



**United States
Department of
Agriculture**

Forest
Service

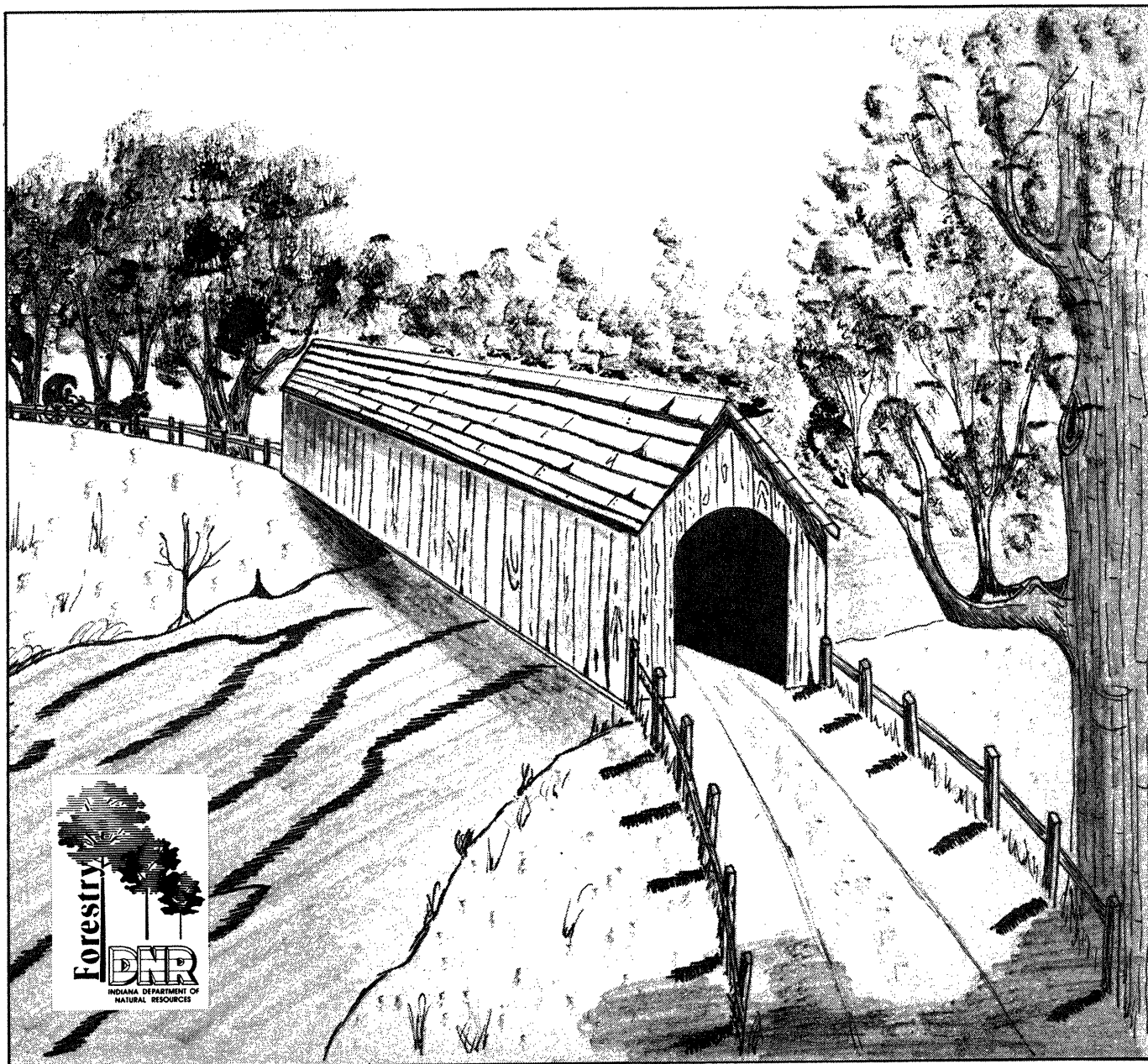
North Central
Forest Experiment
Station

Resource
Bulletin **NC-108**



Indiana Forest Statistics, 1986

W. Brad Smith and Mark F. Golitz



*Forest Inventory and Analysis local artist series No. 1 "Lin Montgomery,
Brownstown, Indiana"*

North Central Forest Experiment Station
Forest Service—U.S. Department of Agriculture
1992 Folwell Avenue
St. Paul, Minnesota 55108
Manuscript approved for publication March 25, 1988
1988

This report includes the most commonly used Forest Inventory and Analysis statistics. However, additional forest resource data can be provided to interested users. Persons requesting additional information that can be provided from the raw inventory data are expected to pay the retrieval costs. These costs range from less than \$100 for a relatively simple request to \$2,000 for a complex retrieval involving the services of a Forest Inventory and Analysis computer programmer. Requests will be filled so as to minimize the impact on the Forest Inventory and Analysis Work Unit.

Requests for unpublished information may be directed to:

Project Leader
Forest Inventory and Analysis Project
North Central Forest Experiment Station
1992 Folwell Avenue
St. Paul, Minnesota 55108
Phone: (612) 649-5140

Area served: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin.

Requests for unpublished information from the Indiana inventory may also be directed to:

State Forester
Indiana Department of Natural Resources
Division of Forestry
613 State Office Building
Indianapolis, Indiana 46204

FOREWORD

Forest Inventory and Analysis (FIA) is a continuing endeavor as mandated by the Renewable Forest and Rangeland Resources Planning Act of 1974. Prior inventories were mandated by the McSweeney-McNary Forest Research Act of 1928. The objective of FIA is to periodically inventory the Nation's forest land to determine its extent, condition, and volume of timber, growth, and depletions. Up-to-date resource information is essential to frame intelligent forest policies and programs. USDA Forest Service regional experiment stations are responsible for conducting these inventories and publishing summary reports for individual States. The North Central Forest Experiment Station is responsible for forest resource evaluation in Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin.

Fieldwork for the Indiana Statewide forest inventory was begun in July 1985 and completed in December 1986. Reports on the two previous inventories of Indiana's timber resource are dated 1950 and 1967.

More accurate survey information was obtained during the 1986 survey than otherwise would have been feasible because of intensified field sampling. Such sampling was made possible by additional funding provided by the Indiana State Legislature through the Division of Forestry, Indiana Department of Natural Resources. The Department also surveyed primary wood-using plants in the State. Data from this survey were used to help estimate the quantity of timber products harvested in the State. Indiana Department of Natural Resources personnel have also assisted in training field personnel, analyzing information obtained from the survey, and preparing this report.

Aerial photos used in the Indiana Forest Inventory were furnished by the Hoosier National Forest and the USDA Agricultural Stabilization and Conservation Service.

CONTENTS

	<i>Page</i>
Highlights	1
Appendix	5
Accuracy of Survey	5
Survey Procedures	5
Comparing Indiana's Third Inventory With the Second Inventory	8
Log Grade	9
Metric Equivalents of Units Used in This Report	13
Tree Species Groups in Indiana	14
Definition of Terms	15
Tables	23

INDIANA FOREST STATISTICS, 1986

W. Brad Smith,
and Mark F. Golitz

HIGHLIGHTS

Forest Area

- Forest land was 4.4 million acres (19.3 percent of the State's total land area) in 1986.
- Timberland (formerly called commercial forest land) increased 10 percent between 1967 and 1986, from 3,895,800 to 4,295,800 acres. The largest increase occurred in the Upland Flats Unit primarily due to reversion of wooded pasture and marginal farmland.
- Reserved timberland totaled 143,400 acres in 1986, 3.2 percent of the State's forest land. There were only 38,500 acres of reserved timberland in the State in 1967.
- Timberland represented 18.7 percent of the State's total land area (fig. 1).
- Perry County contained the largest area of timberland in 1986 (152,500 acres), as it did in 1967 (142,800 acres).
- Farmers and miscellaneous private individuals owned 3,335,400 acres—78 percent of the timberland. A new definition of farm ownership shifted much of what was previously in the farmer category to the miscellaneous private category (fig. 2).
- The predominant forest type, oak-hickory, accounted for 33 percent (1,436,700 acres) of the total timberland in 1986, down from 61 percent of the total in 1966.

The area of the oak-hickory type is declining for several reasons: Many mature oak-hickory stands where no cutting has taken place are succeeding into the maple-beech and cherry-ash-poplar types. In many oak-hickory stands where

cutting has taken place, soft maple and yellow-poplar are the predominant species to regenerate, producing a different forest type.

- The area of sawtimber stands increased 36 percent between inventories, while the area of poletimber stands decreased 22 percent (fig. 3).

Volume

- The volume of growing stock on timberland was 5.2 billion cubic feet in 1986, up 43 percent from 1967¹.
- Sawtimber volume on timberland totaled 19.2 billion board feet² in 1986, up 54 percent from 1967³.
- Hardwoods accounted for more than 96 percent of both the growing-stock volume (5.0 billion cubic feet) and the sawtimber volume (18.6 billion board feet) on the State's timberland.
- The oak species account for 36 percent (6.9 billion board feet) of the total sawtimber volume.
- Growing-stock volume of the oaks and hickories increased 12 percent between 1967 and 1986, while all other species increased 77 percent over the same period. The harvesting pressure on oak and hickory is apparent, as these species' total share of inventory declined from 53 to 41 percent of growing stock between 1967 and 1986. This decrease in oak as a percentage of the total volume is a major factor in the decline in the area of the oak-hickory forest type (fig. 4).
- Yellow-poplar growing-stock volume increased 130 percent, from 188 million cubic feet in 1967 to 433 million cubic feet in 1986. The growing-stock volume of yellow-poplar was 8 percent of the total in 1986, compared to 5 percent of the total in 1967.

¹Because of changes in volume equations, 1967 growing-stock volumes have been adjusted from those published after the 1967 survey to conform to 1986 volumes.

²International 1/4-inch rule.

³1967 sawtimber volume figures have been adjusted from those published after the 1967 survey to conform to 1986 data because of changes in Survey procedures and volume equations.

W. BRAD SMITH is a Mensurationist with the North Central Forest Experiment Station, St. Paul, Minnesota; and **MARK F. GOLITZ** is a Forest Resource Planner, Indiana Department of Natural Resources, Division of Forestry, 613 State Office Building, Indianapolis, Indiana 46204.

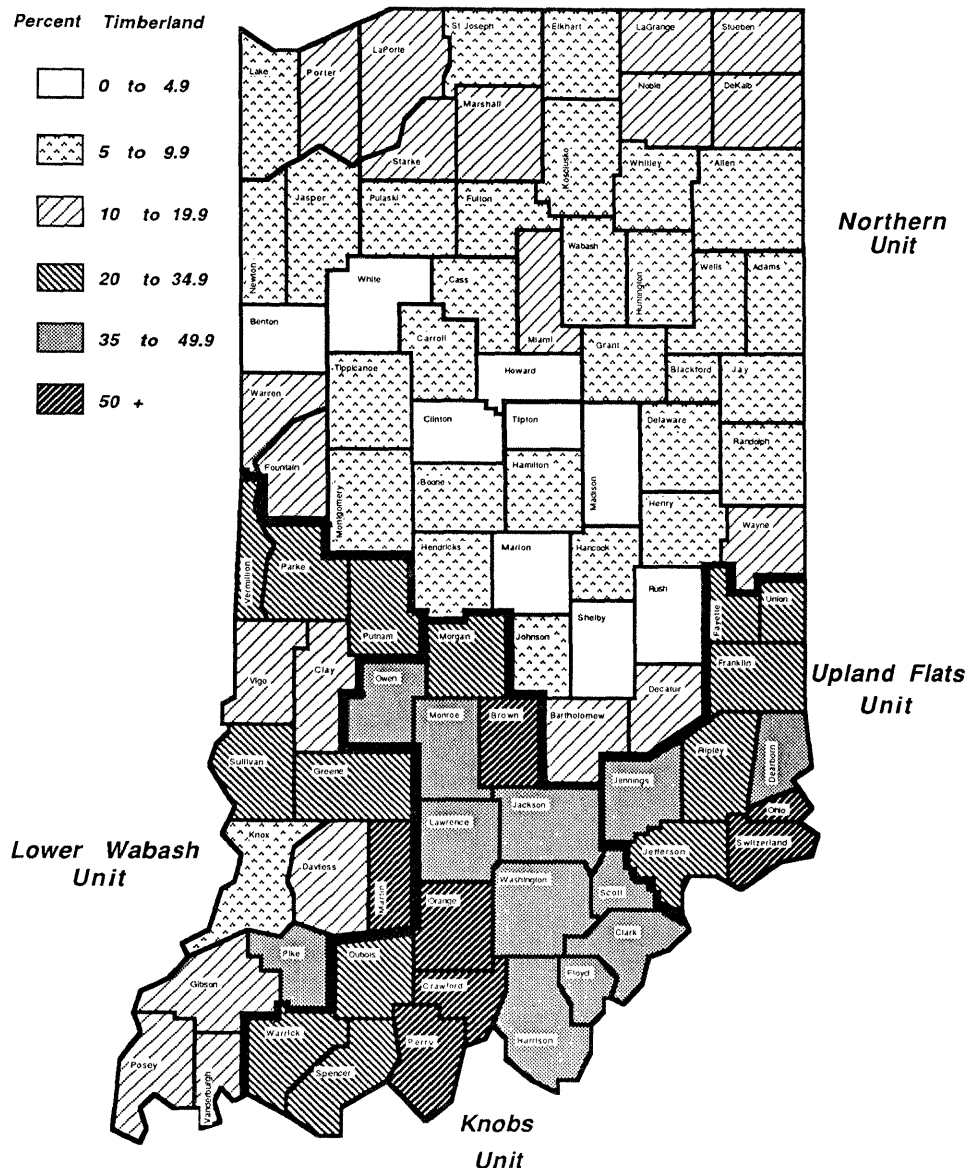


Figure 1.—Timberland as a percent of land area by county, Indiana, 1986.

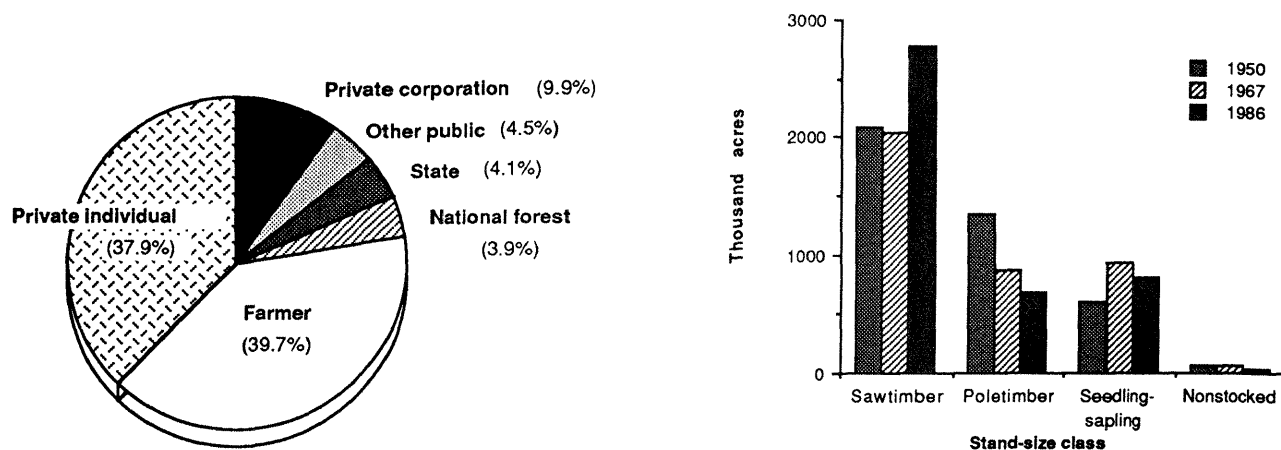


Figure 2.—Area of timberland by owner class, 1986.

Figure 3.—Area of timberland by stand-size class, 1950, 1967, and 1986.

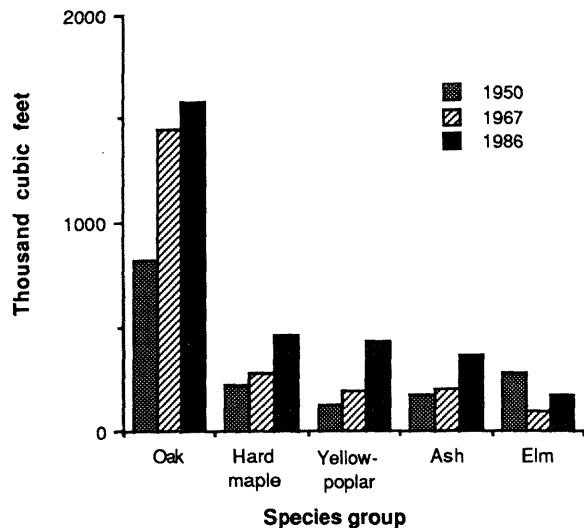


Figure 4.—Trend in growing-stock volume by selected species group.

- Growing-stock volume on timberland averaged 1,215 cubic feet per acre in 1986, compared to 938 cubic feet per acre in 1967, an increase of 30 percent.
- Sawtimber volume per acre increased 39 percent, from 3,212 board feet in 1967 to 4,475 board feet in 1986.
- The volume in live cull trees is 811 million cubic feet; salvable dead tree volume is 82 million cubic feet.
- Private parties (all non-public owners) own 85 percent (4.5 billion cubic feet) of the growing-stock volume.
- The oak-hickory forest type (which includes many non-oak species) contains 37 percent of the sawtimber volume (7.1 billion board feet).

Stand Conditions

- Net annual growth of growing-stock trees on timberland was 154 million cubic feet, 2.9 percent of inventory in 1985. In 1966, net annual growth of growing-stock trees was 104 million cubic feet, 2.8 percent of inventory.
- Net annual growth of growing-stock trees on timberland averaged 35.8 cubic feet per acre in 1985, up 35 percent from 1966 (26.6 cubic feet per acre) (fig. 5).
- Annual mortality of growing stock amounted to 37.5 million cubic feet, 0.7 percent of inventory in 1985.
- Net annual growth of sawtimber on timberland was 726 million board feet, 3.8 percent of inventory in 1985. In 1966, net annual growth of sawtimber was 270 million board feet, 2.2 percent of inventory.

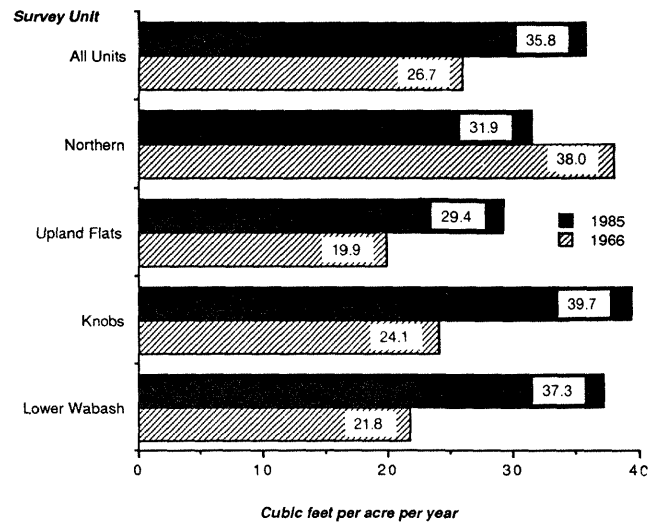


Figure 5.—Net growing-stock growth per acre, 1966 and 1985.

- Net annual growth of sawtimber trees on timberland averaged 169 board feet per acre in 1985, nearly three times the rate in 1966 (69 board feet per acre). This dramatic increase in sawtimber growth was primarily due to ingrowth, the volume of trees that had not yet reached the merchantable diameter limit (9 inches for softwoods, 11 inches for hardwoods) in 1967 but had by 1986. This phenomenon is typical of a rapidly maturing second-growth forest.
- Annual mortality of sawtimber amounted to 101 million board feet, 0.5 percent of inventory in 1985.

Timber Use

- Timber removals from growing stock totaled 93 million cubic feet in 1985 (1.8 percent of inventory and 65 percent of growth).
- Sixty percent of the growing-stock removals were for saw logs (fig. 6).

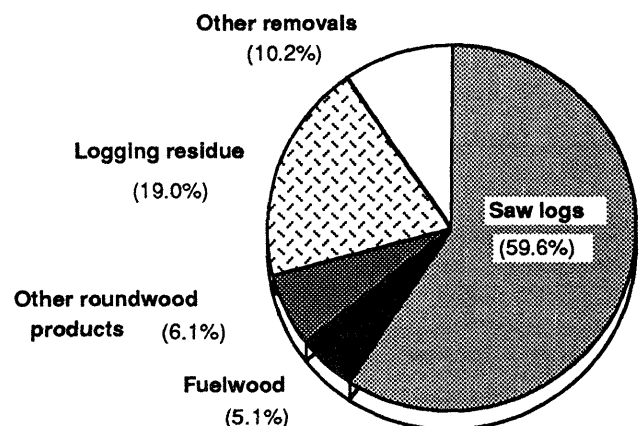


Figure 6.—Timber removals from growing stock, 1985.

- Sawtimber removals totaled 462 million board feet in 1985 (2.4 percent of inventory and 63 percent of growth).
- Oak and hickory growing-stock removals (49 million cubic feet) slightly exceed growth (48 million cubic feet); but removals in all other species (44 million cubic feet) were less than half of growth (94 million cubic feet) (fig. 7).

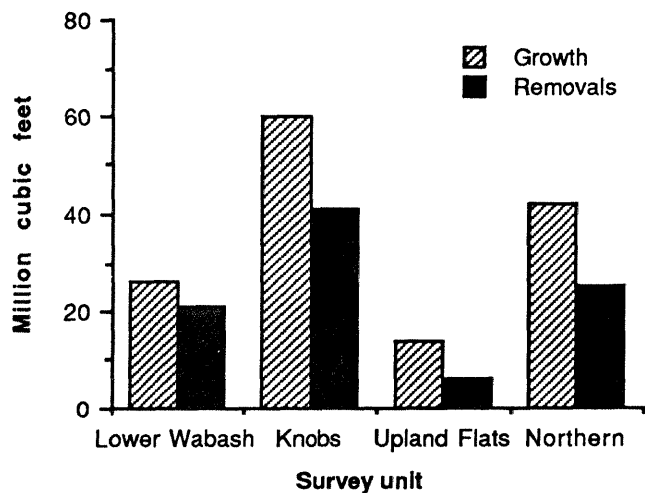


Figure 7.—Growth and removals on timberland, 1985.

