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Illinois' Forest Resources in 2004

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Illinois' Forest Resources in 2004

Historically, the North Central Research Station's Forest Inventory and Analysis (NCFIA) program conducted inventories of a State's forests on a periodic basis. In Illinois, periodic inventories were completed in 1948, 1962, 1985, and 1998 (Essex and Gansner 1965, Raile and Leatherberry 1988, Schmidt *et al.* 2000, USDA FS 1949). In 2001, NCFIA began fieldwork for the fifth inventory of Illinois' forest resources. This initiated an annual inventory system, in which one-fifth of the field plots (considered one panel) in the State are measured each year. The complete inventory will consist of measurements and data compiled and reported for all plots in all five panels. The fifth inventory of Illinois' forest resources will conclude in 2005. Once all panels have been measured and the inventory is completed, a new inventory will begin and the plots from each panel will be remeasured approximately every 5 years. For example, in Illinois, the field plots measured in 2004 will be remeasured in 2009.

In 2004, NCFIA continued the annual inventory and concluded the fourth panel of the fifth inventory. Because each panel is a systematic sample of the State's forests, an effort has been made to release forest resource information on a yearly basis. Summary reports were issued following the completion of each panel, rather than waiting for all 5 years of data. Reports were published for the 2001 panel (Leatherberry 2003), the 2001-2002 panels (Leatherberry *et al.* 2004), and the 2001-2003 panels (Leatherberry *et al.* 2005). Eighty percent of the completed field plots (four panels) are included in this 2004 report. Estimates were compiled assuming that the data from the first year's panel from 2001, the second year's panel from 2002, the third year's panel from 2003, and the fourth year's panel from 2004 represent one sample. As each panel

of Illinois' fifth inventory has been completed, the precision of the estimates has increased.

Data from new inventories are often compared with data from earlier inventories to determine trends in forest resources. However, for the comparisons to be valid, the procedures used in the two inventories must be similar. As a result of our ongoing efforts to improve the efficiency and reliability of the inventory, several changes in procedures and definitions have occurred since the last Illinois inventory in 1998 (Schmidt *et al.* 2000). These changes will have little impact on statewide estimates of forest area, timber volume, and tree biomass; however, they may have significant impacts on plot classification variables such as forest type and stand-size class. For growth, removal, and mortality estimates, the 1998 inventory (Schmidt *et al.* 2000) was processed using estimation/summary routines for the 2001-2004 panels. Because these changes allow only limited comparison of inventory estimates among separate inventories in this report, it is inappropriate to directly compare all portions of the 2001-2004 data with those published for earlier inventories.

RESULTS

Area

Before Euro-American settlement, Illinois was a mixture of tall grass prairie and eastern deciduous forest. Forests then occupied an estimated 14 million acres, or about 40 percent of State land area (Illinois State Natural Survey Division 1960). For nearly 120 years—from 1800 to the 1920s—forest land¹ area (which

¹Forest land is land that is at least 10 percent stocked with trees of any size or that formerly had such tree cover and is not currently developed for a nonforest use. The minimum area for classification of forest land is one acre.

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includes reserved and low-productivity land) in Illinois declined, reaching a low of 3 million acres in 1924 (Telford 1926). But by the 1950s, forest land was on the rise and in 1962 totaled an estimated 4 million acres. In 2004, forest land occupies 4.4 million acres of land, or about 12 percent of the State's total land area (table 1). The majority of forest land in Illinois is privately owned. Presently, there are an estimated 169,000 private forest landowners (Illinois Department of Natural Resources 2003), who own a total of 3.7 million acres of Illinois' forest land (table 1). Private landowners have been instrumental in the conservation and propagation of Illinois' forests. Seventeen percent of forest land is publicly owned (table 1). This ensures that people will have access to forest recreation opportunities, that wildlife habitat is maintained, and that forests remain a vital component of the landscape and economy of Illinois. Public forest lands in Illinois are mostly within the Shawnee National Forest, state parks, county forest preserves, and park districts.

Just over 4.2 million acres of Illinois forest land, representing 96 percent of total forest land in the State, is classified as timberland² (table 2).

Forest land has three components:

- 1) Timberland—forest land that is not restricted from harvesting by statute, administrative regulation, or designation and is capable of growing trees at a rate of 20 cubic feet per acre per year;
- 2) Reserved forest land—land that is restricted from harvesting by statute, administrative regulation, or designation (e.g., state parks, national parks and lakeshores, and Federal wilderness areas); and
- 3) Other forest land—land that is not capable of growing trees at a rate of 20

²Timberland may not be equivalent to the area actually available for commercial timber harvesting or other access. The actual availability of land for various uses depends upon owner decisions that consider economic, environmental, and social factors.

cubic feet per acre per year and is not restricted from harvesting.

The remaining 4 percent of forest land—about 175.1 thousand acres—is classified as reserved or other forest land. Most reserved forest land in Illinois is in county forest preserves, state parks, state natural areas, and on the Shawnee National Forest.

Since 1948, the area of timberland has remained relatively stable, slowly increasing with successive inventories (fig. 1). The 2004 estimate, as shown in figure 1, has a larger sampling error (represented by the vertical bar) because the estimate is based on a partial inventory.

Most timberland stands in Illinois are dominated by hardwood trees; about 97 percent of total timberland area is in the hardwood forest type group (table 2). Hardwood timberland stands are largely of natural origin—only 19.5 thousand acres, or one-half of one percent of hardwoods, were planted. In contrast, 64 percent of the 116.8 thousand acres of timberland in the softwood type group were planted (table 2).

A variety of tree species are found on timberland in Illinois. To facilitate describing forest composition, the various tree species are grouped into forest type groups that reflect the combination of tree species that occur on a particular site. The classification is based on the species forming a plurality of live tree stocking on the site. Three hardwood forest type groups—oak/hickory, elm/ash/cottonwood, and maple/beech/birch—occupy 95 percent of timberland in Illinois (fig. 2). The oak/hickory forest type group alone occupies two-thirds of timberland, the bulk of which resides in the white oak/red oak/hickory forest type (1.5 million acres) (table 3). Softwoods compose only about 3 percent of total timberland area; however, presence of softwoods contributes to increased biodiversity in what would otherwise be a sea of hardwoods. Seventy-four percent of the timberland area occupied by softwood forest types contains pines (table 3). Shortleaf and

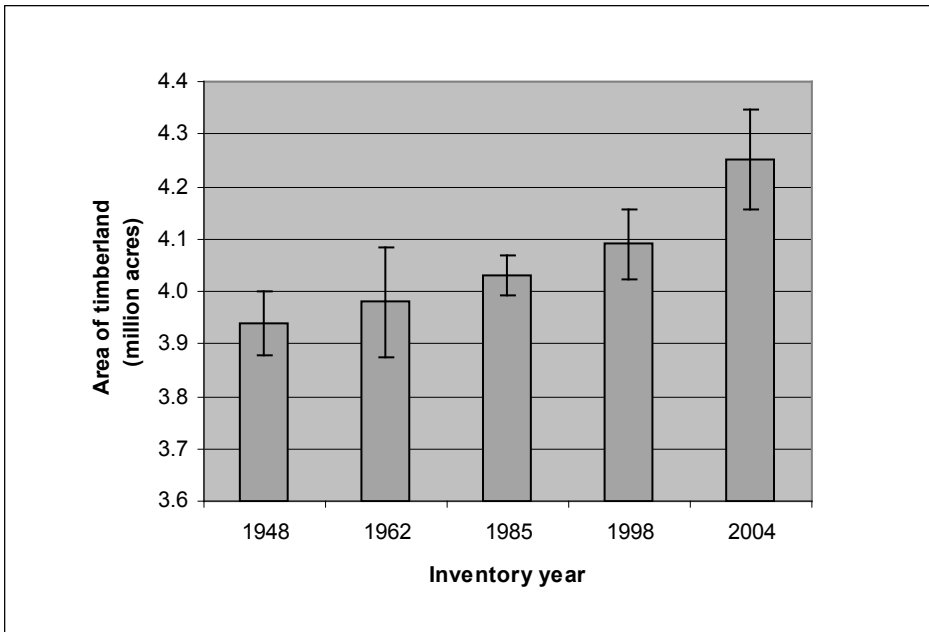


Figure 1. — Area of timberland, Illinois, 1948-2004. The vertical line at the top of each bar represents the sample error associated with each inventory.

white pine stands make up 29 and 23 percent of softwood timberland area, respectively. The remaining softwood timberland area is predominantly eastern redcedar, which occupies 30.3 thousand acres (table 3).

Natural and human-caused disturbances create mosaics of stands with shared size characteristics. Stand-size class is a measure of the average diameter of the dominant trees

in a stand. There are three stand-size classes: sawtimber—large trees, softwoods at least 9 inches in diameter at breast height (d.b.h.) and hardwoods at least 11 inches in d.b.h.; poletimber—medium trees, trees 5 inches in d.b.h. to sawtimber size; and sapling/seedling—small trees, trees 1 to 5 inches in d.b.h or live trees less than 1.0 inch in d.b.h that are expected to survive.

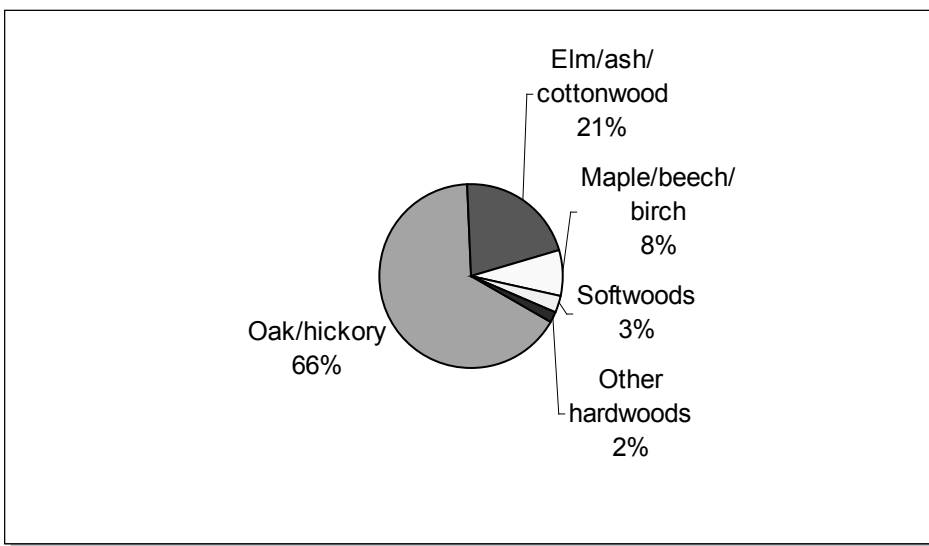


Figure 2. — Area of timberland by forest type group, Illinois, 2004.

