USDA Forest Service, US Department of Agriculture
Northern Research Station

Research Note NRS-94

Illinois' Forest Resources, 2009

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 (NRS) 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, 2009

	2009 estimate	Sampling error (%)
Forest Land Estimates		
Area (1,000 acres)	4,864	1.6
Number of live trees 1-inch diameter or larger (1,000,000 trees)	2,118	2.7
Biomass of live trees 1-inch diameter or larger (1,000 tons)	236,663	2.2
Net volume in live trees (1,000,000 ft^3)	8,717	2.4
Annual net growth of live trees (1,000 ft^3/year)	205,515	9.1
Annual mortality of live trees (1,000 ft^3/year)	127,671	8.1
Annual harvest removals of live trees (1,000 ft^3/year)	40,476	20.7
Annual other removals of live trees (1,000 ft^3/year)	13,660	30.3
Timberland Estimates		
Area (1,000 acres)	4,775	1.6
Number of live trees 1-inch diameter or larger (1,000,000 trees)	2,083	2.8
Biomass of live trees 1-inch diameter or larger (1,000 tons)	231,163	2.2
Net volume in live trees (1,000,000 ft^3)	8,505	2.4
Net volume of growing-stock trees (1,000,000 ft^3)	7,206	2.8
Annual net growth of growing-stock trees (1,000 ft^3)	218,461	8.4
Annual mortality of growing-stock trees (1,000 ft^3/year)	93,205	8.9
Annual harvest removals of growing-stock trees (1,000 ft^3/year)	39,818	21.0
Annual other removals of growing-stock trees (1,000 ft^3/year)	33,799	28.1

Note: Sampling errors in the tables and figures in this report represent 68% confidence intervals for the estimated values. Volumes are for 5-inch and larger diameter trees.

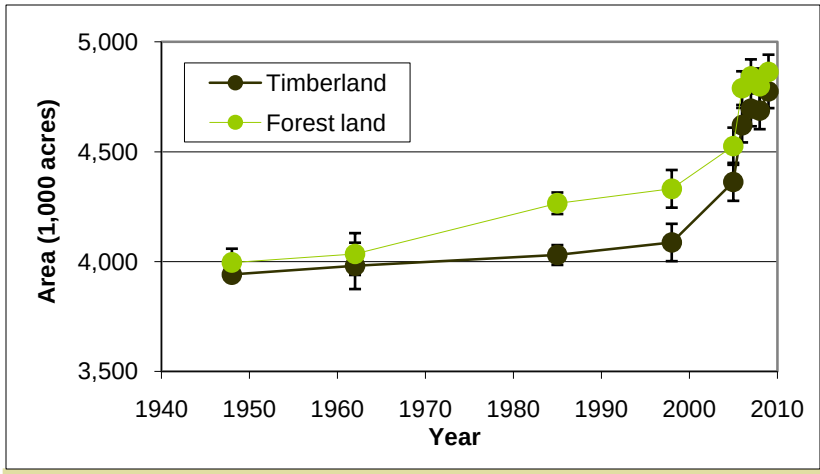

Figure 1.—Area of timberland and forest land by year, Illinois, 1948-2009.

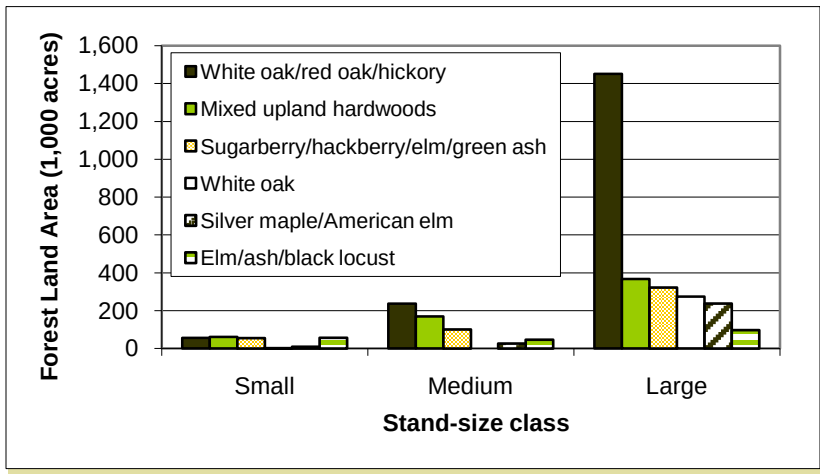

Figure 2.—Area of forest land by top six forest types and stand-size class, Illinois, 2009.