- The oaks accounted for 46 percent (212 million board feet) of the sawtimber removals in 1985 (3.1 percent of oak inventory and 105 percent of oak growth).
- Fuelwood production topped 693 thousand cords in 1984. However, only 10 percent came from growing stock; the rest came from rough, rotten, and dead trees (22 percent), plant residues (27 percent), and other sources (41 percent), primarily tops and limbs of harvested trees and trees from nonforest land (fig. 8).

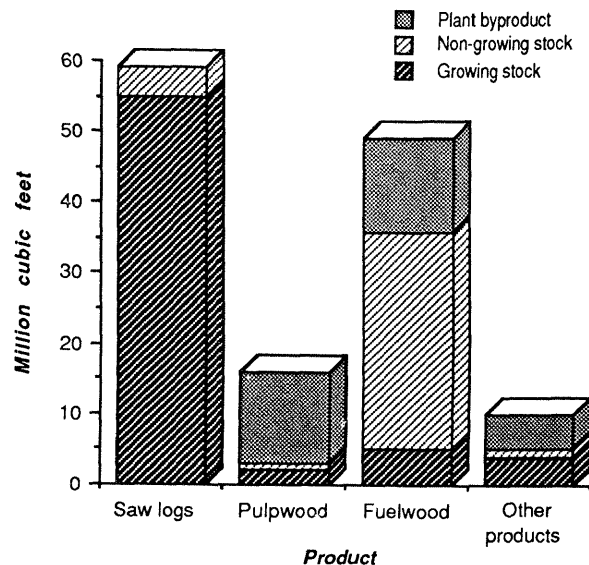


Figure 8.—Timber products output by source of material, 1984.

Biomass

- Live tree biomass (trees greater than 1 inch in d.b.h.) totaled 328 million green tons (an average of 76.3 green tons per acre) in 1986.
- Seventy-three percent (241 million green tons) of all live tree biomass was in growing-stock trees 5 inches d.b.h. and larger (fig. 9).

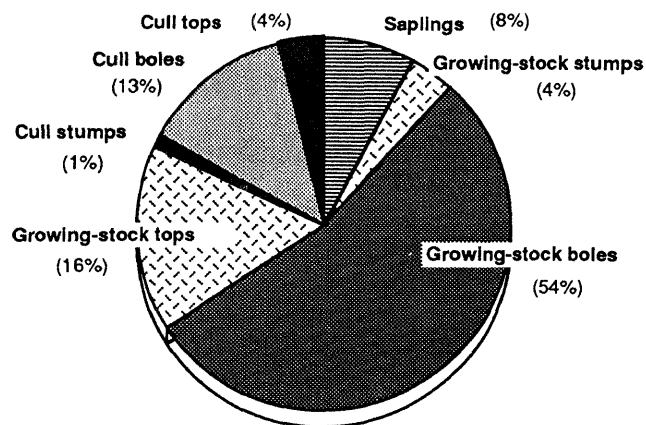


Figure 9.—Components of timberland biomass.

APPENDIX

ACCURACY OF SURVEY

Forest Inventory and Analysis information is based on a sampling procedure designed to provide reliable statistics at the State and Survey Unit levels. Consequently, the reported figures are estimates only. A measure of reliability of these figures is given by sampling errors. These sampling errors mean that the chances are two out of three that if a 100-percent inventory had been taken, using the same methods, the results would have been within the limits indicated.

For example, the estimated growing-stock volume in the State in 1986, 5,217.9 million cubic feet, has a sampling error of +1.57 percent (+81.9 million cubic feet). The growing-stock volume from a 100-percent inventory would be expected to fall between 5,136.0 and 5,299.8 million cubic feet (5,217.9 +81.9), there being a one in three chance that this is not the case.

The following tabulation shows the sampling errors for the 1986 Indiana Forest Inventory:

Item	State totals	Sampling error
Growing stock	(Million cubic feet)	(Percent)
Volume (1986)	5,217.9	1.57
Growth (1985)	142.1	3.42
Average annual removals (1966-1985)	72.6	5.40
Sawtimber	(Million board feet)	
Volume (1986)	19,224.2	1.86
Growth (1985)	729.1	5.47
Average annual removals (1966-1985)	314.0	5.68
Timberland	(Thousand acres)	
Area (1986)	4,295.8	1.00

As survey data are broken down into sections smaller than Survey Unit totals, the sampling error increases. For example, the sampling error for timberland area in a particular county is higher than that for total timberland area in the Unit. Table 89 shows the sampling errors for Unit and county totals. To use this table for data smaller than county totals use the following formula to compute error estimates:

$$E = \frac{(SE) \sqrt{(\text{Unit total area or volume})}}{\sqrt{(\text{Volume or area smaller than Unit total})}}$$

where: E = sampling error in percent

SE = Unit total error from table 90 for area or volume.

For example, to compute the error on the area of oak hickory type in Jackson County, proceed as follows:

Area of oak-hickory type in Jackson County from table 12 = 50,300 acres

Area of all timberland in the Knobs Unit from table 12 = 1,741,100 acres

Unit total error for area in the Knobs Unit from table 90 = 0.83 percent

Using the formula above:

$$\begin{aligned} \text{Error} &= \frac{(0.83) \sqrt{1,741,100}}{\sqrt{50,300}} \\ &= 4.88 \text{ percent} \end{aligned}$$

SURVEY PROCEDURES

Two-phase sampling using both new and remeasurement ground plots was used in this inventory.

The major steps in the Indiana Forest Inventory were as follows:

1. Aerial photography (Phase 1)

Aerial photographs of the entire area were obtained from the Hoosier National Forest and USDA Agricultural Stabilization and Conservation Service. Nine-inch square, black and white Panchromatic prints on a scale of 1:40,000 were used throughout the entire State. Approximate date of photography for each county is shown in table 1. For those counties with photos taken prior to 1980, National High Altitude Photography (NHAP) photos were used to verify change information. The NHAP photos were taken between 1981 and 1983.

The locations of the plots used in the 1967 inventory were transferred to these new photographs. Photographs were assembled into township mosaics, and a systematic grid of 121 one-acre points (each point representing approximately 190.4 acres) was overlaid on each township mosaic. Each of these points (both the new systematic grid points and the

Table 1.--Dates of aerial photography by county and Forest Survey Unit, Indiana

Unit and County	Date	Unit and County	Date
Lower Wabash Unit		Northern Unit	
Clay	10-80	Adams	4-83
Daviess	9-74	Allen	5-81
Gibson	10-74	Bartholomew	11-80
Greene	10-80	Benton	6-83
Knox	4-78	Blackford	9-80
Martin	9-74	Boone	5-72
Parke	6-71	Carroll	11-81
Pike	9-74	Cass	4-82
Posey	6-80	Clinton	5-72
Putnam	4-78	Decatur	10-81
Sullivan	9-74	DeKalb	6-72
Vanderburgh	6-80	Delaware	6-80
Vermillion	9-72	Elkhart	5-81
Vigo	9-74	Fountain	6-83
		Fulton	10-80
		Grant	6-80
		Hamilton	5-82
		Hancock	5-80
		Hendricks	4-78
Knobs Unit			
Brown	10-80	Henry	6-80
Clark	10-81	Howard	5-84
Crawford	11-79	Huntington	4-82
Dubois	11-79	Jasper	4-84
Floyd	6-80	Jay	9-80
Harrison	6-80	Johnson	9-72
Jackson	10-80	Kosciusko	7-73
Lawrence	9-79	LaGrange	10-74
Monroe	10-80	Lake	9-73
Morgan	10-80	LaPorte	11-81
Orange	9-79	Madison	6-80
Owen	10-80	Marion	8-71
Perry	11-79	Marshall	7-73
Scott	10-80	Miami	10-80
Spencer	9-74	Montgomery	7-71
Warrick	6-80	Newton	6-82
Washington	10-80	Noble	7-73
		Porter	6-82
		Pulaski	5-81
		Randolph	9-80
		Rush	10-81
Upland Flats Unit			
Dearborn	7-80	St. Joseph	10-80
Fayette	10-81	Selby	6-80
Franklin	10-71	Starke	5-81
Jefferson	10-80	Stueben	7-73
Jennings	10-81	Tippecanoe	6-71
Ohio	7-80	Tipton	6-72
Ripley	10-81	Wabash	6-72
Switzerland	7-80	Warren	6-83
Union	10-81	Wayne	10-80
		Wells	6-72
		White	4-82
		Whitley	6-72

old sample plots) was examined by aerial photogrammetrists and classified stereoscopically based on land use. If trees were present, forest type and stand size-density class were recorded. Then all the old sample locations and a sample of the new points were sent to the field for the field crew to verify the photo classification and to take further measurements. A total of 126,629 points (120,949 new and 5,680 old) was examined stereoscopically (table 2).

Table 2.--Aerial photo points classified by photo land class and Forest Survey Unit, Indiana, 1986

Photo land class	All Units	Forest Survey Unit			
		Lower Wabash	Knobs	Upland Flats	Northern
Timberland	24,462	4,794	9,665	2,840	7,163
Reserved timberland	830	61	223	176	370
Questionable	645	90	207	73	175
Nonforest with trees	3,842	871	639	454	1,878
Nonforest without trees	95,572	13,931	11,834	5,423	64,384
Water	1,278	285	265	77	651
All classes	126,629	20,032	22,933	9,043	74,621

2. Plot measurements (Phase 2)

Each plot location was visited on the ground by a Forest Service field crew. They classified the plot based on its current land use and recorded various other descriptive information. Table 3 summarizes the results of this step of the inventory.

Table 3.--Number of ground plots by ground land use class, and Forest Survey Unit, Indiana, 1986

Survey Unit and ground land use class	Old plots remeasured	New plots established	Total ground plots taken
All Units			
Timberland	1,059	939	1,998
Reserved timberland	27	115	142
Nonforest with trees	230	228	458
Nonforest without trees	4,308	4,416	8,724
Water	61	57	118
Total	5,685	5,755	11,440
Lower Wabash Unit			
Timberland	205	208	413
Reserved timberland	6	12	18
Nonforest with trees	55	43	98
Nonforest without trees	600	648	1,248
Water	14	12	26
Total	880	923	1,803
Knobs Unit			
Timberland	460	409	869
Reserved timberland	12	45	57
Nonforest with trees	65	62	127
Nonforest without trees	503	525	1,028
Water	16	16	32
Total	1,056	1,057	2,113
Upland Flats Unit			
Timberland	127	121	248
Reserved timberland	0	37	37
Nonforest with trees	27	36	63
Nonforest without trees	219	226	445
Water	7	2	9
Total	380	422	802
Northern Unit			
Timberland	267	201	468
Reserved timberland	9	21	30
Nonforest with trees	83	87	170
Nonforest without trees	2,986	3,017	6,003
Water	24	27	51
Total	3,369	3,353	6,722

On those plots classified as timberland, wooded pasture, or windbreak (at least 120 feet wide), a ground plot was established or remeasured. The ground plot consisted of a 10-point cluster covering approximately 1 acre. At each point, trees 5.0 inches or more in d.b.h. were sampled on a 37.5 Basal Area Factor (BAF) variable-radius plot, and trees less than 5.0 inches d.b.h. were sampled on a 1/300-acre fixed-radius plot.

3. Area estimates

Area estimates outside the Hoosier National Forest were made using two-phase estimation methods.

In this type of estimation, a preliminary estimate of area by land use is made from the aerial photographs (phase 1) and corrected by the plot measurements (phase 2). A complete description of this estimation method is presented by Loetsch and Haller, 1964⁴. Estimates of area for a particular county are based on the aerial photo points taken in that county, corrected using all the ground plots in the Survey Unit, regardless of the county in which they were taken. This was done because there were not enough ground plots in any one county to accurately correct the aerial photo interpretation in that county. Unit-wide correction rates should be accurate at

⁴Loetsch, F.; Haller, K. E. 1964. *Forest inventory. Volume 1: Statistics of forest inventory and information from aerial photographs.* BLV Verlagsgesellschaft Munch Basle Vienna. 436 p.

the county level because we have made every effort to ensure that the plot interpretation is consistent throughout each Survey Unit.

Area estimates within the Hoosier National Forest were obtained from compartment examination records maintained by the Forest Timber Management Staff. This is an intensive area inventory system in which, over a period of years, each stand in the Hoosier is mapped on aerial photographs and then classified by ground visits.

4. Volume estimates

Estimates of volume per acre are made from the trees measured on the 10-point plots. Estimates of volume per acre were multiplied by the area estimates to obtain estimates of total volume. Net cubic foot volumes are based on equations developed by Smith and Weist 1982⁵ for use in Indiana. Board foot International 1/4-inch, board foot Doyle (table 4), and cubic foot volume in saw log (table 5) estimates are developed based on factors derived from full tree

Table 4.--Factors to convert net cubic foot volume in growing-stock trees to board feet by diameter class and softwoods and hardwoods

D.B.H. (inches)	International 1/4-inch rule		Doyle rule	
	Softwoods	Hardwoods	Softwoods	Hardwoods
9.0-10.9	5.1587	--	1.8300	--
11.0-12.9	5.4688	4.9076	2.6526	2.1085
13.0-14.9	5.6519	5.1315	3.4080	2.6800
15.0-16.9	5.7234	5.2444	3.9749	3.1258
17.0-18.9	5.8094	5.2718	4.5314	3.5071
19.0-20.9	5.6641	5.1770	4.7697	3.7644
21.0-22.9	5.6942	5.1096	4.9565	4.0580
23.0-24.9	5.3753	4.8778	5.1949	4.2229
25.0-26.9	5.3753	4.8778	5.9153	4.3566
27.0-28.9	5.3753	4.8778	5.3148	4.4843
29.0+	5.3753	4.8778	5.8066	4.9115

Table 5.--Factors to determine saw log volume as a proportion of growing-stock bole volume by diameter class and softwoods and hardwoods

D.B.H. (inches)	Softwoods	Hardwoods
9.0-10.9	0.8835	--
11.0-12.9	.9533	0.7495
13.0-14.9	.9530	.7905
15.0-16.9	.9488	.8006
17.0-18.9	.9424	.8048
19.0-20.9	.9016	.7809
21.0-22.9	.8842	.7691
23.0-24.9	.7918	.7361
25.0-26.9	.7918	.7361
27.0-28.9	.7918	.7361
29.0+	.7918	.7361

⁵Smith, W. Brad; Weist, Carol A. 1982. A net volume equation for Indiana. *Resour. Bull. NC-63*. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 7 p.

measurements taken throughout the Central States (Illinois, Indiana, Iowa, and Missouri) and an equation developed by Wiant and Castenaeda 1977⁶. Biomass estimates are based on equations developed by Smith 1985⁷.

5. Growth and mortality estimates

On remeasurement plots, estimates of growth and mortality per acre come from the remeasured diameters of trees and from observation of trees that died between inventories. Growth is reported for 1985, the last year before the inventory, and is based on an assumption of constant basal area growth over the remeasurement period. Mortality is reported for 1985 also, and is based on an assumption of constant volume mortality over the remeasurement period.

On new plots, where trees were not remeasured, estimates of growth and mortality were obtained by using the Central States Stand and Tree Evaluation and Modeling System (STEMS)^{8,9} to project the growth and mortality of trees for 1 year. The STEMS growth model was adjusted to meet local conditions, using the data from the remeasured plots and a method developed by Smith 1983¹⁰. As with volume, total growth and mortality estimates were obtained by multiplying the per acre estimates by area estimates.

⁶Wiant, Harry V., Jr.; Castenaeda, Froylan. 1977. *Mesavage and Girard's volume tables formulated. BLM4*. Denver, CO: U.S. Department of the Interior, Bureau of Land Management, Denver Service Center: 1-4.

⁷Smith, W. Brad. 1985. *Factors and equations to estimate forest biomass in the North Central Region*. Res. Pap NC-268. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 6 p.

⁸Miner, Cynthia L.; Walters, Nancy R. 1984. *STEMS: a nontechnical description for foresters*. Res. Pap NC-252. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 12 p.

⁹Shifley, S. F. 1987. *A generalized system of models forecasting central states tree growth*. Res. Pap NC-279. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 10 p.

¹⁰Smith, W. Brad. 1983. *Adjusting the STEMS regional growth models to improve local predictions*. Res. Note NC-297. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 5 p.

6. Average annual removals estimates

Average annual growing-stock and sawtimber removals (1966 to 1985) were estimated only from the remeasurement plots. These estimates are obtained from trees measured in the last survey and cut or otherwise removed from the timberland base. New plots were not used to estimate removals. Because the remeasurement plots made up only half of the total ground plots, average annual removals estimates have greater sampling errors than volume and growth estimates.

7. Timber removals, utilization, and timber product output estimates

Statistics on timber product output during 1984 came from canvassing (with a formal questionnaire) all the known primary wood-using mills that consume Indiana logs and bolts. Indiana Department of Natural Resources (IDNR) foresters personally canvassed all the known Indiana primary mills (except one pulpmill). IDNR utilization and marketing specialists provided estimates based on prior knowledge and contacts for a few mills that did not furnish complete data.

The North Central Forest Experiment Station mailed a formal questionnaire to the only Indiana pulpmill and all known out-of-State mills using Indiana roundwood. Follow-up on nonrespondents was by mail and telephone.

A sample of Illinois households and fuelwood producers provided estimates of fuelwood and post production in Illinois during 1983. Fuelwood and fencepost output in Indiana for 1984 was estimated by extrapolating the study results in Illinois to Indiana.

Wood utilization factors for converting timber products output to removals from growing stock were obtained during a 1984-1985 utilization study in Illinois, a 1971-1972 utilization study in Missouri, a 1966 utilization study in Indiana, and a 1964-1965 utilization study in Michigan.

Because this was a 100-percent sample of all primary wood-using mills, there is no sampling error reported for 1985 removals and timber products. This is not to say that the estimates reported here are totally accurate. Sampling error is a measure of precision, not accuracy, and tells in what range we would expect to obtain an estimate were we to repeat the procedure on a new sample. Because we sampled all mills, we would expect the same results if we repeated the procedure.

COMPARING INDIANA'S THIRD INVENTORY WITH THE SECOND INVENTORY

Data from new forest inventories are often compared with data from earlier inventories to determine trends in forest resources. However, changes in procedures and definitions between surveys often make it necessary to adjust earlier survey data so that they are comparable to data from the new survey. A consistency check was made for the Indiana inventory to ensure that the changes observed between inventories reflect actual changes in the resource and not changes in definitions or procedures.

Identifying and Correcting Procedural Changes

Between the 1967 and 1986 inventories of Indiana, some procedural changes were made in the method of deriving annual growth and mortality estimates and determining forest type. Also, different volume equations and forest types were used for the two inventories.

New volume equations were developed for Indiana, and these equations were used to compute the 1986 volumes and also to recompute the 1967 volume. The recomputed 1967 growing-stock volume averaged 4.3 percent greater than that reported in the 1967 report. Volumes for 1967 shown in this report are the recomputed volumes based on new volume equations and observations from the 1967 inventory.

Mortality figures published in the 1967 inventory report were based on field estimates from nonremeasurement plots. Information gathered on remeasurement plots during the current inventory was used to adjust the 1967 mortality figures. This adjustment, together with the new volume equations, also changed the estimate of net growth for the 1967 inventory.

In the 1967 report, fewer forest types were identified than in this report; however, all the types used in this report are subsets of forest types used in the old report. Areas and volumes in the oak-hickory type in 1967 will be in either the oak-hickory, chestnut-scarlet oak, or sassafras-persimmon type in 1986. Areas and volumes in the oak-gum-cypress type in 1967 will be in either the oak-gum or lowland oak type in 1986. Similarly, the 1967 elm-ash-cottonwood type is made up of the elm-ash-soft maple and cottonwood types in 1986; and the 1967 maple-beech-

birch type is made up of the maple-beech and cherry-ash-yellow-poplar types in 1986. We could not classify the 1967 area by the 1985 types, so all comparisons must be made by combining 1986 data to reflect the 1967 types.

Checking for Consistency

A test was made to ensure that it was possible to move from the adjusted 1967 resource statistics to the 1986 values by means of a computer program for updating and projecting timber volume, growth, and removals. Using the adjusted 1967 volume, growth rates, and removals rates for the period between the two surveys, the program projected the inventory from 1967 to 1986. The program outputs volume, net growth, and removals of growing stock for every year in the period. Thus, inconsistencies in volume, growth, and removals were identified and resolved.

This program estimates how volume, growth, and removals could have logically changed over the inventory period to be consistent with the estimates of past and current volume, growth, and removals and average annual removals presented in this report. The growing-stock growth used for this program was increased by 6.1 million cubic feet per year in both 1967 and 1986 to account for nontimberland that converted to timberland. Between 1967 and 1986, we found that about 900,000 acres of nontimberland converted to timberland. The current growing-stock

volume on this land is 514 million cubic feet. Removals did not require adjustment because they already include "other" removals (see Definition of Terms in Appendix), which includes the volume of timber on land that converted from timberland to nontimberland. Between 1967 and 1986, we found that about 500,000 acres of timberland converted to nontimberland. The growing-stock volume on this land was 400 million cubic feet in 1966.

LOG GRADE

In Indiana the butt log of every sawtimber sample tree was graded for quality. Additionally, all logs in a smaller sample of trees throughout the State were graded. The volume yield by log grade for each tree in the latter sample was used to distribute the volume of trees in the former sample into log-grade classes by species group. The resulting volumes by log-grade classes were expanded to provide an estimate for the entire State.

Logs were graded on the basis of external characteristics as indicators of quality. Hardwood species were graded according to "A guide to hardwood log grading" 1973¹¹. The best 12-foot section of the lowest 16-foot hardwood log, or the best 12-foot upper section if the butt log did not meet minimum log-grade standards, was graded as follows:

¹¹Rast, Everette D.; Sonderman, David L.; Gammon, Glenn L. 1973. *A guide to hardwood log grading* Gen. Tech. Rep. NE-1. Upper Darby, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 31 p.