Timberland area in Illinois is largely composed of stands with sawtimber-size trees. Sawtimber stands occupy 3 million acres, or 71 percent of timberland; this suggests that the majority of Illinois forests are maturing (table 3, fig. 3). Mature stands are more likely to succumb to windthrow, insects, or disease pathogens. Of timberland area, 21 percent is in poletimber stands, 7 percent is in sapling-seedlings, and the remaining 1 percent is nonstocked³ (table 3). The relatively small area of sapling-seedling stands may be related to how timber is harvested in much of the State. Often, mature timber is removed either as single scattered trees or in small groups. The lack of significant disturbances in hardwood stands may not open stands to progressive seedling development. Smaller trees in the understory are outcompeted by larger, canopy dominant trees. Sawtimber-size white oak/red oak/hickory stands occupy 1.2 million acres of timberland. A small percentage of timberland is made up of aspen/birch and exotic hardwood forest types, each of which represents 1.8 thousand acres (table 3).

³Nonstocked land is timberland that is less than 10 percent stocked with all live trees.

Volume

Net volume is the gross volume less deductions for rot, sweep, or other defect affecting use for timber products and is computed from a 1-foot stump to a 4-inch top diameter outside bark for live trees at least 5 inches d.b.h. Total net volume of all live trees on forest land in Illinois is an estimated 7.7 billion cubic feet, which is equivalent to 1,747 cubic feet per acre of forest land (table 4). Eight of every ten cubic feet of all live volume is on privately owned forest land. Virtually all—97 percent—of the net volume of all live trees is contained in hardwoods. Two species groups, other eastern soft hardwoods and select white oaks, are predominant; each represents 16 percent of total volume of all live trees. The largest components of the other eastern soft hardwoods species group are American sycamore and American elm; white and bur oak dominate the select white oak species group (table 4).

Growing-stock volume on timberland is a measure that has traditionally been used to ascertain wood volume. Growing-stock volume is the amount of solid wood on timberland

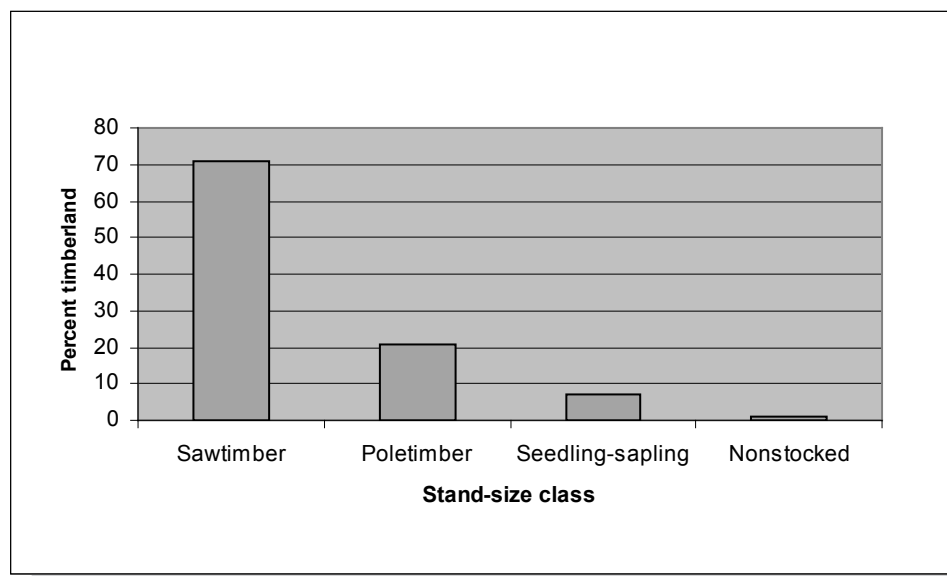


Figure 3. — Stand-size class as a percentage of total timberland area, Illinois, 2004.

in commercial trees⁴ 5.0 inches d.b.h. and larger, from 1 foot above ground (stump) to a minimum 4-inch top diameter, with deductions made for poor form or defect. It excludes rough, rotten, and dead trees and trees of noncommercial species. Growing-stock volume on Illinois timberland totals almost 6.7 billion cubic feet, or 90 percent of the total live volume on timberland (table 5). Ten percent of all live volume on timberland is in live cull trees—705.4 million cubic feet. Cull volume is often used for commercial purposes. For instance, rough trees are sometimes harvested for chipping or for making pallets. Salvable dead trees contain 141.5 million cubic feet of wood volume (table 5). Salvable dead trees are standing or down dead trees that are considered merchantable by regional standards. They have some commercial applications and are an important source of firewood. Salvable dead

trees also play an important role in overall species diversity, providing habitat for a wealth of wildlife species, including cavity nesting birds and mammals that require den sites.

Total growing-stock volume has significantly increased in every inventory, rising from 2.4 billion cubic feet in 1948 to 6.7 billion cubic feet in 2004 (fig. 4, table 6). Currently, 97 percent of total growing-stock volume is in hardwood species. Almost 70 percent of total growing-stock volume is contained in five forest types—white oak/red oak/hickory (38 percent), mixed upland hardwood (10 percent), silver maple/American elm (8 percent), white oak (7 percent), and sugarberry/hackberry/elm/green ash (7 percent). Total net volume of softwood growing stock is 232 million cubic feet. The majority of this volume is in softwood-dominated stands; however, a small amount (45.9 million cubic feet) is in hardwood-dominated stands (table 6).

More than one-fourth—28 percent—of growing-stock volume is in trees that are 21 inches d.b.h. or larger (table 7). A significant

⁴Commercial trees are tree species presently or prospectively suitable for industrial wood products. (Note: Excludes species of typically small size, poor form, or inferior quality, such as hophornbeam, Osage-orange, and redbud.)

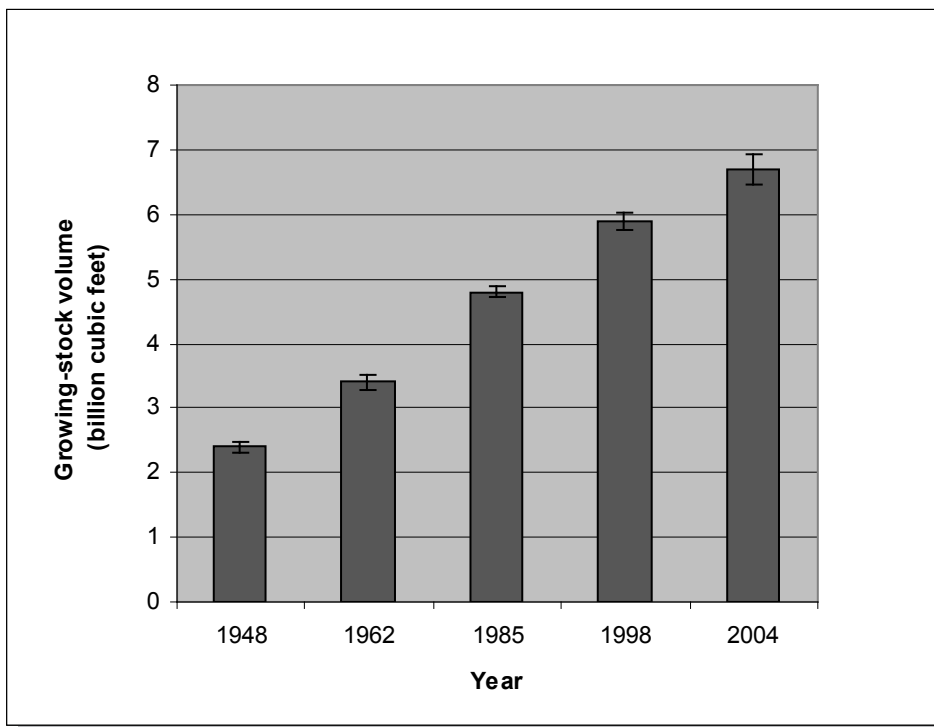


Figure 4. — Growing-stock volume, Illinois, 1948-2004. The vertical line at the top of each bar represents the sample error associated with each inventory.

amount of this volume occurs in oak species—particularly white, black, and northern red oak—as well as silver maple, eastern cottonwood, and American sycamore. Of the 3 percent of net volume of growing stock occupied by softwoods, 88 percent is in trees less than 17 inches d.b.h. (table 7).

Sawtimber volume, a subset of growing-stock volume, is the net volume of the saw log portion of live sawtimber in board feet and is generally measured with the International ¼-inch rule. Net sawtimber volume in Illinois totals 24.6 billion board feet, of which 96 percent is in hardwood species (table 8). Just over half of the volume of sawtimber is in seven hardwood species—white oak (14 percent), black oak (9 percent), silver maple (8 percent), northern red oak (7 percent), eastern cottonwood (5 percent), shagbark hickory, and American sycamore (each 4 percent) (table 8).

Biomass

Biomass estimates have become increasingly important for analyses of questions relating to carbon sequestration, wood fiber availability for fuels, and assessment of fuels in forest stands. Live aboveground tree biomass is estimated for growing-stock trees, non-growing-stock trees, and all live trees that are 1 to 5 inches d.b.h (table 9). In 2004, the estimate of live aboveground tree biomass on timberland in Illinois was 204 million dry tons—an average of 48 dry tons per acre of timberland. Eighty-four percent of tree biomass is in growing-stock trees; of the remainder, 11 percent is in non-growing-stock trees and 5 percent is in trees less than 5 inches d.b.h (table 9). For both growing-stock and non-growing-stock trees, nearly three-fourths of total aboveground biomass is in the boles of trees. The remaining aboveground biomass is in stumps, tops, and limbs. Ninety-eight percent (199.3 million dry tons) of all live aboveground tree biomass is in hardwood species (table 9).

