <sup>3</sup> )	225,770.4	10.2
Annual mortality of growing-stock trees (1,000 ft <sup>3</sup> /year)	88,673.0	12.5
Annual harvest removals of growing-stock trees (1,000 ft <sup>3</sup> /year)	33,316.5	33.1
Annual other removals of growing-stock trees (1,000 ft <sup>3</sup> /year)	24,431.0	34.7

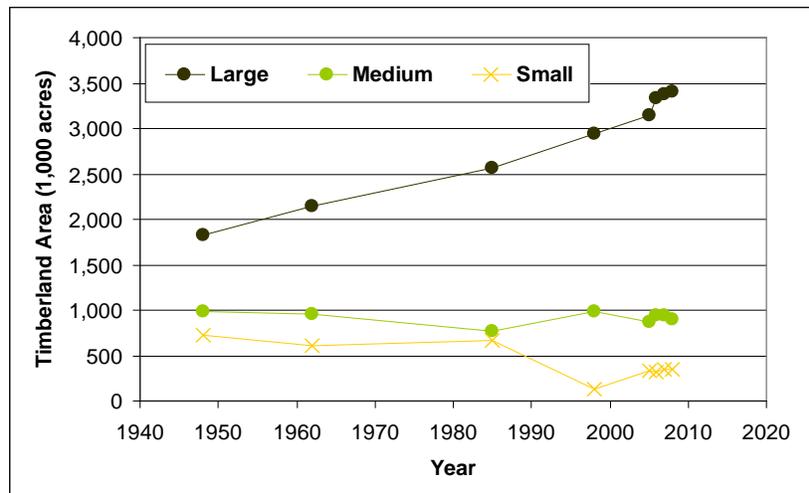
Note: Sampling errors in the tables in this report represent 68% confidence intervals for the estimated values.



**Figure 1.—Area of timberland and forest land by year, Illinois, 2008.**



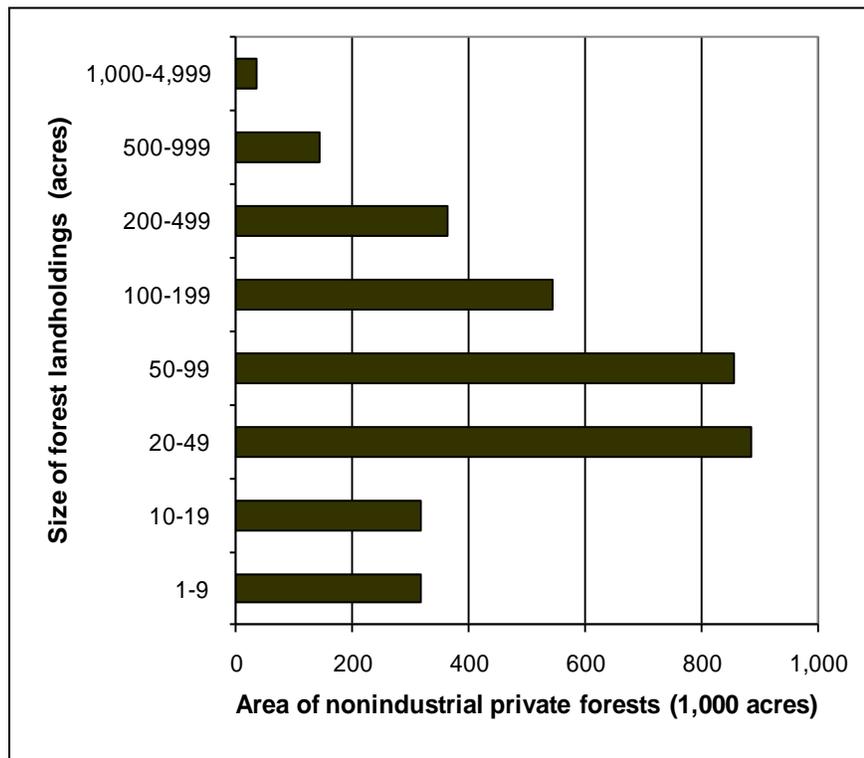
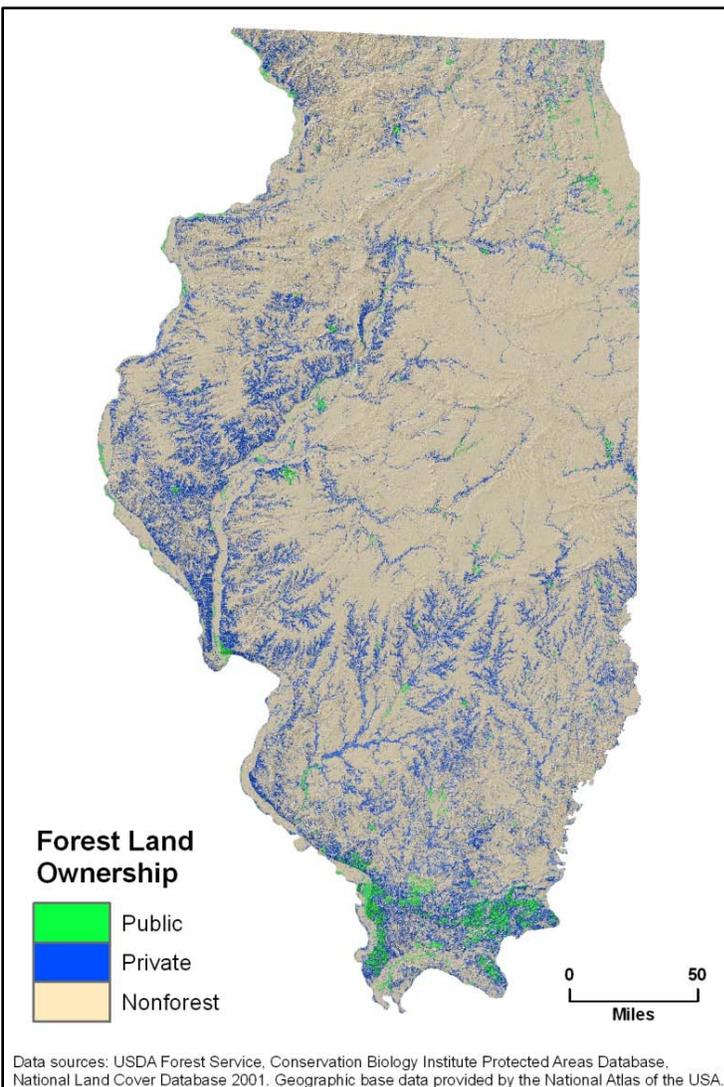
**Figure 2.—Area of forest land by top six forest types and stand-size class, Illinois, 2008.**



