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Illinois' Forest Resources in 2003

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Illinois' Forest Resources in 2003

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The North Central Research Station's Forest Inventory and Analysis (NCFIA) program began fieldwork for the fifth forest inventory of Illinois in 2001. This inventory initiated the new annual inventory system in which one-fifth of the field plots (considered one panel) in the State are measured each year. A complete inventory consists of measuring and compiling the data for all plots in all five panels. Once all panels have been measured, each will be remeasured approximately every 5 years. For example, in Illinois, the field plots measured in 2003 will be remeasured in 2008.

In 2003, NCFIA continued the annual inventory effort with the third panel of the fifth Illinois forest inventory. Reports of previous inventories of Illinois are dated 1948, 1962, 1985, and 1998. This fifth inventory of Illinois' forest resources will be completed in 2005. However, because each year's sample is a systematic sample of the State's forest and because timely information is needed about Illinois' forest resources, estimates have been prepared from data gathered during the first 3 years of the inventory. Data presented in this report represent 60 percent of the field plots (or three panels) for a complete inventory and are a combination of the first year's panel from 2001, the second year's panel from 2002, and the third year's panel from 2003. Reports for the 2001 panel (Leatherberry 2003) and the 2002 panel (Leatherberry *et al.* 2004) have been published. The results presented from the 2001–2003 panels are estimates based on sampling techniques; estimates were compiled assuming the 2001, 2002, and 2003 data represent one sample. As additional panels of Illinois' fifth inventory are completed, the precision of the estimates will increase and additional data will be released.

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). Although these changes will have little impact on statewide estimates of forest area, timber volume, and tree biomass, they may significantly impact 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 fot the 2000–2003 panels. Although these changes allow limited comparison of inventory estimates among separate inventories in this report, it is inappropriate to directly compare all portions of the 2000-2003 data with those published for earlier inventories.

RESULTS

Area

The area that is Illinois was once a mix of tall grass prairie and eastern deciduous forest. At the time of initial Euro-American settlement, forests occupied an estimated 14 million acres, or about 40 percent of the land area that is now Illinois (Illinois State Natural Survey Division 1960). Over a 120-year period—from 1800 to the 1920s—forest land area in Illinois

declined to a low of 3.0 million acres (Telford 1926). But by the 1950s, forest land area was trending up and in 1962 totaled an estimated 4 million acres. Forest land in 2003 occupies 4.3 million acres of land, or about 12 percent of the State's land area (table 1). Forest land in Illinois is mostly in private ownerships. Presently, there are an estimated 169,000 private forest landowners in Illinois (Illinois Department of Natural Resources 2003). Those owners have been instrumental in conserving and propagating forests. The 17 percent of forest land in public ownership in Illinois 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 the economy of Illinois. Public forest lands in Illinois are mostly within the Shawnee National Forest, State parks, county forest preserves, and park districts.

Slightly more than 4.1 million acres of forest land are classified as timberland[1], accounting for 95 percent of total forest land in the State (table 2). The 5 percent—about 206 thousand acres—of forest land that is not timberland in Illinois is classified as reserved forest land. Reserved forest land is restricted from harvesting by statute, administrative regulation, or designation. Most reserved forest land is in county forest preserves and on the Shawnee National Forest.

Since the first Illinois inventory in 1948, timberland area has remained relatively stable, increasing slightly over the years (fig. 1). The 2003 estimate, as shown in figure 1, has a larger sampling error because the estimate is based on a partial inventory.

Most timberland stands in Illinois are populated with hardwood trees; about 97 percent of total timberland area is in the hardwood forest type group (table 2). Timberland stands are largely of natural origin—only 91 thousand acres were planted

[1] Timberland, a subset of forest land, is capable of growing trees at a minimum level (20 cubic feet per acre per year) and is not restricted from harvest. Timberland 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.

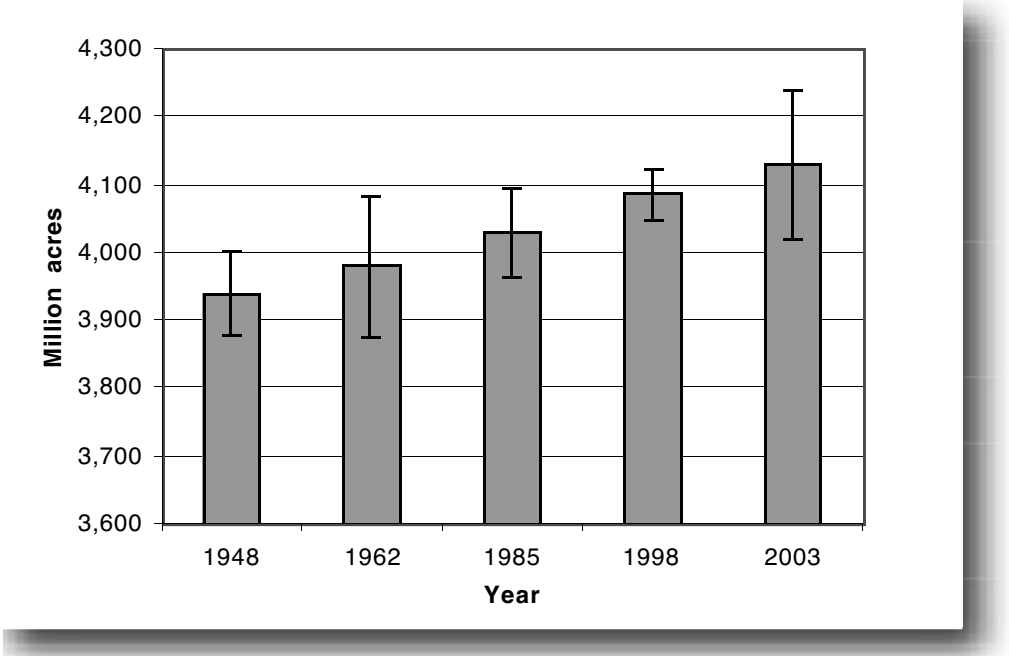

Figure 1. — Area of timberland in Illinois, 1948–2003. The vertical line at the top of each bar represents the sample error associated with each inventory.

(table 2). Seven of every 10 acres with planted trees are in softwood forest types. Sixty percent of the 106.1 thousand acres of timberland in the softwood type group is planted, mostly on publicly owned timberland. The 26 thousand acres of hardwood plantings probably are high valued species such as black walnut.

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 the timberland area in Illinois (fig. 2). The oak/hickory forest type group alone occupies slightly more than two-thirds of the timberland area, mostly (1.5 million acres) in the forest type white oak/red oak/hickory. Softwoods occupy only about 3 percent of the total timberland area; however, softwoods are important because they increase tree biodiversity in an otherwise sea of hardwoods. For instance, the majority (66 percent) of area in the softwood forest type has pines on it, with white pine stands generally found in the northern portion of the State and shortleaf pine stands generally found in the southern reaches of the State. The remaining softwood timberland area is mostly eastern redcedar. Some eastern redcedar is probably also mixed in with oak in the oak/pine hardwood type group.

As forests mature and are affected by natural and human-caused events, forest stands take on certain 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 d.b.h.; poletimber—medium trees, trees 5 inches d.b.h. to sawtimber size; and sapling/seedling—small trees, trees 1 to 5 inches d.b.h.

The area with larger diameter trees (sawtimber-size trees) accounts for 73 percent of timberland area (table 3, fig. 3). The substantial area of sawtimber-size stands points to a maturing forest. The area in poletimber-size trees accounts for 20 percent