Forest Service standard grades for hardwood factory saw logs

Grading factors		Specifications							
		Log grade 1			Log grade 2			Log grade 3	
Position in tree		Butts only	Butts and uppers		Butts and uppers			Butts and uppers	
Scaling diameter, inches		¹ 13-15	16-19	20 +	² 11 +	12 +		8 +	
Length without trim, feet		10 +			10 +	8-9	10-11	12 +	8 +
Required clear cuttings ³ of each of three best faces ⁴	Min. length, feet	7	5	3	3	3	3	3	2
	Max. number	2	2	2	2	2	2	3	No Limit
	Min. proportion of log length required in clear cutting	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{2}{3}$	$\frac{1}{2}$
Maximum sweep and crook allowance	For logs with less than one-fourth of end in sound defects	15 percent			30 percent			50 percent	
	For logs with more than one-fourth of end in sound defects	10 percent			20 percent			35 percent	
Maximum scaling deduction		40 percent ⁵			50 percent ⁶			50 percent	

¹Ash and basswood butts can be 12 inches if they otherwise meet requirements for small #1's.

²Ten-inch logs of all species can be #2's if they otherwise meet requirements for small #1's.

³A clear cutting is a portion of a face, extending the width of the face, that is free of defects.

⁴A face is one-fourth of the surface of the log as divided lengthwise.

⁵Otherwise #1 logs with 41-60 percent deductions can be #2.

⁶Otherwise #2 logs with 51-60 percent deductions can be #3.

Forest Service standard specifications for hardwood construction logs (tie and timber logs)¹

Position in tree		Butt and upper
Min. diameter, small end		8 inches +
Min. length, without trim		8 feet
Clear cuttings		No requirements.
Sweep allowance, absolute		One-fourth of the diameter at the small end for each 8 feet of length.
Sound surface defects	Single knots	Any number, if no one knot has an average diameter above the callus in excess of one-third of the log diameter at point of occurrence.
	Whorled knots	Any number if sum of knot diameters above the callus does not exceed one-third of the log diameter at point of occurrence.
	Holes	Any number provided none has a diameter over one-third of the log diameter at point of occurrence, and none extends more than 3 inches into included timber. ²
Unsound surface defects		Same requirements as for sound defects if they extend into included timber. ² No limit if they do not.
End defects	Sound	No requirements.
	Unsound	None allowed; log must be sound internally, but will admit one shake not to exceed one-fourth the scaling diameter and will admit a longitudinal split not extending more than 5 inches into the contained timber.

¹These specifications are minimum for the class. If, from a group of logs, factory logs are selected first, thus leaving only nonfactory logs from which to select construction logs, then the quality range of the construction logs so selected is limited, and the class may be considered a grade. If selection for construction logs is given first priority, it may be necessary to subdivide the class into grades.

²Included timber is always square, and dimension is judged from small end.

Softwood species were graded according to the following specifications on the following page.

Log Grades for Eastern White Pine

Log grade	Minimum size Diameter	Length ¹	Sweep or crook allowance	Total cull allowance including sweep	Maximum weevil injury	Allowable knot size (inches) ² on three best faces or minimum clearness on four faces
	(Inches)	(Feet)	(Percent)		(Number)	(Inches)
1	12 & 13 14 +	8-16 10-16	20 20	50 50	0 0	Four faces clear full length Two faces clear full length, or four faces clear 50 percent length (6 feet min. length) ³
2	6 +	8-16	30	50	0	Sound knots 1.e. ⁴ D/6 and less than 3 inches. ⁵ Unsound knots: 1.e. 1½ inches and for: butt, logs 1.e. D/12, upper logs 1.e. D/10, or four faces clear 50 percent of length
3	6 +	8-16	40	50	8-foot logs: 1 weevil 10-foot + logs: 2 weevils	Sound knots 1.e. D/3 and less than 5 inches. Unsound knots 1.e. D/6 and less than 2½ inches.
4	6 +	8-16	50	50	No limit	No limit

¹Plus trim.

²Disregard all knots less than ½-inch diameter in all grades.

³The sum of the diameter of sound knots plus twice the sum of the diameter of unsound knots (in inches) is less than or equal to half of the diameter of the log (inches).

⁴1.e. means less than or equal to.

⁵D means d.i.b. of log at location of knot.

LOG GRADES FOR JACK PINE AND RED PINE

Grade 1: logs with three or four clear faces.¹²

Grade 2: logs with one or two clear faces.

Grade 3: logs with no clear faces.

After the tentative log grade is established, the log will be degraded one grade for each of the following, except that no log can be degraded below grade 3. Net scale after deduction for defect must be at least 50 percent of the gross contents of the log.

1. *Sweep.* Degrade any tentative 1 or 2 log one grade if sweep amounts to 3 or more inches and equals or exceeds one-third the diameter inside bark at small end.

2. *Heart rot.* Degrade any tentative 1 or 2 log one grade if conk, massed hyphae, or other evidence of advanced heart rot is found anywhere in it.

¹² A face is one fourth of the circumference in width extending full length of the log. Clear faces are those free of: knots measuring more than ½-inch in diameter, overgrown knots of any size, holes more than ¼-inch in diameter. Faces may be rotated to obtain the maximum number of clear ones.

LOG GRADES FOR ALL OTHER SOFTWOOD LOGS

Grade 1

1. Logs must be 16 inches in diameter or larger, 10 feet in length or longer, and have not more than 30 percent of gross scale deducted for defect.
2. Logs must be at least 75 percent clear on each of three faces.
3. All knots outside clear cutting must be sound and not more than 2½-inches in size.

Grade 2

1. Logs must be 12 inches in diameter or larger, 10 feet in length or longer, and have a net scale of at least 50 percent of the gross contents of the log after deduction for defect.
2. Logs must be at least 50 percent clear on each of three faces or 75 percent clear on two faces.

Grade 3

1. Logs must be 6 inches in diameter or larger, 8 feet in length or longer, and have a net scale of at least 50 percent of the gross contents of the log after deduction for defect.

- Note: (A) Diameters are diameter inside bark (d.i.b.)
at small end of log.
(B) Percent clear refers to percent clear in one
continuous section.

METRIC EQUIVALENTS OF UNITS USED IN THIS REPORT

1 acre = 4,046.86 square meters or 0.405 hectare.
1,000 acres = 405 hectares.
1 cubic foot = 0.0283 cubic meter.
1 foot = 30.48 centimeters or 0.3048 meter.
1 inch = 25.4 millimeters, 2.54 centimeters, or 0.0254
meter.
1 pound = 0.454 kilograms.
1 ton = 0.907 metric tons.

TREE SPECIES GROUPS IN INDIANA¹³

SOFTWOODS

Jack pine *Pinus banksiana*
Red pine *Pinus resinosa*
White pine *Pinus strobus*
Shortleaf pine *Pinus echinata*
Other yellow pine
Virginia pine *Pinus virginiana*
Tamarack *Larix laricina*
Baldcypress *Taxodium distichum*
Eastern redcedar *Juniperus virginiana*
Other softwoods

Scotch pine *Pinus sylvestris*
HARDWOODS

Select white oak

White oak¹⁴ *Quercus alba*
Swamp white oak¹⁴ *Quercus bicolor*
Bur oak¹⁴ *Quercus macrocarpa*
Swamp chestnut oak¹⁴ *Quercus michauxii*
Chinkapin oak¹⁴ *Quercus muehlenbergii*

Other white oak

Overcup oak¹⁴ *Quercus lyrata*
Chestnut oak¹⁴ *Quercus prinus*
Post oak¹⁴ *Quercus stellata*

Select red oak

Cherrybark oak¹⁴ *Quercus falcata* var. *pagodifolia*
Northern red oak¹⁴ *Quercus rubra*
Shumard oak¹⁴ *Quercus shumardii*

Other red oaks

Scarlet oaks¹⁴ *Quercus coccinea*
Northern pin oak¹⁴ *Quercus ellipsoidalis*
Southern red oak¹⁴ *Quercus falcata*
Shingle oak¹⁴ *Quercus imbricaria*
Black oak¹⁴ *Quercus velutina*
Blackjack oak¹⁴ *Quercus marilandica*
Pin oak¹⁴ *Quercus palustris*

Select hickory

Pecan¹⁴ *Carya illinoensis*
Shellbark hickory¹⁴ *Carya laciniosa*
Shagbark hickory¹⁴ *Carya ovata*
Mockernut hickory¹⁴ *Carya tomentosa*

Other hickory

Bitternut hickory¹⁴ *Carya cordiformis*
Pignut hickory¹⁴ *Carya glabra*

Birch

Yellow birch¹⁴ *Betula alleghaniensis*
River birch¹⁴ *Betula nigra*
Paper birch¹⁴ *Betula papyrifera*

Hard maple

Black maple¹⁴ *Acer nigrum*
Sugar maple¹⁴ *Acer saccharum*

Soft maple

Red maple¹⁵ *Acer rubrum*
Silver maple¹⁵ *Acer saccharinum*

Ash

Black ash¹⁵ *Fraxinus nigra*
Blue ash¹⁴ *Fraxinus quadrangulata*
White ash¹⁴ *Fraxinus americana*
Green ash¹⁴ *Fraxinus pennsylvanica*

Cottonwood¹⁵ *Populus deltoides*

Aspen

Bigtooth aspen¹⁵ *Populus grandidentata*
Quaking aspen¹⁵ *Populus tremuloides*
Balsam poplar¹⁵ *Populus balsamifera*

Basswood

American basswood¹⁵ *Tilia americana*
White basswood¹⁵ *Tilia heterophylla*

Beech¹⁴ *Fagus grandifolia*

Black walnut¹⁴ *Juglans nigra*

Black cherry¹⁵ *Prunus serotina*

Butternut¹⁵ *Juglans cinerea*

Elm

Winged elm¹⁵ *Ulmus alata*

American elm¹⁵ *Ulmus americana*

Siberian elm¹⁵ *Ulmus pumila*

Slippery elm¹⁵ *Ulmus rubra*

Rock elm¹⁴ *Ulmus thomasii*

Hackberry¹⁵ *Celtis occidentalis*

Sycamore¹⁵ *Platanus occidentalis*

Yellow-poplar¹⁵ *Liriodendron tulipifera*

¹³The common and scientific names are based on:
Little, Elbert L. 1979. Checklist of native and naturalized
trees of the United States. Agric Handb. 541.
Washington, DC: U.S. Department of Agriculture, Forest
Service. 375 p.

¹⁴This species is considered a hard hardwood, with
an average specific gravity greater than or equal to 0.50.

¹⁵This species is considered a soft hardwood, with an
average specific gravity of 0.50 or less.

Black willow ¹⁵	<i>Salix nigra</i>
Sweetgum ¹⁵	<i>Liquidambar styraciflua</i>
Tupelo	
Black tupelo ¹⁵	<i>Nyssa sylvatica</i> var. <i>sylvatica</i>
Swamp tupelo ¹⁵	<i>Nyssa sylvatica</i> var. <i>biflora</i>
Persimmon ¹⁴	<i>Diospyros virginiana</i>
Sassafras ¹⁵	<i>Sassafras albidum</i>
Other hardwoods	
Ohio buckeye ¹⁵	<i>Aesculus glabra</i>
Boxelder ¹⁵	<i>Acer negundo</i>
Kentucky coffeetree ¹⁴	<i>Gymnocladus dioica</i>
Black locust ¹⁴	<i>Robinia pseudoacacia</i>
White mulberry ¹⁵	<i>Morus alba</i>
Red mulberry ¹⁵	<i>Morus rubra</i>
Flowering dogwood ¹⁴	<i>Cornus florida</i>
Honeylocust ¹⁴	<i>Gleditsia triacanthos</i>
Northern catalpa ¹⁵	<i>Catalpa speciosa</i>
European alder ¹⁵	<i>Alnus glutinosa</i>
White poplar ¹⁵	<i>Populus alba</i>
Yellow buckeye ¹⁵	<i>Aesculus octandra</i>
Noncommercial species ¹⁶	
Osage-orange	<i>Maclura pomifera</i>
Eastern hophornbeam	<i>Ostrya virginiana</i>
Apple	<i>Malus</i> spp.
American hornbeam	<i>Carpinus caroliniana</i>
Wild plum	<i>Prunus</i> spp.
Eastern redbud	<i>Cercis canadensis</i>
Pawpaw	<i>Asimina triloba</i>
Hawthorn	<i>Crataegus</i> spp.
Ailanthus	<i>Ailanthus altissima</i>
Chokecherry	<i>Prunus virginiana</i>

DEFINITION OF TERMS

Average annual removals from growing stock.—

The average net growing-stock volume in growing-stock trees removed annually for forest products (including roundwood products and logging residues) and for other uses (see other removals). Average annual removals of growing stock are reported for a period of several years (1966 to 1985 in this report) and are based on information obtained from remeasurement plots (see Survey Procedures).

Average annual removals from sawtimber.—

The average net board foot sawtimber volume of live sawtimber trees removed annually for forest products (including roundwood products and other uses [see other removals]). Average annual removals of sawtimber are reported for a period of several years

(1966 to 1985 in this report) and are based on information obtained from remeasurement plots (see Survey Procedures).

Basal area.—The area in square feet of the cross section at breast height of a single tree. When the basal area of all trees in a stand are summed, the result is usually expressed as square feet of basal area per acre.

Biomass.—The above-ground volume of all live trees (including bark and foliage) reported in green tons. Biomass is made up of 7 components:

Growing-stock stumps.—Biomass of a growing-stock tree 1-foot stump.

Growing-stock bole.—Biomass of a growing-stock tree from a 1-foot stump to a variable 4-inch top.

Growing-stock tops and limbs.—Biomass of a growing-stock tree from a 1-foot stump minus the growing-stock bole.

Cull stumps.—Biomass of a cull tree 1-foot stump.

Cull bole.—Biomass of a cull tree from a 1-foot stump to a variable 4-inch top.

Cull tops and limbs.—Biomass of a cull tree from a 1-foot stump minus the cull bole.

1- to 5-inch trees.—Biomass of all live trees from 1- to 5-inches in diameter at breast height.

Commercial species.—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.)

Commercial forest land.—(See timberland).

County and municipal land.—Land owned by counties and local public agencies or municipalities, or land leased to these governmental units for 50 years or more.

Cropland.—Land under cultivation within the past 24 months; including cropland harvested, crop failures, cultivated summer fallow, idle cropland used only for pasture, orchards, and land in soil improvement crops, but excluding land cultivated in developing improved pasture.

Cull.—Portions of a tree that are unusable for industrial wood products because of rot, form, or other defect.

Diameter classes.—A classification of trees based on diameter outside bark, measured at breast height (4½ feet above the ground). (Note: D.b.h. is the common abbreviation for diameter at breast height. Two-inch diameter classes are commonly used in Forest Inventory and Analysis, with the even inch the approximate midpoint for a class. For example, the 6-inch class includes trees 5.0 through 6.9 inches d.b.h.)

Farm.—Any place from which \$1,000 or more of agricultural products were produced and sold during the year.

¹⁶Individual noncommercial species were not classified as soft or hard hardwoods since they are predominately hard hardwoods, the entire group was classed as hard.

Farmer-owned land.—Land owned by farm operators. (Note: Excludes land leased by farm operators from nonfarm owners, such as railroad companies and States.)

Forest land.—Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for non-forest use. (Note: Stocking is measured by comparing specified standards with basal area and/or number of trees, age or size, and spacing.) The minimum area for classification of forest land is 1 acre. Roadside, streamside, and shelterbelt strips of timber must have a crown width of at least 120 feet to qualify as forest land. Unimproved roads and trails, streams, or other bodies of water or clearings in forest areas shall be classed as forest if less than 120 feet wide. Also see definitions for tree, land, timberland, reserved timberland, stocking, and water.

Forest industry land.—Land owned by companies or individuals operating primary wood-using plants.

Forest type.—A classification of forest land based on the species forming a plurality of live tree stocking. Major forest types in the State are:

Jack-red-white pine.—Forests in which jack, red or white pine, singly or in combination, comprise a plurality of the stocking. (These species are generally found in plantations in Indiana.)

Shortleaf pine.—Forests in which shortleaf pine comprises a plurality of the stocking. (Primarily plantations in Indiana.)

Scotch-Virginia pine.—Forests in which Scotch and Virginia pines and eastern redcedar, singly or in combination, comprise a plurality of the stocking. (Common associates include oak, yellow-poplar, red maple, sassafras, and white pine.)

Oak-pine.—Forests in which hardwoods (usually white, scarlet, chestnut, northern red or black oaks), singly or in combination, comprise a plurality of the stocking but where pines or eastern redcedar comprise 25 to 50 percent of the stocking. (Common associates include gum, hickory, sassafras, and yellow-poplar.)

Oak-hickory.—Forests in which upland oaks or hickories, singly or in combination, comprise a plurality of the stocking, and less than 25 percent of the stocking is in white, Scotch, and Virginia pines or eastern redcedar. (Common associates include yellow-poplar, elm, maple, black walnut, black locust, and sassafras.)

Chestnut-scarlet oak.—Forests in which chestnut oak or scarlet oak, singly or in combination, comprise a plurality of the stocking. (Common associates include eastern redcedar, black oak, white oak, and hickory.)

Sassafras-persimmon.—Forests in which sassafras and persimmon, singly or in combination, comprise at least 50 percent of the stocking. (Common associates include oak, yellow-poplar, elm, maple, and eastern redcedar.)

Oak-gum.—Bottomland forests in which tupelo, blackgum, sweetgum, oaks, or cypress, singly or in combination, comprise a plurality of the stocking. (Common associates include cottonwood, willow, ash, elm, hackberry, and maple.)

Lowland oak.—Bottomland forests in which wet site oaks such as swamp chestnut, cherrybark, and pin oak, singly or in combination, comprise a plurality of the stocking. (Common associates are swamp white oak, bur oak, soft maple, and sycamore.)

Elm-ash-soft maple.—Forests in which lowland elm, ash, soft maple, and cottonwood, singly or in combination, comprise a plurality of the stocking. (Common associates include boxelder, willow, sycamore, and beech.)

Cottonwood.—Forests in which cottonwood comprises at least 50 percent of the stocking. (Associates include willow, elm, soft maple, and ash.)

Maple-beech.—Forests in which hard maple or beech, singly or in combination, comprise a plurality of the stocking. (Common associates include soft maple, elm, and basswood.)

Cherry-ash-yellow-poplar.—Forests in which black cherry, white ash, and yellow-poplar, singly or in combination, comprise a plurality of the stocking. (Common associates include oak, maple, black walnut, beech, basswood, and sycamore.)

Gross area.—The entire area of land and water as determined by the Soil Conservation Service, 1980.

Growing-stock trees.—Live trees of commercial species that meet specified standards of size, quality, and merchantability. (Note: Excludes rough and rotten trees.)

Growing-stock volume.—Net volume in cubic feet of growing-stock trees 5 inches d.b.h. and over, from one foot above the ground to a minimum 4 inch top diameter outside bark of the central stem or to the point where the central stem breaks into limbs. Cubic feet can be converted to standard cords by dividing by 79. One standard cord is 128 cubic feet of stacked wood, including bark and air.

Hard hardwoods.—Hardwood species with an average specific gravity greater than or equal to 0.50 such as oaks, hard maple, hickories, and ash.

Hardwoods.—Dicotyledonous trees, usually broad-leaved and deciduous. See soft hardwoods and hard hardwoods.

Idle farmland.—Includes former cropland, orchards, improved pastures, and farm sites not tended

within the past 2 years and presently less than 16.7 percent stocked with trees.

Improved pasture.—Land currently improved for grazing by cultivating, seeding, irrigating, or clearing of trees or brush and less than 16.7 percent stocked with live trees.

Industrial wood.—All roundwood products, except fuelwood.

Land.—A. *Bureau of the Census.* Dry land and land temporarily or partly covered by water such as marshes, swamps, and river flood plains (omitting tidal flats below mean high tide); streams, sloughs, estuaries, and canals less than one-eighth of a statute mile wide; and lakes, reservoirs, and ponds less than 40 acres in area. This is the same definition that the Soil Conservation Service uses in the National Resource Inventory. Bureau of Census estimates of total land area where used in 1967; Soil Conservation Service estimates were used for 1986.

B. *Forest Inventory and Analysis.* The same as the Soil Conservation Service, except minimum width of streams, etc., is 120 feet and minimum size of lakes, etc., is 1 acre.

Live trees.—Growing-stock, rough, and rotten trees 1-inch d.b.h. and larger.

Log grades.—A classification of logs based on external characteristics as indicators of quality or value. (See Appendix for specific grading factors used.)

Logging residues.—The unused growing stock portions of trees cut or killed by logging.

Maintained road.—Any road, hard-topped or other surfaces, that is plowed or graded at least once a year. Includes rights-of-way that are cut or treated to limit herbaceous growth.

Marsh.—Nonforest land that characteristically supports low, generally herbaceous or shrubby vegetation and that is intermittently covered with water.

Merchantable.—Refers to a pulpwood or saw log section that meets pulpwood or saw log specifications, respectively.

Miscellaneous federal land.—Federal land other than National Forest.

Miscellaneous private land.—Privately owned land other than forest-industry and farmer-owned land.

Mortality.—The volume of sound wood in growing-stock and sawtimber trees that die annually.

National forest land.—Federal land that has been legally designated as National Forest or purchase units, and other land administered by the USDA Forest Service.

Net annual growth of growing stock.—The annual change in volume of sound wood in live sawtimber and poletimber trees and the total volume of trees entering these classes through ingrowth, less volume losses resulting from natural causes.

Net annual growth of sawtimber.—The annual change in the volume of live sawtimber trees and the total volume of trees reaching sawtimber size, less volume losses resulting from natural causes.

Net volume.—Gross volume less deductions for rot, sweep, or other defect affecting use for timber products.

Noncommercial species.—Tree species of typically small size, poor form, or inferior quality that normally do not develop into trees suitable for industrial wood products.