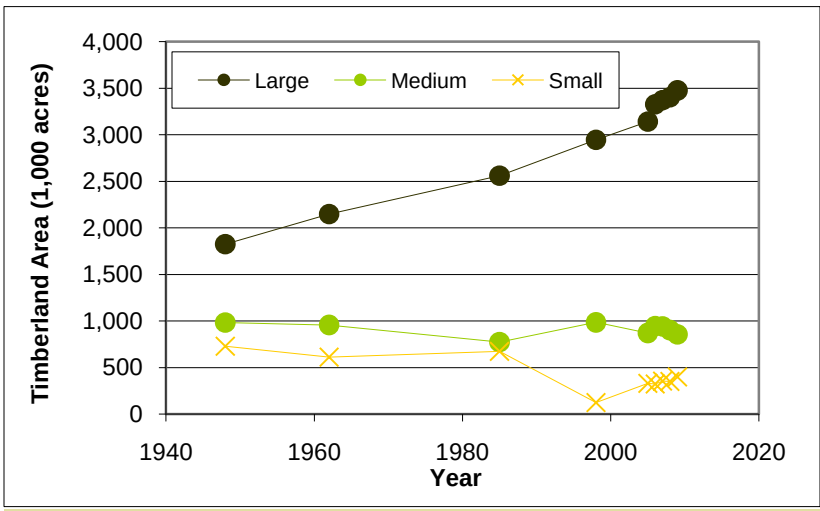

Figure 3.—Area of timberland by stand-size class and year, Illinois, 2009.

Table 2.—Top 10 tree species by statewide volume estimates, Illinois, 2009

Rank	Species	Volume of live trees on forest land (1,000,000 ft³)	Sampling error (%)	Volume of sawtimber trees on timberland (1,000,000 bdft)	Sampling error (%)
1	White oak	992	7.0	3,632	7.8
2	Silver maple	802	13.3	2,404	14.9
3	Black oak	548	8.5	2,050	9.2
4	Northern red oak	454	9.9	1,758	11.0
5	Eastern cottonwood	350	17.4	1,328	16.6
6	Shagbark hickory	310	8.5	942	10.8
7	Green ash	303	10.0	908	12.4
8	American sycamore	303	16.8	1,116	17.4
9	Sugar maple	289	10.4	856	13.0
10	Black walnut	287	8.2	877	10.1
	Other softwoods	259	17.5	911	20.7
	Other hardwoods	3,821	3.3	9,991	4.4
	All Species	**8,717**	**2.4**	**26,769**	**2.9**