Growth, Removals, and Mortality

Growing stock on timberland increased by an average of 339.6 million cubic feet per year between 1998 and 2004 (table 10). Ninety-eight percent of the total average

annual net growth of growing stock is the result of growth in hardwoods. Softwood net growth reached an average of 5.2 million cubic feet per year (table 10). Overall, net growth was highest in the other eastern soft hardwoods species group (19 percent), the species group that contains hackberry and the elms, where the growth rate was 64.4 million cubic feet per year. Other fast growing species groups in Illinois were the other select white oaks (40.7 million cubic feet per year), the soft maples (38.7 million cubic feet per year) and cottonwood and aspen (35.1 million cubic feet per year) (table 10).

An average of 63.7 million cubic feet per year of growing stock has been removed from timberland since 1998 (table 11). Virtually all removals were from hardwoods, as softwood removals totaled only 49 thousand cubic feet per year, or less than one-tenth of a percent of the total. The other eastern soft hardwoods species group had the highest average annual removals at 12.1 million cubic feet per year, followed by select white oaks at 11.5 million cubic feet per year, and cottonwood and aspen at 11.2 million cubic feet per year. Oak species account for 36 percent of annual removals. Eighty-four percent of growing-stock removals were on private land (table 11).

Average annual mortality of growing stock on timberland from 1998 to 2004 was 93.2 million cubic feet per year (table 12). Hardwoods account for 98 percent of the total mortality, or 91.1 million cubic feet per year, while softwood species account for the remaining 2 percent of mortality, 2.1 million cubic feet per year. Seventy-eight percent of softwood mortality occurred in the other yellow pines and the eastern white and red pine species groups (table 12). On average, just over one-third of annual mortality of growing stock on timberland took place in the other eastern soft hardwood species group. Twenty-three percent of average annual mortality was in oak species groups (table 12).

Forest Health

The following information about the insects and pathogens affecting Illinois' forests was gathered from the 2004 Insect and Disease

Conditions Report (<http://www.na.fs.fed.us/fhp/pcond/>) and the Central States Forest Health Watch newsletter (<http://www.na.fs.fed.us/spfo/pubs/newsletters/csfhw/index.html>), both of which are published by the USDA Forest Service, Northeastern Area, State and Private Forestry. Additional information was obtained from the National Forest Health Monitoring (FHM) Program at <http://fhm.fs.fed.us/>. Several issues of concern in 2004 are highlighted below. For more information on the health of Illinois forests, contact the Illinois Department of Natural Resources.

Invasion by exotic insects continues to be a concern when assessing forest health in Illinois. Since the 1998 discovery of the Asian longhorned beetle (ALB) in live trees in Chicago, widespread surveys have been conducted to locate and destroy trees infested by the ALB. Eradication efforts in Illinois have yielded a continued decrease in the number of new infestations since its initial discovery in the State. In 2004, there were no new infestations in Chicago. For additional information on the status of the ALB in the U.S., please visit the USDA Forest Service ALB Web page at <http://www.na.fs.fed.us/fhp/alb/index.shtm>.

An insect of longtime U.S. and statewide concern is the gypsy moth, which has established populations in the northeast counties of Illinois. The USDA Forest Service, in conjunction with the Animal and Plant Health Inspection Service (APHIS), has adopted the Slow the Spread program to limit gypsy moth movement. As part of this program, six Illinois counties received active treatments; 18,500 acres were treated with mating disruption pheromones and 6,616 acres were treated with *Bacillus thuringiensis* (B.t.k) sprays. Insect traps, from 86 counties in central and southern Illinois, caught 11 moths in 9 counties. However, in 2004, no gypsy moth defoliation was detected. Moths were not found on the Shawnee National Forest. For more information on the Slow the Spread program, please visit <http://www.gmsts.org/operations/index.htm>.

Another defoliating insect remains a concern in 2004. Populations of the native fall webworm fluctuate from year to year. A shift in populations was observed; the high population numbers that characterized the northern third of Illinois in 2003 were centered in west-central counties in 2004. Larvae of the fall webworm feed on many tree species, including elm, hickory, and fruit trees. Defoliation can be significant and is accompanied by the formation of dense silken webs (Shetlar 1995). Similar damage is caused by the eastern tent caterpillar, which achieved very high populations in the southern third of Illinois. Black cherry trees in this area were completely defoliated. In contrast, populations of the forest tent caterpillar remained at low levels, following an outbreak in southeastern Illinois in 2002.

An exotic insect that to date has not been found in Illinois, but looms as a potential threat is the emerald ash borer (EAB). Following the discovery of this insect in southeast Michigan in 2002, extensive survey efforts have been launched to determine areas of potential risk and to identify the extent of its current geographic distribution. The core of the infestation is in the Detroit-metropolitan area, although outlier populations have been established in Ohio and Indiana. EAB attacks many species of ash, and since its discovery, the EAB has killed millions of ash in infested zones. In 2004, visual surveys of trees and firewood conducted throughout Illinois did not detect EAB at any survey site. Surveys were conducted on State and private forests, in campgrounds, and within stands known to exhibit symptoms of ash yellows disease.

Oak wilt continues to be an important source of oak mortality in the central U.S. Oak wilt is caused by a fungus, *Ceratocystis fagacearum* (Bretz) Hunt, which enters the vascular system of trees and disrupts the translocation of water from the roots to the canopy, causing the foliage to wilt and die (Pecknold 2001). The fungus may spread via root grafts or may be transported by bark beetles carrying fungal spores. Injury or fresh pruning wounds attract

beetles; therefore, unnecessary pruning and pruning between March 1 and July 15, when beetles are active, should be avoided (Pecknold 2001).

A small sample of nursery and forest plots in Illinois tested negative for the Oomycete, *Phytophthora ramorum*, the fungus-like organism that is the causal agent of sudden oak death. Preliminary tests show that many oaks, *Rhododendron* spp., and other herbaceous plants are susceptible to this relatively new disease (O'Brien *et al.* 2002). On oaks, infection causes bleeding cankers. A cankered tree may survive from one to several years; however, once the crown begins to dieback, mortality occurs within weeks (O'Brien *et al.* 2002).

SUMMARY

The trend of increasing timberland that characterized the latter portion of the 20th century continues as the fifth forest inventory of Illinois unfolds. The majority of timberland stands support hardwood-dominated forest types. Hardwood stands are mostly of natural origin and are dominated by oak/hickory forest types. Growing-stock volume continues to rise with successive inventories. Management programs for the Asian longhorned beetle and the gypsy moth have limited spread. Oak wilt remains an important source of oak mortality. A complete analysis and interpretation of Illinois' fifth forest inventory will be made available upon the completion of the final panel. As the annual inventory system progresses, a more clearly defined picture of the status and trends of Illinois' forest resources will emerge.

APPENDIX

Inventory Methods

Since the 1998 inventory of Illinois, several changes have been made to NCFIA inventory methods to improve the quality of the inventory, as well as to meet the increasing demands for timely forest resource information. The most significant difference between inventories has been the change from periodic to annual inventories. Historically, NCFIA inventoried each State on a cycle that averaged every 12 years. However, the need for timely and consistent data across large geographical regions, combined with national legislative mandates, resulted in NCFIA's implementation of an annual inventory system. NCFIA began the annual inventory of Illinois in 2001.

With an annual inventory system, approximately one-fifth of all field plots are measured each year. After the first 5 years, the entire inventory cycle will be completed and NCFIA will analyze and report results as a moving 5-year average. For example, NCFIA will be able to generate a report based on inventory data from 2001 through 2005 or from 2002 through 2006. Although there are great advantages to an annual inventory, it is difficult to report on the results from the first 4 years. With the 2004 data, 80 percent of all field plots have been measured. Sampling error estimates for the 2004 inventory results are area of forest land, 2.11 percent; area of timberland, 2.24 percent; volume of growing stock on timberland, 3.43 percent; volume of sawtimber on timberland, 3.82 percent; average annual net growth of growing stock, 13.29 percent; average annual removals from growing stock, 27.24 percent; and average annual mortality of growing stock, 13.97 percent. These sampling error estimates are higher than those for the 1998 periodic inventory (e.g., 1.61 percent for timberland area and 2.28 percent for growing-stock volume) because of smaller sample sizes. Thus, caution should be used when comparing 2004 inventory results to previous inventories. As we continue to complete plot measurements and our sample size increases, so does the confidence of our estimates.

Other significant changes between inventories include the implementation of a new sampling design and field plot configuration, use of new remote sensing technology, and gathering of additional field and remotely sensed data. Changes in remote sensing technology since the previous inventory in 1998 have allowed NCFIA to use classifications of Multi-Resolution Land Characterization (MRLC) data and other available remote sensing products to stratify the total area of the State and improve estimates.

New algorithms were used in 2003 to assign forest type and stand-size class to each condition observed on a plot. These algorithms are being used by FIA nationwide to provide consistency from State to State and will be used to reassign the forest type and stand-size class of every plot in the 1998 inventory when it is updated. This will be done so that changes in forest type and stand-size class will reflect actual changes in the forest and not changes in how values are computed. The list of recognized forest types, groupings of these forest types for reporting purposes, models used to assign stocking values to individual trees, definition of nonstocked, and names given to the forest types changed with the new algorithms. As a result, comparison between the published 2004 inventory results and those published for the 1998 inventory may not be valid. For additional details about algorithms used in both inventories, please contact NCFIA.

Sampling Phases

The 2004 Illinois survey is based on a three-phase inventory. In the first phase, classified satellite imagery is used to stratify the State, and aerial photographs are used to select plots for measurement. The second phase involves measurement of a traditional FIA suite of mensurational variables (basic tree and stand attributes), and the third phase focuses on measurement of a suite of variables related to forest health.

The only plots that could not be measured were (1) plots on private land where field personnel

could not obtain permission from the owner to measure the field plot and (2) plots that could not be accessed because of a hazard or danger to field personnel. The methods used in the preparation of this report make the necessary adjustments to account for sites where access was denied or hazardous.