Nonforest land.—Land that has never supported forests, and land formerly forested where use for timber management is precluded by development for other uses. (Note: Includes areas used for crops, improved pasture, residential areas, city parks, improved roads of any width and adjoining clearings, powerline clearings of any width, and 1- to 40-acre areas of water classified by the Bureau of the Census as land. If intermingled in forest areas, unimproved roads and nonforest strips must be more than 120 feet wide and more than 1 acre in area to qualify as nonforest land.)

a. *Nonforest land without trees.*—Nonforest land with no live trees present.

b. *Nonforest land with trees.*—Nonforest land with one or more trees per acre at least 5 inches d.b.h.

Nonstocked land.—Timberland less than 16.7 percent stocked with growing-stock trees.

Other removals.—Growing-stock trees removed but not utilized for products, or trees left standing but “removed” from the timberland classification by land use change. Examples are removals from cultural operations such as timber stand improvement work, land clearing, and changes in land use.

Ownership.—Property owned by one owner, regardless of the number of parcels in a specified area.

Ownership size class.—The amount of timberland owned by one owner, regardless of the number of parcels.

Owner tenure.—The length of time a property has been held by the owner.

Pasture.—Land presently used for grazing or under cultivation to develop grazing.

Pastured timberland.—Timberland for which the primary use is wood production, but is presently used for grazing.

Physiographic class.—A measure of soil and water conditions that affect tree growth on a site. The physiographic classes are:

Xeric sites.—Very dry soils where excessive drainage seriously limits both growth and species occurrence. Example: cedar barrens.

Xeromesic sites.—Moderately dry soils where excessive drainage limits growth and species occur-

rence to some extent. Example: dry oak ridge.

Mesic sites.—Deep, well-drained soils. Growth and species occurrence are limited only by climate.

Hydromesic sites.—Moderately wet soils where insufficient drainage or infrequent flooding limits growth and species occurrence to some extent. Example: better drained bottomland hardwood sites.

Hydric sites.—Very wet sites where excess water seriously limits both growth and species occurrence. Example: frequently flooded river bottoms and cypress swamps.

Plant byproducts.—Plant residues used for products such as mulch, pulp chips, and fuelwood.

Plant residues.—Wood and bark materials generated at manufacturing plants during production of other products.

Poletimber stands.—(See stand-size class.)

Poletimber trees.—Growing-stock trees of commercial species at least 5 inches d.b.h. but smaller than sawtimber size.

Reserved timberland.—Forest land sufficiently productive to qualify as timberland but withdrawn from timber utilization through statute, administrative regulation, designation, or exclusive use for Christmas tree production, as indicated by annual shearing. Formerly called productive-reserved forest land.

Rotten trees.—Live trees of commercial species that do not contain at least one 12-foot saw log or two saw logs 8 feet or longer, now or prospectively, and/or do not meet regional specifications for freedom from defect primarily because of rot; that is, when more than 50 percent of the cull volume in a tree is rotten.

Rough trees.—(a) Live trees of commercial species that do not contain at least one merchantable 12-foot saw log or two saw logs 8 feet or longer, now or prospectively, and/or do not meet regional specifications for freedom from defect primarily because of roughness or poor form, and (b) all live trees of noncommercial species.

Roundwood products.—Logs, bolts, or other round sections (including chips from roundwood) cut from trees for industrial or consumer uses. (Note: Includes saw logs, veneer logs, and bolts; cooperage logs and bolts; pulpwood; fuelwood; piling; poles; posts; hewn ties; mine timbers; and various other round, split, or hewn products.)

Salvable dead trees.—Standing or down dead trees considered merchantable by regional standards.

Saplings.—Live trees 1 to 5 inches d.b.h.

Sapling-seedling stands.—(See stand-size class.)

Saw log.—A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight and with a

minimum diameter outside bark (d.o.b.) for softwoods of 7 inches (9 inches for hardwoods) or other combinations of size and defect specified by regional standards.

Saw log portion.—That part of the bole of sawtimber trees between the stump and the saw log top.

Saw log top.—The point on the bole of sawtimber trees above which a saw log cannot be produced. The minimum saw log top is 7 inches d.o.b. for softwoods and 9 inches d.o.b. for hardwoods.

Sawtimber stands.—(See stand-size class.)

Sawtimber trees.—Growing-stock trees of commercial species containing at least a 12-foot saw log or two noncontiguous saw logs 8 feet or longer, and meeting regional specifications for freedom from defect. Softwoods must be at least 9 inches d.b.h. Hardwoods must be at least 11 inches d.b.h.

Sawtimber volume.—Net volume of the saw log portion of live sawtimber in board feet, International ½-inch rule (unless specified otherwise) from stump to a minimum 7 inches top diameter outside bark (d.o.b.) for softwoods and a minimum 9 inches top d.o.b. for hardwoods.

Seedlings.—Live trees less than 1 inch d.b.h. that are expected to survive. Only softwood seedlings more than 6 inches tall and hardwood seedlings more than 1 foot tall are counted.

Short-log (rough tree).—Sawtimber-size trees of commercial species that contain at least one merchantable 8- to 11-foot saw log but not a 12-foot saw log.

Site class.—A classification of forest land in terms of inherent capacity to grow crops of industrial wood based on fully stocked natural stands.

Site index.—An expression of forest site quality based on the height of a free-growing dominant or codominant tree of a representative species in the forest type at age 50.

Soft hardwoods.—Hardwood species with an average specific gravity less than 0.50 such as gum, yellow-poplar, cottonwood, red maple, basswood, and willow.

Softwoods.—Coniferous trees, usually evergreen, having needles or scale-like leaves.

Stand.—A group of trees on a minimum of 1 acre of forest land that is stocked by forest trees of any size.

Stand-age class.—Age of the main stand. Main stand refers to trees of the dominant forest type and stand-size class.

Stand-area class.—The extent of a continuous forested area of the same forest type, stand-size class, and stand-density class.

Stand-size class.—A classification of stocked (see stocking) forest land based on the size class of live trees on the area; that is, sawtimber, poletimber, or seedlings and saplings.

a. *Sawtimber stands*.—Stands with half or more of live stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

b. *Poletimber stands*.—Stands with half or more live stocking in poletimber and/or sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

c. *Sapling-seedling stands*.—Stands with more than half of the live stocking in saplings and/or seedlings.

State land.—Land owned either by States or leased to them, for 50 years or more.

Stocking.—The degree of occupancy of land by trees, measured by basal area and/or the number of trees in a stand by size or age and spacing, compared to the basal area and/or number of trees required to fully utilize the growth potential of the land; that is, the stocking standard.

A stocking percent of 100 indicates full utilization of the site and is equivalent to 80 square feet of basal area per acre in trees 5 inches d.b.h. and larger. In a stand of trees less than 5 inches d.b.h., a stocking percent of 100 would indicate that the present number of trees is sufficient to produce 80 square feet of basal area per acre when the trees reach 5 inches d.b.h.

Stands are grouped into the following stocking classes:

Overstocked stands.—Stands in which stocking of trees is 130.0 percent or more.

Fully stocked stands.—Stands in which stocking of trees is from 100.0 to 129.9 percent.

Medium stocked stands.—Stands in which stocking of trees is from 60.0 to 99.9 percent.

Poorly stocked stands.—Stands in which stocking of trees is from 16.7 to 59.9 percent.

Nonstocked areas.—Commercial forest land on which stocking of trees is less than 16.7 percent.

Timberland.—Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization. (Note: Areas qualifying as timberland are capable of producing more than 20 cubic feet per acre per year of annual growth when managed. Currently inaccessible and inoperable areas are included except when the areas involved are small and unlikely to become suitable for producing industrial wood in the foreseeable future.) Formerly called commercial forest land. Also see definition of pastured timberland.

Timber removals from growing stock.—The net volume of growing stock in growing-stock trees removed for forest products (including roundwood products and logging residues) and for other uses (see other removals). Timber removals from grow-

ing stock are reported for a single year (1985 in this report) and are based on information obtained from a survey of primary wood-using mills (see Survey Procedures).

Timber removals from sawtimber.—The net board-foot volume of live sawtimber trees removed for forest products (including roundwood products and logging residues) and for other uses (see other removals). Timber removals from sawtimber are reported for a single year (1985 in this report) and are based on information obtained from a survey of primary wood-using mills (see Survey Procedures).

Timber products output.—All timber products cut from roundwood and byproducts of wood manufacturing plants. Roundwood products include logs, bolts, or other round sections cut from growing-stock trees, cull trees, salvable dead trees, trees on nonforest land, noncommercial species, sapling-size trees, and limbwood. Byproducts from primary manufacturing plants include slabs, edging, trimmings, miscuts, sawdust, shavings, veneer cores and clippings, and screenings of pulpmills that are used as pulpwood chips or other products.

Trees.—Woody plant having a well-developed stem and usually more than 12 feet tall at maturity.

Tree biomass.—The total aboveground weight (including the bark) of all trees from 1 to 5 inches in d.b.h., and the total aboveground weight (including the bark) from a 1-foot stump for trees more than 5 inches in diameter.

Tree size class.—A classification of trees based on diameter at breast height, including sawtimber trees, poletimber trees, saplings, and seedlings.

Upper stem portion.—That part of the bole of sawtimber trees above the saw log top to a minimum top diameter of 4 inches outside bark or to the point where the central stem breaks into limbs.

Urban and other areas.—Areas within the legal boundaries of cities and towns; suburban areas developed for residential, industrial, or recreational purposes; schoolyards; cemeteries; roads; railroads; airports; beaches; powerlines and other rights-of-way; or other nonforest land not included in any other specified land use class.

Urban forest land.—Land that would otherwise meet the criteria for timberland, but is in an urban-suburban area surrounded by commercial, industrial, or residential development.

Water.—(a) *Bureau of the Census*.—Permanent inland water surfaces, such as lakes, reservoirs, and ponds at least 40 acres in area; and streams, sloughs, estuaries, and canals at least one-eighth of a statute mile wide. This is the same definition that the Soil Conservation Service uses in the National

Resource Inventory. Bureau of Census estimates of total water area were used in 1967; Soil Conservation Service estimates were used for 1986.

(b) *Noncensus*.—Permanent inland water surfaces, such as lakes, reservoirs, and ponds from 1 to 39.9 acres in area; and streams, sloughs, estuaries, and canals from 120 feet to one-eighth of a statute mile wide.

Windbreaks.—A group of trees whose primary use is to protect buildings currently in use.

Wooded pasture.—Improved pasture with more than 16.7 percent stocking in live trees but less than 25 percent stocking in growing-stock trees. Area is currently improved for grazing or there is other evidence of grazing.

Wooded strip.—An acre or more of natural continuous forest land that would otherwise meet survey standards for timberland except that it is less than 120 feet wide.

Woodland.—Forest land incapable of producing 20 cubic feet per acre of annual growth or of yielding crops of industrial wood under natural conditions because of adverse site conditions. (Note: Adverse conditions include shallow soil, dry climate, poor drainage, high elevation, steepness, and rockiness.) Formerly called unproductive forest land.

TABLES

Text Tables

- Table 1.—Dates of aerial photography by county and Forest Survey Unit
- Table 2.—Aerial photo points classified by photo land class and Forest Survey Unit
- Table 3.—Number of ground plots by ground land use class and Forest Survey Unit
- Table 4.—Factors to convert net cubic foot volume in growing-stock trees to board feet by diameter class and softwoods and hardwoods.
- Table 5.—Factors to determine saw log volume as a proportion of growing-stock bole volume by diameter class and softwoods and hardwoods

Area

- Table 6.—Area of land by land class and Forest Survey Unit, 1950, 1967, 1986

- Table 7.—Area of timberland by county, 1950, 1967, and 1986
- Table 8.—Area of timberland by stand-size class, 1950, 1967, and 1986
- Table 9.—Area of land by land use class and Forest Survey Unit
- *Table 10.—Area of land by county and major land use class
- *Table 11.—Area of timberland by county and ownership class
- *Table 12.—Area of timberland by county and forest type
- *Table 13.—Area of timberland by county and stand-size class
- *Table 14.—Area of timberland by county and site class
- *Table 15.—Area of timberland by county and stocking class of growing-stock trees
- *Table 16.—Area of timberland by forest type, ownership class, and Forest Survey Unit
- Table 17.—Area of timberland by ownership class, site class, and Forest Survey Unit
- Table 18.—Area of privately owned timberland by ownership class, owner tenure, and size of holding
- *Table 19.—Area of timberland by ownership class, stocking class of growing-stock trees, and Forest Survey Unit
- *Table 20.—Area of timberland by forest type, stand-size class, and Forest Survey Unit
- Table 21.—Area of timberland by ownership class, stand-volume class, and Forest Survey Unit
- Table 22.—Area of timberland by forest type, stand-size class, and ownership class
- Table 23.—Area of timberland by forest type, stand-size class, and site class
- Table 24.—Area of timberland by forest type, stand-age class, and Forest Survey Unit
- Table 25.—Area of timberland by forest type, site-index class, and Forest Survey Unit
- Table 26.—Area of timberland by forest type, stand-size class, and basal-area class
- Table 27.—Area of timberland by stocking class based on selected stand components and Forest Survey Unit
- Table 28.—Area of timberland in plantations by forest type, stand-age class, and Forest Survey Unit
- Table 29.—Area of reserved timberland by ownership class and Forest Survey Unit
- Table 30.—Area of reserved timberland by forest type and Forest Survey Unit
- Table 31.—Area of nonforest land with trees by forest type, land use, and Forest Survey Unit

*Indicates core table common to all eastern FIA statistical reports.

Number of Trees

*Table 32.—Number of all live trees on timberland by species group and diameter class

*Table 33.—Number of growing-stock trees on timberland by species group and diameter class

Volume

Table 34.—Net volume of growing stock on timberland by species and Forest Survey Unit, 1967 and 1986

Table 35.—Net volume of sawtimber on timberland by species and Forest Survey Unit, 1967 and 1986

Table 36.—Net volume of all live trees on timberland by species group and diameter class

*Table 37.—Net volume of timber on timberland by class of timber and major species group

*Table 38.—Net volume of growing stock in the saw log portion of sawtimber trees on timberland by species group and diameter class

Table 39.—Net volume of growing-stock, sawtimber, short-log, and rough and rotten trees on timberland by individual species (commercial species only)

Table 40.—Net volume of noncommercial species on timberland by individual species

*Table 41.—Net volume of growing stock on timberland by species group and diameter class

*Table 42.—Net volume of sawtimber on timberland by species group and diameter class

*Table 43.—Net volume of live trees and growing stock on timberland by ownership class and major species group

Table 44.—Net volume of growing stock on timberland by species group and forest type

Table 45.—Net volume of sawtimber on timberland by species group and forest type

Table 46.—Net volume of growing stock on timberland by species group and ownership class

Table 47.—Net volume of sawtimber on timberland by species group and ownership class

Table 48.—Net volume of growing stock on timberland by forest type, stand-age class, and Forest Survey Unit

Table 49.—Net volume of sawtimber on timberland by forest type, stand-age class, and Forest Survey Unit

Table 50.—Net volume of growing stock on timberland by forest type, stand-size class, and basal-area class

Table 51.—Net volume of sawtimber on timberland by forest type, stand-size class, and basal-area class

*Table 52.—Net volume of growing stock and sawtimber on timberland by county and major species group

*Table 53.—Net volume of sawtimber on timberland by species group and tree grade

Table 54.—Net volume of sawtimber on timberland, by species group, log grade, and diameter class

Table 55.—Net volume of short-log trees on timberland by species group and diameter class (cubic feet)

Table 56.—Net volume of short-log trees on timberland by species group and diameter class (board feet)

Growth

Table 57.—Net annual growth of growing stock and sawtimber on timberland by softwoods and hardwoods, 1966 and 1985

Table 58.—Net annual growth of growing stock on timberland by species group and ownership class

Table 59.—Net annual growth of sawtimber on timberland by species group and ownership class

Table 60.—Net annual growth of growing stock on timberland by species group and forest type

Table 61.—Net annual growth of sawtimber on timberland by species group and forest type

Table 62.—Net annual growth of growing stock on timberland by forest type, stand-age class, and Forest Survey Unit

Table 63.—Net annual growth of sawtimber on timberland by forest type, stand-age class, and Forest Survey Unit

Table 64.—Net annual growth of growing stock on timberland by forest type, stand-size class, and basal area class

Table 65.—Net annual growth of sawtimber on timberland by forest type, stand-size class, and basal area class

*Table 66.—Net annual growth of growing stock and sawtimber on timberland by county and major species group

Removals

- Table 67.—Timber removals from growing stock and sawtimber on timberland by species group, 1966 and 1985
- *Table 68.—Average annual removals of growing stock and sawtimber on timberland by county and major species group, 1966-1985
- Table 69.—Average annual removals of growing stock on timberland by species group and Forest Survey Unit, 1966-1985
- Table 70.—Average annual removals of sawtimber on timberland by species group and Forest Survey Unit, 1966-1985
- Table 71.—Timber removals from growing stock and sawtimber on timberland by item and species category
- *Table 72.—Net annual growth and removals of growing stock on timberland by species group and Forest Survey Unit
- *Table 73.—Net annual growth and removals from sawtimber on timberland by species group and Forest Survey Unit
- *Table 74.—Net annual growth and removals of growing stock on timberland by ownership class and major species group
- *Table 75.—Net annual growth and removals of sawtimber on timberland by ownership class and major species group

Mortality

- Table 76.—Annual mortality of growing stock on timberland by softwoods and hardwoods, 1966 and 1985
- *Table 77.—Annual mortality of growing stock and sawtimber on timberland by species group
- Table 78.—Annual mortality of growing stock on timberland by species group and cause of death
- Table 79.—Annual mortality of sawtimber on timberland by species group and cause of death
- Table 80.—Annual mortality of growing stock and sawtimber on timberland by ownership class and softwoods and hardwoods

Utilization

- Table 81.—Output of timber products by product, softwoods and hardwoods, and source of material
- Table 82.—Output of roundwood products by product, softwoods and hardwoods, and source of material
- Table 83.—Timber products from roundwood by species group and product
- Table 84.—Volume of primary plant residue by use and type of residue

Biomass

- Table 85.—All live tree biomass yields on timberland by species group and forest type
- Table 86.—All live tree biomass on timberland by species group and forest type
- Table 87.—All live tree biomass on timberland by species group and tree biomass component (green tons)
- Table 88.—All live tree biomass on timberland by species group and tree biomass component (cubic feet)
- Table 89.—All live shrub biomass yields on timberland by shrub species group and forest type

Sampling Error

- Table 90.—Sampling errors for Survey Unit and county totals of volume, net growth, average annual removals, and area of timberland

Special Use

- Table 91.—Net volume of sawtimber on timberland by species group and diameter class (Doyle rule)

Table 6.--Area of land by land use class and Forest Survey Unit, Indiana, 1950, 1967, 1986

(In thousand acres)

Land class	All Units		Lower Wabash Unit		Knobs Unit		Upland Flats Unit		Northern Unit	
	1950 ^{1/}	1967	1986	1967	1986	1967	1986	1967	1986	1986
Forest Land										
Timberland										
Pine	55.0	54.0	149.2	12.1	30.9	38.6	95.7	--	5.8	3.3
Oak-pine	75.0	46.0	104.2	--	2.3	46.0	54.2	--	45.6	--
Oak-hickory ^{2/}	2,312.0	2,366.7	1,436.7	530.3	303.5	1,262.0	741.3	176.8	116.1	397.6
Oak-gum ^{3/}	138.0	52.2	82.6	14.7	16.4	9.1	27.7	12.7	14.4	15.7
Elm-ash-soft maple ^{4/}	984.0	524.3	848.9	153.9	231.1	99.9	207.0	50.4	86.7	220.1
Maple-beech ^{5/}	416.0	771.2	1,633.7	106.0	274.1	305.8	605.5	93.7	296.0	265.7
Aspen-birch	41.0	13.1	--	7.8	--	--	--	--	--	5.3
Nonstocked	61.0	68.3	40.5	11.4	2.1	7.8	9.7	20.1	6.5	29.0
Subtotal	4,082.0	3,895.8	4,295.8	836.2	860.4	1,769.2	1,741.1	353.7	571.1	936.7
Reserved timberland	58.0	38.5	143.4	1.0	17.2	26.9	64.2	6.2	33.1	4.4
Woodland	--	30.0	--	3.0	--	--	--	7.7	--	19.3
All forest land	4,140.0	3,964.3	4,439.2	840.2	877.6	1,796.1	1,805.3	367.6	604.2	960.4
Nonforest land										
Cropland	12,608.0	13,264.5	13,936.2	1,953.2	2,052.8	1,431.6	1,325.0	676.1	606.6	9,203.6
Pasture	2,167.0	2,100.0	1,583.0	357.6	260.3	448.7	394.6	373.1	197.0	920.6
Other	4,256.0	3,832.3	3,043.7	539.4	467.8	515.8	623.2	231.8	236.6	2,545.3
All nonforest land	19,031.0	19,196.8	18,562.9	2,850.2	2,780.9	2,396.1	2,342.8	1,281.0	1,040.2	12,669.5
Total land	23,171.0	23,161.1	23,002.1	3,690.4	3,658.5	4,192.2	4,148.1	1,648.6	1,644.4	13,629.9
Water	55.2	65.1	156.5	13.3	28.0	2.4	38.8	--	6.6	49.4
Total land and water ^{6/}	23,226.2	23,226.2	23,158.6	3,703.7	3,686.5	4,194.6	4,186.9	1,648.6	1,651.0	13,679.3

^{1/}1950 data are only available at the State level.^{2/}Includes all the 1986 oak-hickory, chestnut-scarlet oak, and sassafras-persimmon types.^{3/}Includes all the 1986 oak-gum-cypress and lowland oak types.^{4/}Includes all the 1986 elm-ash-soft maple and cottonwood types.^{5/}Includes all the 1986 maple-beech and cherry-ash-yellow-poplar types.^{6/}1950 land and water totals come from the Bureau of Census, 1950. 1967 land and water totals come from the Bureau of Census, 1960. 1986 land and water totals come from the 1982 National Resource Inventory, Soil Conservation Service.