**Figure 3.—Area of timberland by stand-size class and year, Illinois, 2008.**

**Table 2.—Top 10 tree species by statewide volume estimates, Illinois, 2008**

Rank	Species	Volume of live trees on forest land (1,000,000 ft³)	Sampling error (%)	Volume of sawtimber trees on timberland (1,000,000 bdf)	Sampling error (%)
1	White oak	1,061.9	7.1	4,010.8	7.8
2	Silver maple	804.1	14.9	2,428.8	16.7
3	Black oak	540.4	9.1	1,979.3	9.7
4	Northern red oak	478.4	10.1	1,828.1	11.4
5	Eastern cottonwood	339.1	18	1,312.7	17.3
6	Green ash	321.5	10.2	953.5	12.8
7	Shagbark hickory	315.4	9.4	964.4	12.3
8	American sycamore	286.8	17.9	1,038.8	18.8
9	Sugar maple	279.2	10.7	830.4	13.7
10	Black walnut	271.0	8.5	822.6	10.6
	Other softwoods	262.6	19.8	977.1	23.2
	Other hardwoods	3,691.4	3.6	9,811.1	4.8
	<b>All Species</b>	<b>8,651.7</b>	<b>2.7</b>	<b>26,957.6</b>	<b>3.3</b>



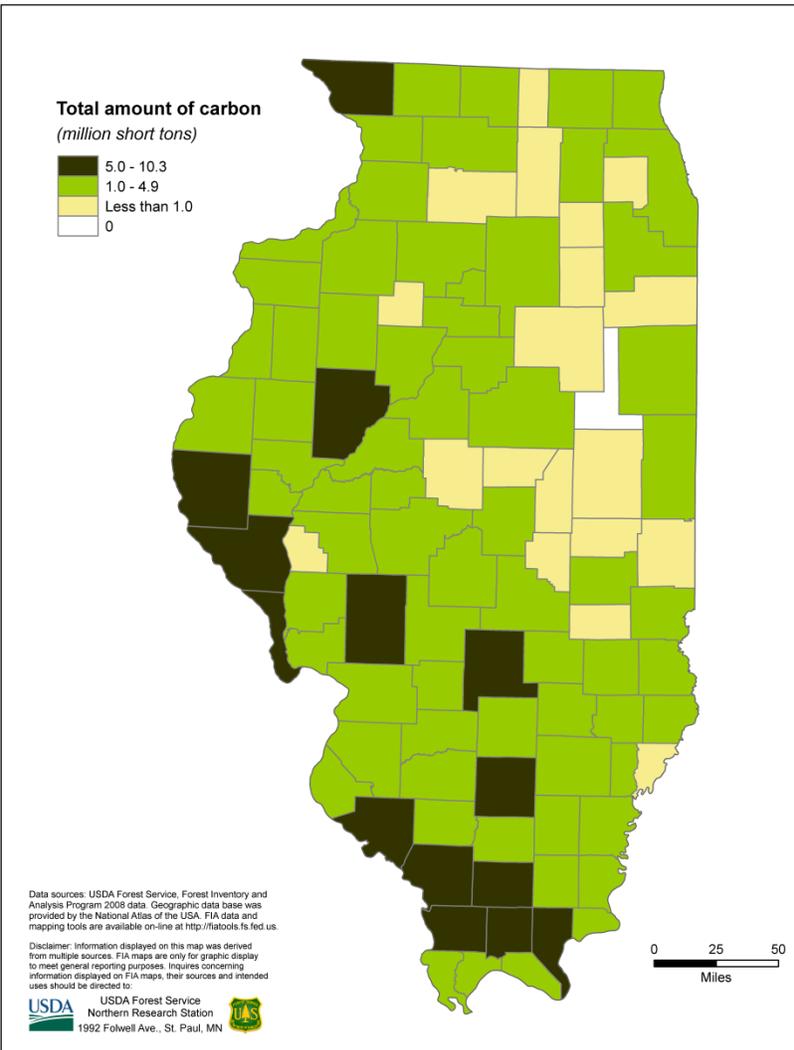
**Figure 4.—Distribution of forest land by major owner group (map) and size of nonindustrial private forest landholdings (graph), Illinois, 2002-2006.**