Phase 1

The 2004 inventory used a classification of satellite imagery. FIA used the imagery to form two initial strata—forest and nonforest. Pixels within 60 m (2 pixel widths) of a forest/nonforest boundary formed two additional strata—forest/forest edge and nonforest edge. Forest pixels within 60 m on the forest side of a forest/nonforest boundary were classified into a forest edge stratum. Pixels within 60 m of the boundary on the nonforest side were classified into the nonforest edge stratum. The estimated population total for a variable is the sum across all strata of the product of each stratum's estimated area and the variable's estimated mean per unit area for the stratum.

Phase 2

Phase 2 involved measurement of the annual sample of Illinois field plots. Current FIA precision standards for annual inventories require a sampling intensity of one plot for approximately every 6,000 acres. FIA divided the entire area of the United States into nonoverlapping hexagons, each of which contains 5,937 acres (McRoberts 1999). An array of field plots was established by selecting one plot from each hexagon based on the following rules: (1) if a Forest Health Monitoring (FHM) plot (Mangold 1998) fell within a hexagon, it was selected; (2) if no FHM plot fell within a hexagon, the existing NCFIA plot from the 1990 inventory nearest the hexagon center was selected; and (3) if neither FHM nor existing NCFIA plots fell within the hexagon, a new NCFIA plot was established in the hexagon (McRoberts 1999). This array of plots is designated the Federal base sample and is considered an equal probability sample; its measurement in Illinois is funded by the Federal government.

The total Federal base sample of plots was systematically divided into five interpenetrating, nonoverlapping subsamples or panels. Each year, the plots in a single panel are measured; panels are selected on a 5-year, rotating basis (McRoberts 1999). For estimation purposes, the measurement of each panel of plots may be considered an independent systematic sample of all land in a State. Field crews measure vegetation on plots forested at the time of the last inventory and on plots currently classified as forest by trained photointerpreters using aerial photos or digital orthoquads.

Phase 3

NCFIA has two categories of field plot measurements—phase 2 field plots (standard FIA plots) and phase 3 plots (forest health plots)—to optimize our ability to collect data when available for measurement. Both types of plots are uniformly distributed both geographically and temporally. Phase 3 plots are measured with the full suite of FHM vegetative and health variables (Mangold 1998), as well as the full suite of measures associated with phase 2 plots. Phase 3 plots must be measured between June 1 and August 30 to accommodate the additional measurement of nonwoody, understory vegetation; ground cover; soils; and other variables. On phase 2 plots, only variables that can be measured throughout the entire year are collected. The 2001-2004 annual inventory results are based on field measurement of 793 forested phase 2 plots and 60 forested phase 3 plots.

The new national FIA plot configuration (fig. 5) was first used for data collection in Illinois in 1998. This configuration was also used in the 2001-2004 inventories and will be used in subsequent years. The national plot configuration requires mapping forest conditions on each plot. Due to the small sample size (20 percent) each year, precision associated with change factors such as mortality will be relatively low.

The overall plot layout for the new configuration consists of four subplots. The centers of subplots 2, 3, and 4 are located 120 feet from the center of subplot 1. The azimuths to subplots 2, 3, and 4 are 0, 120, and 240 degrees, respectively, from the center of subplot 1. The center of the new plot is located at the same point as the center of the previous plot, if a previous plot existed at the same location. Trees with a d.b.h. of 5 inches and larger are measured on a 24-foot-radius (1/24 acre) circular subplot. All trees with a d.b.h. 1 inch and larger but less than 5 inches are measured on a 6.8-foot-radius (1/300 acre) circular microplot located 12 feet east of the center of each of the four subplots. Seedlings [trees less than 1 inch d.b.h. and at least 6 inches tall (softwood species) or 12 inches tall (hardwood species)] are counted but not individually measured on this same microplot. Forest conditions that occur on any of the four subplots are recorded. Factors that differentiate forest conditions are changes in forest type, stand-size class, land use, ownership, and density. Each condition that occurs anywhere on any of the subplots is identified, described, and mapped if the area of the condition meets or exceeds 1 acre in size.

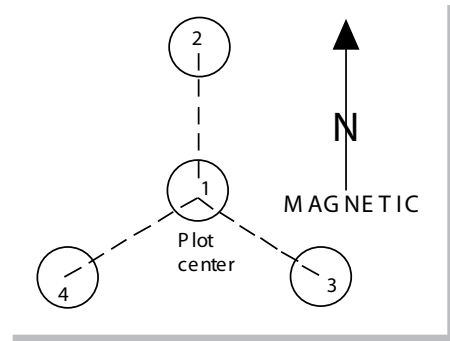


Figure 5. — NCFIA field plot design.

Field plot measurements are combined with phase 1 estimates in the data compilation and table production process. The number of published tables generated from less than five panels of data is limited. However, other tabular data can be generated at <http://www.ncrs2.fs.fed.us/4801/FIADB/index.htm>. For additional information, contact:

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TABLES

Table 1. -- Area of forest land by forest type group, forest type, and owner category, Illinois, 2001-2004

(In thousand acres)

Forest type group/ forest type	Owner category			
	All owners	Public	Private	Unidentified owner
Softwood type groups				
White / red / jack pine group	1.9	--	1.9	--
Jack pine	8.6	--	8.6	--
Red pine	27.4	13.6	13.7	--
Eastern white pine	37.9	13.6	24.3	--
All forest types				
Loblolly / shortleaf pine group	33.6	25.5	8.0	--
Shortleaf pine	33.6	25.5	8.0	--
All forest types				
Pinyon / juniper group	30.3	3.9	26.4	--
Eastern redcedar	30.3	3.9	26.4	--
All forest types				
Exotic softwoods group	15.0	2.1	12.9	--
Scotch pine	15.0	2.1	12.9	--
All forest types	116.8	45.2	71.6	--
All softwood groups				
Hardwood type groups				
Oak / pine group	1.2	--	1.2	--
Oak / pine group	18.5	--	18.5	--
Eastern redcedar / hardwood	4.6	4.2	0.4	--
Shortleaf pine / oak	7.2	--	7.2	--
Other pine / hardwood	31.4	4.2	27.3	--
All forest types				
Oak / hickory group	55.9	4.2	51.8	--
Post oak / blackjack oak	1,572.5	270.6	1,301.9	--
White oak / red oak / hickory	222.5	45.8	176.7	--
White oak	72.9	21.8	51.1	--
Northern red oak	14.1	10.5	3.7	--
Yellow-poplar / white oak / red oak	83.8	7.9	75.9	--
Sassafras / persimmon	60.4	23.6	36.8	--
Sweetgum / yellow-poplar	57.2	9.3	47.8	--
Bur oak	7.7	7.7	--	--
Yellow-poplar	38.3	7.2	31.1	--
Black walnut	34.2	8.9	25.2	--
Black locust	9.7	--	9.7	--
Chestnut oak / black oak / scarlet oak	710.7	56.2	654.5	--
Mixed upland hardwoods	2,939.9	473.7	2,466.2	--
All forest types				
Oak / gum / cypress group	6.0	--	6.0	--
Swamp chestnut oak / cherrybark oak	1.2	--	1.2	--
Sweetgum / Nuttall oak / willow oak	15.7	--	15.7	--
Baldcypress / water tupelo	16.4	--	16.4	--
Sweetbay / swamp tupelo / red maple	39.2	--	39.2	--
All forest types				

(Table 1 continued on next page)

(Table 1 continued)

Forest type group/ forest type	Owner category		
	All owners	Public	Private Unidentified owner
Hardwood type groups			
Elm / ash / cottonwood group			
Black ash / American elm / red maple	9.0	1.5	7.5
River birch / sycamore	58.6	6.7	51.8
Cottonwood	58.1	7.2	50.9
Willow	17.3	9.7	7.6
Sycamore / pecan / American elm	80.2	18.5	61.6
Sugarberry / hackberry / elm / green ash	401.0	70.6	330.4
Silver maple / American elm	243.0	48.7	194.4
Red maple / lowland	19.6	--	19.6
Cottonwood / willow	29.9	17.2	12.8
All forest types	916.9	180.1	736.8
Maple / beech / birch group			
Sugar maple / beech / yellow birch	158.7	7.3	151.4
Black cherry	17.2	--	17.2
Cherry / ash / yellow-poplar	39.7	7.8	32.0
Hard maple / basswood	77.5	--	77.5
Elm / ash / locust	57.3	15.0	42.3
Red maple / upland	5.3	--	5.3
All forest types	355.7	30.1	325.6
Aspen / birch group			
Aspen	1.8	--	1.8
All forest types	1.8	--	1.8
Exotic hardwoods group			
Other exotic hardwoods	1.8	--	1.8
All forest types	1.8	--	1.8
All hardwood groups	4,286.7	688.1	3,598.6
Nonstocked	19.7	--	19.7
All forest groups	4,423.2	733.3	3,689.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table 2. -- Area of timberland by major forest type group, stand origin, and owner category, Illinois, 2001-2004

(In thousand acres)

Major forest type group and stand origin	Owner category			
	All owners	Public	Private	Unidentified owner
Softwood type groups				
Natural	41.6	8.8	32.9	--
Planted	75.2	36.5	38.7	--
All softwood types	116.8	45.2	71.6	--
Hardwood type groups				
Natural	4,092.1	512.2	3,579.8	--
Planted	19.5	7.9	11.6	--
All hardwood types	4,111.6	520.1	3,591.4	--
Nonstocked	19.7	--	19.7	--
All groups	4,248.1	565.4	3,682.7	--

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table 3. -- Area of timberland by forest type group, forest type, and stand-size class, Illinois, 2001-2004

(In thousand acres)