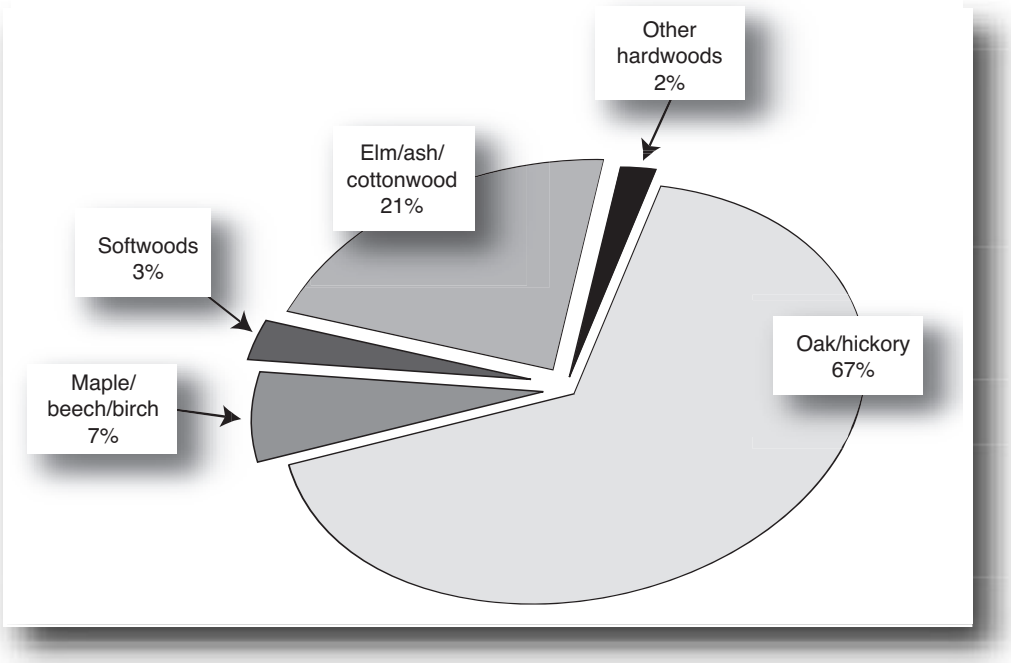

Figure 2. — *Area of timberland in Illinois by forest type, 2003.*

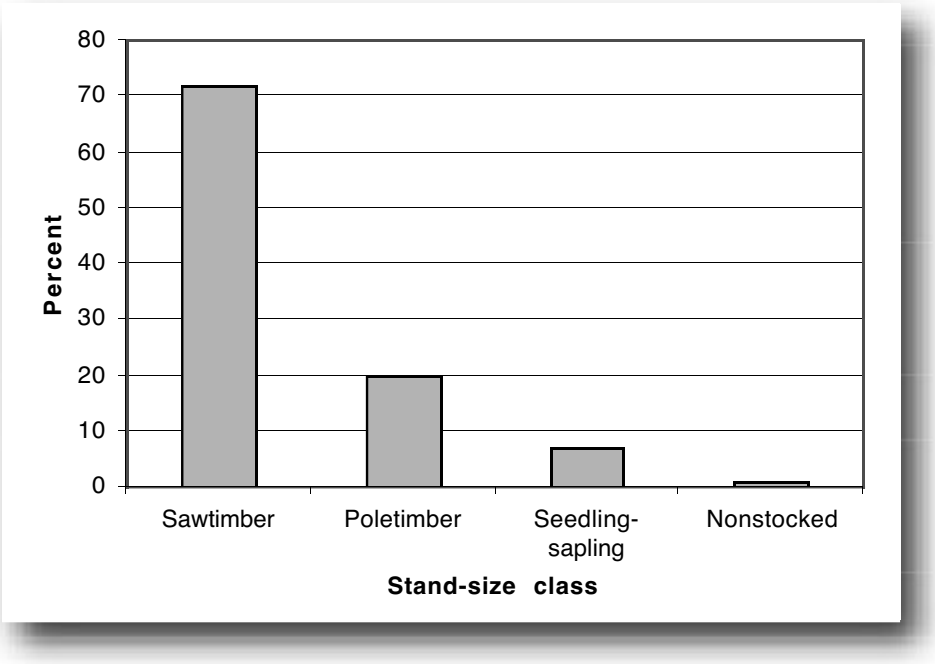

Figure 3. — *Stand-size class as a percentage of total timberland area in Illinois, 2003.*

of timberland area. Over the years, poletimber stands have grown into sawtimber stands as the forests have matured. Sapling-seedling-size stands occupy about 7 percent of timberland area. 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 dominated by larger trees.

Volume

Total net volume of all live trees on forest land in Illinois is 7.6 billion cubic feet, which equates to 1,757 cubic feet per acre of forest land (table 4). Net volume is the amount of soundwood computed from a 1-foot stump to a 4-inch top diameter outside bark for live trees at least 5 inches d.b.h. Eight of every ten cubic feet of all live volume are on privately owned forest land. Virtually all—96 percent—of net volume of all live trees is contained in hardwoods, and the species group select white oaks is predominant at 17 percent of total volume of all live trees.

Growing-stock volume on timberland is a measure that has traditionally been used to ascertain wood volume useful for commercial purposes. Growing-stock volume is the amount of solid wood on timberland in commercial trees 5.0 inches d.b.h. and over, from 1 foot above ground (stump) to a minimum 4-inch top diameter with deductions made for poor form or defect. Growing-stock volume excludes rough, rotten, and dead trees and noncommercial tree species. Growing-stock volume on Illinois timberland area totals almost 6.5 billion cubic feet, representing 87 percent of total live volume on timberland (table 5). Ten percent of all live volume on timberland is in live cull trees—754.7 million cubic feet. Cull volume is often used for commercial purposes. For instance, rough trees are sometimes used to make pallets or for chipping. Salvable dead trees contain 193.8 million cubic feet of wood volume and are sometimes used for commercial purposes; they are an important source of firewood. Salvable dead trees are also important for wildlife species such as cavity nesting birds and mammals that require den sites.

Total growing-stock volume has increased in every inventory since 1948, going from over 2 billion cubic feet to 6.5 billion cubic feet in 2003 (fig. 4). Presently, 96 percent of total growing-stock volume is in hardwood species (table 6). Almost 60 percent of growing-stock volume is contained in four forest types—white oak/red oak/hickory (38 percent), white oak (8 percent), silver maple/American elm (7 percent), and sugarberry/hackberry/elm/green ash (6 percent). Growing-stock volume present in softwoods amounts to 4 percent (255.97 million cubic feet) of total growing-stock volume. A small amount of this volume (51.1 million cubic feet) is present in hardwood-dominated stands; most, however, is in softwood-dominated stands.

The increase in growing-stock volume over the years reflects a forest in which trees continue to put on volume. Much of the growing-stock volume on timberland in Illinois is in large-diameter trees. For instance, over one-fourth—27 percent—of growing-stock volume is in trees that are 21 inches d.b.h. and larger (table 7). Oak trees, particularly white oak, bur oak, black oak, and northern red along with silver maple and eastern cottonwood, have significant volume in trees that are 21 inches d.b.h. and larger.

Sawtimber volume, a subset of growing-stock volume, is the volume of the saw log portion of live sawtimber measured in board feet. Sawtimber volume is generally measured with the International 1/4-inch rule. Sawtimber volume in Illinois totals 23.8 billion board feet (table 8). Ninety-six percent of all sawtimber volume is in hardwood trees. About half of the volume of sawtimber on timberland is in only seven hardwood species—white oak) (15 percent), black oak (9 percent), silver maple and northern red oak (each 7 percent), eastern cottonwood (5 percent), and shagbark hickory and sycamore (each 4 percent). Of total sawtimber volume, 32 percent is in trees with diameters of 21 inches or larger.

Biomass

Live aboveground tree biomass in Illinois timberland area was estimated to be 199.7 million dry tons in 2003 (an average of 48 dry tons per acre of timberland). All live aboveground tree biomass is estimated for growing-stock trees, non-growing-stock trees, and all live 1- to 5-inch d.b.h. trees (table 9). Eighty-three percent of tree biomass is in growing-stock trees, with an additional 12 percent in non-growing-stock trees, and the remaining 5 percent is in trees less than 5 inches d.b.h. For both growing-stock and non-growing-stock

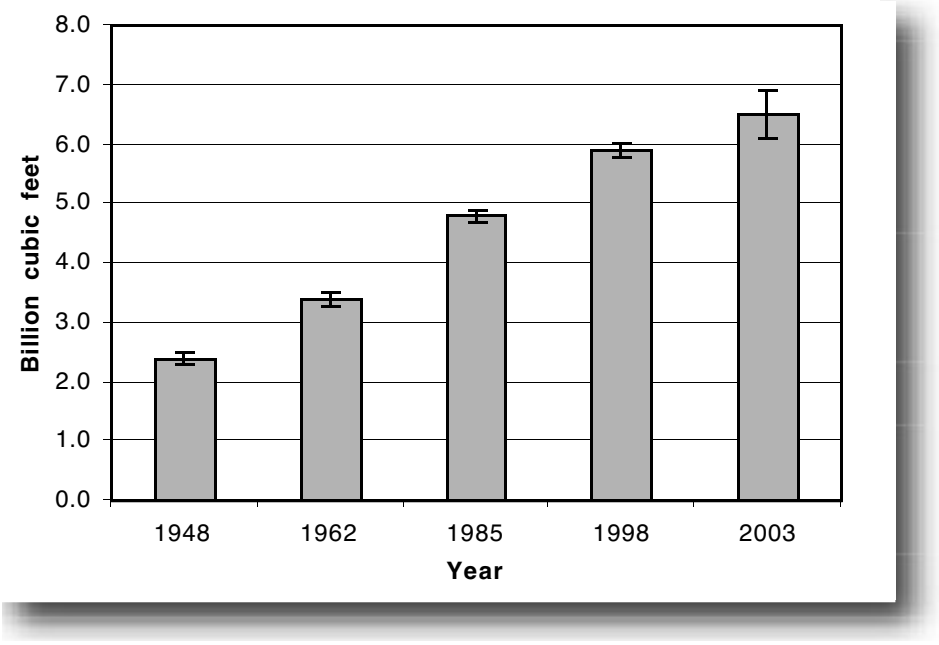

Figure 4. — Growing-stock volume, Illinois, 1948-2003. The vertical line at the top of each bar represents the sample error associated with each inventory.

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-seven percent (194.6 million dry tons) of all live aboveground tree biomass is in hardwood species. Biomass estimates are increasing in importance for analyses of questions relating to carbon sequestration, wood fiber availability for fuel, and assessment of fuel in forest stands.

Growth, Removals, and Mortality

The growing stock on Illinois' timberland grew, on average, 336.7 million cubic feet per year between 1998 and 2003 (table 10). Hardwood growth accounts for virtually all (98 percent) of the total average annual growth of growing stock. Softwood growth was 5.1 million cubic feet per year. Other eastern soft hardwoods, the species group that contains hackberry and elms, had a growth rate of almost 69 million cubic feet per year. Other fast growing species groups in Illinois were other select white oaks at 44.2 million cubic feet per year, cottonwood and aspen at 37.8 million cubic feet per year, and soft maple at 33.6 million cubic feet per year.

Average annual removals of growing stock on timberland totaled 70.6 million cubic feet per year (table 11). Virtually all removals were from hardwoods. Softwood removals were only 53 thousand cubic feet per year, or less then 1 percent of the total. Removals from private ownerships totaled 62.4 million cubic feet per year, or 88 percent of all removals. Cottonwood and aspen had the highest average annual removals at 16.3 million cubic feet per year, followed by select white oaks at 15 million cubic feet per year and other eastern soft hardwoods at 12.1 million cubic feet per year.

Average annual mortality of all growing stock on timberland from 1998 to 2003 was 94.3 million cubic feet per year (table 12). Ninety-eight percent of the total, or 92.8 million cubic feet per year, was among hardwoods, while the remaining 1.4 million cubic feet per year was in softwoods. Slightly more than one-third of average annual mortality of growing stock on timberland was in the other eastern soft hardwood species group where the elm species are found. One-fourth of average annual mortality was in oaks. Oak mortality was the result of oak wilt and general oak decline. The forest health discussion below provides more information about the causes of tree mortality in Illinois.

Forest Health

The information presented about pathogens and insects affecting Illinois forests was obtained from the national Forest Health Monitoring (FHM) program at: http://www.na.fs.fed.us/spfo/fhm/index.htm. Several special issues were identified in 2003 and some are highlighted below. For more information about forest health in Illinois, contact the Illinois Department of Natural Resources.