The Forest Inventory and Analysis Database (FIADB) was recently upgraded to include estimates of forest carbon.

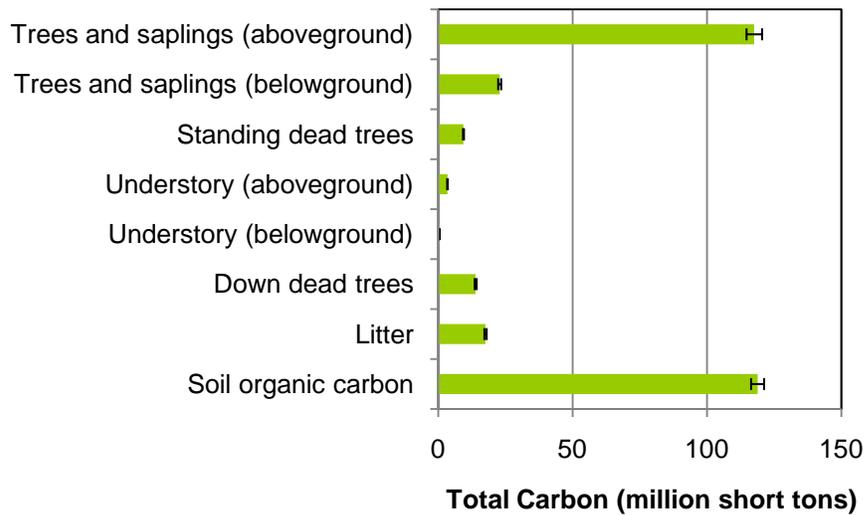
Online calculation tools are now available using EVALIDator and FIDO, and data tables can be downloaded from the FIA Datamart (<http://fiatools.fs.fed.us>).

Forest carbon is stored in a variety of forms or stocks: live trees and saplings (above- and belowground), standing dead trees, understory (above- and belowground), down dead trees, litter, and soil (to 1 meter).

In 2008, forest carbon in Illinois totaled 304 million short tons (equivalent to 276 million metric tons). The highest amounts of carbon were found in the southern and western portions of the State (Fig. 5). The largest components of total forest carbon stock were live trees and saplings (aboveground) and soil organic carbon (Fig. 6).



**Figure 5.—Total amount of carbon stored on forest land by county, Illinois, 2008.**



**Figure 6.—Amount of carbon stored on forest land by stock, Illinois, 2008. Note: 1 short ton = 2000 pounds.**

## Citation for this Publication

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## FIA Program Information

Bechtold, W.A.; Patterson, P.L. 2005. The enhanced Forest Inventory and Analysis Program: national sampling design and estimation procedures. Gen. Tech. Rep. SRS-80. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 85 p.

Smith, W.B. 2002. Forest inventory and analysis: a national inventory and monitoring program. Environmental Pollution. 116: 233-242.

USDA Forest Service. 2007. Forest inventory and analysis national core field guide, Vol. 1, field data collection procedures for phase 2 plots, ver. 4.0. Available at <http://www.fia.fs.fed.us/library/field-guides-methods-proc/> (verified June 21, 2010).

## Additional Illinois Inventory Information

Crocker, Susan J.; Brand, Gary J.; Butler, Brett J.; et al. 2009. Illinois' Forests 2005. Resour. Bull. NRS-29. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 114 p.

Schmidt, T.L.; Hansen, M.H.; Solomakos, J.A. 2000. Illinois' forests in 1998. Resour. Bull. NC-198. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 133 p.

## Definitions

**Forest land** — Land that is at least 10 percent stocked by trees of any size or formerly having had such tree cover and is not currently developed for nonforest uses. The area with trees must be at least 1 acre in size and at least 120 feet wide.

**Timberland** — Forest land that is producing or is capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands and is not withdrawn from timber utilization by statute or administrative regulation.

**Growing-stock volume** — The amount of sound wood in live, commercial tree species; trees must be at least 5 inches in d.b.h. or greater and free of defect.

**Sawtimber volume** — Net volume of the saw log portion of live sawtimber, measured in board feet, from a 1-foot stump to minimum top diameter (9 inches for hardwoods and 7 inches for softwoods).

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Heading image credit: Paul Wray, Iowa State University, Bugwood.org

*Information published in this report and in related tables is based on Forest Inventory and Analysis Database (FIABD), 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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