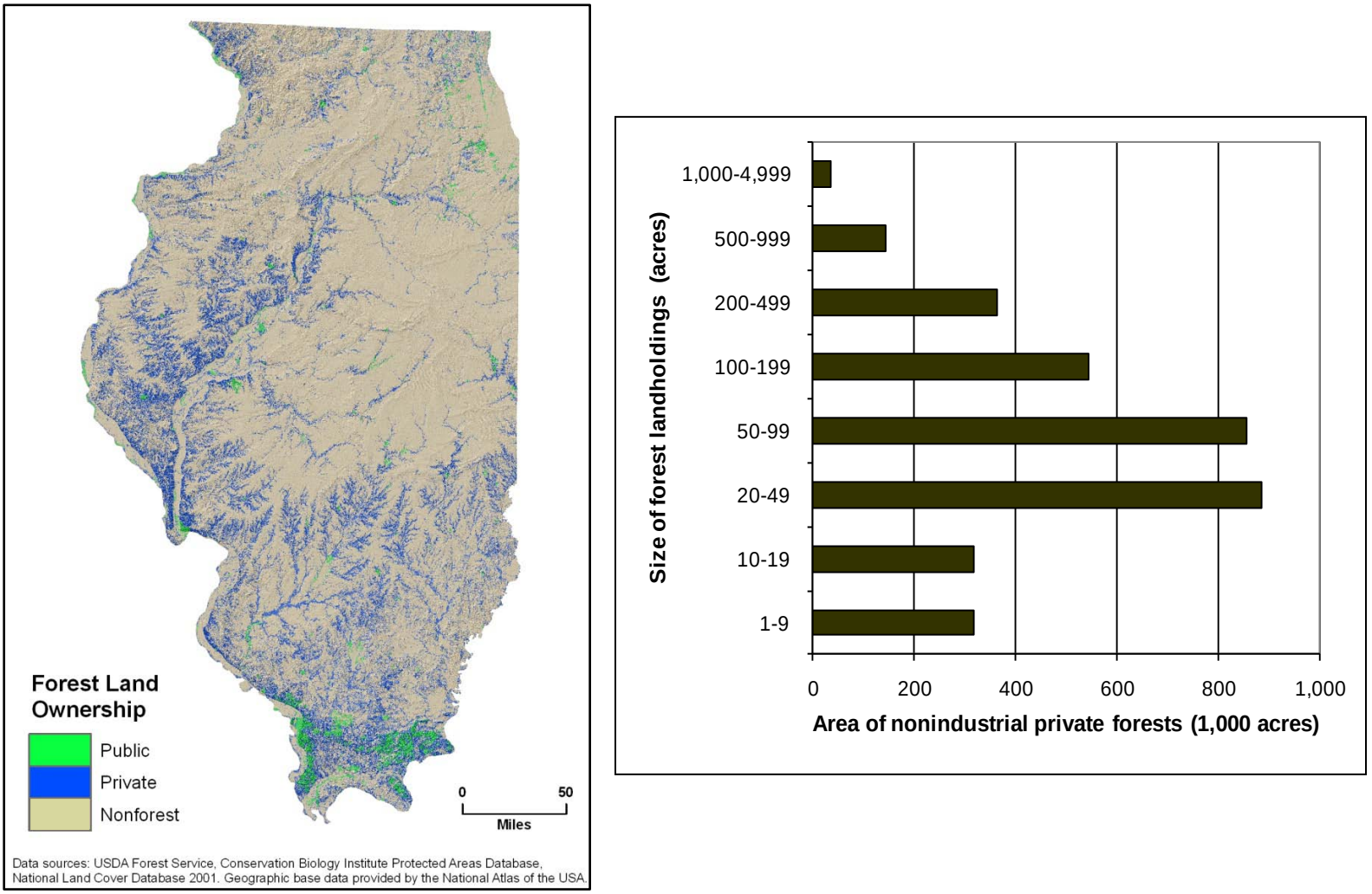

Figure 4.—Distribution of forest land by major owner group (map) and size of nonindustrial private forest landholdings (graph), Illinois, 2002-2006.

Illinois Issue Update – Nonnative Invasive Plants

Nonnative invasive plants continue to be a common occurrence throughout Illinois' forests. The growing incidence of these species has resulted largely from human introductions of plant material for use as ornamentals, food or fiber (Pimentel et al. 2000). Their abundance in introduced ecosystems can be attributed to a lack of natural enemies, high adaptability, and the presence of disturbed habitats, which allows these species to outcompete and displace native plants (Pimentel et al. 2000). Nonnative invasive plants are a major concern to the health of native forest ecosystems because they alter natural plant communities, threaten biodiversity, and contribute to an overall decrease in forest sustainability, productivity, and availability of wildlife habitat.