Several exotic invasive insects were of concern in Illinois in 2003. Since the late 1990s, when the Asian longhorned beetle (*Anoplophora glabripennis*), was found infesting live trees in the Chicago area, extensive surveys have been carried out to locate and destroy infested trees. Over 400 infested trees were initially identified in 1998; removal began in 1999. By 2001, over 1,500 trees had been removed. It appears that quarantine and other efforts to prevent the shipment of infested wood outside of the known infested areas in Chicago are effective in curbing the spread of the beetle. In 2003, only one live beetle was found in the Chicago area and only six infested trees were found.

Since 1992 when first found in northeastern Illinois, the pine shoot beetle (*Tomicus piniperda*), an insect of European origin, has spread south and westward (fig. 5). However, populations of the beetle in Illinois have remained low.

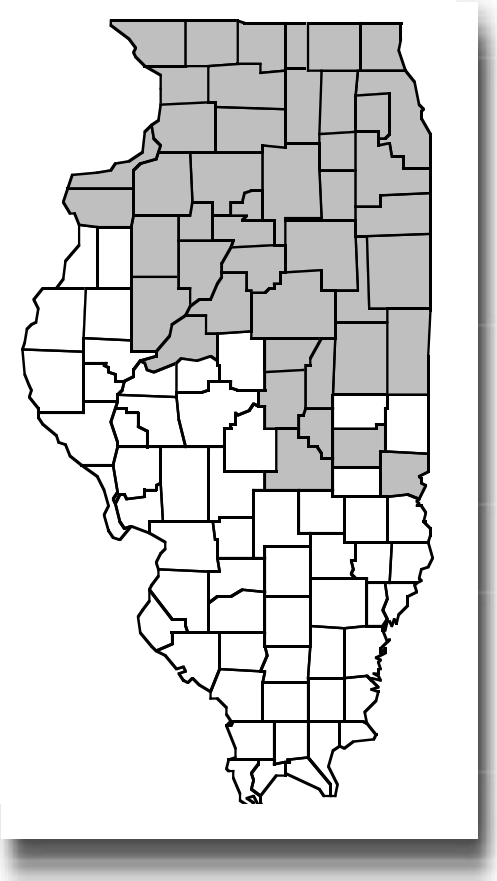

Figure 5. — Counties in Illinois with infestations of the pine shoot beetle, 2003. (Source: USDA Forest Service, State and Private Forestry Health Protection Program.)

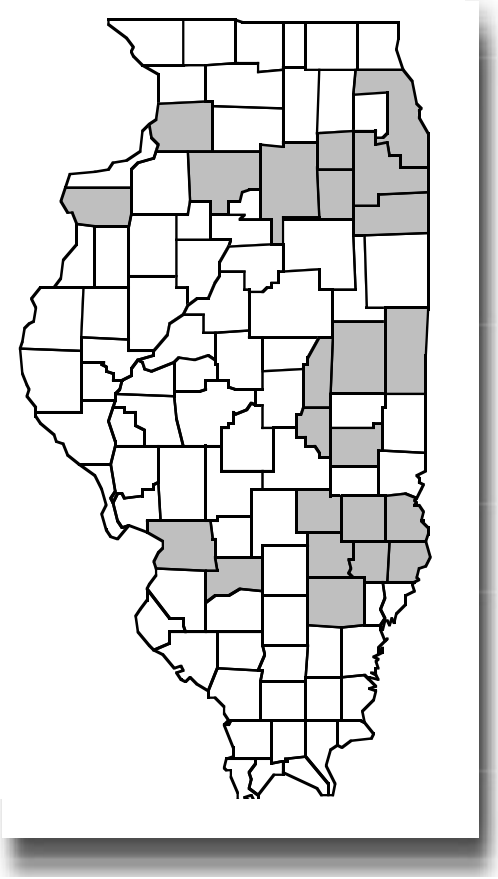

Figure 6. — Counties in Illinois with infestations of Japanese beetle, 2003. (Source: USDA Forest Service, State and Private Forestry Health Protection Program.)

Infestations of Japanese beetles (*Popillia japonica*) were reported throughout the State in 2003 (fig. 6). In some areas, the foliage of basswood, oak, crabapple, apple, hawthorn, and river birch was completely skeletonized by July.

As people have built more homes in oak forests, the number of trees infected with oak wilt has increased, especially in northern counties of the Greater Chicago area (fig. 7). A fungus, *Ceratocystis fagacearum*, is the cause of oak wilt. The fungus enters the tree through fresh wounds or by root grafts connecting healthy and diseased trees. Once inside the tree the fungus permeates the vascular system, causing the water-conducting units of the plant to become plugged. Water and nutrient flow is disrupted, causing the oak to wilt (Pecknold 2001). The most susceptible period for the spread of oak wilt is from about March 1 to July 15. Preventing injury caused by humans, such as pruning or construction activities, during this period is especially effective in limiting the spread of oak wilt.

In several central and southern counties, moderate to heavy infestations of bagworms occurred during 2003 (fig. 8). Spruce, white pine, juniper, and arborvitae are common

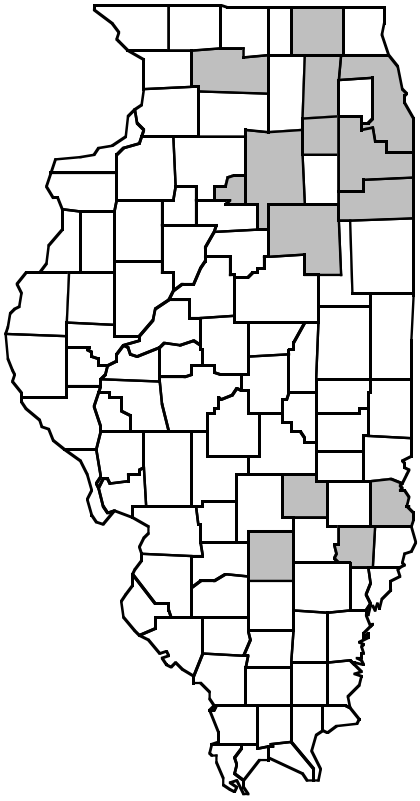

Figure 7. — Counties in Illinois with oak wilt present, 2003. (Source: USDA Forest Service, State and Private Forestry Health Protection Program.)

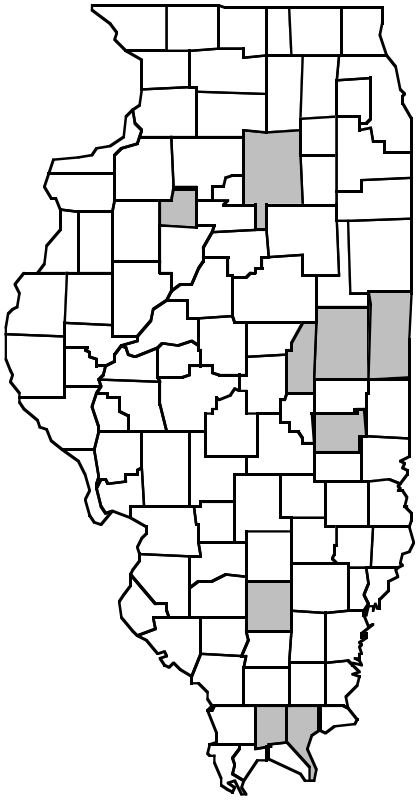

Figure 8. — Counties in Illinois with bagworm infestations, 2003. (Source: USDA Forest Service, State and Private Forestry Health Protection Program.)

hosts. Complete defoliation of evergreens results in tree death. This insect is more commonly found in urban landscapes although Christmas plantations containing spruce and white pine are vulnerable. Control is best accomplished with an insecticide application in mid-June after all the over wintering eggs have hatched.

Populations of all webworm insects (*Hyphantria cunea*) vary greatly from year to year. In 2003, populations of webworm were found in several counties in the northwestern and south central regions of the State. Some trees were completely defoliated by early August with the trees entirely covered with the webbing.

Summary

The area of timberland in Illinois is holding steady, as it has throughout the second half of the 20th century. Most timberland stands are populated with hardwood trees; about 97 percent of total area of timberland is in hardwood forest type groups. Growing-stock volume continues to increase as the forest matures. In general, the forest of Illinois is in good health, with areas of local concern. These findings are presented with the caveat that data are not yet sufficient to make definitive statements about how Illinois' forest resources have changed since the previous inventory in 1998. As additional data become available under the annual inventory system, a clearer picture of the status and direction of Illinois' forests will emerge.

APPENDIX

Inventory Methods

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

With an annual inventory system, about one-fifth of all field plots are measured each year. After 5 years, an entire inventory cycle will be completed. After the first 5 years, NCFIA will report and analyze results as a moving 5-year average. For example, NCFIA will be able to generate a report based on inventory results for 2001 through 2005 or for 2003 through 2006. Although there are great advantages for an annual inventory, one difficulty is reporting on results in the first 4 years. With the 2003 annual measurements, 60 percent of all field plots have been measured. Sampling error estimates for the 2003 inventory results are area of forest land, 2.47 percent; area of timberland, 2.65 percent; number of growing-stock trees on timberland, 4.15 percent; volume of growing stock on timberland, 4.07 percent; and volume of sawtimber on timberland, 4.46 percent. These sampling error estimates are higher than those for the last periodic inventory completed in 1998 (i.e., 1.61 percent for timberland area and 2.18 percent for growing-stock volume) because of the smaller sample sizes. Thus, caution should be used when drawing conclusions based on estimates. As we complete ensuing measurements, we will have additional confidence in our estimates due to the increased number of field plots measured. As each measurement year is completed, the precision of estimates will improve.

Other significant changes between inventories include new remote sensing technology, new sampling design, a new field plot design, and additional remotely sensed and field data. Changes in remote sensing technology since the previous inventory in 1998 have allowed NCFIA to use computer-assisted classifications of Multi-Resolution Land Characterization (MRLC) data and other available remote sensing products to stratify the total area of the State and to improve estimates. Inventories in Illinois before 1998 used manual interpretation of aerial photographs to stratify the sample. In 1998, a computer-assisted classification of LandSat Thematic Mapper satellite imagery was used.