Forest type group/ forest type	Stand-size class				
	All stands	Sawtimber	Poletimber	Sapling-seedling	Non-stocked
Softwood type groups					
White / red / jack pine group					
Jack pine	1.9	--	1.9	--	--
Red pine	8.6	8.6	--	--	--
Eastern white pine	27.4	23.2	4.2	--	--
All forest types	37.9	31.8	6.1	--	--
Loblolly / shortleaf pine group					
Shortleaf pine	33.6	32.4	0.8	0.4	--
All forest types	33.6	32.4	0.8	0.4	--
Pinyon / juniper group					
Eastern redcedar	30.3	6.4	23.9	--	--
All forest types	30.3	6.4	23.9	--	--
Exotic softwoods group					
Scotch pine	15.0	6.4	6.4	2.1	--
All forest types	15.0	6.4	6.4	2.1	--
All softwood groups	116.8	77.0	37.3	2.5	--
Hardwood type groups					
Oak / pine group					
Oak / pine group	1.2	1.2	--	--	--
Eastern redcedar / hardwood	18.5	--	9.2	9.3	--
Shortleaf pine / oak	4.6	4.2	0.4	--	--
Other pine / hardwood	7.2	7.2	--	--	--
All forest types	31.4	12.5	9.6	9.3	--
Oak / hickory group					
Post oak / blackjack oak	55.9	46.1	9.9	--	--
White oak / red oak / hickory	1,520.2	1,221.6	244.5	54.2	--
White oak	214.1	205.5	8.6	--	--
Northern red oak	66.9	66.9	--	--	--
Yellow-poplar / white oak / red oak	14.1	6.3	--	7.8	--
Sassafras / persimmon	78.2	32.4	43.6	2.3	--
Sweetgum / yellow-poplar	51.3	28.8	21.9	0.6	--
Bur oak	47.8	43.6	2.5	1.7	--
Yellow-poplar	7.7	4.6	3.1	--	--
Black walnut	38.3	24.2	8.3	5.7	--
Black locust	34.2	5.2	28.9	--	--
Chestnut oak / black oak / scarlet oak	9.7	--	--	9.7	--
Mixed upland hardwoods	679.2	384.4	215.7	79.1	--
All forest types	2,817.8	2,069.7	587.0	161.0	--
Oak / gum / cypress group					
Swamp chestnut oak / cherrybark oak	6.0	6.0	--	--	--
Sweetgum / Nuttall oak / willow oak	1.2	--	1.2	--	--
Baldcypress / water tupelo	15.7	7.9	7.8	--	--
Sweetbay / swamp tupelo / red maple	16.4	16.4	--	--	--
All forest types	39.2	30.3	8.9	--	--

(Table 3 continued on next page)

(Table 3 continued)

Forest type group/ forest type	Stand-size class					Non- stocked
	All stands	Sawtimber	Poletimber	Sapling- seedling		
Hardwood type groups						
Elm / ash / cottonwood group						
Black ash / American elm / red maple	9.0	3.3	5.7	--	--	--
River birch / sycamore	58.6	42.9	15.7	--	--	--
Cottonwood	58.1	57.5	0.6	--	--	--
Willow	17.3	7.6	9.7	--	--	--
Sycamore / pecan / American elm	69.1	56.0	7.6	5.5	--	--
Sugarberry / hackberry / elm / green ash	384.6	219.7	98.1	66.8	--	--
Silver maple / American elm	232.0	206.7	14.6	10.8	--	--
Red maple / lowland	19.6	11.7	7.9	--	--	--
Cottonwood / willow	21.5	21.5	--	--	--	--
All forest types	870.0	626.9	160.0	83.1	--	--
Maple / beech / birch group						
Sugar maple / beech / yellow birch	158.7	116.0	23.5	19.3	--	--
Black cherry	17.2	--	8.6	8.6	--	--
Cherry / ash / yellow-poplar	39.7	7.1	24.0	8.6	--	--
Hard maple / basswood	77.5	64.7	12.8	--	--	--
Elm / ash / locust	51.2	22.2	27.0	1.9	--	--
Red maple / upland	5.3	5.3	--	--	--	--
All forest types	349.5	215.2	95.9	38.4	--	--
Aspen / birch group						
Aspen	1.8	--	1.8	--	--	--
All forest types	1.8	--	1.8	--	--	--
Exotic hardwoods group						
Other exotic hardwoods	1.8	1.8	--	--	--	--
All forest types	1.8	1.8	--	--	--	--
All hardwood groups	4,111.6	2,956.5	863.3	291.8	--	--
Nonstocked	19.7	--	--	--	--	19.7
All forest groups	4,248.1	3,033.5	900.6	294.3	--	19.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table 4. -- Net volume of all live trees on forest land by species group, species, and owner category, Illinois, 2001-2004

(In thousand cubic feet)

Species group/ species	Owner category		
	All owners	Public	Private Unidentified owner
Softwoods			
Loblolly and shortleaf pines			
Shortleaf pine	74,826	65,419	9,407
All species	74,826	65,419	9,407
Other yellow pines			
Scotch pine	6,939	604	6,335
All species	6,939	604	6,335
Eastern white and red pines			
Red pine	19,022	--	19,022
Eastern white pine	90,485	38,121	52,364
All species	109,506	38,121	71,385
Jack pine			
Jack pine	1,376	--	1,376
All species	1,376	--	1,376
Spruce and balsam fir			
White spruce	1,154	--	1,154
All species	1,154	--	1,154
Cypress			
Baldcypress	7,571	--	7,571
All species	7,571	--	7,571
Other eastern softwoods			
Eastern redcedar	42,617	5,310	37,307
Blue spruce	157	--	157
All species	42,774	5,310	37,463
Total softwoods	244,148	109,455	134,692
Hardwoods			
Select white oaks			
White oak	941,685	204,611	737,074
Swamp white oak	34,619	16,690	17,930
Bur oak	242,271	24,491	217,780
Chinkapin oak	22,120	672	21,448
All species	1,240,696	246,464	994,232
Select red oaks			
Cherrybark oak	17,442	770	16,671
Northern red oak	430,967	91,469	339,498
Shumard oak	333	--	333
All species	448,741	92,239	356,502
Other white oaks			
Overcup oak	8,581	--	8,581
Post oak	121,858	31,817	90,042
All species	130,439	31,817	98,623

(Table 4 continued on next page)

(Table 4 continued)

Species group/ species	Owner category				Unidentified owner
	All owners	Public	Private		
Hardwoods					
Other red oaks					
Scarlet oak	4,161	1,148	3,013	--	--
Northern pin oak	19,242	1,999	17,243	--	--
Southern red oak	23,861	3,730	20,131	--	--
Shingle oak	175,786	12,393	163,393	--	--
Blackjack oak	7,946	1,422	6,524	--	--
Pin oak	123,995	4,950	119,045	--	--
Black oak	553,408	113,846	439,561	--	--
All species	908,399	139,488	768,911	--	--
Hickory					
Hickory spp.	805	--	805	--	--
Bitternut hickory	109,096	7,240	101,856	--	--
Pignut hickory	234,816	76,253	158,563	--	--
Pecan	26,651	--	26,651	--	--
Shellbark hickory	13,147	--	13,147	--	--
Shagbark hickory	323,033	32,667	290,366	--	--
Black hickory	220	--	220	--	--
Mockernut hickory	68,537	6,632	61,904	--	--
All species	776,304	122,792	653,513	--	--
Yellow birch					
Yellow birch	1,158	--	1,158	--	--
All species	1,158	--	1,158	--	--
Hard maple					
Black maple	9,445	--	9,445	--	--
Sugar maple	267,805	50,567	217,238	--	--
All species	277,250	50,567	226,683	--	--
Soft maple					
Red maple	128,923	29,136	99,786	--	--
Silver maple	589,728	172,878	416,850	--	--
All species	718,651	202,014	516,637	--	--
Beech					
American beech	6,320	2,689	3,631	--	--
All species	6,320	2,689	3,631	--	--
Sweetgum					
Sweetgum	105,423	35,447	69,976	--	--
All species	105,423	35,447	69,976	--	--
Tupelo and blackgum					
Water tupelo	2,096	38	2,059	--	--
Blackgum	22,556	14,513	8,043	--	--
All species	24,652	14,551	10,102	--	--
Ash					
White ash	164,792	25,410	139,383	--	--
Black ash	3,194	466	2,728	--	--
Green ash	224,183	41,138	183,045	--	--
Pumpkin ash	1,035	--	1,035	--	--
All species	393,204	67,013	326,191	--	--

(Table 4 continued on next page)

(Table 4 continued)

Species group/ species	Owner category			
	All owners	Public	Private	Unidentified owner
Hardwoods				
Cottonwood and aspen				
Balsam poplar		--		--
Eastern cottonwood	316,789	58,626	258,163	--
Bigtooth aspen	3,699	--	3,699	--
Swamp cottonwood	458	--	458	--
Quaking aspen	1,335	--	1,335	--
All species	322,281	58,626	263,655	--
Basswood				
American basswood	79,801	5,078	74,724	--
All species	79,801	5,078	74,724	--
Yellow-poplar				
Yellow-poplar	113,579	57,879	55,700	--
All species	113,579	57,879	55,700	--
Black walnut				
Black walnut	244,951	43,727	201,225	--
All species	244,951	43,727	201,225	--
Other eastern soft hardwoods				
Boxelder	121,019	12,052	108,968	--
Ohio buckeye	4,453	--	4,453	--
River birch	34,022	2,000	32,022	--
Northern catalpa	961	--	961	--
Sugarberry	2,940	146	2,794	--
Hackberry	215,962	31,082	184,880	--
Butternut	841	--	841	--
Cucumber tree	660	620	40	--
American sycamore	250,047	34,145	215,902	--
Black cherry	186,818	20,315	166,503	--
Black willow	62,432	20,297	42,135	--
Sassafras	53,236	8,243	44,993	--
Winged elm	5,414	2,672	2,742	--
American elm	242,981	24,637	218,344	--
Siberian elm	2,052	--	2,052	--
Slippery elm	87,394	9,247	78,147	--
All species	1,271,232	165,457	1,105,775	--
Other eastern hard hardwoods				
Flowering dogwood	3,997	1,762	2,235	--
Common persimmon	19,085	1,674	17,411	--
Honeylocust	154,928	13,199	141,729	--
Kentucky coffeetree	7,658	210	7,448	--
Mulberry spp.	397	--	397	--
White mulberry	6,951	371	6,580	--
Red mulberry	25,255	1,898	23,357	--
Black locust	75,979	18,932	57,047	--
All species	294,251	38,045	256,206	--

(Table 4 continued on next page)

(Table 4 continued)

Species group/ Species	Owner category			
	All owners	Public	Private	Unidentified owner
Hardwoods				
Eastern noncommercial hardwoods				
Ailanthus	271	271	--	--
Mimosa, silktree	76	--	76	--
Serviceberry spp.	--	--	--	--
Pawpaw	347	125	222	--
American hornbeam, musciewood	1,106	421	685	--
Eastern redbud	4,845	1,775	3,070	--
Hawthorn spp.	4,017	1,482	2,536	--
Cockspur hawthorn	54	--	54	--
Downy hawthorn	206	--	206	--
Osage-orange	106,186	2,851	103,335	--
Apple spp.	686	--	686	--
Eastern hophornbeam	8,465	879	7,586	--
Cherry and plum spp.	98	--	98	--
Chokecherry	--	--	--	--
American plum	803	--	803	--
Peachleaf willow	58	--	58	--
Russian-olive	--	--	--	--
All species	127,218	7,804	119,414	--
Total hardwoods	7,484,552	1,381,695	6,102,857	--
All species groups	7,728,700	1,491,150	6,237,550	--

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 thousand cubic feet. Columns and rows may not add to their totals due to rounding.