Table 7.--Area of timberland by county, Indiana,
1950, 1967, and 1986

(In thousand acres)

Unit and county	1950	1967	1986
Lower Wabash Unit			
Clay	54.0	53.0	44.3
Daviess	41.0	41.9	41.6
Gibson	43.0	48.9	42.0
Greene	101.0	99.5	105.3
Knox	34.0	39.4	30.8
Martin	126.0	111.1	128.4
Parke	97.0	90.0	87.6
Pike	43.0	79.8	83.9
Posey	38.0	42.1	45.1
Putnam	74.0	71.5	76.5
Sullivan	49.0	53.8	64.7
Vanderburgh	19.0	20.0	24.7
Vermillion	31.0	35.0	34.7
Vigo	45.0	50.2	50.8
Total	795.0	836.2	860.4
Knobs Unit			
Brown	134.0	133.3	131.6
Clark	82.0	92.1	84.9
Crawford	102.0	112.8	119.3
Dubois	86.0	96.7	93.0
Floyd	36.0	36.6	34.5
Harrison	122.0	130.9	132.1
Jackson	121.0	121.9	120.6
Lawrence	125.0	125.5	125.3
Monroe	132.0	133.8	117.5
Morgan	84.0	91.9	86.7
Orange	123.0	118.4	129.1
Owen	114.0	113.8	107.5
Perry	161.0	142.8	152.5
Scott	43.0	45.1	43.0
Spencer	45.0	67.8	62.5
Warrick	49.0	75.5	81.4
Washington	118.0	130.3	119.6
Total	1,677.0	1,769.2	1,741.1
Upland Flats Unit			
Dearborn	61.0	39.0	91.1
Fayette	19.0	15.8	33.5
Franklin	70.0	56.6	80.4
Jefferson	79.0	60.7	78.3
Jennings	74.0	67.5	87.6
Ohio	20.0	13.2	27.9
Ripley	61.0	49.8	75.7
Switzerland	45.0	38.8	75.2
Union	14.0	12.3	21.4
Total	443.0	353.7	571.1

(Table 7 continued on next page)

(Table 7 continued)

Unit and county	1950	1967	1986
Northern Unit			
Adams	20.0	14.0	14.1
Allen	43.0	35.3	29.8
Bartholomew	35.0	35.2	44.8
Benton	2.0	3.0	1.5
Blackford	8.0	6.9	9.4
Boone	15.0	11.1	15.2
Carroll	16.0	16.0	18.4
Cass	29.0	20.2	24.2
Clinton	11.0	9.5	9.2
Decatur	22.0	23.0	24.1
De Kalb	29.0	21.7	27.3
Delaware	17.0	11.2	15.8
Elkhart	28.0	25.4	29.1
Fountain	28.0	26.5	36.6
Fulton	17.0	15.8	20.4
Grant	18.0	14.0	18.2
Hamilton	21.0	13.6	20.0
Hancock	15.0	8.9	11.8
Hendricks	17.0	15.3	17.7
Henry	19.0	14.2	20.6
Howard	11.0	6.6	8.6
Huntington	23.0	20.3	22.9
Jasper	48.0	24.4	27.0
Jay	17.0	18.6	24.0
Johnson	17.0	12.2	20.1
Kosciusko	39.0	27.5	33.0
La Grange	27.0	19.0	35.9
Lake	30.0	9.5	17.8
La Porte	35.0	28.0	41.4
Madison	15.0	11.7	13.0
Marion	22.0	13.4	0.9
Marshall	28.0	25.1	31.0
Miami	24.0	20.2	25.4
Montgomery	23.0	21.8	24.0
Newton	27.0	18.4	17.9
Noble	28.0	23.2	32.3
Porter	31.0	25.6	30.6
Pulaski	29.0	24.2	27.0
Randolph	20.0	14.1	19.7
Rush	11.0	12.3	12.4
St. Joseph	28.0	21.6	22.5
Shelby	16.0	13.0	12.5
Starke	34.0	24.4	26.9
Steuben	20.0	22.6	31.5
Tippecanoe	21.0	18.8	22.6
Tipton	10.0	6.3	4.7
Wabash	25.0	21.1	24.0
Warren	19.0	20.1	23.8
Wayne	23.0	23.1	31.9
Wells	16.0	16.4	16.2
White	16.0	12.4	13.0
Whitley	28.0	20.0	20.5
Total	1,171.0	936.7	1,123.2
All counties	4,086.0	3,895.8	4,295.8

Table 8.--Area of timberland by stand-size class and Forest Survey Unit, Indiana, 1950, 1967, and 1986

(In thousand acres)

Unit and stand-size class	1950 ^{1/}	1967	1986
All Units			
Sawtimber	2,084.0	2,036.5	2,770.0
Poletimber	1,337.0	865.7	673.5
Seedling-sapling	600.0	925.3	811.8
Nonstocked	61.0	68.3	40.5
Total	4,082.0	3,895.8	4,295.8
Lower Wabash Unit			
Sawtimber	--	432.2	582.5
Poletimber	--	177.6	112.0
Seedling-sapling	--	215.0	163.8
Nonstocked	--	11.4	2.1
Total	--	836.2	860.4
Knobs Unit			
Sawtimber	--	900.8	1,148.7
Poletimber	--	425.1	254.0
Seedling-sapling	--	435.5	328.7
Nonstocked	--	7.8	9.7
Total	--	1,769.2	1,741.1
Upland Flats Unit			
Sawtimber	--	172.4	285.4
Poletimber	--	75.8	113.9
Seedling-sapling	--	85.4	165.3
Nonstocked	--	20.1	6.5
Total	--	353.7	571.1
Northern Unit			
Sawtimber	--	531.1	753.4
Poletimber	--	187.2	193.6
Seedling-sapling	--	189.4	154.0
Nonstocked	--	29.0	22.2
Total	--	936.7	1,123.2

^{1/}1950 data are only available at the State level.

Table 9.--Area of land by land use class and Forest Survey Unit, Indiana, 1986

(In thousand acres)

Land use class	All Units	Forest Survey Unit			
		Lower Wabash	Knobs	Upland Flats	Northern
Forest land					
Timberland	4,295.8	860.4	1,741.1	571.1	1,123.2
Reserved timberland	143.4	17.2	64.2	33.1	28.9
Total	4,439.2	877.6	1,805.3	604.2	1,152.1
Nonforest land					
Nonforest with trees					
Cropland with trees	78.1	22.9	19.6	10.1	25.5
Improved pasture with trees	149.9	33.3	52.2	28.8	35.6
Wooded strips	111.7	31.3	28.0	14.3	38.1
Idle farmland with trees	24.4	4.1	13.8	2.1	4.4
Marsh with trees	12.1	--	1.9	--	10.2
Urban timberland	117.0	6.5	16.2	4.9	89.4
Urban and other with trees	274.6	47.0	61.4	27.0	139.2
Windbreaks	40.2	12.1	15.2	1.7	11.2
Wooded pasture	120.0	24.4	35.0	29.4	31.2
Subtotal	928.0	181.6	243.3	118.3	384.8
Nonforest without trees					
Cropland without trees	13,858.1	2,029.9	1,305.4	596.5	9,926.3
Improved pasture without trees	1,313.1	202.6	307.4	138.8	664.3
Idle farm without trees	213.0	31.4	91.9	35.7	54.0
Marsh without trees	47.7	2.1	--	2.1	43.5
Other farm-farmstead	382.3	42.1	62.3	31.8	246.1
Urban and other	1,720.0	260.1	306.9	112.0	1,041.0
Noncensus water	100.7	31.1	25.6	5.0	39.0
Subtotal	17,634.9	2,599.3	2,099.5	921.9	12,014.2
Total	18,562.9	2,780.9	2,342.8	1,040.2	12,399.0
Total land	23,002.1	3,658.5	4,148.1	1,644.4	13,551.1
Water ^{1/}	156.5	28.0	38.8	6.6	83.1
Total land and water	23,158.6	3,686.5	4,186.9	1,651.0	13,634.2

^{1/}1982 National Resource Inventory, Soil Conservation Service, USDA.

Table 10.--Area of land by county and major land use class, Indiana, 1986

Unit and county	Land area	Forest land				Nonforest land with trees	Nonforest land as a percent of land area	Sampling error for timberland
		All forest land	Reserved timberland	Timberland	Timberland as a percent of land area			
		Thousand acres	Thousand acres	Thousand acres	Percent			
Lower Wabash Unit								
Clay	230.5	44.7	0.4	44.3	19.2	15.7	6.8	11.11
Daviess	276.6	42.1	0.5	41.6	15.0	9.9	3.6	11.46
Gibson	313.6	42.4	0.4	42.0	13.4	14.3	4.6	11.41
Greene	348.6	106.2	0.9	105.3	30.2	20.9	6.0	7.20
Knox	332.6	31.0	0.2	30.8	9.3	17.3	5.2	13.32
Martin	216.8	131.9	3.5	128.4	59.2	6.4	3.0	6.52
Parke	284.2	91.0	3.4	87.6	30.8	12.8	4.5	7.90
Pike	218.0	84.4	0.5	83.9	38.5	8.6	3.9	8.07
Posey	261.8	49.9	4.8	45.1	17.2	9.5	3.6	11.01
Putnam	308.4	76.7	0.2	76.5	24.8	16.0	5.2	8.45
Sullivan	287.8	65.5	0.8	64.7	22.5	9.9	3.4	9.19
Vanderburgh	151.1	25.7	1.0	24.7	16.3	18.7	12.4	14.87
Vermillion	166.4	35.0	0.3	34.7	20.9	6.2	3.7	12.55
Vigo	262.1	51.1	0.3	50.8	19.4	15.4	5.9	10.37
Total	3,658.5	877.6	17.2	860.4	23.5	181.6	5.0	2.52
Knobs Unit								
Brown	199.2	150.0	18.4	131.6	66.1	10.4	5.2	3.02
Clark	240.8	85.9	1.0	84.9	35.3	14.2	5.9	3.76
Crawford	196.1	120.8	1.5	119.3	60.8	7.8	4.0	3.17
Dubois	274.8	93.8	0.8	93.0	33.8	15.2	5.5	3.59
Floyd	95.8	34.9	0.4	34.5	36.0	14.2	14.8	5.90
Harrison	311.0	135.2	3.1	132.1	42.5	17.1	5.5	3.01
Jackson	327.8	125.2	4.6	120.6	36.8	17.2	5.2	3.15
Lawrence	289.3	126.8	1.5	125.3	43.3	15.4	5.3	3.09
Monroe	246.4	130.8	13.3	117.5	47.7	13.3	5.4	3.20
Morgan	261.6	88.2	1.5	86.7	33.1	18.3	7.0	3.72
Orange	254.7	131.5	2.4	129.1	50.7	13.3	5.2	3.05
Owen	247.1	110.3	2.8	107.5	43.5	15.7	6.4	3.34
Perry	244.2	153.8	1.3	152.5	62.4	9.7	4.0	2.80
Scott	122.5	45.6	2.6	43.0	35.1	6.9	5.6	5.28
Spencer	256.2	65.0	2.5	62.5	24.4	14.8	5.8	4.38
Warrick	250.4	84.0	2.6	81.4	32.5	16.8	6.7	3.84
Washington	330.2	123.5	3.9	119.6	36.2	23.0	7.0	3.17
Total	4,148.1	1,805.3	64.2	1,741.1	42.0	243.3	5.9	.83
Upland Flats Unit								
Dearborn	196.7	91.1	--	91.1	46.3	12.6	6.4	8.86
Fayette	137.8	33.6	0.1	33.5	24.3	8.5	6.2	14.62
Franklin	246.9	82.2	1.8	80.4	32.6	17.4	7.0	9.43
Jefferson	232.0	87.3	9.0	78.3	33.8	19.7	8.5	9.56
Jennings	241.8	95.7	8.1	87.6	36.2	15.0	6.2	9.04
Ohio	55.8	27.9	--	27.9	50.0	3.6	6.5	16.02
Ripley	286.3	88.8	13.1	75.7	26.4	25.9	9.0	9.72
Switzerland	143.1	75.7	0.5	75.2	52.6	8.9	6.2	9.76
Union	104.0	21.9	0.5	21.4	20.6	6.7	6.4	18.29
Total	1,644.4	604.2	33.1	571.1	34.7	118.3	7.2	3.54

(Table 10 continued on next page)

(Table 10 continued)

Unit and county	Forest land				Timberland as a percent of land area	Nonforest land with trees	Nonforest land as a percent of land area	Sampling error for timberland
	Land area	All forest land	Reserved timberland	Timberland				
		Thousand acres			Percent	Thousand acres	Percent	Percent
Northern Unit								
Adams	217.5	14.2	0.1	14.1	6.5	2.1	1.0	21.78
Allen	421.7	30.5	0.7	29.8	7.1	23.8	5.6	14.98
Bartholomew	261.5	47.1	2.3	44.8	17.1	6.9	2.6	12.22
Benton	260.2	1.5	--	1.5	0.6	0.4	0.2	66.77
Blackford	106.0	9.4	--	9.4	8.9	1.3	1.2	26.67
Boone	271.0	15.3	0.1	15.2	5.6	4.1	1.5	20.97
Carroll	238.1	18.5	0.1	18.4	7.7	6.1	2.6	19.06
Cass	265.1	24.3	0.1	24.2	9.1	5.8	2.2	16.62
Clinton	259.3	9.3	0.1	9.2	3.5	2.4	0.9	26.96
Decatur	238.6	24.3	0.2	24.1	10.1	3.4	1.4	16.66
De Kalb	232.4	27.4	0.1	27.3	11.7	5.9	2.5	15.65
Delaware	250.8	15.9	0.1	15.8	6.3	4.6	1.8	20.57
Elkhart	298.4	29.4	0.3	29.1	9.7	8.4	2.8	15.16
Fountain	254.6	37.4	0.8	36.6	14.4	8.4	3.3	13.52
Fulton	236.3	20.5	0.1	20.4	8.6	5.1	2.2	18.11
Grant	265.5	18.3	0.1	18.2	6.9	4.6	1.7	19.17
Hamilton	255.0	20.4	0.4	20.0	7.8	5.3	2.1	18.29
Hancock	196.5	11.9	0.1	11.8	6.0	4.9	2.5	23.81
Hendricks	261.7	17.8	0.1	17.7	6.8	5.1	1.9	19.44
Henry	251.8	20.7	0.1	20.6	8.2	8.4	3.3	18.02
Howard	187.6	8.7	0.1	8.6	4.6	7.4	3.9	27.88
Huntington	234.4	23.1	0.2	22.9	9.8	5.3	2.3	17.09
Jasper	359.0	27.9	0.9	27.0	7.5	6.6	1.8	15.74
Jay	245.8	24.1	0.1	24.0	9.8	3.0	1.2	16.69
Johnson	205.8	20.2	0.1	20.1	9.8	5.7	2.8	18.24
Kosciusko	345.2	33.1	0.1	33.0	9.6	5.8	1.7	14.24
La Grange	243.2	36.0	0.1	35.9	14.8	10.6	4.4	13.65
Lake	320.5	18.5	0.7	17.8	5.6	11.5	3.6	19.38
La Porte	384.2	42.2	0.8	41.4	10.8	11.2	2.9	12.71
Madison	289.8	13.1	0.1	13.0	4.5	4.4	1.5	22.68
Marion	252.9	1.9	1.0	0.9	0.4	53.3	21.1	86.20
Marshall	284.3	31.1	0.1	31.0	10.9	6.5	2.3	14.69
Miami	240.9	25.5	0.1	25.4	10.5	4.1	1.7	16.23
Montgomery	323.1	25.7	1.7	24.0	7.4	7.2	2.2	16.69
Newton	256.6	19.5	1.6	17.9	7.0	2.1	0.8	19.33
Noble	264.0	33.6	1.3	32.3	12.2	7.9	3.0	14.39
Porter	267.7	37.9	7.3	30.6	11.4	13.6	5.1	14.78
Pulaski	278.1	29.3	2.3	27.0	9.7	5.7	2.0	15.74
Randolph	290.2	19.8	0.1	19.7	6.8	4.2	1.4	18.42
Rush	261.2	12.6	0.2	12.4	4.7	7.4	2.8	23.22
St. Joseph	293.9	23.3	0.8	22.5	7.7	10.3	3.5	17.24
Shelby	264.0	12.6	0.1	12.5	4.7	2.1	0.8	23.13
Starke	198.0	27.1	0.2	26.9	13.6	6.9	3.5	15.77
Steuben	196.8	32.5	1.0	31.5	16.0	7.9	4.0	14.57
Tippecanoe	321.1	22.8	0.2	22.6	7.0	7.8	2.4	17.20
Tipton	166.6	4.8	0.1	4.7	2.8	4.2	2.5	37.72
Wabash	265.6	24.2	0.2	24.0	9.0	8.9	3.4	16.69
Warren	234.5	23.9	0.1	23.8	10.1	5.8	2.5	16.76
Wayne	258.3	32.0	0.1	31.9	12.3	17.1	6.6	14.48
Wells	236.9	17.3	1.1	16.2	6.8	3.4	1.4	20.32
White	324.0	13.1	0.1	13.0	4.0	4.9	1.5	22.68
Whitley	214.9	20.6	0.1	20.5	9.5	5.0	2.3	18.06
Total	13,551.1	1,152.1	28.9	1,123.2	8.3	384.8	2.8	2.44
All counties	23,002.1	4,439.2	143.4	4,295.8	18.7	928.0	4.0	1.00

Table 11.--Area of timberland by county and ownership class, Indiana, 1986
(In thousand acres)

Unit and county	Ownership class								
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer	Misc. private-corp.	Misc. private-indiv.
Lower Wabash Unit									
Clay	44.3	--	2.9	--	0.6	--	17.4	6.8	16.6
Daviess	41.6	--	2.6	3.6	0.4	0.2	13.8	6.7	14.3
Gibson	42.0	--	1.9	0.2	0.5	--	17.5	6.4	15.5
Greene	105.3	--	7.1	4.5	0.9	--	37.1	18.4	37.3
Knox	30.8	--	2.0	0.4	0.4	--	13.0	1.9	13.1
Martin	128.4	9.0	12.7	7.6	1.0	1.1	40.5	15.2	41.3
Parke	87.6	--	3.5	0.3	0.9	0.7	33.2	15.3	33.7
Pike	83.9	--	5.0	4.0	0.7	--	28.5	15.7	30.0
Posey	45.1	--	3.1	1.7	0.5	--	17.1	5.9	16.8
Putnam	76.5	--	6.7	2.1	1.0	0.1	29.2	3.7	33.7
Sullivan	64.7	--	4.3	4.9	0.5	--	20.6	11.6	22.8
Vanderburgh	24.7	--	1.3	--	0.3	--	10.2	2.3	10.6
Vermillion	34.7	--	3.1	--	0.2	--	14.1	4.1	13.2
Vigo	50.8	--	3.0	0.2	0.4	--	20.3	8.9	18.0
Total	860.4	9.0	59.2	29.5	8.3	2.1	312.5	122.9	316.9
Knobs Unit									
Brown	131.6	14.4	10.3	23.3	0.3	2.1	29.8	9.3	42.1
Clark	84.9	--	4.1	15.9	0.3	--	23.7	7.7	33.2
Crawford	119.3	19.5	8.3	12.6	0.3	2.4	27.2	8.2	40.8
Dubois	93.0	0.3	6.2	4.5	0.3	0.1	30.8	9.8	41.0
Floyd	34.5	--	--	--	0.1	0.2	14.5	4.3	15.4
Harrison	132.1	--	--	13.9	0.5	1.0	41.4	11.7	63.6
Jackson	120.6	20.0	4.1	6.9	0.5	0.3	32.7	9.2	46.9
Lawrence	125.3	14.9	2.1	--	0.3	0.6	39.3	12.5	55.6
Monroe	117.5	8.0	8.3	18.9	0.3	0.6	30.6	9.2	41.6
Morgan	86.7	--	--	5.2	0.6	1.1	28.5	8.3	43.0
Orange	129.1	26.0	12.4	1.3	0.4	0.7	31.5	8.9	47.9
Owen	107.5	--	6.2	5.5	0.2	0.4	40.8	11.9	42.5
Perry	152.5	53.9	--	3.4	0.3	2.6	32.6	10.3	49.4
Scott	43.0	--	--	5.3	0.3	--	13.4	4.1	19.9
Spencer	62.5	--	--	--	0.4	0.2	22.4	6.7	32.8
Warrick	81.4	--	--	--	0.5	0.5	30.2	8.9	41.3
Washington	119.6	--	--	12.6	0.3	0.7	45.1	13.6	47.3
Total	1,741.1	157.0	62.0	129.3	5.9	13.5	514.5	154.6	704.3
Upland Flats Unit									
Dearborn	91.1	--	2.2	0.3	0.5	--	46.6	5.2	36.3
Fayette	33.5	--	0.8	0.1	0.4	--	16.7	1.3	14.2
Franklin	80.4	--	1.8	0.2	0.6	--	38.6	3.6	35.6
Jefferson	78.3	--	2.0	0.1	0.1	--	36.3	2.8	37.0
Jennings	87.6	--	1.6	6.9	0.6	--	38.1	5.0	35.4
Ohio	27.9	--	0.7	--	0.2	--	14.3	1.5	11.2
Ripley	75.7	--	2.0	--	0.1	--	33.1	2.5	38.0
Switzerland	75.2	--	1.8	--	0.1	--	37.6	3.6	32.1
Union	21.4	--	0.6	--	0.1	--	10.0	1.0	9.7
Total	571.1	--	13.5	7.6	2.7	--	271.3	26.5	249.5

(Table 11 continued on next page)

(Table 11 continued)