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 nationwide by FIA 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 2003 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 2003 Illinois survey was based on a three-phase inventory. The first phase used classified satellite imagery to stratify the State and aerial photographs to select plots for measurement. The second phase entailed measurement of the traditional FIA suite of mensurational variables, and the third phase focused on a suite of variables related to the health of the forest.

The only land that could not be sampled was (1) 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 2003 inventory used a computer-assisted 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 a 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 of the inventory consisted of the measurement of the annual sample of field plots in Illinois. Current FIA precision standards for annual inventories require a sampling intensity of one plot for approximately every 6,000 acres. FIA has 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, and 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 plot are uniformly distributed both geographically and temporally. Phase 3 plots are measured with the full suite of FHM vegetative and health variables (Mangold 1998) collected 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. We anticipate that in Illinois the complete 5-year annual inventory will include measures of about 70 phase 3 field plots. On the remaining plots, referred to as phase 2 plots, only variables that can be measured throughout the entire year are collected. In Illinois, the complete 5-year annual inventory is expected to include measures of about 940 phase 2 forested plots. The 2001–2003 annual inventory results represent field measures on 562 phase 2 forested plots and 42 phase 3 field plots.

The new national FIA plot design (fig. 9) was first used for data collection in Illinois in 1998. This design was also used in the 2000-2003 inventories and will be used in subsequent years. The national plot design 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 design 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. The center of the new plot is located at the same point as the center of the previous plot if a previous plot existed within the sample unit. Trees with a d.b.h. 5 inches and larger are measured on a 24-foot-radius (1/24 acre) circular subplot. All trees less than 5 inches d.b.h. 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. 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.

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

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or

State Forester
Illinois Department of Natural Resources
Office of Resources Conservation
1 Natural Resources Way
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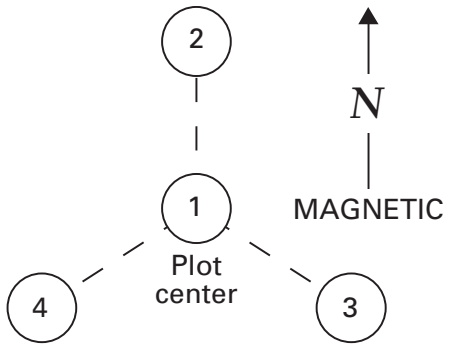

Figure 9. — *Current NCFIA field plot design.*

LITERATURE CITED

Illinois Department of Natural Resources. 2001.
Illinois forest resource facts. Springfield, IL: State of Illinois, Division of Resource Protection and Stewardship. http://dnr.state.il.us/conservation/forestry/Fact.htm.

Illinois State Natural Survey Division. 1960.
Atlas of Illinois resources, section 3: forest, wildlife and recreational resources. Springfield, IL: State of Illinois, Division of Industrial Planning and Development. 46 p.

Leatherberry, E.C. 2003.
Illinois's forests in 2001. Res. Note NC-385. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 8 p. [Available only online at: www.ncrs.fs.fed.us]

Leatherberry, E.C.; Brand, G.J.; Little, D.C. 2003.
Illinois's forests in 2002. Resour. Bull. NC-236. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 22 p.

Mangold, R.D. 1998.
Forest health monitoring field methods guide (National 1998). Research Triangle Park, NC: U.S. Department of Agriculture, Forest Service, National Forest Health Monitoring Program. 429 p. (Revision 0, April 1998).

McRoberts, R.E. 1999.
Joint annual forest inventory and monitoring system, the North Central perspective. Journal of Forestry. 97(12): 27-31.

Pecknold, P.C. 2001.
Tree diseases. BP-28-W. West Lafayette, IN: Purdue University Cooperative Extension Service.

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.

Telford, C.J. 1926.
Third report on a forest survey of Illinois. Illinois Natural History Survey Bulletin. 1(1): 1–102.

TABLE TITLES

TABLES

Table 1. -- Area of forest land by forest type group, forest type, and owner category, Illinois, 2001-2003

(In thousand acres)

Forest type group/ forest type	Owner category			
	All owners	Public	Private	Unidentified owner
Softwood type groups				
White / red / jack pine group				
Jack pine	2.6	- -	2.6	- -
Red pine	10.4	- -	10.4	- -
Eastern white pine	23.3	12.6	10.7	- -
All forest types	36.3	12.6	23.7	- -
Loblolly / shortleaf pine group				
Shortleaf pine	33.7	33.2	0.5	- -
All forest types	33.7	33.2	0.5	- -
Pinyon / juniper group				
Eastern redcedar	24.6	- -	24.6	- -
All forest types	24.6	- -	24.6	- -
Exotic softwoods group				
Scotch pine	11.4	2.9	8.6	- -
All forest types	11.4	2.9	8.6	- -
All softwood groups	106.1	48.7	57.4	- -
Hardwood type groups				
Oak / pine group				
Oak / pine group	1.5	- -	1.5	- -
Eastern redcedar / hardwood	1.9	- -	1.9	- -
Shortleaf pine / oak	7.6	7.6	- -	- -
Other pine / hardwood	9.6	- -	9.6	- -
All forest types	20.6	7.6	13.0	- -
Oak / hickory group				
Post oak / blackjack oak	66.4	7.6	58.9	- -
White oak / red oak / hickory	1,567.6	275.9	1,291.7	- -
White oak	251.6	58.1	193.5	- -
Northern red oak	78.6	24.1	54.5	- -
Yellow-poplar / white oak / red oak	13.2	7.6	5.6	- -
Sassafras / persimmon	91.1	10.9	80.2	- -
Sweetgum / yellow-poplar	71.4	34.1	37.3	- -
Bur oak	60.9	12.5	48.4	- -
Yellow-poplar	2.4	2.4	- -	- -
Black walnut	31.0	10.0	21.0	- -
Black locust	26.8	6.9	19.9	- -
Chestnut oak / black oak / scarlet oak	12.8	- -	12.8	- -
Mixed upland hardwoods	640.8	43.4	597.4	- -
All forest types	2,914.6	493.5	2,421.1	- -
Oak / gum / cypress group				
Swamp chestnut oak / cherrybark oak	8.3	- -	8.3	- -
Sweetgum / Nuttall oak / willow oak	1.6	- -	1.6	- -
Baldcypress / water tupelo	21.3	- -	21.3	- -
Sweetbay / swamp tupelo / red maple	18.3	- -	18.3	- -
All forest types	49.5	- -	49.5	- -

(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	12.4	2.0	10.4	--
River birch / sycamore	54.9	9.0	46.0	--
Cottonwood	48.0	--	48.0	--
Willow	5.4	2.8	2.6	--
Sycamore / pecan / American elm	91.5	23.6	67.9	--
Sugarberry / hackberry / elm / green ash	407.7	59.8	347.9	--
Silver maple / American elm	232.7	44.3	188.4	--
Red maple / lowland	18.7	--	18.7	--
Cottonwood / willow	32.9	23.6	9.3	--
All forest types	904.3	165.1	739.2	--
Maple / beech / birch group				
Sugar maple / beech / yellow birch	114.9	--	114.9	--
Black cherry	21.1	--	21.1	--
Cherry / ash / yellow-poplar	53.2	10.3	42.8	--
Hard maple / basswood	83.6	--	83.6	--
Elm / ash / locust	40.5	20.8	19.7	--
All forest types	313.2	31.1	282.0	--
Aspen / birch group				
Aspen	2.4	--	2.4	--
All forest types	2.4	--	2.4	--
Exotic hardwoods group				
Other exotic hardwoods	2.5	--	2.5	--
All forest types	2.5	--	2.5	--
All hardwood groups	4,207.0	697.3	3,509.7	--
Nonstocked	21.8	--	21.8	--
All forest groups	4,334.9	746.0	3,588.9	--

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, 2001-2003

(In thousand acres)

Major forest type group and stand origin	Owner category			
	All owners	Public	Private	Unidentified owner
Softwood type groups				
Natural	42.0	8.8	33.2	- -
Planted	64.1	39.9	24.2	- -
All softwood types	106.1	48.7	57.4	- -
Hardwood type groups				
Natural	3,974.6	489.7	3,484.9	- -
Planted	26.4	11.3	15.2	- -
All hardwood types	4,001.1	501.0	3,500.1	- -
Nonstocked	21.8	- -	21.8	- -
All groups	4,129.0	549.7	3,579.3	- -

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, 2001-2003

(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	2.6	- -	2.6	- -	- -
Red pine	10.4	10.4	- -	- -	- -
Eastern white pine	23.3	23.3	- -	- -	- -
All forest types	36.3	33.7	2.6	- -	- -
Loblolly / shortleaf pine group					
Shortleaf pine	33.7	32.0	1.2	0.5	- -
All forest types	33.7	32.0	1.2	0.5	- -
Pinyon / juniper group					
Eastern redcedar	24.6	8.9	15.7	- -	- -
All forest types	24.6	8.9	15.7	- -	- -
Exotic softwoods group					
Scotch pine	11.4	- -	8.6	2.9	- -
All forest types	11.4	- -	8.6	2.9	- -
All softwood groups	106.1	74.7	28.1	3.3	- -
Hardwood type groups					
Oak / pine group					
Oak / pine group	1.5	1.5	- -	- -	- -
Eastern redcedar / hardwood	1.9	- -	1.9	- -	- -
Shortleaf pine / oak	7.6	7.6	- -	- -	- -
Other pine / hardwood	9.6	9.6	- -	- -	- -
All forest types	20.6	18.7	1.9	- -	- -

(Table 3 continued on next page)

(Table 3 continued)