Table 5. -- Net volume of all live trees and salvable dead trees on timberland by class of timber and softwood/hardwood species category, Illinois, 2001-2004

(In thousand cubic feet)

Class of timber	All species	Softwood species	Hardwood species
Live trees			
Growing-stock trees			
Sawtimber			
Saw log portion	4,721,477	158,335	4,563,142
Upper stem portion	600,811	20,402	580,409
Total	5,322,288	178,737	5,143,550
Poletimber	1,363,907	53,599	1,310,308
All growing-stock trees	6,686,194	232,336	6,453,858
Cull trees			
Rough trees ¹			
Sawtimber size	474,586	9,104	465,482
Poletimber size	198,587	2,524	196,063
Total	673,173	11,628	661,545
Rotten trees ¹			
Sawtimber size	28,137	--	28,137
Poletimber size	4,076	--	4,076
Total	32,213	--	32,213
All live trees	705,386	11,628	693,757
All live trees	7,391,580	243,965	7,147,616
Salvable dead trees			
Sawtimber size	109,117	605	108,512
Poletimber size	32,333	2,106	30,227
All salvable dead trees	141,450	2,711	138,739
All classes	7,533,030	246,675	7,286,355

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 thousand cubic feet. Columns and rows may not add to their totals due to rounding.

¹Includes noncommercial species.

Table 6. -- Net volume of growing stock on timberland by forest type group, forest type, and softwood/hardwood species category, Illinois, 2001-2004

(In thousand cubic feet)

Forest type group/ forest type	All species	Softwood species	Hardwood species
Softwood type groups			
White / red / jack pine group			
Jack pine	3,241	3,241	--
Red pine	17,718	17,718	--
Eastern white pine	69,875	67,475	2,400
All forest types	90,834	88,434	2,400
Loblolly / shortleaf pine group			
Shortleaf pine	83,077	67,350	15,727
All forest types	83,077	67,350	15,727
Pinyon / juniper group			
Eastern redcedar	22,431	16,911	5,520
All forest types	22,431	16,911	5,520
Exotic softwoods group			
Scotch pine	16,398	13,773	2,625
All forest types	16,398	13,773	2,625
All softwood groups	212,740	186,468	26,272
Hardwood type groups			
Oak / pine group			
Oak / pine group	8,824	8,281	542
Eastern redcedar / hardwood	8,136	2,360	5,776
Shortleaf pine / oak	6,872	3,995	2,878
Other pine / hardwood	12,691	3,600	9,091
All forest types	36,524	18,237	18,287
Oak / hickory group			
Post oak / blackjack oak	83,744	--	83,744
White oak / red oak / hickory	2,512,465	13,737	2,498,728
White oak	443,106	265	442,842
Northern red oak	132,312	176	132,137
Yellow-poplar / white oak / red oak	16,433	289	16,144
Sassafras / persimmon	84,960	463	84,497
Sweetgum / yellow-poplar	119,702	--	119,702
Bur oak	87,500	--	87,500
Yellow-poplar	22,357	--	22,357
Black walnut	22,843	--	22,843
Black locust	35,479	--	35,479
Chestnut oak / black oak / scarlet oak			
Mixed upland hardwoods	650,292	3,353	646,939
All forest types	4,211,194	18,283	4,192,911

(Table 6 continued on next page)

(Table 6 continued)

Forest type group/ forest type	All species	Softwood species	Hardwood species
Hardwood type groups			
Oak / gum / cypress group			
Swamp chestnut oak / cherrybark oak	15,217	--	15,217
Sweetgum / Nuttall oak / willow oak	2,092	--	2,092
Baldcypress / water tupelo	12,424	7,571	4,853
Sweetbay / swamp tupelo / red maple	37,558	--	37,558
All forest types	67,291	7,571	59,720
Elm / ash / cottonwood group			
Black ash / American elm / red maple	19,160	--	19,160
River birch / sycamore	141,213	--	141,213
Cottonwood	197,808	--	197,808
Willow	27,660	--	27,660
Sycamore / pecan / American elm	170,299	--	170,299
Sugarberry / hackberry / elm / green ash	463,658	1,174	462,485
Silver maple / American elm	553,528	--	553,528
Red maple / lowland	25,304	--	25,304
Cottonwood / willow	66,883	--	66,883
All forest types	1,665,513	1,174	1,664,340
Maple / beech / birch group			
Sugar maple / beech / yellow birch	238,987	300	238,687
Black cherry	7,751	--	7,751
Cherry / ash / yellow-poplar	34,963	178	34,785
Hard maple / basswood	110,611	--	110,611
Elm / ash / locust	72,972	126	72,847
Red maple / upland	24,212	--	24,212
All forest types	489,497	604	488,893
Aspen / birch group			
Aspen	2,567	--	2,567
All forest types	2,567	--	2,567
All hardwood groups	6,472,586	45,868	6,426,718
Nonstocked	868	--	868
All forest groups	6,686,194	232,336	6,453,858

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 thousand cubic feet. Columns and rows may not add to their totals due to rounding.

Table 7. -- Net volume of growing stock on timberland by species group, species, and diameter class, Illinois, 2001-2004

(In thousand cubic feet)

Species group/ species	Diameter class (inches at breast height)										29.0+
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	18.0-20.9	21.0-23.9	
Softwoods											
Loblolly and shortleaf pines											
Shortleaf pine	74,826	3,562	10,590	15,572	20,436	14,384	3,371	3,509	1,417	1,985	--
All species	74,826	3,562	10,590	15,572	20,436	14,384	3,371	3,509	1,417	1,985	--
Other yellow pines											
Scotch pine	6,112	849	2,783	2,480	--	--	--	--	--	--	--
All species	6,112	849	2,783	2,480	--	--	--	--	--	--	--
Eastern white and red pines											
Red pine	19,022	2,079	7,577	5,554	1,502	915	1,394	--	--	--	--
Eastern white pine	89,895	2,203	7,795	15,113	21,708	15,192	12,412	5,445	4,786	5,241	--
All species	108,916	4,282	15,373	20,667	23,211	16,107	13,805	5,445	4,786	5,241	--
Jack pine	1,298	--	1,298	--	--	--	--	--	--	--	--
All species	1,298	--	1,298	--	--	--	--	--	--	--	--
Spruce and balsam fir											
White spruce	1,154	774	380	--	--	--	--	--	--	--	--
All species	1,154	774	380	--	--	--	--	--	--	--	--
Cypress											
Baldcypress	7,571	82	236	253	518	--	--	--	2,677	3,805	--
All species	7,571	82	236	253	518	--	--	--	2,677	3,805	--
Other eastern softwoods											
Eastern redcedar	32,301	5,605	7,627	9,257	4,269	3,304	2,238	--	--	--	--
Blue spruce	157	--	157	--	--	--	--	--	--	--	--
All species	32,458	5,605	7,784	9,257	4,269	3,304	2,238	--	--	--	--
Total softwoods	232,336	15,154	38,445	48,229	48,434	33,795	19,414	8,954	8,881	11,031	--
Hardwoods											
Select white oaks											
White oak	845,943	10,116	19,832	33,251	56,716	81,483	91,850	105,476	119,096	250,411	77,712
Swamp white oak	34,562	317	556	923	591	995	--	5,659	6,056	19,464	--
Bur oak	169,752	1,518	623	2,783	2,872	10,720	8,359	15,492	12,691	73,412	41,281
Chinkapin oak	21,441	754	1,523	2,131	2,147	2,753	3,140	3,616	--	5,378	--
All species	1,071,698	12,704	22,534	39,087	62,326	95,951	103,349	130,244	137,844	348,666	118,994
Select red oaks											
Cherrybark oak	16,671	744	1,106	1,027	--	3,012	--	6,529	--	4,253	--
Northern red oak	384,995	7,205	7,708	16,558	27,353	27,827	48,878	49,191	41,157	123,703	35,415
Shumard oak	333	--	--	333	--	--	--	--	--	--	--
All species	401,999	7,949	8,814	17,918	27,353	30,839	48,878	55,720	41,157	127,957	35,415
Other white oaks											
Overcup oak	5,598	--	--	--	--	1,092	1,321	--	--	3,186	--
Post oak	113,128	2,086	6,026	13,520	16,197	17,738	13,833	11,283	13,090	19,355	--
All species	118,727	2,086	6,026	13,520	16,197	18,830	15,154	11,283	13,090	22,541	--
Other red oaks											
Scarlet oak	4,161	--	--	--	--	--	1,235	2,927	--	--	--
Northern pin oak	18,306	--	--	2,474	780	--	1,218	5,368	--	--	8,466
Southern red oak	23,337	157	--	--	685	1,856	4,188	3,356	1,336	11,758	--
Shingle oak	146,129	6,198	11,155	10,575	12,807	31,476	16,037	16,533	10,409	30,938	--
Blackjack oak	6,620	259	232	2,222	530	--	3,376	--	--	--	--
Pin oak	119,717	1,711	3,197	6,981	10,767	13,232	8,769	14,119	9,975	35,736	15,230
Black oak	495,643	9,159	14,670	30,292	42,754	72,681	80,427	64,140	41,824	108,640	31,056
All species	813,913	17,484	29,255	52,544	68,324	119,245	115,249	106,443	63,545	187,073	54,752