Unit and county	Ownership class								Misc. private-indiv.
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer	Misc. private-corp.	
Northern Unit									
Adams	14.1	--	0.3	--	0.1	0.1	7.9	1.3	4.4
Allen	29.8	--	0.4	--	0.3	0.2	15.0	3.1	10.8
Bartholomew	44.8	--	1.0	0.1	0.4	0.1	24.8	4.5	13.9
Benton	1.5	--	0.0	--	--	--	0.8	0.2	0.5
Blackford	9.4	--	0.2	--	0.1	--	5.3	0.9	2.9
Boone	15.2	--	0.4	--	0.1	--	8.1	1.6	5.0
Carroll	18.4	--	0.3	0.1	0.2	--	10.0	1.7	6.1
Cass	24.2	--	0.5	--	0.3	0.2	13.6	2.0	7.6
Clinton	9.2	--	0.2	--	0.1	--	5.0	0.9	3.0
Decatur	24.1	--	0.5	--	0.2	--	13.5	2.3	7.6
De Kalb	27.3	--	0.9	--	0.3	0.3	15.3	2.2	8.3
Delaware	15.8	--	0.4	--	0.2	--	8.3	1.6	5.3
Elkhart	29.1	--	0.6	--	0.3	--	16.4	2.4	9.4
Fountain	36.6	--	1.0	--	0.4	--	21.2	2.9	11.1
Fulton	20.4	--	0.5	0.1	0.2	0.3	11.1	1.8	6.4
Grant	18.2	--	0.4	--	0.2	--	10.3	1.6	5.7
Hamilton	20.0	--	0.5	--	0.3	--	11.0	1.7	6.5
Hancock	11.8	--	0.3	--	0.2	--	6.6	0.9	3.8
Hendricks	17.7	--	0.4	--	0.2	--	9.5	1.8	5.8
Henry	20.6	--	0.6	0.3	0.3	0.1	10.6	1.9	6.8
Howard	8.6	--	0.1	--	0.1	--	4.0	1.1	3.3
Huntington	22.9	--	0.5	0.1	0.2	--	13.0	2.0	7.1
Jasper	27.0	--	0.6	1.4	0.3	--	13.5	2.5	8.7
Jay	24.0	--	0.5	--	0.1	--	13.8	2.3	7.3
Johnson	20.1	--	0.4	0.5	0.2	--	10.4	2.0	6.6
Kosciusko	33.0	--	0.6	0.6	0.2	0.4	17.9	3.2	10.1
La Grange	35.9	--	1.9	0.7	0.5	--	18.1	3.5	11.2
Lake	17.8	--	0.5	0.1	0.2	--	9.8	1.6	5.6
La Porte	41.4	--	1.1	1.0	0.4	0.1	21.9	3.8	13.1
Madison	13.0	--	0.2	--	0.1	--	7.4	1.2	4.1
Marion	0.9	--	0.0	--	--	--	0.3	0.1	0.5
Marshall	31.0	--	0.9	0.1	0.2	0.2	17.2	2.8	9.6
Miami	25.4	--	0.5	0.1	0.2	0.2	14.2	2.4	7.8
Montgomery	24.0	--	0.5	--	0.3	--	13.0	2.1	8.1
Newton	17.9	--	0.4	2.0	0.2	--	8.3	1.6	5.4
Noble	32.3	--	0.9	0.3	0.3	0.1	17.2	3.0	10.5
Porter	30.6	--	1.0	0.1	0.5	--	16.1	2.8	10.1
Pulaski	27.0	--	0.6	1.2	0.3	0.1	13.9	2.3	8.6
Randolph	19.7	--	0.4	--	0.1	0.2	10.8	1.8	6.4
Rush	12.4	--	0.2	--	0.2	--	6.1	1.3	4.6
St. Joseph	22.5	--	0.6	--	0.3	--	12.5	1.9	7.2
Shelby	12.5	--	0.3	--	0.1	--	7.0	1.2	3.9
Starke	26.9	--	0.5	1.0	0.3	--	14.2	2.2	8.7
Steuben	31.5	--	0.9	0.9	0.4	0.2	15.8	3.0	10.3
Tippecanoe	22.6	--	0.5	--	0.3	--	12.3	1.9	7.6
Tipton	4.7	--	0.1	--	0.1	--	2.1	0.5	1.9
Wabash	24.0	--	0.8	0.3	0.3	--	12.3	2.3	8.0
Warren	23.8	--	0.5	--	0.2	--	13.2	2.2	7.7
Wayne	31.9	--	1.0	--	0.4	--	17.7	2.8	10.0
Wells	16.2	--	0.4	--	0.2	--	8.9	1.5	5.2
White	13.0	--	0.5	--	0.2	--	6.8	1.2	4.3
Whitley	20.5	--	0.6	--	0.2	--	11.6	1.7	6.4
Total	1,123.2	--	27.9	11.0	12.0	2.8	605.6	103.1	360.8
All counties	4,295.8	166.0	162.6	177.4	28.9	18.4	1,703.9	407.1	1,631.5

Table 12.--Area of timberland by county and forest type, Indiana, 1986
(In thousand acres)

Unit and County	All types	Forest type													
		Jack-red-white pine	Shortleaf pine	Scotch-Virginia pine	Oak-pine	Oak-hickory	Chestnut-scarlet oak	Sassafras-persimmon	Oak-gum	Lowland oak	Elm-ash-soft maple	Cotton-wood	Maple-beech	Cherry-ash-yellow-poplar	Non-stocked
Lower Wabash Unit															
Clay	44.3	1.2	0.2	1.3	0.1	14.1	--	0.1	0.7	0.6	11.3	0.4	7.7	6.5	0.1
Daviess	41.6	0.4	0.3	1.1	0.1	14.5	--	0.4	0.4	0.4	11.1	0.4	7.3	5.0	0.2
Gibson	42.0	0.5	0.2	1.3	0.2	13.9	--	0.4	0.4	0.5	11.2	0.5	7.0	5.7	0.2
Greene	105.3	2.3	0.5	2.8	0.4	33.9	--	1.3	1.6	0.9	28.4	1.4	18.7	12.9	0.2
Knox	30.8	0.1	0.1	0.8	--	10.4	--	0.2	--	0.4	7.9	0.1	5.5	5.1	0.2
Martin	128.4	0.1	0.6	0.6	--	50.1	--	0.9	0.6	1.0	31.4	0.1	27.4	15.5	0.1
Parke	87.6	1.6	0.3	1.9	0.5	30.0	--	0.5	1.2	0.8	23.0	1.3	14.8	11.6	0.1
Pike	83.9	1.2	0.5	1.8	0.4	28.1	--	1.0	1.0	0.7	22.9	1.0	15.1	10.1	0.1
Posey	45.1	0.4	--	0.8	0.1	16.5	--	0.2	0.4	0.5	11.4	0.3	8.3	6.0	0.2
Putnam	76.5	0.1	--	0.8	--	26.6	--	0.2	0.1	1.0	18.8	--	15.6	13.1	0.2
Sullivan	64.7	1.1	0.2	1.4	0.2	22.0	--	1.0	0.9	0.5	17.7	0.6	11.5	7.4	0.2
Vanderburgh	24.7	0.2	0.1	0.6	0.1	8.1	--	0.1	0.1	0.3	6.1	0.1	4.6	4.2	0.1
Vermillion	34.7	0.2	0.1	0.6	--	11.9	--	0.6	0.2	0.2	9.3	0.1	6.9	4.5	0.1
Vigo	50.8	0.5	0.6	1.5	0.2	16.0	--	0.5	0.5	0.5	13.9	0.4	9.0	7.1	0.1
Total	860.4	9.9	3.7	17.3	2.3	296.1	--	7.4	8.1	8.3	224.4	6.7	159.4	114.7	2.1
Knobs Unit															
Brown	131.6	2.0	2.3	3.0	4.3	53.9	4.6	0.5	1.6	0.1	13.7	0.1	30.8	14.4	0.3
Clark	84.9	1.7	1.0	2.9	3.3	30.9	1.9	0.7	1.4	0.2	11.2	0.1	19.1	10.0	0.5
Crawford	119.3	4.4	1.7	1.4	3.1	50.2	2.6	0.4	1.7	0.2	12.8	0.2	26.4	13.7	0.5
Dubois	93.0	1.0	0.3	3.5	3.1	34.6	1.8	0.9	1.2	--	10.7	--	25.3	10.2	0.4
Floyd	34.5	0.2	0.1	0.8	1.2	12.7	0.2	0.1	0.3	--	4.1	--	10.7	3.9	0.2
Harrison	132.1	1.9	0.5	4.9	4.7	50.0	3.4	1.0	2.5	0.4	16.9	0.7	28.3	16.3	0.6
Jackson	120.6	2.1	1.4	2.9	2.9	50.3	4.5	1.4	2.2	0.2	14.5	0.8	21.9	14.9	0.6
Lawrence	125.3	1.3	0.3	2.2	3.0	54.4	3.0	1.0	1.2	--	11.6	0.2	32.5	14.1	0.5
Monroe	117.5	1.0	0.6	2.6	2.8	48.4	2.9	0.9	1.5	0.3	12.2	0.2	30.2	13.2	0.4
Morgan	86.7	1.3	0.2	2.0	2.7	32.8	2.2	0.6	1.7	0.3	12.2	0.2	18.8	10.9	0.8
Orange	129.1	3.3	2.5	1.8	4.1	54.7	2.8	0.7	2.1	0.3	13.5	0.5	25.6	15.7	1.5
Owen	107.5	0.7	0.1	3.0	4.0	38.6	0.9	0.5	1.6	--	14.2	--	31.4	12.1	0.4
Perry	152.5	4.9	7.8	1.9	4.7	70.5	4.3	0.6	1.5	0.2	12.5	0.2	25.7	16.9	0.8
Scott	43.0	0.6	0.2	1.6	1.3	15.7	1.0	0.4	0.7	--	5.8	0.2	9.7	5.4	0.4
Spencer	62.5	0.8	0.1	2.9	1.8	22.4	1.3	0.9	1.2	--	8.5	0.3	13.8	7.8	0.7
Warrick	81.4	1.2	0.5	3.2	2.6	27.1	1.6	1.0	1.9	0.2	13.2	0.7	16.8	10.8	0.6
Washington	119.6	1.4	0.6	5.1	4.6	42.0	0.7	0.8	1.3	--	14.4	--	35.2	13.0	0.5
Total	1,741.1	29.8	20.2	45.7	54.2	689.2	39.7	12.4	25.6	2.1	202.6	4.4	402.2	203.3	9.7
Upland Flats Unit															
Dearborn	91.1	--	--	0.6	6.6	18.4	--	--	2.5	--	16.5	--	21.3	24.3	0.9
Fayette	33.5	--	--	--	2.1	5.4	--	--	1.6	--	4.7	--	9.3	9.7	0.7
Franklin	80.4	--	--	0.3	6.9	15.1	--	--	2.6	--	9.9	--	20.6	23.9	1.1
Jefferson	78.3	2.4	--	0.1	9.4	16.7	--	--	1.1	--	9.4	--	20.0	18.4	0.8
Jennings	87.6	--	--	0.6	5.8	16.7	--	--	2.9	--	15.6	--	21.7	23.2	1.1
Ohio	27.9	--	--	0.2	2.1	5.6	--	--	0.7	--	4.6	--	6.7	7.7	0.3
Ripley	75.7	1.4	--	0.1	7.8	16.3	--	--	1.1	--	8.8	--	20.0	19.2	1.0
Switzerland	75.2	--	--	--	3.2	18.2	--	--	1.1	--	13.7	--	20.3	18.4	0.3
Union	21.4	--	--	0.1	1.7	3.7	--	--	0.8	--	3.5	--	5.3	6.0	0.3
Total	571.1	3.8	--	2.0	45.6	116.1	--	--	14.4	--	86.7	--	145.2	150.8	6.5

(Table 12 continued on next page)

(Table 12 continued on next page)

(Table 12 continued)

Unit and County	All types	Forest type												Cherry-ash- yellow- poplar	Non- stocked	
		Jack-red- white pine	Shortleaf pine	Scotch- Virginia pine	Oak- pine	Oak- hickory	Chestnut- scarlet oak	Sassafras- persimmon	Oak- gum	Lowland oak	Elm-ash- soft maple	Cotton- wood	Maple- beech			
Northern Unit																
Adams	14.1	0.1	--	0.1	--	3.5	0.1	--	0.1	0.3	3.8	0.1	3.5	2.2	0.3	
Allen	29.8	0.4	--	0.1	0.2	5.7	0.2	--	--	0.4	8.7	0.3	6.7	6.6	0.5	
Bartholomew	44.8	0.3	--	0.1	0.1	11.0	0.3	--	0.2	1.0	11.8	0.3	11.9	6.9	0.9	
Benton	1.5	--	--	--	--	0.4	--	--	--	--	0.2	--	0.4	0.3	--	
Blackford	9.4	--	--	--	--	2.5	--	--	--	0.3	4.2	--	2.7	1.4	0.2	
Boone	15.2	--	--	--	--	3.6	0.1	--	0.1	0.4	3.7	0.1	4.2	2.5	0.5	
Carroll	18.4	0.1	--	0.1	--	4.6	0.1	--	0.1	0.5	4.6	0.1	4.8	3.0	0.4	
Cass	18.4	0.4	--	0.2	--	5.9	0.2	--	--	0.3	7.4	0.1	5.5	3.8	0.4	
Clinton	24.2	0.4	--	0.2	--	2.3	0.1	--	--	0.2	2.1	0.1	2.7	1.5	0.2	
Decatur	9.2	--	--	--	--	6.2	0.1	--	0.1	0.7	5.7	0.2	6.8	3.7	0.5	
De Kalb	27.3	0.4	--	0.2	--	6.7	0.1	--	--	0.3	8.8	0.2	6.1	4.0	0.5	
Delaware	15.8	0.2	--	0.1	0.1	3.4	0.1	--	--	0.2	4.6	0.1	3.9	2.9	0.2	
Elkhart	29.1	0.3	--	0.1	--	6.9	0.3	--	0.2	0.6	8.3	0.2	6.6	4.6	1.0	
Fountain	36.6	0.5	--	0.3	--	9.2	0.2	--	0.1	0.6	11.0	0.2	8.4	5.5	0.6	
Fulton	20.4	0.3	--	0.1	--	4.9	0.1	--	--	0.3	6.3	0.1	4.7	3.3	0.3	
Grant	18.2	0.1	--	0.1	--	4.8	0.1	--	0.1	0.4	4.4	0.1	4.9	2.8	0.4	
Hamilton	20.0	0.2	--	0.1	--	4.9	0.2	--	0.1	0.4	5.7	0.1	4.8	3.0	0.5	
Hancock	11.8	0.2	--	0.1	--	3.0	--	--	--	0.1	3.5	0.1	2.8	1.9	0.1	
Hendricks	17.7	0.2	--	0.1	--	4.1	0.1	--	0.1	0.3	4.9	0.1	4.5	2.9	0.4	
Henry	20.6	0.2	--	0.1	--	5.0	0.1	--	0.1	0.4	5.7	0.1	5.3	3.2	0.4	
Howard	8.6	--	--	--	0.1	1.5	--	--	--	0.1	2.3	0.1	2.2	2.1	0.2	
Huntington	22.9	0.3	--	0.2	--	4.8	0.1	--	--	0.2	7.4	0.2	5.4	3.9	0.3	
Jasper	27.0	0.3	--	0.1	--	6.2	0.3	--	0.2	0.5	7.7	0.2	6.3	4.4	0.7	
Jay	24.0	0.1	--	--	--	6.3	0.1	--	0.1	0.7	5.8	0.1	6.8	3.5	0.5	
Johnson	20.1	0.1	--	--	--	5.1	0.1	--	0.1	0.6	4.8	0.1	5.7	3.1	0.4	
Kosciusko	33.0	0.2	--	0.1	--	8.5	0.2	--	0.1	0.9	8.0	0.2	9.1	5.0	0.6	
La Grange	35.9	0.4	--	0.2	--	8.1	0.2	--	0.1	0.4	12.0	0.2	8.6	4.8	0.9	
Lake	17.8	0.2	--	0.1	--	4.4	0.1	--	0.1	0.3	5.0	0.1	4.5	2.6	0.3	
La Porte	41.4	0.4	--	0.1	--	9.8	0.4	--	0.3	0.9	11.9	0.2	9.8	6.1	1.5	
Madison	13.0	0.1	--	--	--	3.3	0.1	--	--	0.3	3.3	0.1	3.4	2.2	0.2	
Marion	0.9	--	--	--	--	0.3	--	--	--	--	--	--	0.3	0.2	--	
Marshall	31.0	0.5	--	0.1	--	7.3	0.2	--	0.1	0.5	9.5	0.2	7.1	4.9	0.6	
Miami	25.4	0.1	--	0.1	--	6.6	0.1	--	0.1	0.7	6.2	0.2	7.0	3.8	0.5	
Montgomery	24.0	0.3	--	0.2	--	5.6	0.1	--	--	0.3	6.8	0.2	5.7	4.4	0.3	
Newton	17.9	0.1	--	0.1	--	4.7	0.1	--	0.1	0.4	4.7	0.1	4.7	2.7	0.2	
Noble	32.3	0.4	--	0.2	--	7.3	0.1	--	0.1	0.4	9.8	0.3	7.5	5.6	0.5	
Porter	30.6	0.3	--	0.2	--	7.4	0.1	--	0.1	0.5	9.2	0.2	7.6	4.3	0.7	
Pulaski	27.0	0.4	--	0.2	--	6.5	0.2	--	0.1	0.5	7.8	0.2	6.2	4.4	0.5	
Randolph	19.7	0.4	--	0.2	--	5.2	0.1	--	0.1	0.6	4.4	0.1	5.7	3.0	0.4	
Rush	12.4	0.2	--	0.1	--	2.5	--	--	--	0.1	3.4	0.1	3.0	2.8	0.1	
St. Joseph	22.5	0.3	--	0.2	--	5.3	0.2	--	0.1	0.4	6.7	0.1	5.0	3.4	0.7	
Shelby	12.5	--	--	--	--	3.3	--	--	0.1	0.3	3.0	0.1	3.6	1.9	0.2	
Starke	26.9	0.3	--	0.1	--	6.7	0.2	--	0.1	0.5	7.3	0.2	6.5	4.3	0.6	
Steuben	31.5	0.4	--	0.2	--	7.1	0.1	--	0.1	0.4	9.6	0.2	7.4	5.4	0.5	
Tippecanoe	22.6	0.3	--	0.2	--	5.3	0.1	--	0.1	0.2	6.7	0.2	5.2	4.1	0.2	
Tipton	4.7	--	--	0.1	--	1.0	--	--	--	0.1	1.2	--	1.2	1.0	--	
Wabash	24.0	0.2	--	0.3	--	5.7	0.1	--	--	0.3	7.2	0.1	6.0	3.6	0.4	
Warren	23.8	0.2	--	0.1	--	5.8	0.1	--	0.1	0.5	6.2	0.2	6.1	4.0	0.4	
Wayne	31.9	0.4	--	0.2	--	7.7	0.2	--	0.1	0.5	9.8	0.1	7.5	4.8	0.6	
Wells	16.2	0.2	--	0.1	--	3.8	0.1	--	--	0.2	4.7	0.1	4.0	2.7	0.2	
White	13.0	0.2	--	0.1	--	2.8	0.1	--	--	0.1	4.2	0.1	3.0	2.1	0.3	
Whitley	20.5	0.3	--	0.1	--	4.9	0.1	--	--	0.4	6.5	0.1	4.6	3.1	0.4	
Total	1,123.2	11.2	--	5.6	2.1	269.4	6.4	--	3.6	20.5	316.8	7.3	277.9	180.2	22.2	
All counties	4,295.8	54.7	23.9	70.6	104.2	1,370.8	46.1	19.8	51.7	30.9	830.5	18.4	984.7	649.0	40.5	

Table 13.--Area of timberland by county and stand-size class, Indian, 1986

(In thousand acres)

Unit and county	All stands	Stand-size class			
		Sawtimber	Poletimber	Sapling & seedling	Nonstocked
Lower Wabash Unit					
Clay	44.3	30.1	6.0	8.1	0.1
Daviess	41.6	27.2	5.8	8.4	0.2
Gibson	42.0	26.1	6.2	9.5	0.2
Greene	105.3	65.5	17.0	22.6	0.2
Knox	30.8	19.2	3.3	8.1	0.2
Martin	128.4	98.3	12.2	17.8	0.1
Parke	87.6	61.0	12.0	14.5	0.1
Pike	83.9	54.8	13.2	15.8	0.1
Posey	45.1	33.1	4.5	7.3	0.2
Putnam	76.5	56.6	6.2	13.5	0.2
Sullivan	64.7	42.0	9.2	13.3	0.2
Vanderburgh	24.7	16.2	3.0	5.4	0.1
Vermillion	34.7	21.7	4.6	8.3	0.1
Vigo	50.8	30.7	8.8	11.2	0.1
Total	860.4	582.5	112.0	163.8	2.1
Knobs Unit					
Brown	131.6	93.6	18.6	19.0	0.4
Clark	84.9	56.3	11.9	16.3	0.4
Crawford	119.3	76.2	17.6	24.9	0.6
Dubois	93.0	61.6	11.8	19.1	0.5
Floyd	34.5	24.7	3.8	5.9	0.1
Harrison	132.1	84.7	22.3	24.4	0.7
Jackson	120.6	75.3	21.4	23.2	0.7
Lawrence	125.3	89.4	15.7	19.7	0.5
Monroe	117.5	79.6	18.4	19.2	0.3
Morgan	86.7	54.4	12.3	19.3	0.7
Orange	129.1	86.3	19.2	22.0	1.6
Owen	107.5	71.9	13.4	21.8	0.4
Perry	152.5	101.7	22.9	27.0	0.9
Scott	43.0	27.2	6.4	9.1	0.3
Spencer	62.5	38.5	8.9	14.6	0.5
Warrick	81.4	44.9	14.5	21.3	0.7
Washington	119.6	82.4	14.9	21.9	0.4
Total	1,741.1	1,148.7	254.0	328.7	9.7
Upland Flats Unit					
Dearborn	91.1	43.9	20.7	25.6	0.9
Fayette	33.5	12.8	8.2	11.9	0.6
Franklin	80.4	31.7	18.6	29.0	1.1
Jefferson	78.3	45.9	12.9	18.7	0.8
Jennings	87.6	42.2	20.0	24.3	1.1
Ohio	27.9	12.8	6.2	8.6	0.3
Ripley	75.7	41.0	11.9	21.8	1.0
Switzerland	75.2	47.2	10.4	17.3	0.3
Union	21.4	7.9	5.0	8.1	0.4
Total	571.1	285.4	113.9	165.3	6.5

(Table 13 continued on next page)

(Table 13 continued)