Forest type group/ forest type	Stand-size class				
	All stands	Sawtimber	Poletimber	Sapling-seedling	Non-stocked
Hardwood type groups					
Oak / hickory group					
Post oak / blackjack oak	66.4	51.9	14.6	- -	- -
White oak / red oak / hickory	1,506.4	1,220.3	221.1	65.0	- -
White oak	244.0	232.6	11.4	- -	- -
Northern red oak	69.7	69.7	- -	- -	- -
Yellow-poplar / white oak / red oak	13.2	7.6	- -	5.6	- -
Sassafras / persimmon	83.6	31.6	48.5	3.4	- -
Sweetgum / yellow-poplar	57.8	28.3	28.7	0.8	- -
Bur oak	48.4	47.3	1.1	- -	- -
Yellow-poplar	2.4	2.4	- -	- -	- -
Black walnut	31.0	24.0	2.6	4.4	- -
Black locust	26.8	- -	26.8	- -	- -
Chestnut oak / black oak / scarlet oak	12.8	- -	- -	12.8	- -
Mixed upland hardwoods	607.8	361.0	173.3	73.6	- -
All forest types	2,770.4	2,076.7	528.2	165.5	- -
Oak / gum / cypress group					
Swamp chestnut oak / cherrybark oak	8.3	8.3	- -	- -	- -
Sweetgum / Nuttall oak / willow oak	1.6	- -	1.6	- -	- -
Baldcypress / water tupelo	21.3	11.0	10.3	- -	- -
Sweetbay / swamp tupelo / red maple	18.3	18.3	- -	- -	- -
All forest types	49.5	37.6	11.9	- -	- -
Elm / ash / cottonwood group					
Black ash / American elm / red maple	12.4	4.4	8.1	- -	- -
River birch / sycamore	54.9	44.6	10.3	- -	- -
Cottonwood	48.0	47.2	0.9	- -	- -
Willow	5.4	5.4	- -	- -	- -
Sycamore / pecan / American elm	77.9	65.2	- -	12.6	- -
Sugarberry / hackberry / elm / green ash	396.3	209.5	101.3	85.4	- -
Silver maple / American elm	217.6	201.6	16.0	- -	- -
Red maple / lowland	18.7	7.7	11.0	- -	- -
Cottonwood / willow	20.3	20.3	- -	- -	- -
All forest types	851.5	605.9	147.5	98.0	- -

(Table 3 continued on next page)

(Table 3 continued)

Forest type group/ forest type	Stand-size class				
	All stands	Sawtimber	Poletimber	Sapling-seedling	Non-stocked
Hardwood type groups					
Maple / beech / birch group					
Sugar maple / beech / yellow birch	114.9	85.7	18.2	11.0	--
Black cherry	21.1	--	9.6	11.4	--
Cherry / ash / yellow-poplar	53.2	9.4	31.1	12.7	--
Hard maple / basswood	83.6	66.0	17.5	--	--
Elm / ash / locust	31.6	13.9	15.1	2.5	--
All forest types	304.2	175.1	91.5	37.6	--
Aspen / birch group					
Aspen	2.4	--	2.4	--	--
All forest types	2.4	--	2.4	--	--
Exotic hardwoods group					
Other exotic hardwoods	2.5	2.5	--	--	--
All forest types	2.5	2.5	--	--	--
All hardwood groups	4,001.1	2,916.5	783.4	301.2	--
Nonstocked	21.8	--	--	--	21.8
All forest groups	4,129.0	2,991.2	811.5	304.5	21.8

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, 2001-2003

(In thousand cubic feet)

Species group/ species	Owner category			
	All owners	Public	Private	Unidentified owner
Softwoods				
Loblolly and shortleaf pines				
Shortleaf pine	90,724	89,025	1,699	--
All species	90,724	89,025	1,699	--
Other yellow pines				
Scotch pine	6,785	804	5,981	--
All species	6,785	804	5,981	--
Eastern white and red pines				
Red pine	24,361	--	24,361	--
Eastern white pine	89,993	45,757	44,236	--
All species	114,354	45,757	68,597	--
Jack pine				
Jack pine	1,876	--	1,876	--
All species	1,876	--	1,876	--
Spruce and balsam fir				
White spruce	1,536	--	1,536	--
All species	1,536	--	1,536	--
Cypress				
Baldcypress	10,516	--	10,516	--
All species	10,516	--	10,516	--
Other eastern softwoods				
Eastern redcedar	43,906	3,709	40,197	--
Blue spruce	209	--	209	--
All species	44,114	3,709	40,405	--
Total softwoods	269,906	139,296	130,610	--
Hardwoods				
Select white oaks				
White oak	971,941	228,314	743,627	--
Swamp white oak	44,659	22,066	22,593	--
Bur oak	276,309	32,417	243,891	--
Chinkapin oak	24,664	78	24,586	--
All species	1,317,572	282,875	1,034,697	--

(Table 4 continued on next page)

(Table 4 continued)

Species group/ species	Owner category			
	All owners	Public	Private	Unidentified owner
Hardwoods				
Hard maple				
Black maple	6,292	- -	6,292	- -
Sugar maple	225,781	40,217	185,564	- -
All species	232,073	40,217	191,856	- -
Soft maple				
Red maple	120,828	39,483	81,345	- -
Silver maple	528,195	152,523	375,672	- -
All species	649,023	192,006	457,017	- -
Beech				
American beech	5,504	745	4,759	- -
All species	5,504	745	4,759	- -
Sweetgum				
Sweetgum	104,630	34,272	70,358	- -
All species	104,630	34,272	70,358	- -
Tupelo and blackgum				
Water tupelo	2,813	68	2,745	- -
Blackgum	16,212	9,553	6,658	- -
All species	19,025	9,621	9,403	- -
Ash				
White ash	154,859	27,052	127,807	- -
Black ash	3,606	- -	3,606	- -
Green ash	229,310	45,728	183,582	- -
Pumpkin ash	1,438	- -	1,438	- -
All species	389,213	72,779	316,433	- -
Cottonwood and aspen				
Balsam poplar		- -		- -
Eastern cottonwood	312,246	32,518	279,728	- -
Bigtooth aspen	5,119	- -	5,119	- -
Swamp cottonwood	636	- -	636	- -
Quaking aspen	1,778	- -	1,778	- -
All species	319,778	32,518	287,260	- -

(Table 4 continued on next page)

(Table 4 continued)

Species group/ species	Owner category			
	All owners	Public	Private	Unidentified owner
Hardwoods				
Basswood				
American basswood	99,301	4,083	95,218	- -
All species	99,301	4,083	95,218	- -
Yellow-poplar				
Yellow-poplar	75,969	34,050	41,920	- -
All species	75,969	34,050	41,920	- -
Black walnut				
Black walnut	242,627	39,493	203,134	- -
All species	242,627	39,493	203,134	- -
Other eastern soft hardwoods				
Boxelder	119,209	7,501	111,709	- -
Ohio buckeye	2,645	- -	2,645	- -
River birch	41,299	2,581	38,717	- -
Northern catalpa		- -		- -
Sugarberry	2,394	209	2,185	- -
Hackberry	185,315	27,641	157,674	- -
Butternut	1,067	- -	1,067	- -
Cucumbertree	72	- -	72	- -
American sycamore	263,990	43,013	220,977	- -
Black cherry	208,192	27,036	181,157	- -
Black willow	66,549	20,080	46,469	- -
Sassafras	62,212	11,274	50,938	- -
Winged elm	6,394	3,803	2,590	- -
American elm	219,619	22,736	196,883	- -
Siberian elm	2,310	- -	2,310	- -
Slippery elm	86,950	11,442	75,508	- -
All species	1,268,217	177,316	1,090,901	- -

(Table 4 continued on next page)

(Table 4 continued)

Species group/ species	Owner category			
	All owners	Public	Private	Unidentified owner
Hardwoods				
Other eastern hard hardwoods				
Flowering dogwood	3,639	1,411	2,227	--
Common persimmon	17,747	1,603	16,144	--
Honeylocust	146,812	17,549	129,263	--
Kentucky coffeetree	2,519	--	2,519	--
White mulberry	6,836	556	6,280	--
Red mulberry	19,987	2,219	17,768	--
Black locust	50,326	19,357	30,969	--
All species	247,866	42,695	205,171	--
Eastern noncommercial hardwoods				
Ailanthus	490	490	--	--
Mimosa, silktree	117	--	117	--
Serviceberry spp.		--		--
Pawpaw	171	--	171	--
American hornbeam, musclewood	917	--	917	--
Eastern redbud	3,143	--	3,143	--
Hawthorn spp.	3,636	733	2,904	--
Cockspur hawthorn	75	--	75	--
Osage-orange	99,570	1,510	98,060	--
Apple spp.	785	--	785	--
Eastern hophornbeam	7,805	280	7,525	--
Cherry and plum spp.	131	--	131	--
Chokecherry		--		--
American plum	240	--	240	--
All species	117,078	3,013	114,065	--
Total hardwoods	7,345,762	1,365,445	5,980,317	--
All species groups	7,615,668	1,504,741	6,110,927	--

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates that 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, 2001-2003

(In thousand cubic feet)

Class of timber	All species	Softwood species	Hardwood species
Live trees			
Growing-stock trees			
Sawtimber			
Saw log portion	4,551,038	177,211	4,373,827
Upper stem portion	590,914	21,729	569,185
Total	5,141,952	198,940	4,943,012
Poletimber	1,317,081	56,921	1,260,160
All growing-stock trees	6,459,033	255,861	6,203,172
Cull trees			
Rough trees[1]			
Sawtimber size	539,358	11,474	527,884
Poletimber size	193,727	2,297	191,430
Total	733,084	13,771	719,314
Rotten trees[1]			
Sawtimber size	18,442	--	18,442
Poletimber size	3,211	--	3,211
Total	21,654	--	21,654
All live cull trees	754,738	13,771	740,967
All live trees	7,213,771	269,631	6,944,139
Salvable dead trees			
Sawtimber size	149,823	805	149,017
Poletimber size	43,933	2,925	41,009
All salvable dead trees	193,756	3,730	190,026
All classes	7,407,527	273,361	7,134,165

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

[1] Includes noncommercial species.