(Table 7 continued on next page)

(Table 7 continued)

Species group/ species	Diameter class (inches at breast height)											29.0+
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Hardwoods												
Hickory												
Hickory spp.	75	75	--	--	--	--	--	--	--	--	--	--
Bitternut hickory	104,024	7,895	10,303	17,622	16,770	17,653	17,787	9,947	2,803	3,445	--	--
Pignut hickory	226,402	15,595	24,437	27,180	46,904	37,139	32,228	15,143	9,677	18,099	--	--
Pecan	25,703	618	943	1,923	702	2,532	--	--	6,501	5,046	7,439	--
Shelbark hickory	13,147	352	489	1,124	2,145	1,216	3,190	1,949	2,681	--	--	--
Shagbark hickory	299,274	18,767	24,526	34,962	38,991	45,806	42,615	23,895	13,790	41,075	14,847	--
Black hickory	220	--	--	--	--	--	--	--	--	--	--	--
Mockernut hickory	66,605	4,275	10,996	9,913	6,012	6,072	10,727	3,859	6,926	7,826	--	--
All species	735,451	47,575	71,694	92,724	111,524	110,418	106,547	54,794	42,377	75,490	22,286	--
Hard maple												
Black maple	6,818	2,319	1,248	2,384	--	--	--	--	--	--	--	--
Sugar maple	245,441	22,358	24,137	31,528	24,395	33,912	31,831	20,243	21,561	35,476	--	--
All species	252,258	24,677	25,385	33,912	25,260	33,912	31,831	20,243	21,561	35,476	--	--
Soft maple												
Red maple	107,824	5,741	8,627	10,761	12,178	12,851	5,068	8,756	7,682	36,159	--	--
Silver maple	501,197	7,785	20,274	22,980	33,490	44,116	51,625	54,594	65,669	118,163	82,502	--
All species	609,022	13,526	28,901	33,741	45,668	56,968	56,693	63,350	73,351	154,322	82,502	--
Beech												
American beech	6,189	427	235	--	352	1,152	--	2,274	1,749	--	--	--
All species	6,189	427	235	--	352	1,152	--	2,274	1,749	--	--	--
Sweetgum												
Sweetgum	85,564	6,169	8,757	12,714	11,035	10,907	13,938	4,103	13,203	4,738	--	--
All species	85,564	6,169	8,757	12,714	11,035	10,907	13,938	4,103	13,203	4,738	--	--
Tupelo and blackgum												
Water tupelo	2,059	826	912	320	--	--	--	--	--	--	--	--
Blackgum	18,835	1,865	2,694	2,792	1,363	4,737	--	2,162	1,316	1,906	--	--
All species	20,893	2,691	3,606	3,113	1,363	4,737	--	2,162	1,316	1,906	--	--
Ash												
White ash	148,380	10,966	18,100	15,743	16,096	18,428	9,509	19,186	23,132	10,685	6,535	--
Black ash	3,194	177	1,229	351	--	1,437	--	--	--	--	--	--
Green ash	190,866	17,492	20,604	26,914	35,435	28,997	25,878	12,681	13,779	9,087	--	--
Pumpkin ash	1,035	379	657	--	--	--	--	--	--	--	--	--
All species	343,475	29,014	40,589	43,008	51,531	48,862	35,387	31,867	36,910	19,773	6,535	--
Cottonwood and aspen												
Eastern cottonwood	289,323	2,138	3,339	9,344	6,306	10,260	18,942	15,663	17,224	44,080	162,027	--
Bigtooth aspen	3,640	168	392	518	--	--	--	--	2,561	--	--	--
Swamp cottonwood	458	--	--	458	--	--	--	--	--	--	--	--
Quaking aspen	1,335	108	240	--	988	--	--	--	--	--	--	--
All species	294,756	2,414	3,971	10,320	7,294	10,260	18,942	15,663	19,785	44,080	162,027	--
Basswood												
American basswood	71,757	4,538	6,046	6,008	8,836	9,175	9,628	8,512	3,267	15,745	--	--
All species	71,757	4,538	6,046	6,008	8,836	9,175	9,628	8,512	3,267	15,745	--	--
Yellow-poplar												
Yellow-poplar	107,643	4,028	5,539	7,501	8,718	13,251	1,033	7,867	23,466	36,241	--	--
All species	107,643	4,028	5,539	7,501	8,718	13,251	1,033	7,867	23,466	36,241	--	--
Black walnut												
Black walnut	214,893	9,374	18,201	23,748	32,957	33,000	39,373	20,267	17,159	20,813	--	--
All species	214,893	9,374	18,201	23,748	32,957	33,000	39,373	20,267	17,159	20,813	--	--

(Table 7 continued on next page)

(Table 7 continued)

Species group/ species	All classes										Diameter class (inches at breast height)										29.0+
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-23.9	25.0+	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-23.9	25.0+	
Hardwoods																					
Other eastern soft hardwoods																					
Boxelder	64,973	7,519	10,567	8,238	11,292	11,633	4,239	2,177	5,619	3,690	--	--	--	--	--	--	--	--	--	--	--
Ohio buckeye	3,590	803	500	714	--	--	1,574	--	--	--	--	--	--	--	--	--	--	--	--	--	--
River birch	33,524	2,179	3,760	4,741	2,671	6,626	2,891	1,821	--	8,836	--	--	--	--	--	--	--	--	--	--	--
Northern catalpa	286	72	214	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sugarberry	2,387	699	219	--	1,468	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hackberry	196,191	15,389	22,138	29,768	21,387	23,719	17,997	10,720	15,528	31,059	8,485	--	--	--	--	--	--	--	--	--	--
Butternut	841	--	167	--	673	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cucumber tree	660	40	--	275	345	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American sycamore	229,649	4,111	6,707	10,649	9,784	20,791	18,599	6,166	59,925	72,134	--	--	--	--	--	--	--	--	--	--	--
Black cherry	147,178	18,553	23,208	24,553	29,125	21,924	16,068	5,660	5,013	3,074	--	--	--	--	--	--	--	--	--	--	--
Black willow	54,328	2,734	5,014	5,959	4,991	10,192	3,499	2,468	--	19,470	--	--	--	--	--	--	--	--	--	--	--
Sassafras	43,920	10,730	10,670	6,228	4,752	2,051	2,854	1,686	--	4,949	--	--	--	--	--	--	--	--	--	--	--
Winged elm	3,323	1,421	1,461	441	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American elm	205,059	36,615	37,102	35,070	40,873	11,474	13,260	8,103	12,235	10,326	--	--	--	--	--	--	--	--	--	--	--
Siberian elm	403	215	188	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Slippery elm	78,827	9,974	14,088	10,089	13,264	7,884	7,600	5,610	6,870	3,449	--	--	--	--	--	--	--	--	--	--	--
All species	1,065,139	111,053	136,002	136,724	140,627	116,285	90,774	56,844	51,433	144,778	80,619	--	--	--	--	--	--	--	--	--	--
Other eastern hard hardwoods																					
Flowering dogwood	1,429	1,341	89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Common persimmon	18,418	6,379	4,770	2,163	3,260	1,847	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Honeylocust	133,392	3,032	7,046	10,531	15,330	25,104	13,509	14,454	20,390	23,994	--	--	--	--	--	--	--	--	--	--	--
Kentucky coffeetree	7,658	--	--	210	847	1,002	--	--	--	5,599	--	--	--	--	--	--	--	--	--	--	--
White mulberry	2,509	1,463	637	408	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Red mulberry	9,177	1,324	1,570	607	1,975	2,131	1,569	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Black locust	67,897	5,390	11,308	14,172	11,215	14,666	7,621	3,526	--	--	--	--	--	--	--	--	--	--	--	--	--
All species	240,480	18,930	25,420	28,090	32,628	44,750	22,699	17,990	20,390	29,593	--	--	--	--	--	--	--	--	--	--	--
Total hardwoods	6,453,858	314,662	440,974	554,671	651,992	758,543	709,476	609,615	581,604	1,269,191	563,130	--	--	--	--	--	--	--	--	--	--
All species groups	6,686,194	329,817	479,419	602,901	700,426	792,337	728,890	618,569	590,485	1,280,222	563,130	--	--	--	--	--	--	--	--	--	--

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 thousand cubic feet. Columns and rows may not add to their totals due to rounding.

Table 8. -- Net volume of sawtimber on timberland by species group, species, and diameter class, Illinois, 2001-2004