FIA collects information on nonnative invasive plants on both Phase 2 plots and Phase 3 vegetative diversity plots. In Illinois, this data is available for the entire 2005 to 2009 inventory period. NRS-FIA currently records plot data for 43 nonnative invasive plants. Of these, a total of 27 nonnative invasive plant species occurred on Illinois forest land. Multiflora rose, Japanese honeysuckle, Amur honeysuckle, nonnative bush honeysuckles, and garlic mustard were the most commonly observed invasive plants (Table 3). Multiflora rose was found throughout the State (Fig. 5). Garlic mustard, which was found primarily found in the northern third of the State in 2005 and 2006, started to appear in the lower half of the State after 2007 (Fig. 6).

Additional data collection and remeasurement of plots will yield more information about the trends in nonnative invasive plants in Illinois. Continued spread of these species will likely impact the abundance of native plant species and the composition of Illinois' forests.

Table 3.—Top 10 nonnative invasive plants by order of occurrence, Illinois, 2009

Common Name	Scientific Name
Multiflora rose	*Rosa multiflora*
Japanese honeysuckle	*Lonicera japonica*
Amur honeysuckle	*Lonicera maackii*
Nonnative bush honeysuckles	*Lonicera spp.*
Garlic mustard	*Alliaria petiolata*
Common buckthorn	*Rhamnus cathartica*
Common burdock	*Arctium minus*
Autumn olive	*Elaeagnus umbellata*
Japanese barberry	*Berberis thunbergii*
Reed canary grass	*Phalaris arundinacea*

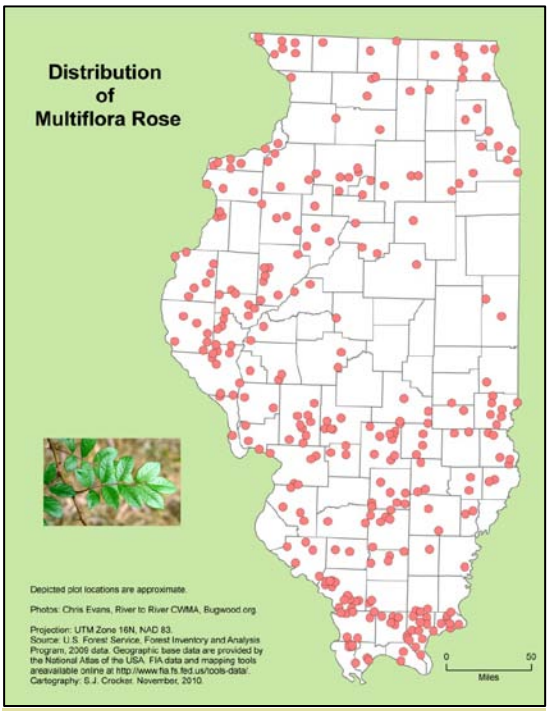

Figure 5.—Distribution of multiflora rose, Illinois, 2009.

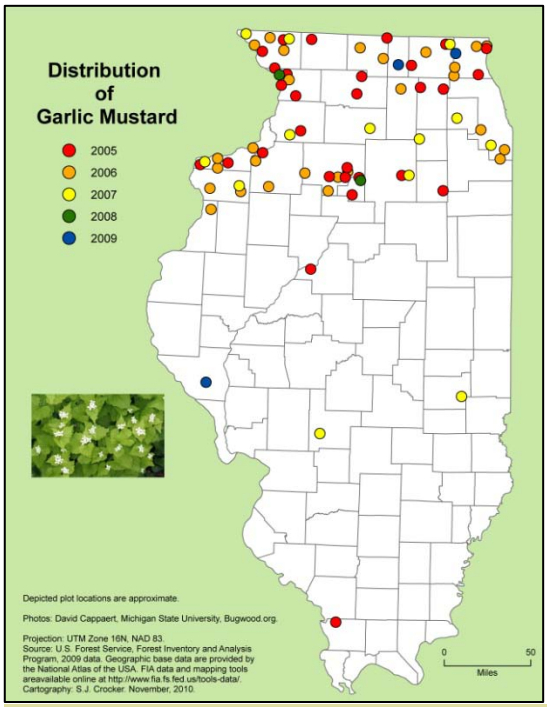

Figure 6.—Distribution of garlic mustard, Illinois, 2009.

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FIA Program and Illinois Inventory Information

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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 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/.