Unit and county	All stands	Stand-size class			
		Sawtimber	Poletimber	Sapling & seedling	Nonstocked
Northern Unit					
Adams	14.1	9.8	2.3	1.6	0.4
Allen	29.8	17.6	6.0	5.7	0.5
Bartholomew	44.8	32.3	6.5	5.1	0.9
Benton	1.5	1.1	0.3	0.1	--
Blackford	9.4	7.2	1.2	0.8	0.2
Boone	15.2	10.6	2.1	2.1	0.4
Carroll	18.4	12.7	3.0	2.3	0.4
Cass	24.2	15.8	4.8	3.2	0.4
Clinton	9.2	6.8	1.2	1.0	0.2
Decatur	24.1	18.3	3.0	2.3	0.5
De Kalb	27.3	17.6	5.3	3.9	0.5
Delaware	15.8	10.3	2.9	2.4	0.2
Elkhart	29.1	18.1	5.4	4.6	1.0
Fountain	36.6	24.9	6.8	4.3	0.6
Fulton	20.4	13.7	3.7	2.7	0.3
Grant	18.2	13.6	2.7	1.6	0.3
Hamilton	20.0	12.9	3.7	2.9	0.5
Hancock	11.8	7.8	2.3	1.5	0.2
Hendricks	17.7	11.7	2.9	2.7	0.4
Henry	20.6	13.6	3.6	3.0	0.4
Howard	8.6	5.3	1.5	1.7	0.1
Huntington	22.9	14.3	4.3	4.0	0.3
Jasper	27.0	17.3	4.9	4.1	0.7
Jay	24.0	18.4	3.0	2.1	0.5
Johnson	20.1	14.8	2.7	2.2	0.4
Kosciusko	33.0	25.1	4.3	2.9	0.7
La Grange	35.9	21.5	6.2	7.3	0.9
Lake	17.8	12.2	3.1	2.2	0.3
La Porte	41.4	26.4	7.1	6.5	1.4
Madison	13.0	9.5	2.0	1.3	0.2
Marion	0.9	0.3	0.3	0.3	--
Marshall	31.0	20.3	5.6	4.5	0.6
Miami	25.4	19.4	3.4	2.1	0.5
Montgomery	24.0	15.9	4.7	3.2	0.2
Newton	17.9	13.4	2.9	1.4	0.2
Noble	32.3	20.7	6.1	5.0	0.5
Porter	30.6	19.1	5.7	5.1	0.7
Pulaski	27.0	17.9	5.0	3.6	0.5
Randolph	19.7	15.0	2.5	1.8	0.4
Rush	12.4	7.4	2.5	2.3	0.2
St. Joseph	22.5	13.8	4.3	3.7	0.7
Shelby	12.5	9.5	1.7	1.0	0.3
Starke	26.9	18.2	4.7	3.4	0.6
Steuben	31.5	20.1	5.8	5.1	0.5
Tippecanoe	22.6	14.6	4.6	3.2	0.2
Tipton	4.7	2.8	1.0	0.9	--
Wabash	24.0	15.0	4.6	4.0	0.4
Warren	23.8	16.6	3.9	2.9	0.4
Wayne	31.9	20.6	5.9	4.8	0.6
Wells	16.2	10.9	3.0	2.1	0.2
White	13.0	7.7	2.6	2.4	0.3
Whitley	20.5	13.0	4.0	3.1	0.4
Total	1,123.2	753.4	193.6	154.0	22.2
All counties	4,295.8	2,770.0	673.5	811.8	40.5

Table 14.--Area of timberland by county and site class, Indiana, 1986

(In thousand acres)

Unit and county	All classes	Site class (cubic feet of growth per acre per year)				
		165+	120-164	85-119	50-84	20-49
Lower Wabash Unit						
Clay	44.3	--	8.6	13.4	15.6	6.7
Daviess	41.6	--	6.2	14.1	15.6	5.7
Gibson	42.0	--	6.8	13.7	15.2	6.3
Greene	105.3	--	18.1	36.2	36.1	14.9
Knox	30.8	--	5.1	8.7	11.9	5.1
Martin	128.4	--	17.0	44.8	53.0	13.6
Parke	87.6	--	15.7	29.7	31.2	11.0
Pike	83.9	--	13.6	30.2	29.6	10.5
Posey	45.1	--	7.2	14.7	17.4	5.8
Putnam	76.5	--	14.1	22.3	29.4	10.7
Sullivan	64.7	--	10.0	23.0	23.1	8.6
Vanderburgh	24.7	--	4.8	7.3	9.0	3.6
Vermillion	34.7	--	5.4	11.8	12.7	4.8
Vigo	50.8	--	8.4	17.3	17.8	7.3
Total	860.4	--	141.0	287.2	317.6	114.6
Knobs Unit						
Brown	131.6	--	21.7	43.3	46.2	20.4
Clark	84.9	--	15.4	26.7	29.4	13.4
Crawford	119.3	--	20.7	36.7	39.4	22.5
Dubois	93.0	--	16.2	32.3	31.1	13.4
Floyd	34.5	--	6.4	14.0	10.5	3.6
Harrison	132.1	--	21.3	41.8	45.7	23.3
Jackson	120.6	--	17.2	36.2	44.5	22.7
Lawrence	125.3	--	20.6	41.7	43.1	19.9
Monroe	117.5	--	18.8	40.1	39.7	18.9
Morgan	86.7	--	13.5	26.2	30.9	16.1
Orange	129.1	--	20.2	39.8	44.8	24.3
Owen	107.5	--	18.2	40.8	35.9	12.6
Perry	152.5	--	24.0	47.5	52.4	28.6
Scott	43.0	--	7.2	13.3	15.0	7.5
Spencer	62.5	--	9.8	18.5	23.3	10.9
Warrick	81.4	--	13.1	24.8	28.8	14.7
Washington	119.6	--	22.3	48.2	37.1	12.0
Total	1,741.1	--	286.6	571.9	597.8	284.8
Upland Flats Unit						
Dearborn	91.1	--	15.0	31.1	23.6	21.4
Fayette	33.5	--	5.6	11.9	8.3	7.7
Franklin	80.4	--	12.0	28.8	21.0	18.6
Jefferson	78.3	--	18.2	29.6	18.7	11.8
Jennings	87.6	--	15.1	31.0	21.3	20.2
Ohio	27.9	--	4.5	9.6	7.3	6.5
Ripley	75.7	--	16.5	27.8	19.6	11.8
Switzerland	75.2	--	16.4	27.3	18.5	13.0
Union	21.4	--	3.2	7.0	5.9	5.3
Total	571.1	--	106.5	204.1	144.2	116.3

(Table 14 continued on next page)

(Table 14 continued)

Unit and county	All classes	Site class (cubic feet of growth per acre per year)				
		165+	120-164	85-119	50-84	20-49
Northern Unit						
Adams	14.1	--	2.1	5.4	4.3	2.3
Allen	29.8	--	3.9	12.5	8.2	5.2
Bartholomew	44.8	--	6.6	17.2	13.9	7.1
Benton	1.5	--	0.3	0.5	0.5	0.2
Blackford	9.4	--	1.5	3.4	3.1	1.4
Boone	15.2	--	2.3	5.6	4.8	2.5
Carroll	18.4	--	2.8	6.9	5.7	3.0
Cass	24.2	--	3.3	9.9	7.0	4.0
Clinton	9.2	--	1.4	3.4	3.0	1.4
Decatur	24.1	--	3.9	8.9	7.6	3.7
De Kalb	27.3	--	3.8	10.6	8.1	4.8
Delaware	15.8	--	2.3	6.2	4.6	2.7
Elkhart	29.1	--	3.8	11.3	8.7	5.3
Fountain	36.6	--	5.3	14.5	10.8	6.0
Fulton	20.4	--	2.9	8.1	6.0	3.4
Grant	18.2	--	3.1	6.8	5.6	2.7
Hamilton	20.0	--	2.9	7.6	6.0	3.5
Hancock	11.8	--	1.8	4.6	3.5	1.9
Hendricks	17.7	--	2.4	6.9	5.4	3.0
Henry	20.6	--	2.9	7.8	6.5	3.4
Howard	8.6	--	1.3	3.4	2.4	1.5
Huntington	22.9	--	3.1	9.3	6.7	3.8
Jasper	27.0	--	3.6	10.7	8.0	4.7
Jay	24.0	--	3.7	8.9	7.7	3.7
Johnson	20.1	--	3.0	7.5	6.5	3.1
Kosciusko	33.0	--	5.2	12.4	10.4	5.0
La Grange	35.9	--	4.2	12.9	11.8	7.0
Lake	17.8	--	2.7	6.8	5.4	2.9
La Porte	41.4	--	5.5	15.6	12.8	7.5
Madison	13.0	--	2.0	5.1	3.9	2.0
Marion	0.9	--	0.1	0.3	0.4	0.1
Marshall	31.0	--	4.0	12.4	9.3	5.3
Miami	25.4	--	4.2	9.5	7.9	3.8
Montgomery	24.0	--	3.8	9.5	6.8	3.9
Newton	17.9	--	3.1	6.8	5.3	2.7
Noble	32.3	--	4.5	12.8	9.4	5.6
Porter	30.6	--	4.2	11.4	9.7	5.3
Pulaski	27.0	--	3.9	10.7	7.8	4.6
Randolph	19.7	--	3.1	7.2	6.4	3.0
Rush	12.4	--	1.7	5.1	3.5	2.1
St. Joseph	22.5	--	3.0	8.7	6.7	4.1
Shelby	12.5	--	2.1	4.6	3.9	1.9
Starke	26.9	--	3.9	10.5	8.1	4.4
Steuben	31.5	--	4.4	12.1	9.4	5.6
Tippecanoe	22.6	--	3.4	9.1	6.4	3.7
Tipton	4.7	--	0.7	1.8	1.4	0.8
Wabash	24.0	--	3.3	9.0	7.6	4.1
Warren	23.8	--	3.6	9.1	7.2	3.9
Wayne	31.9	--	4.1	12.6	9.8	5.4
Wells	16.2	--	2.6	6.3	4.6	2.7
White	13.0	--	1.7	4.9	4.0	2.4
Whitley	20.5	--	2.6	8.2	6.2	3.5
Total	1,123.2	--	161.6	433.3	340.7	187.6
All counties	4,295.8	--	695.7	1,496.5	1,400.3	703.3

Table 15.--Area of timberland by county and stocking class of growing-stock trees, Indiana, 1986

(In thousand acres)

Unit and county	All classes	Stocking percent of growing-stock trees				
		Less than 16.7	16.7- 59.9	60.0- 99.9	100.0- 129.9	130.0+
Lower Wabash Unit						
Clay	44.3	0.1	4.2	23.2	15.2	1.6
Daviess	41.6	0.2	3.3	20.3	15.3	2.5
Gibson	42.0	0.2	3.5	21.5	14.6	2.2
Greene	105.3	0.2	8.2	54.3	37.2	5.4
Knox	30.8	0.2	3.4	16.2	9.5	1.5
Martin	128.4	0.1	9.0	59.1	53.9	6.3
Parke	87.6	0.1	5.3	44.5	34.0	3.7
Pike	83.9	0.1	4.9	42.0	32.8	4.1
Posey	45.1	0.2	3.4	21.9	17.3	2.3
Putnam	76.5	0.2	7.1	39.8	27.4	2.0
Sullivan	64.7	0.2	4.1	32.3	24.6	3.5
Vanderburgh	24.7	0.1	2.0	13.6	8.0	1.0
Vermillion	34.7	0.1	2.6	17.9	12.1	2.0
Vigo	50.8	0.1	3.8	26.3	18.0	2.6
Total	860.4	2.1	64.8	432.9	319.9	40.7
Knobs Unit						
Brown	131.6	0.3	6.1	53.4	61.4	10.4
Clark	84.9	0.4	5.7	33.7	37.7	7.4
Crawford	119.3	0.6	6.0	50.2	52.9	9.6
Dubois	93.0	0.5	6.2	37.9	41.5	6.9
Floyd	34.5	0.2	2.9	13.0	16.0	2.4
Harrison	132.1	0.6	8.4	54.6	60.1	8.4
Jackson	120.6	0.7	7.6	50.5	54.6	7.2
Lawrence	125.3	0.5	5.7	52.6	57.2	9.3
Monroe	117.5	0.4	6.5	49.8	53.2	7.6
Morgan	86.7	0.8	6.3	36.2	38.1	5.3
Orange	129.1	1.6	6.5	52.8	59.2	9.0
Owen	107.5	0.3	9.4	40.6	50.1	7.1
Perry	152.5	0.9	6.0	58.3	72.4	14.9
Scott	43.0	0.3	2.9	17.8	19.0	3.0
Spencer	62.5	0.5	4.6	25.7	27.7	4.0
Warrick	81.4	0.7	7.1	33.4	35.0	5.2
Washington	119.6	0.4	10.8	43.5	55.5	9.4
Total	1,741.1	9.7	108.7	704.0	791.6	127.1
Upland Flats Unit						
Dearborn	91.1	0.9	19.6	42.3	23.4	4.9
Fayette	33.5	0.6	8.7	14.3	8.0	1.9
Franklin	80.4	1.2	19.5	36.4	18.8	4.5
Jefferson	78.3	0.8	13.7	36.9	23.6	3.3
Jennings	87.6	1.1	19.3	38.9	23.3	5.0
Ohio	27.9	0.3	6.2	12.8	7.0	1.6
Ripley	75.7	0.9	14.0	36.7	21.0	3.1
Switzerland	75.2	0.3	11.3	36.1	23.2	4.3
Union	21.4	0.4	5.3	9.7	4.9	1.1
Total	571.1	6.5	117.6	264.1	153.2	29.7

(Table 15 continued on next page)

(Table 15 continued)

Unit and county	All classes	Stocking percent of growing-stock trees				
		Less than 16.7	16.7- 59.9	60.0- 99.9	100.0- 129.9	130.0+
Northern Unit						
Adams	14.1	0.3	2.8	7.0	3.5	0.5
Allen	29.8	0.5	8.3	14.4	5.7	0.9
Bartholomew	44.8	0.9	8.9	21.7	11.8	1.5
Benton	1.5	--	0.3	0.7	0.4	0.1
Blackford	9.4	0.2	1.7	4.5	2.7	0.3
Boone	15.2	0.4	3.2	7.2	4.0	0.4
Carroll	18.4	0.4	3.8	8.9	4.7	0.6
Cass	24.2	0.4	5.1	12.3	5.4	1.0
Clinton	9.2	0.2	1.8	4.3	2.6	0.3
Decatur	24.1	0.5	4.3	11.7	6.8	0.8
De Kalb	27.3	0.5	5.5	14.3	6.0	1.0
Delaware	15.8	0.2	3.5	8.1	3.5	0.5
Elkhart	29.1	1.0	6.4	14.3	6.4	1.0
Fountain	36.6	0.6	7.1	19.0	8.5	1.4
Fulton	20.4	0.4	4.3	10.3	4.6	0.8
Grant	18.2	0.3	3.2	9.2	4.9	0.6
Hamilton	20.0	0.5	4.0	10.2	4.6	0.7
Hancock	11.8	0.1	2.4	6.1	2.7	0.5
Hendricks	17.7	0.4	4.1	8.3	4.3	0.6
Henry	20.6	0.4	4.4	10.0	5.1	0.7
Howard	8.6	0.1	2.4	4.2	1.7	0.2
Huntington	22.9	0.3	4.9	11.8	5.1	0.8
Jasper	27.0	0.7	6.1	13.2	6.1	0.9
Jay	24.0	0.5	4.4	11.5	6.8	0.8
Johnson	20.1	0.5	4.0	9.4	5.6	0.6
Kosciusko	33.0	0.6	6.1	15.9	9.3	1.1
La Grange	35.9	0.9	8.1	17.8	8.0	1.1
Lake	17.8	0.4	3.4	9.0	4.4	0.6
La Porte	41.4	1.4	8.9	20.1	9.7	1.3
Madison	13.0	0.2	2.5	6.4	3.4	0.5
Marion	0.9	--	0.4	0.3	0.2	--
Marshall	31.0	0.6	7.0	15.2	7.0	1.2
Miami	25.4	0.5	4.4	12.5	7.1	0.9
Montgomery	24.0	0.2	4.9	12.8	5.2	0.9
Newton	17.9	0.3	2.8	9.4	4.7	0.7
Noble	32.3	0.5	7.1	16.5	7.0	1.2
Porter	30.6	0.7	6.3	15.4	7.2	1.0
Pulaski	27.0	0.6	5.6	13.7	6.1	1.0
Randolph	19.7	0.4	3.6	9.4	5.7	0.6
Rush	12.4	0.1	3.5	5.9	2.5	0.4
St. Joseph	22.5	0.7	4.9	11.2	4.9	0.8
Shelby	12.5	0.2	2.2	6.1	3.6	0.4
Starke	26.9	0.6	5.5	13.3	6.5	1.0
Steuben	31.5	0.5	6.9	16.2	6.8	1.1
Tippecanoe	22.6	0.2	4.9	11.8	4.8	0.9
Tipton	4.7	--	1.4	2.2	1.0	0.1
Wabash	24.0	0.4	5.2	12.0	5.6	0.8
Warren	23.8	0.4	4.9	11.8	5.9	0.8
Wayne	31.9	0.6	6.9	15.9	7.3	1.2
Wells	16.2	0.2	3.2	8.5	3.7	0.6
White	13.0	0.3	3.0	6.6	2.7	0.4
Whitley	20.5	0.4	4.5	10.3	4.5	0.8
Total	1,123.2	22.2	235.0	558.8	268.3	38.9
All counties	4,295.8	40.5	526.1	1,959.8	1,533.0	236.4

Table 16.--Area of timberland by forest type, ownership class and Forest Survey Unit, Indiana, 1986

(In thousand acres)

Forest type	Ownership class								
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer	Misc. priv.-corp.	Misc. priv.-indiv.
All Units									
Jack-red-white pine	54.7	11.5	--	4.5	--	--	6.4	14.0	18.3
Shortleaf pine	23.9	14.8	--	3.5	--	--	1.9	1.6	2.1
Scotch-Virginia pine	70.6	--	--	4.0	--	--	37.0	9.4	20.2
Oak-pine	104.2	3.4	2.5	1.9	--	--	50.4	6.3	39.7
Oak-hickory	1,370.8	99.7	70.0	92.6	8.3	12.5	451.4	111.4	524.9
Chestnut-scarlet oak	46.1	6.2	--	13.9	--	--	1.2	--	24.8
Sassafras-persimmon	19.8	--	--	--	--	--	6.7	2.1	11.0
Oak-gum	51.7	--	--	6.6	--	--	23.0	6.2	15.9
Lowland oak	30.9	--	--	--	--	--	16.2	4.4	10.3
Elm-ash-soft maple	830.5	2.0	28.4	17.8	11.5	--	374.7	103.1	293.0
Cottonwood	18.4	--	--	2.1	2.3	--	2.8	8.8	2.4
Maple-beech	984.7	10.7	42.1	13.1	4.8	3.8	422.1	88.9	399.2
Cherry-ash-yellow-poplar	649.0	16.0	16.9	17.4	2.0	--	295.2	48.5	253.0
Nonstocked	40.5	1.7	2.7	--	--	2.1	14.9	2.4	16.7
All types	4,295.8	166.0	162.6	177.4	28.9	18.4	1,703.9	407.1	1,631.5
Lower Wabash									
Jack-red-white pine	9.9	--	--	--	--	--	--	9.9	--
Shortleaf pine	3.7	0.5	--	1.6	--	--	--	1.6	--
Scotch-Virginia pine	17.3	--	--	--	--	--	8.6	5.4	3.3
Oak-pine	2.3	--	--	--	--	--	--	2.3	--
Oak-hickory	296.1	4.5	40.4	2.0	--	--	101.7	25.5	122.0
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	7.4	--	--	--	--	--	4.8	--	2.6
Oak-gum	8.1	--	--	4.3	--	--	--	1.5	2.3
Lowland oak	8.3	--	--	--	--	--	2.0	2.0	4.3
Elm-ash-soft maple	224.4	0.8	4.6	11.2	4.0	--	92.2	36.8	74.8
Cottonwood	6.7	--	--	2.1	2.3	--	--	2.3	--
Maple-beech	159.4	2.2	8.6	2.0	--	--	52.8	24.3	69.5
Cherry-ash-yellow-poplar	114.7	1.0	5.6	6.3	2.0	--	50.4	11.3	38.1
Nonstocked	2.1	--	--	--	--	2.1	--	--	--
All types	860.4	9.0	59.2	29.5	8.3	2.1	312.5	122.9	316.9
Knobs									
Jack-red-white pine	29.8	11.5	--	4.5	--	--	3.6	4.1	6.1
Shortleaf pine	20.2	14.3	--	1.9	--	--	1.9	--	2.1
Scotch-Virginia pine	45.7	--	--	4.0	--	--	20.8	4.0	16.9
Oak-pine	54.2	3.4	2.5	1.9	--	--	25.7	1.9	18.8
Oak-hickory	689.2	95.2	20.1	80.6	3.8	9.7	177.9	50.9	251.0
Chestnut-scarlet oak	39.7	6.2	--	13.9	--	--	--	--	19.6
Sassafras-persimmon	12.4	--	--	--	--	--	--	--	8.4
Oak-gum	25.6	--	--	2.3	--	--	1.9	2.1	8.2
Lowland oak	2.1	--	--	--	--	--	13.1	2.0	--
Elm-ash-soft maple	202.6	1.2	10.7	4.2	--	--	66.5	31.7	88.3
Cottonwood	4.4	--	--	--	--	--	--	4.4	--
Maple-beech	402.2	8.5	22.6	10.1	2.1	3.8	127.7	38.7	188.7
Cherry-ash-yellow-poplar	203.3	15.0	6.1	5.9	--	--	73.3	14.8	88.2
Nonstocked	9.7	1.7	--	--	--	--	--	--	8.0
All types	1,741.1	157.0	62.0	129.3	5.9	13.5	514.5	154.6	704.3

(Table 16 continued on next page)

(Table 16 continued)