(In thousand board feet)¹

Species Group/ Species	Diameter class (inches at breast height)									
	All classes	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Softwoods										
Loblolly and shortleaf pines										
Shortleaf pine	308,971	76,983	102,974	74,363	17,610	18,679	7,584	10,778	--	--
All species	308,971	76,983	102,974	74,363	17,610	18,679	7,584	10,778	--	--
Other yellow pines										
Scotch pine	11,796	11,796	--	--	--	--	--	--	--	--
All species	11,796	11,796	--	--	--	--	--	--	--	--
Eastern white and red pines										
Red pine	45,338	26,455	7,347	4,517	7,019	--	--	--	--	--
Eastern white pine	397,950	70,753	104,961	76,862	64,155	28,283	25,285	27,651	--	--
All species	443,288	97,208	112,308	81,379	71,174	28,283	25,285	27,651	--	--
Cypress										
Baldcypress	35,065	1,001	2,182	--	--	--	12,958	18,924	--	--
All species	35,065	1,001	2,182	--	--	--	12,958	18,924	--	--
Other eastern softwoods										
Eastern redcedar	100,014	51,032	22,225	16,253	10,505	--	--	--	--	--
All species	100,014	51,032	22,225	16,253	10,505	--	--	--	--	--
Total softwoods										
	899,134	238,019	239,689	171,995	99,290	46,962	45,827	57,353	--	--
Hardwoods										
Select white oaks										
White oak	3,529,765	--	277,946	392,318	434,779	489,592	541,671	1,088,138	306,320	--
Swamp white oak	145,246	--	2,963	4,836	--	26,239	27,897	83,311	--	--
Bur oak	710,482	--	14,184	51,464	39,572	72,491	57,503	313,693	161,576	--
Chinkapin oak	78,398	--	10,643	13,388	14,920	16,801	--	22,647	--	--
All species	4,463,891	--	305,737	462,006	489,272	605,122	627,071	1,507,788	466,896	--
Select red oaks										
Cherrybark oak	67,785	--	--	15,006	--	32,423	--	20,356	--	--
Northern red oak	1,705,428	--	135,473	138,994	244,519	245,004	203,512	591,948	145,977	--
All species	1,773,213	--	135,473	154,000	244,519	277,428	203,512	612,304	145,977	--
Other white oaks										
Overcup oak	28,043	--	--	5,533	6,779	--	--	15,731	--	--
Post oak	449,151	--	80,648	89,150	68,254	54,778	64,724	91,597	--	--
All species	477,194	--	80,648	94,683	75,033	54,778	64,724	107,328	--	--
Other red oaks										
Scarlet oak	20,449	--	--	--	6,095	--	--	--	--	--
Northern pin oak	71,290	--	3,903	--	6,093	26,445	--	--	34,849	--
Southern red oak	111,361	--	3,440	9,142	20,615	16,332	6,488	55,343	--	--
Shingle oak	577,882	--	63,276	156,086	79,495	81,064	50,562	147,399	--	--
Blackjack oak	19,456	--	2,636	--	16,820	--	--	--	--	--
Pin oak	490,307	--	53,066	65,312	43,205	69,272	48,530	166,186	44,736	--
Black oak	2,130,227	--	211,315	360,809	398,356	315,214	203,296	506,894	134,343	--
All species	3,420,971	--	337,637	591,349	570,679	522,682	308,876	875,822	213,928	--
Hickory										
Bitternut hickory	340,284	--	83,264	88,082	88,417	49,257	14,064	17,210	--	--
Pignut hickory	791,424	--	232,977	184,741	160,669	75,518	48,135	89,384	--	--
Pecan	107,779	--	3,386	12,260	--	--	31,503	24,490	36,140	--
Shellbark hickory	54,177	--	10,373	5,882	15,454	9,477	12,941	--	--	--
Shagbark hickory	1,071,845	--	188,127	221,982	206,905	115,890	66,963	199,998	72,010	--
Mockernut hickory	200,995	--	28,993	29,388	52,109	18,752	33,742	38,011	--	--
All species	2,566,455	--	547,119	542,315	523,554	288,895	207,329	369,093	108,150	--
Hard maple										
Black maple	4,156	--	4,156	--	--	--	--	--	--	--
Sugar maple	791,173	--	116,683	162,475	152,585	96,105	101,351	161,974	--	--
All species	795,329	--	120,839	162,475	152,585	96,105	101,351	161,974	--	--
Soft maple										
Red maple	357,471	--	52,729	56,229	22,238	38,467	33,591	154,218	--	--
Silver maple	1,920,346	--	145,364	193,064	226,708	239,699	287,100	504,739	323,652	--
All species	2,277,817	--	198,113	249,294	248,946	278,165	320,691	658,957	323,652	--

(Table 8 continued on next page)

Table 9. -- All live aboveground tree biomass on timberland by owner category, softwood/hardwood species category, and tree biomass component, Illinois, 2001-2004

(In dry tons)

Owner category and softwood/hardwood category	Tree biomass component											
	All components			All live 1-5 inch trees			Growing-stock trees			Non-growing-stock trees		
				Total	Boles	Stumps, tops, and limbs	Total	Boles	Stumps, tops, and limbs	Total	Boles	Stumps, tops, and limbs
Public												
Softwoods	2,042,372	45,723	1,975,176	1,658,836	316,340	21,473	15,165	6,308				
Hardwoods	28,904,669	1,770,301	25,769,018	19,118,285	6,650,734	1,365,349	969,814	395,536				
Total	30,947,041	1,816,024	27,744,194	20,777,121	6,967,073	1,386,823	984,979	401,844				
Private												
Softwoods	2,627,958	101,766	2,279,143	1,801,551	477,592	247,048	183,949	63,099				
Hardwoods	170,389,764	9,235,849	141,002,166	104,064,062	36,938,104	20,151,750	14,841,362	5,310,388				
Total	173,017,722	9,337,615	143,281,309	105,865,613	37,415,696	20,398,798	15,025,311	5,373,487				
All ownerships												
Softwoods	4,670,330	147,489	4,254,319	3,460,387	793,932	268,521	199,114	69,407				
Hardwoods	199,294,433	11,006,150	166,771,184	123,182,347	43,588,837	21,517,100	15,811,176	5,705,924				
Total	203,964,763	11,153,639	171,025,503	126,642,734	44,382,769	21,785,621	16,010,290	5,775,331				

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the aboveground tree biomass rounds to less than 1 dry ton. Columns and rows may not add to their totals due to rounding.

Table 10. -- Average annual net growth of growing stock on timberland by species group and owner category, Illinois, 1998 to 2001-2004

(In thousand cubic feet per year)

Species group	Owner category			
	All owners	Public	Private	Unidentified owner
Softwoods				
Loblolly and shortleaf pines	1,787	1,716	71	--
Other yellow pines	-190	23	-213	--
Eastern white and red pines	2,860	2,181	679	--
Jack pine	47	--	47	--
Spruce and balsam fir	83	--	83	--
Other eastern softwoods	700	244	455	--
Total softwoods	5,286	4,164	1,122	--
Hardwoods				
Select white oaks	40,668	13,209	27,459	--
Select red oaks	23,645	7,448	16,197	--
Other white oaks	2,240	527	1,713	--
Other red oaks	25,019	2,836	22,183	--
Hickory	25,855	6,088	19,767	--
Hard maple	11,567	1,505	10,062	--
Soft maple	38,650	2,239	36,411	--
Beech	480	448	32	--
Sweetgum	4,739	643	4,096	--
Tupelo and blackgum	926	227	699	--
Ash	19,983	3,763	16,220	--
Cottonwood and aspen	35,055	4,915	30,141	--
Basswood	6,032	386	5,647	--
Yellow-poplar	7,413	2,786	4,627	--
Black walnut	12,209	1,092	11,117	--
Other eastern soft hardwoods	64,393	13,731	50,662	--
Other eastern hard hardwoods	15,440	2,400	13,040	--
Total hardwoods	334,314	64,243	270,071	--
All species groups	339,600	68,407	271,193	--

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 thousand cubic feet. Columns and rows may not add to their totals due to rounding.

Table 11. -- Average annual removals of growing stock on timberland by species group and owner category, Illinois, 1998 to 2001-2004

(In thousand cubic feet per year)

Species group	Owner category			
	All owners	Public	Private	Unidentified owner
Softwoods				
Other eastern softwoods	49	--	49	--
Total softwoods	49	--	49	--
Hardwoods				
Select white oaks	11,523	2,563	8,959	--
Select red oaks	4,505	--	4,505	--
Other red oaks	6,605	1,871	4,734	--
Hickory	5,104	2,402	2,702	--
Hard maple	118	118	--	--
Soft maple	2,376	--	2,376	--
Sweetgum	3,173	2,987	186	--
Ash	2,738	--	2,738	--
Cottonwood and aspen	11,158	--	11,158	--
Basswood	1,019	--	1,019	--
Yellow-poplar	1,504	--	1,504	--
Black walnut	1,358	--	1,358	--
Other eastern soft hardwoods	12,065	--	12,065	--
Other eastern hard hardwoods	415	113	302	--
Total hardwoods	63,661	10,055	53,607	--
All species groups	63,710	10,055	53,656	--

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 thousand cubic feet. Columns and rows may not add to their totals due to rounding.

Table 12. -- Average annual mortality of growing stock on timberland by species group and owner category, Illinois, 1998 to 2001-2004

(In thousand cubic feet per year)

Species group	Owner category			
	All owners	Public	Private	Unidentified owner
Softwoods				
Loblolly and shortleaf pines	340	340	--	--
Other yellow pines	751	--	751	--
Eastern white and red pines	875	34	841	--
Jack pine	88	--	88	--
Other eastern softwoods	26	--	26	--
Total softwoods	2,079	374	1,706	--
Hardwoods				
Select white oaks	3,361	1,104	2,256	--
Select red oaks	2,417	519	1,898	--
Other white oaks	1,141	--	1,141	--
Other red oaks	14,382	2,457	11,925	--
Hickory	7,382	401	6,981	--
Hard maple	2,691	292	2,399	--
Soft maple	14,010	2,800	11,210	--
Sweetgum	1,477	1,137	340	--
Tupelo and blackgum	44	44	--	--
Ash	5,965	968	4,997	--
Cottonwood and aspen	81	81	--	--
Basswood	22	--	22	--
Yellow-poplar	41	41	--	--
Black walnut	981	33	948	--
Other eastern soft hardwoods	31,723	784	30,939	--
Other eastern hard hardwoods	5,432	299	5,133	--
Total hardwoods	91,149	10,960	80,188	--
All species groups	93,228	11,334	81,894	--

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 thousand cubic feet. Columns and rows may not add to their totals due to rounding.

Crocker, Susan J.; Leatherberry, Earl C.; Brand, Gary J.; Little, Dick C.

2006. **Illinois' forest resources in 2004**. Resour. Bull. NC-260. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 35 p.

Results of the 2004 annual inventory of Illinois show an estimated 4.4 million acres of forest land that supports 7.7 billion cubic feet of total net volume of all live trees. Since 1948, timberland area has steadily increased and now represents 96 percent of total forest land. Growing-stock volume on timberland has risen to an estimated 6.7 billion cubic feet. All live aboveground tree biomass on timberland is estimated at 204 million dry tons. Asian longhorned beetle, oak wilt, gypsy moth, and fall webworm are among Illinois' forest health concerns.

KEY WORDS: Annual inventory, forest land, timberland, forest type, growing-stock volume, growth, removals, mortality, forest health, Illinois.

The Forest Inventory and Analysis web site is:
www.fia.fs.fed.us

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