Table 6. -- Net volume of growing stock on timberland by forest type group, forest type, and softwood/hardwood species category, Illinois, 2001-2003

(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	4,419	4,419	- -
Red pine	21,432	21,432	- -
Eastern white pine	64,727	63,514	1,213
All forest types	90,577	89,365	1,213
Loblolly / shortleaf pine group			
Shortleaf pine	99,208	82,201	17,007
All forest types	99,208	82,201	17,007
Pinyon / juniper group			
Eastern redcedar	24,337	19,771	4,565
All forest types	24,337	19,771	4,565
Exotic softwoods group			
Scotch pine	14,644	13,380	1,264
All forest types	14,644	13,380	1,264
All softwood groups	228,765	204,717	24,048
Hardwood type groups			
Oak / pine group			
Oak / pine group	11,765	11,042	723
Eastern redcedar / hardwood	406	406	- -
Shortleaf pine / oak	12,445	7,233	5,211
Other pine / hardwood	16,922	4,800	12,122
All forest types	41,538	23,482	18,056

(Table 6 continued on next page)

(Table 6 continued)

Forest type group/ forest type	All species	Softwood species	Hardwood species
Hardwood type groups			
Oak / hickory group			
Post oak / blackjack oak	95,575	- -	95,575
White oak / red oak / hickory	2,464,310	12,639	2,451,671
White oak	504,940	479	504,461
Northern red oak	144,917	234	144,683
Yellow-poplar / white oak / red oak	22,907	- -	22,907
Sassafras / persimmon	93,808	108	93,700
Sweetgum / yellow-poplar	108,385	- -	108,385
Bur oak	94,193	- -	94,193
Yellow-poplar	5,637	- -	5,637
Black walnut	18,330	- -	18,330
Black locust	29,335	- -	29,335
Chestnut oak / black oak / scarlet oak		- -	
Mixed upland hardwoods	566,515	3,048	563,467
All forest types	4,148,851	16,508	4,132,343
Oak / gum / cypress group			
Swamp chestnut oak / cherrybark oak	21,134	- -	21,134
Sweetgum / Nuttall oak / willow oak	2,822	- -	2,822
Baldcypress / water tupelo	17,142	10,516	6,626
Sweetbay / swamp tupelo / red maple	25,716	- -	25,716
All forest types	66,814	10,516	56,298

(Table 6 continued on next page)

(Table 6 continued)

Forest type group/ forest type	All species	Softwood species	Hardwood species
Hardwood type groups			
Elm / ash / cottonwood group			
Black ash / American elm / red maple	26,388	- -	26,388
River birch / sycamore	145,866	- -	145,866
Cottonwood	198,803	- -	198,803
Willow	21,893	- -	21,893
Sycamore / pecan / American elm	185,351	- -	185,351
Sugarberry / hackberry / elm / green ash	417,168	- -	417,168
Silver maple / American elm	479,975	- -	479,975
Red maple / lowland	24,847	- -	24,847
Cottonwood / willow	63,507	- -	63,507
All forest types	1,563,796	- -	1,563,796
Maple / beech / birch group			
Sugar maple / beech / yellow birch	189,320	400	188,920
Black cherry	5,839	- -	5,839
Cherry / ash / yellow-poplar	46,087	237	45,850
Hard maple / basswood	132,703	- -	132,703
Elm / ash / locust	31,819	- -	31,819
All forest types	405,768	637	405,131
Aspen / birch group			
Aspen	3,500	- -	3,500
All forest types	3,500	- -	3,500
All hardwood groups	6,230,267	51,143	6,179,124
Nonstocked	- -	- -	- -
All forest groups	6,459,033	255,861	6,203,172

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates that 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, 2001-2003

(In thousand cubic feet)

Species group/ species	All classes	Diameter class (inches at breast height)									
		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+
Softwoods											
Loblolly and shortleaf pines											
Shortleaf pine	90,724	4,729	14,408	22,245	22,765	18,331	2,900	1,751	--	3,595	--
All species	90,724	4,729	14,408	22,245	22,765	18,331	2,900	1,751	--	3,595	--
Other yellow pines											
Scotch pine	5,684	875	3,294	1,515	--	--	--	--	--	--	--
All species	5,684	875	3,294	1,515	--	--	--	--	--	--	--
Eastern white and red pines											
Red pine	24,361	2,639	9,627	7,014	2,003	1,219	1,859	--	--	--	--
Eastern white pine	89,993	1,401	4,620	8,973	18,487	15,693	18,444	7,334	7,179	7,862	--
All species	114,354	4,040	14,247	15,987	20,490	16,913	20,303	7,334	7,179	7,862	--
Jack pine											
Jack pine	1,770	--	1,770	--	--	--	--	--	--	--	--
All species	1,770	--	1,770	--	--	--	--	--	--	--	--
Spruce and balsam fir											
White spruce	1,536	1,030	506	--	--	--	--	--	--	--	--
All species	1,536	1,030	506	--	--	--	--	--	--	--	--
Cypress											
Baldcypress	10,516	114	328	352	720	--	--	--	3,718	5,284	--
All species	10,516	114	328	352	720	--	--	--	3,718	5,284	--
Other eastern softwoods											
Eastern redcedar	31,068	4,301	7,070	9,012	4,583	4,495	1,606	--	--	--	--
Blue spruce	209	--	209	--	--	--	--	--	--	--	--
All species	31,276	4,301	7,279	9,012	4,583	4,495	1,606	--	--	--	--
Total softwoods	255,861	15,089	41,832	49,111	48,558	39,739	24,809	9,085	10,898	16,740	--
Hardwoods											
Select white oaks											
White oak	859,271	10,858	22,752	36,490	61,476	96,407	95,497	101,914	132,169	217,709	83,998
Swamp white oak	44,588	416	607	637	--	1,325	--	7,633	8,061	25,908	--
Bur oak	178,884	1,282	507	3,327	2,769	10,048	9,018	13,073	10,126	73,786	54,949
Chinkapin oak	23,761	256	1,931	620	2,214	2,416	4,136	5,029	--	7,159	--
All species	1,106,504	12,811	25,798	41,074	66,459	110,196	108,651	127,648	150,357	324,562	138,947
Select red oaks											
Cherrybark oak	16,220	1,015	1,061	1,400	--	3,961	--	8,782	--	--	--
Northern red oak	398,301	7,480	7,693	14,372	30,256	30,218	46,569	51,724	51,701	112,020	46,268
Shumard oak	413	--	--	413	--	--	--	--	--	--	--
All species	414,934	8,496	8,754	16,185	30,256	34,179	46,569	60,506	51,701	112,020	46,268
Other white oaks											
Overcup oak	7,780	--	--	--	--	1,521	1,835	--	--	4,425	--
Post oak	132,742	1,895	6,392	13,702	16,587	23,098	15,606	12,937	15,022	27,503	--
All species	140,522	1,895	6,392	13,702	16,587	24,619	17,440	12,937	15,022	31,927	--
Other red oaks											
Scarlet oak	3,904	--	--	--	--	--	1,532	2,372	--	--	--
Northern pin oak	19,180	--	--	1,996	1,087	--	1,697	2,608	--	--	11,791
Southern red oak	24,581	218	--	--	913	2,804	6,162	3,220	--	11,263	--
Shingle oak	125,308	6,149	11,758	8,578	11,236	28,540	14,067	16,745	6,301	21,935	--
Blackjack oak	7,152	160	288	2,430	736	--	3,537	--	--	--	--
Pin oak	84,302	1,367	3,133	5,653	8,770	13,510	5,944	18,785	9,189	17,951	--
Black oak	503,306	9,403	15,702	29,812	47,806	73,335	79,034	63,443	38,008	102,751	44,012
All species	767,731	17,297	30,880	48,470	70,547	118,190	111,973	107,172	53,498	153,900	55,803

(Table 7 continued on next page)

(Table 7 continued)

Species group/ species	All classes	Diameter class (inches at breast height)									
		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											
Bitternut hickory	102,908	7,279	9,915	19,326	14,731	21,433	13,281	8,309	3,854	4,781	--
Pignut hickory	212,787	14,822	21,723	26,626	45,012	30,098	34,449	17,502	4,186	18,369	--
Pecan	35,534	833	1,271	2,571	975	3,516	--	--	9,029	7,008	10,331
Shellbark hickory	17,061	477	680	1,448	2,837	1,619	3,958	2,715	3,326	--	--
Shagbark hickory	267,651	17,600	25,125	33,347	38,567	32,672	30,705	22,965	14,722	31,946	20,002
Black hickory	284	284	--	--	--	--	--	--	--	--	--
Mockernut hickory	74,679	5,115	13,185	10,834	6,177	7,455	8,547	2,830	9,673	10,863	--
All species	710,905	46,412	71,899	94,152	108,299	96,792	90,939	54,321	44,790	72,967	30,333
Hard maple											
Black maple	3,273	1,419	340	1,514	--	--	--	--	--	--	--
Sugar maple	199,536	18,995	23,476	28,540	22,154	30,830	27,368	13,019	4,157	30,996	--
All species	202,809	20,414	23,816	30,054	22,154	30,830	27,368	13,019	4,157	30,996	--
Soft maple											
Red maple	92,092	4,485	9,206	11,453	10,573	9,845	7,656	4,662	3,732	30,481	--
Silver maple	432,820	6,849	21,450	22,543	37,833	45,162	46,282	64,361	58,830	81,467	48,042
All species	524,912	11,334	30,655	33,996	48,407	55,006	53,938	69,024	62,562	111,948	48,042
Beech											
American beech	5,396	--	--	--	637	1,600	--	3,158	--	--	--
All species	5,396	--	--	--	637	1,600	--	3,158	--	--	--
Sweetgum											
Sweetgum	89,415	7,744	10,513	14,866	10,585	14,602	12,700	5,471	6,355	6,580	--
All species	89,415	7,744	10,513	14,866	10,585	14,602	12,700	5,471	6,355	6,580	--
Tupelo and blackgum											
Water tupelo	2,745	1,102	1,216	427	--	--	--	--	--	--	--
Blackgum	15,753	1,111	997	2,836	1,818	6,608	--	--	2,383	--	--
All species	18,498	2,213	2,213	3,263	1,818	6,608	--	--	2,383	--	--
Ash											
White ash	135,348	8,215	16,878	14,523	13,777	19,105	6,407	17,841	19,845	9,654	9,102
Black ash	3,606	150	1,218	539	--	1,699	--	--	--	--	--
Green ash	189,363	17,282	22,326	27,296	35,032	26,672	22,881	14,396	11,765	11,712	--
Pumpkin ash	1,438	526	912	--	--	--	--	--	--	--	--
All species	329,755	26,173	41,334	42,359	48,809	47,476	29,288	32,237	31,610	21,366	9,102
Cottonwood and aspen											
Eastern cottonwood	277,732	954	3,372	8,021	7,841	12,644	17,418	12,551	15,645	33,988	165,298
Bigtooth aspen	5,038	230	534	706	--	--	--	--	3,568	--	--
Swamp cottonwood	636	--	--	636	--	--	--	--	--	--	--
Quaking aspen	1,778	143	319	--	1,315	--	--	--	--	--	--
All species	285,183	1,327	4,225	9,363	9,157	12,644	17,418	12,551	19,212	33,988	165,298
Basswood											
American basswood	89,121	4,729	5,399	6,952	9,411	12,384	12,673	11,530	4,349	21,695	--
All species	89,121	4,729	5,399	6,952	9,411	12,384	12,673	11,530	4,349	21,695	--
Yellow-poplar											
Yellow-poplar	74,549	3,076	2,925	3,952	4,558	11,162	--	3,657	7,242	37,977	--
All species	74,549	3,076	2,925	3,952	4,558	11,162	--	3,657	7,242	37,977	--
Black walnut											
Black walnut	207,946	9,821	18,157	21,373	32,962	35,695	43,542	18,944	13,136	14,317	--
All species	207,946	9,821	18,157	21,373	32,962	35,695	43,542	18,944	13,136	14,317	--

(Table 7 continued on next page)

(Table 7 continued)

Species group/ species	All classes	Diameter class (inches at breast height)									
		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											
Other eastern soft hardwoods											
Boxelder	58,325	8,072	10,332	5,820	14,506	11,141	--	--	3,542	4,911	--
Ohio buckeye	1,574	344	696	534	--	--	--	--	--	--	--
River birch	41,162	2,526	3,950	5,378	3,399	8,302	3,587	2,259	--	11,761	--
Northern catalpa		--	--	--	--	--	--	--	--	--	--
Sugarberry	1,861	826	--	--	1,035	--	--	--	--	--	--
Hackberry	169,393	13,988	20,304	29,727	16,075	18,579	17,241	9,156	9,944	22,812	11,568
Butternut	1,067	--	232	--	836	--	--	--	--	--	--
Cucumbertree	72	72	--	--	--	--	--	--	--	--	--
American sycamore	235,082	4,261	3,310	7,629	11,749	24,638	16,874	22,160	3,836	58,594	82,032
Black cherry	161,453	19,698	22,939	26,378	30,902	23,240	20,095	7,709	6,678	3,814	--
Black willow	59,244	442	1,671	4,312	7,447	11,287	4,795	3,364	--	25,927	--
Sassafras	51,862	10,845	11,849	6,949	6,467	2,848	3,965	2,340	--	6,599	--
Winged elm	3,318	1,274	1,431	613	--	--	--	--	--	--	--
American elm	177,448	38,247	34,095	32,391	43,069	9,900	11,406	8,340	--	--	--
Siberian elm	104	104	--	--	--	--	--	--	--	--	--
Slippery elm	77,345	8,423	11,497	8,476	16,185	5,416	8,492	7,679	6,588	4,590	--
All species	1,039,311	109,123	122,305	128,205	151,670	115,351	86,453	63,007	30,588	139,009	93,600
Other eastern hard hardwoods											
Flowering dogwood	1,523	1,523	--	--	--	--	--	--	--	--	--
Common persimmon	16,967	6,472	5,136	1,470	2,740	1,148	--	--	--	--	--
Honeylocust	122,086	2,765	5,586	8,331	14,298	22,024	11,837	14,011	15,704	27,530	--
Kentucky coffeetree	2,519	--	--	--	1,128	1,391	--	--	--	--	--
White mulberry	1,242	1,242	--	--	--	--	--	--	--	--	--
Red mulberry	7,875	1,421	2,170	380	2,629	1,273	--	--	--	--	--
Black locust	43,469	3,850	11,077	12,641	8,701	2,975	2,226	1,999	--	--	--
All species	195,681	17,273	23,970	22,822	29,497	28,813	14,063	16,010	15,704	27,530	--
Total hardwoods	6,203,172	300,137	429,235	530,789	661,812	756,147	673,018	611,192	512,666	1,140,783	587,394
All species groups	6,459,033	315,226	471,066	579,901	710,370	795,885	697,827	620,277	523,564	1,157,524	587,394

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates that 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, 2001-2003

(In thousand board feet) [1]

Species group/ species	All classes	Diameter class (inches at breast height)							
		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	364,917	110,218	115,154	95,185	15,182	9,660	--	19,517	--
All species	364,917	110,218	115,154	95,185	15,182	9,660	--	19,517	--
Other yellow pines									
Scotch pine	7,258	7,258	--	--	--	--	--	--	--
All species	7,258	7,258	--	--	--	--	--	--	--
Eastern white and red pines									
Red pine	58,546	33,368	9,796	6,023	9,359	--	--	--	--
Eastern white pine	426,558	42,973	90,969	79,745	95,366	38,102	37,928	41,476	--
All species	485,104	76,341	100,765	85,767	104,725	38,102	37,928	41,476	--
Cypress									
Baldcypress	48,702	1,391	3,031	--	--	--	17,997	26,283	--
All species	48,702	1,391	3,031	--	--	--	17,997	26,283	--
Other eastern softwoods									
Eastern redcedar	103,319	49,750	23,960	22,104	7,506	--	--	--	--
All species	103,319	49,750	23,960	22,104	7,506	--	--	--	--
Total softwoods	1,009,299	244,958	242,910	203,055	127,412	47,762	55,925	87,276	--
Hardwoods									
Select white oaks									
White oak	3,567,531	--	301,333	464,219	452,132	473,103	601,726	943,734	331,283
Swamp white oak	189,852	--	--	6,437	--	35,388	37,133	110,894	--
Bur oak	743,912	--	13,698	48,079	42,636	61,116	45,719	317,593	215,071
Chinkapin oak	95,870	--	10,999	11,690	19,674	23,362	--	30,145	--
All species	4,597,165	--	326,030	530,426	514,442	592,970	684,578	1,402,366	546,354
Select red oaks									
Cherrybark oak	63,335	--	--	19,732	--	43,603	--	--	--
Northern red oak	1,776,430	--	149,874	150,981	233,024	257,510	255,405	538,737	190,900
All species	1,839,765	--	149,874	170,712	233,024	301,113	255,405	538,737	190,900
Other white oaks									
Overcup oak	38,971	--	--	7,706	9,415	--	--	21,849	--
Post oak	542,853	--	82,739	115,871	77,110	62,991	73,820	130,322	--
All species	581,824	--	82,739	123,577	86,525	62,991	73,820	152,171	--
Other red oaks									
Scarlet oak	19,264	--	--	--	7,562	11,702	--	--	--
Northern pin oak	75,357	--	5,436	--	8,486	12,895	--	--	48,540
Southern red oak	117,131	--	4,587	13,818	30,332	15,662	--	52,732	--
Shingle oak	484,825	--	55,505	141,622	69,726	82,182	30,849	104,940	--
Blackjack oak	21,289	--	3,661	--	17,628	--	--	--	--
Pin oak	359,753	--	43,309	66,689	29,265	92,172	44,769	83,548	--
Black oak	2,158,050	--	236,342	364,348	391,400	311,859	185,051	478,640	190,412
All species	3,235,670	--	348,841	586,478	554,399	526,471	260,669	719,860	238,952
Hickory									
Bitternut hickory	330,542	--	73,151	106,944	66,033	41,199	19,324	23,890	--
Pignut hickory	743,375	--	223,605	149,530	171,711	87,179	20,857	90,493	--
Pecan	149,686	--	4,700	17,024	--	--	43,754	34,014	50,194
Shellbark hickory	69,977	--	13,716	7,830	19,175	13,200	16,056	--	--
Shagbark hickory	928,403	--	186,023	158,189	149,008	111,269	71,417	155,495	97,003
Mockernut hickory	220,973	--	29,777	36,094	41,453	13,745	47,139	52,764	--
All species	2,442,955	--	530,971	475,611	447,380	266,593	218,547	356,656	147,198
Hard maple									
Sugar maple	606,535	--	105,817	147,571	130,922	61,528	19,731	140,965	--
All species	606,535	--	105,817	147,571	130,922	61,528	19,731	140,965	--

(Table 8 continued on next page)

(Table 8 continued)

Species group/ species	All classes	Diameter class (inches at breast height) 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									
Soft maple									
Red maple	289,000	--	45,819	43,060	33,599	20,472	16,320	129,729	--
Silver maple	1,643,410	--	164,186	197,684	203,301	282,605	257,173	347,356	191,106
All species	1,932,410	--	210,005	240,744	236,900	303,078	273,493	477,085	191,106
Beech									
American beech	26,905	--	3,226	8,056	--	15,623	--	--	--
All species	26,905	--	3,226	8,056	--	15,623	--	--	--
Sweetgum									
Sweetgum	253,622	--	48,380	66,547	57,772	24,472	28,509	27,942	--
All species	253,622	--	48,380	66,547	57,772	24,472	28,509	27,942	--
Tupelo and blackgum									
Blackgum	49,626	--	8,435	30,433	--	--	10,758	--	--
All species	49,626	--	8,435	30,433	--	--	10,758	--	--
Ash									
White ash	446,013	--	62,239	88,454	30,177	84,807	94,706	45,621	40,009
Black ash	7,935	--	--	7,935	--	--	--	--	--
Green ash	569,176	--	158,425	123,699	107,747	68,461	56,167	54,675	--
All species	1,023,123	--	220,665	220,088	137,924	153,268	150,873	100,297	40,009
Cottonwood and aspen									
Eastern cottonwood	1,100,494	--	36,065	61,412	86,202	62,780	79,891	171,970	602,174
Bigtooth aspen	17,564	--	--	--	--	--	17,564	--	--
Quaking aspen	6,355	--	6,355	--	--	--	--	--	--
All species	1,124,413	--	42,420	61,412	86,202	62,780	97,455	171,970	602,174
Basswood									
American basswood	356,572	--	47,599	62,356	63,399	57,209	21,246	104,762	--
All species	356,572	--	47,599	62,356	63,399	57,209	21,246	104,762	--
Yellow-poplar									
Yellow-poplar	330,660	--	22,407	56,681	--	18,811	37,039	195,721	--
All species	330,660	--	22,407	56,681	--	18,811	37,039	195,721	--
Black walnut									
Black walnut	755,954	--	159,021	171,818	209,204	89,925	61,332	64,654	--
All species	755,954	--	159,021	171,818	209,204	89,925	61,332	64,654	--
Other eastern soft hardwoods									
Boxelder	154,989	--	66,335	51,121	--	--	15,935	21,598	--
River birch	130,585	--	15,507	37,880	16,251	10,180	--	50,766	--
Sugarberry	4,919	--	4,919	--	--	--	--	--	--
Hackberry	458,039	--	75,538	85,649	77,578	40,838	42,780	93,786	41,869
Butternut	3,832	--	3,832	--	--	--	--	--	--
American sycamore	953,696	--	53,992	113,171	80,032	102,377	17,422	275,553	311,149
Black cherry	422,331	--	141,988	106,890	91,642	35,127	29,925	16,758	--
Black willow	227,811	--	33,487	50,727	22,277	14,872	--	106,448	--
Sassafras	99,732	--	29,901	13,078	18,246	10,729	--	27,777	--
American elm	336,625	--	202,066	45,755	52,043	36,761	--	--	--
Slippery elm	223,020	--	76,616	24,988	38,234	35,307	28,055	19,820	--
All species	3,015,577	--	704,181	529,259	396,305	286,192	134,117	612,506	353,018
Other eastern hard hardwoods									
Common persimmon	17,825	--	12,531	5,293	--	--	--	--	--
Honeylocust	471,029	--	65,684	100,948	54,400	63,408	69,862	116,728	--
Kentucky coffeetree	11,472	--	5,177	6,296	--	--	--	--	--
Red mulberry	17,951	--	12,135	5,816	--	--	--	--	--
Black locust	72,989	--	40,051	13,597	10,167	9,173	--	--	--
All species	591,267	--	135,578	131,950	64,567	72,581	69,862	116,728	--
Total hardwoods	22,764,044	--	3,146,188	3,613,720	3,218,966	2,895,605	2,397,436	5,182,419	2,309,710
All species groups	23,773,343	244,958	3,389,098	3,816,775	3,346,378	2,943,367	2,453,361	5,269,695	2,309,710

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 board feet. Columns and rows may not add to their totals due to rounding.

[1] International 1/4-inch rule.

Table 9. -- All live aboveground tree biomass on timberland by owner category, softwood/hardwood species category, and tree biomass component, Illinois, 2001-2003

(In dry tons)

Owner category and softwood/hardwood category	All components	Tree biomass component						
		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
Public								
Softwoods	2,563,944	27,621	2,536,323	2,136,488	399,834	--	--	--
Hardwoods	27,079,456	1,594,285	24,433,577	18,086,217	6,347,360	1,051,593	739,885	311,708
Total	29,643,399	1,621,906	26,969,900	20,222,706	6,747,194	1,051,593	739,885	311,708
Private								
Softwoods	2,529,182	62,918	2,147,854	1,688,985	458,870	318,410	237,180	81,230
Hardwoods	167,489,799	9,184,200	136,428,986	100,642,856	35,786,130	21,876,614	16,185,752	5,690,862
Total	170,018,981	9,247,118	138,576,840	102,331,840	36,244,999	22,195,024	16,422,932	5,772,092
All ownerships								
Softwoods	5,093,126	90,539	4,684,177	3,825,473	858,704	318,410	237,180	81,230
Hardwoods	194,569,255	10,778,485	160,862,563	118,729,073	42,133,490	22,928,207	16,925,637	6,002,570
Total	199,662,381	10,869,024	165,546,740	122,554,546	42,992,194	23,246,617	17,162,817	6,083,800

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 2001-2003

(In thousand cubic feet per year)

Species group	Owner category			
	All owners	Public	Private	Unidentified owner
Softwoods				
Loblolly and shortleaf pines	2,230	2,129	100	- -
Other yellow pines	-378	33	-410	- -
Eastern white and red pines	2,899	1,439	1,459	- -
Jack pine	70	- -	70	- -
Spruce and balsam fir	116	- -	116	- -
Other eastern softwoods	166	210	-45	- -
Total softwoods	5,102	3,812	1,290	- -
Hardwoods				
Select white oaks	44,249	14,075	30,174	- -
Select red oaks	22,607	5,668	16,940	- -
Other white oaks	3,113	514	2,599	- -
Other red oaks	19,706	3,119	16,586	- -
Hickory	23,793	6,517	17,276	- -
Hard maple	10,110	1,635	8,475	- -
Soft maple	33,643	1,994	31,649	- -
Beech	644	644	- -	- -
Sweetgum	6,044	1,647	4,396	- -
Tupelo and blackgum	785	203	582	- -
Ash	21,211	2,889	18,322	- -
Cottonwood and aspen	37,794	- -	37,794	- -
Basswood	7,349	- -	7,349	- -
Yellow-poplar	7,972	1,882	6,091	- -
Black walnut	11,433	1,538	9,896	- -
Other eastern soft hardwoods	68,954	18,155	50,799	- -
Other eastern hard hardwoods	12,194	2,178	10,016	- -
Total hardwoods	331,603	62,657	268,945	- -
All species groups	336,704	66,469	270,236	- -

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates that 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 2001-2003

(In thousand cubic feet per year)

Species group	Owner category			
	All owners	Public	Private	Unidentified owner
Softwoods				
Other eastern softwoods	53	--	53	--
Total softwoods	53	--	53	--
Hardwoods				
Select white oaks	15,060	2,997	12,063	--
Select red oaks	3,337	--	3,337	--
Other red oaks	7,761	2,187	5,574	--
Hickory	5,630	2,808	2,822	--
Hard maple	143	143	--	--
Soft maple	1,831	--	1,831	--
Sweetgum	237	--	237	--
Ash	2,946	--	2,946	--
Cottonwood and aspen	16,294	--	16,294	--
Basswood	1,501	--	1,501	--
Yellow-poplar	2,006	--	2,006	--
Black walnut	1,562	--	1,562	--
Other eastern soft hardwoods	12,051	--	12,051	--
Other eastern hard hardwoods	233	132	101	--
Total hardwoods	70,591	8,267	62,324	--
All species groups	70,644	8,267	62,377	--

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates that 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 2001-2003

(In thousand cubic feet per year)

Species group	Owner category			
	All owners	Public	Private	Unidentified owner
Softwoods				
Loblolly and shortleaf pines	434	434	--	--
Other yellow pines	870	--	870	--
Jack pine	131	--	131	--
Total softwoods	1,435	434	1,001	--
Hardwoods				
Select white oaks	3,555	1,337	2,218	--
Select red oaks	3,325	594	2,731	--
Other white oaks	1,300	--	1,300	--
Other red oaks	15,944	3,072	12,872	--
Hickory	7,579	490	7,089	--
Hard maple	3,874	370	3,503	--
Soft maple	9,863	3,059	6,805	--
Sweetgum	699	116	584	--
Tupelo and blackgum	53	53	--	--
Ash	5,727	1,369	4,358	--
Basswood	31	--	31	--
Yellow-poplar	52	52	--	--
Black walnut	857	40	816	--
Other eastern soft hardwoods	35,206	545	34,661	--
Other eastern hard hardwoods	4,771	372	4,398	--
Total hardwoods	92,835	11,469	81,366	--
All species groups	94,270	11,903	82,367	--

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

(Table 4 continued)

Species group/ species	Owner category			
	All owners	Public	Private	Unidentified owner
Hardwoods				
Select red oaks				
Cherrybark oak	17,351	1,132	16,220	- -
Northern red oak	451,812	94,836	356,976	- -
Shumard oak	413	- -	413	- -
All species	469,577	95,967	373,610	- -
Other white oaks				
Overcup oak	11,926	- -	11,926	- -
Post oak	142,510	36,233	106,277	- -
All species	154,436	36,233	118,204	- -
Other red oaks				
Scarlet oak	3,904	- -	3,904	- -
Northern pin oak	19,860	2,784	17,076	- -
Southern red oak	24,581	2,456	22,125	- -
Shingle oak	163,188	16,031	147,156	- -
Blackjack oak	8,976	721	8,255	- -
Pin oak	90,229	6,600	83,629	- -
Black oak	569,939	116,228	453,711	- -
All species	880,677	144,820	735,856	- -
Hickory				
Bitternut hickory	109,599	8,610	100,989	- -
Pignut hickory	222,122	73,317	148,805	- -
Pecan	36,850	- -	36,850	- -
Shellbark hickory	17,061	- -	17,061	- -
Shagbark hickory	288,388	29,754	258,634	- -
Black hickory	284	- -	284	- -
Mockernut hickory	77,279	11,061	66,219	- -
All species	751,583	122,741	628,842	- -
Yellow birch				
Yellow birch	1,613	- -	1,613	- -
All species	1,613	- -	1,613	- -

(Table 4 continued on next page)

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

2005. **Illinois' forest resources in 2003.** Resour. Bull. NC-241. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 37 p.

Reports the results of the first three yearly panels of the fifth inventory of the forest resources of Illinois. Includes information on forest area; volume; biomass; growth, removals, and mortality; and forest health.

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

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