Unit and forest type	Ownership class								
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer	Misc. priv.-corp.	Misc. priv.-indiv.
Upland Flats Unit									
Jack-red-white pine	3.8	--	--	--	--	--	--	--	3.8
Shortleaf pine	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	2.0	--	--	--	--	--	2.0	--	--
Oak-pine	45.6	--	--	--	--	--	22.6	2.1	20.9
Oak-hickory	116.1	--	4.7	4.8	--	--	47.7	8.9	50.0
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--
Oak-gum	14.4	--	--	--	--	--	7.5	2.7	4.2
Lowland oak	--	--	--	--	--	--	--	--	--
Elm-ash-soft maple	86.7	--	2.1	--	--	--	45.8	2.1	36.7
Cottonwood	--	--	--	--	--	--	--	--	--
Maple-beech	145.2	--	4.0	--	2.7	--	67.3	4.1	67.1
Cherry-ash-yellow-poplar	150.8	--	--	2.8	--	--	76.7	6.6	64.7
Nonstocked	6.5	--	2.7	--	--	--	1.7	--	2.1
All types	571.1	--	13.5	7.6	2.7	--	271.3	26.5	249.5
Northern Unit									
Jack-red-white pine	11.2	--	--	--	--	--	2.8	--	8.4
Shortleaf pine	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	5.6	--	--	--	--	--	5.6	--	--
Oak-pine	2.1	--	--	--	--	--	2.1	--	--
Oak-hickory	269.4	--	4.8	5.2	4.5	2.8	124.1	26.1	101.9
Chestnut-scarlet oak	6.4	--	--	--	--	--	1.2	--	5.2
Sassafras-persimmon	--	--	--	--	--	--	--	--	--
Oak-gum	3.6	--	--	--	--	--	2.4	--	1.2
Lowland oak	20.5	--	--	--	--	--	12.1	2.4	6.0
Elm-ash-soft maple	316.8	--	11.0	2.4	7.5	--	170.2	32.5	93.2
Cottonwood	7.3	--	--	--	--	--	2.8	2.1	2.4
Maple-beech	277.9	--	6.9	1.0	--	--	174.3	21.8	73.9
Cherry-ash-yellow-poplar	180.2	--	5.2	2.4	--	--	94.8	15.8	62.0
Nonstocked	22.2	--	--	--	--	--	13.2	2.4	6.6
All types	1,123.2	--	27.9	11.0	12.0	2.8	605.6	103.1	360.8

Table 17.--Area of timberland by ownership class and site class, and Forest Survey Unit, Indiana, 1986

(In thousand acres)

Unit and ownership class	All classes	Site class (cubic feet of growth per acre per year)				
		165+	120-164	85-119	50-84	20-49
All Units						
National forest	166.0	--	21.7	48.1	58.1	38.1
Miscellaneous federal	162.6	--	17.2	45.8	77.6	22.0
State	177.4	--	27.5	44.3	58.3	47.3
County and municipal	28.9	--	--	16.0	10.1	2.8
Forest industry	18.4	--	3.8	1.9	5.9	6.8
Farmer	1,703.9	--	294.1	605.3	531.3	273.2
Misc. private-corporation	407.1	--	70.0	139.1	138.6	59.4
Misc. private-individual	1,631.5	--	261.4	596.0	520.4	253.7
All owners	4,295.8	--	695.7	1,496.5	1,400.3	703.3
Lower Wabash Unit						
National forest	9.0	--	--	2.7	6.3	--
Miscellaneous federal	59.2	--	4.0	16.8	30.4	8.0
State	29.5	--	7.9	8.1	6.3	7.2
County and municipal	8.3	--	--	6.0	2.3	--
Forest industry	2.1	--	--	--	2.1	--
Farmer	312.5	--	39.9	104.5	126.6	41.5
Misc. private-corporation	122.9	--	32.1	37.7	34.3	18.8
Misc. private-individual	316.9	--	57.1	111.4	109.3	39.1
All owners	860.4	--	141.0	287.2	317.6	114.6
Knobs Unit						
National forest	157.0	--	21.7	45.4	51.8	38.1
Miscellaneous federal	62.0	--	8.3	17.8	29.2	6.7
State	129.3	--	14.4	30.4	47.2	37.3
County and municipal	5.9	--	--	2.1	3.8	--
Forest industry	13.5	--	3.8	1.9	3.8	4.0
Farmer	514.5	--	100.3	170.4	170.3	73.5
Misc. private-corporation	154.6	--	27.0	48.5	60.0	19.1
Misc. private-individual	704.3	--	111.1	255.4	231.7	106.1
All owners	1,741.1	--	286.6	571.9	597.8	284.8
Upland Flats Unit						
National forest	--	--	--	--	--	--
Miscellaneous federal	13.5	--	--	4.0	6.7	2.8
State	7.6	--	2.8	4.8	--	--
County and municipal	2.7	--	--	2.7	--	--
Forest industry	--	--	--	--	--	--
Farmer	271.3	--	60.4	99.0	61.8	50.1
Misc. private-corporation	26.5	--	2.1	9.6	6.1	8.7
Misc. private-individual	249.5	--	41.2	84.0	69.6	54.7
All owners	571.1	--	106.5	204.1	144.2	116.3
Northern Unit						
National forest	--	--	--	--	--	--
Miscellaneous federal	27.9	--	4.9	7.2	11.3	4.5
State	11.0	--	2.4	1.0	4.8	2.8
County and municipal	12.0	--	--	5.2	4.0	2.8
Forest industry	2.8	--	--	--	--	2.8
Farmer	605.6	--	93.5	231.4	172.6	108.1
Misc. private-corporation	103.1	--	8.8	43.3	38.2	12.8
Misc. private-individual	360.8	--	52.0	145.2	109.8	53.8
All owners	1,123.2	--	161.6	433.3	340.7	187.6

Table 18.--Area of privately owned timberland by ownership class, owner tenure, and size of holding, Indiana, 1986

(In thousand acres)

Ownership class and owner tenure class	All sizes	Size of holding (acres)								
		1-4	5-10	11-20	21-50	51-100	101- 500	501- 2,500	2,501- 5,000	5001+
Forest industry										
1-4 years	7.6	--	--	--	--	--	5.7	--	--	1.9
5-9 years	--	--	--	--	--	--	--	--	--	--
10-19 years	4.0	--	2.1	--	--	--	--	--	--	1.9
20+ years	6.8	--	--	--	--	--	4.7	--	--	2.1
All classes	18.4	--	2.1	--	--	--	10.4	--	--	5.9
Farmer										
1-4 years	173.7	18.2	3.8	18.4	33.7	48.5	46.7	4.4	--	--
5-9 years	327.7	14.4	9.9	65.5	83.2	69.3	80.6	4.8	--	--
10-19 years	529.4	10.5	36.3	72.1	181.4	142.8	82.0	4.3	--	--
20+ years	673.1	26.7	36.4	95.6	183.0	174.4	150.4	6.6	--	--
All classes	1,703.9	69.8	86.4	251.6	481.3	435.0	359.7	20.1	--	--
Misc. priv.-corporation										
1-4 years	71.9	2.1	--	2.8	8.5	8.9	30.3	11.2	3.5	4.6
5-9 years	97.6	6.2	2.4	6.3	9.5	11.2	31.4	14.8	7.2	8.6
10-19 years	118.6	2.4	--	7.1	8.1	14.0	24.4	33.4	3.7	25.5
20+ years	119.0	4.3	4.5	2.4	14.7	15.1	21.9	25.8	7.7	22.6
All classes	407.1	15.0	6.9	18.6	40.8	49.2	108.0	85.2	22.1	61.3
Misc. priv.-individual										
1-4 years	330.9	29.1	38.1	37.3	76.8	68.7	63.7	8.5	--	8.7
5-9 years	368.1	35.6	18.0	65.9	125.6	60.3	61.5	1.2	--	--
10-19 years	493.9	50.0	34.4	67.9	115.1	126.5	89.9	5.9	4.2	--
20+ years	438.6	27.7	27.0	58.8	117.4	105.6	93.6	6.2	--	2.3
All classes	1,631.5	142.4	117.5	229.9	434.9	361.1	308.7	21.8	4.2	11.0
All private owners										
1-4 years	584.1	49.4	41.9	58.5	119.0	126.1	146.4	24.1	3.5	15.2
5-9 years	793.4	56.2	30.3	137.7	218.3	140.8	173.5	20.8	7.2	8.6
10-19 years	1,145.9	62.9	72.8	147.1	304.6	283.3	196.3	43.6	7.9	27.4
20+ years	1,237.5	58.7	67.9	156.8	315.1	295.1	270.6	38.6	7.7	27.0
All classes	3,760.9	227.2	212.9	500.1	957.0	845.3	786.8	127.1	26.3	78.2

Table 19.--Area of timberland by ownership class and stocking class of growing-stock trees, and Forest Survey Unit, 1986

(In thousand acres)

Unit and ownership class	All classes	Stocking percent of growing stock trees				
		Less than 16.7	16.7-59.9	60.0-99.9	100.0-129.9	130.0+
All Units						
National forest	166.0	1.7	2.0	58.5	82.0	21.8
Miscellaneous federal	162.6	2.7	6.3	66.2	76.9	10.5
State	177.4	--	6.6	60.3	94.6	15.9
County and municipal	28.9	--	11.5	1.7	15.7	--
Forest industry	18.4	2.1	--	6.8	9.5	--
Farmer	1,703.9	14.9	266.3	811.0	526.7	85.0
Misc. private-corporation	407.1	2.4	48.2	176.8	157.1	22.6
Misc. private-individual	1,631.5	16.7	185.2	778.5	570.5	80.6
All owners	4,295.8	40.5	526.1	1,959.8	1,533.0	236.4
Lower Wabash Unit						
National forest	9.0	--	1.0	3.0	5.0	--
Miscellaneous federal	59.2	--	--	17.0	40.2	2.0
State	29.5	--	4.2	15.0	10.3	--
County and municipal	8.3	--	2.0	--	6.3	--
Forest industry	2.1	2.1	--	--	--	--
Farmer	312.5	--	36.7	169.8	88.5	17.5
Misc. private-corporation	122.9	--	4.3	58.4	54.3	5.9
Misc. private-individual	316.9	--	16.6	169.7	115.3	15.3
All owners	860.4	2.1	64.8	432.9	319.9	40.7
Knobs Unit						
National forest	157.0	1.7	1.0	55.5	77.0	21.8
Miscellaneous federal	62.0	--	2.5	33.7	20.1	5.7
State	129.3	--	--	38.4	80.5	10.4
County and municipal	5.9	--	1.7	--	4.2	--
Forest industry	13.5	--	--	4.0	9.5	--
Farmer	514.5	--	48.8	213.0	221.3	31.4
Misc. private-corporation	154.6	--	18.7	62.1	59.8	14.0
Misc. private-individual	704.3	8.0	36.0	297.3	319.2	43.8
All owners	1,741.1	9.7	108.7	704.0	791.6	127.1
Upland Flats Unit						
National forest	--	--	--	--	--	--
Miscellaneous federal	13.5	2.7	2.1	3.8	4.9	--
State	7.6	--	--	2.1	--	5.5
County and municipal	2.7	--	2.7	--	--	--
Forest industry	--	--	--	--	--	--
Farmer	271.3	1.7	56.3	110.9	91.6	10.8
Misc. private-corporation	26.5	--	6.2	10.7	6.9	2.7
Misc. private-individual	249.5	2.1	50.3	136.6	49.8	10.7
All owners	571.1	6.5	117.6	264.1	153.2	29.7
Northern Unit						
National forest	--	--	--	--	--	--
Miscellaneous federal	27.9	--	1.7	11.7	11.7	2.8
State	11.0	--	2.4	4.8	3.8	--
County and municipal	12.0	--	5.1	1.7	5.2	--
Forest industry	2.8	--	--	2.8	--	--
Farmer	605.6	13.2	124.5	317.3	125.3	25.3
Misc. private-corporation	103.1	2.4	19.0	45.6	36.1	--
Misc. private-individual	360.8	6.6	82.3	174.9	86.2	10.8
All owners	1,123.2	22.2	235.0	558.8	268.3	38.9

Table 20.--Area of timberland by forest type and stand-size class,
and Forest Survey Unit, 1986

(In thousand acres)

Unit and forest type	All stands	Stand-size class			
		Sawtimber	Poletimber	Sapling & seedling	Nonstocked
All Units					
Jack-red-white pine	54.7	22.3	18.3	14.1	--
Shortleaf pine	23.9	7.6	14.5	1.8	--
Scotch-Virginia pine	70.6	24.4	14.1	32.1	--
Oak-pine	104.2	44.6	25.8	33.8	--
Oak-hickory	1,370.8	975.9	189.8	205.1	--
Chestnut-scarlet oak	46.1	46.1	--	--	--
Sassafras-persimmon	19.8	--	4.2	15.6	--
Oak-gum	51.7	29.7	4.6	17.4	--
Lowland oak	30.9	25.3	3.6	2.0	--
Elm-ash-soft maple	830.5	495.4	169.1	166.0	--
Cottonwood	18.4	11.7	6.7	--	--
Maple-beech	984.7	692.3	110.5	181.9	--
Cherry-ash-yellow-poplar	649.0	394.7	112.3	142.0	--
Nonstocked	40.5	--	--	--	40.5
All types	4,295.8	2,770.0	673.5	811.8	40.5
Lower Wabash Unit					
Jack-red-white pine	9.9	7.6	2.3	--	--
Shortleaf pine	3.7	--	3.7	--	--
Scotch-Virginia pine	17.3	7.4	3.1	6.8	--
Oak-pine	2.3	2.3	--	--	--
Oak-hickory	296.1	218.6	27.4	50.1	--
Chestnut-scarlet oak	--	--	--	--	--
Sassafras-persimmon	7.4	--	--	7.4	--
Oak-gum	8.1	5.8	2.3	--	--
Lowland oak	8.3	6.3	--	2.0	--
Elm-ash-soft maple	224.4	132.5	36.1	55.8	--
Cottonwood	6.7	2.3	4.4	--	--
Maple-beech	159.4	113.1	20.5	25.8	--
Cherry-ash-yellow-poplar	114.7	86.6	12.2	15.9	--
Nonstocked	2.1	--	--	--	2.1
All types	860.4	582.5	112.0	163.8	2.1
Knobs Unit					
Jack-red-white pine	29.8	8.1	7.6	14.1	--
Shortleaf pine	20.2	7.6	10.8	1.8	--
Scotch-Virginia pine	45.7	14.2	8.2	23.3	--
Oak-pine	54.2	25.3	13.3	15.6	--
Oak-hickory	689.2	502.5	86.8	99.9	--
Chestnut-scarlet oak	39.7	39.7	--	--	--
Sassafras-persimmon	12.4	--	4.2	8.2	--
Oak-gum	25.6	16.7	2.3	6.6	--
Lowland oak	2.1	2.1	--	--	--
Elm-ash-soft maple	202.6	105.1	48.3	49.2	--
Cottonwood	4.4	2.1	2.3	--	--
Maple-beech	402.2	295.9	38.6	67.7	--
Cherry-ash-yellow-poplar	203.3	129.4	31.6	42.3	--
Nonstocked	9.7	--	--	--	9.7
All types	1,741.1	1,148.7	254.0	328.7	9.7

(Table 20 continued on next page)

(Table 20 continued)

Unit and forest type	All stands	Stand-size class			
		Sawtimber	Poletimber	Sapling & seedling	Nonstocked
Upland Flats Unit					
Jack-red-white pine	3.8	3.8	--	--	--
Shortleaf pine	--	--	--	--	--
Scotch-Virginia pine	2.0	--	--	2.0	--
Oak-pine	45.6	17.0	12.5	16.1	--
Oak-hickory	116.1	70.9	17.4	27.8	--
Chestnut-scarlet oak	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--
Oak-gum	14.4	4.8	--	9.6	--
Lowland oak	--	--	--	--	--
Elm-ash-soft maple	86.7	44.4	21.8	20.5	--
Cottonwood	--	--	--	--	--
Maple-beech	145.2	83.1	16.9	45.2	--
Cherry-ash-yellow-poplar	150.8	61.4	45.3	44.1	--
Nonstocked	6.5	--	--	--	6.5
All types	571.1	285.4	113.9	165.3	6.5
Northern Unit					
Jack-red-white pine	11.2	2.8	8.4	--	--
Shortleaf pine	--	--	--	--	--
Scotch-Virginia pine	5.6	2.8	2.8	--	--
Oak-pine	2.1	--	--	2.1	--
Oak-hickory	269.4	183.9	58.2	27.3	--
Chestnut-scarlet oak	6.4	6.4	--	--	--
Sassafras-persimmon	--	--	--	--	--
Oak-gum	3.6	2.4	--	1.2	--
Lowland oak	20.5	16.9	3.6	--	--
Elm-ash-soft maple	316.8	213.4	62.9	40.5	--
Cottonwood	7.3	7.3	--	--	--
Maple-beech	277.9	200.2	34.5	43.2	--
Cherry-ash-yellow-poplar	180.2	117.3	23.2	39.7	--
Nonstocked	22.2	--	--	--	22.2
All types	1,123.2	753.4	193.6	154.0	22.2

Table 21.--Area of timberland by ownership class and stand-volume class,
and Forest Survey Unit, 1986

(In thousand acres)

Unit and ownership class	All classes	Stand-volume class (board feet ^{1/})		
		Less than 1,500	1,500 to 5,000	5,000+
All Units				
National forest	166.0	34.2	52.4	79.4
Miscellaneous federal	162.6	47.7	49.0	65.9
State	177.4	34.2	38.2	105.0
County and municipal	28.9	6.4	15.0	7.5
Forest industry	18.4	2.1	6.6	9.7
Farmer	1,703.9	552.7	563.0	588.2
Misc. private-corporation	407.1	143.4	131.6	132.1
Misc. private-individual	1,631.5	527.7	507.7	596.1
All owners	4,295.8	1,348.4	1,363.5	1,583.9
Lower Wabash Unit				
National forest	9.0	1.0	0.5	7.5
Miscellaneous federal	59.2	12.8	18.4	28.0
State	29.5	10.9	4.3	14.3
County and municipal	8.3	2.0	4.0	2.3
Forest industry	2.1	2.1	--	--
Farmer	312.5	88.9	112.2	111.4
Misc. private-corporation	122.9	40.7	49.7	32.5
Misc. private-individual	316.9	89.7	95.9	131.3
All owners	860.4	248.1	285.0	327.3
Knobs Unit				
National forest	157.0	33.2	51.9	71.9
Miscellaneous federal	62.0	20.1	14.4	27.5
State	129.3	18.1	31.5	79.7
County and municipal	5.9	--	5.9	--
Forest industry	13.5	--	3.8	9.7
Farmer	514.5	147.4	165.4	201.7
Misc. private-corporation	154.6	52.2	37.7	64.7
Misc. private-individual	704.3	180.0	229.6	294.7
All owners	1,741.1	451.0	540.2	749.9
Upland Flats Unit				
National forest	--	--	--	--
Miscellaneous federal	13.5	10.7	--	2.8
State	7.6	--	--	7.6
County and municipal	2.7	2.7	--	--
Forest industry	--	--	--	--
Farmer	271.3	121.4	62.3	87.6
Misc. private-corporation	26.5	15.3	2.1	9.1
Misc. private-individual	249.5	138.2	45.2	66.1
All owners	571.1	288.3	109.6	173.2
Northern Unit				
National forest	--	--	--	--
Miscellaneous federal	27.9	4.1	16.2	7.6
State	11.0	5.2	2.4	3.4
County and municipal	12.0	1.7	5.1	5.2
Forest industry	2.8	--	2.8	--
Farmer	605.6	195.0	223.1	187.5
Misc. private-corporation	103.1	35.2	42.1	25.8
Misc. private-individual	360.8	119.8	137.0	104.0
All owners	1,123.2	361.0	428.7	333.5

^{1/} International 1/4-inch rule.

Table 22.--Area of timberland by forest type, stand-size class, and ownership class, Indiana, 1986

(In thousand acres)

Forest type and stand-size class	Ownership class								
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer	Misc. priv.-corp.	Misc. priv.-indiv.
Jack-red-white-pine									
Sawtimber	22.3	4.1	--	1.9	--	--	2.8	9.7	3.8
Poletimber	18.3	--	--	--	--	--	3.6	2.3	12.4
Sapling & seedling	14.1	7.4	--	2.6	--	--	--	2.0	2.1
All stands	54.7	11.5	--	4.5	--	--	6.4	14.0	18.3
Shortleaf pine									
Sawtimber	7.6	1.7	--	1.9	--	--	1.9	--	2.1
Poletimber	14.5	11.3	--	1.6	--	--	--	1.6	--
Sapling & seedling	1.8	1.8	--	--	--	--	--	--	--
All stands	23.9	14.8	--	3.5	--	--	1.9	1.6	2.1
Scotch-Virginia pine									
Sawtimber	24.4	--	--	4.0	--	--	9.7	4.2	6.5
Poletimber	14.1	--	--	--	--	--	6.8	3.1	4.2
Sapling & seedling	32.1	--	--	--	--	--	20.5	2.1	9.5
All stands	70.6	--	--	4.0	--	--	37.0	9.4	20.2
Oak-pine									
Sawtimber	44.6	3.4	--	1.9	--	--	20.6	4.2	14.5
Poletimber	25.8	--	2.5	--	--	--	12.1	--	11.2
Sapling & seedling	33.8	--	--	--	--	--	17.7	2.1	14.0
All stands	104.2	3.4	2.5	1.9	--	--	50.4	6.3	39.7
Oak-hickory									
Sawtimber	975.9	73.4	53.5	76.4	6.6	10.6	316.7	79.7	359.0
Poletimber	189.8	17.3	8.5	9.2	--	1.9	69.0	10.1	73.8
Sapling & seedling	205.1	9.0	8.0	7.0	1.7	--	65.7	21.6	92.1
All stands	1,370.8	99.7	70.0	92.6	8.3	12.5	451.4	111.4	524.9
Chestnut-scarlet oak									
Sawtimber	46.1	6.2	--	13.9	--	--	1.2	--	24.8
Poletimber	--	--	--	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--	--	--	--
All stands	46.1	6.2	--	13.9	--	--	1.2	--	24.8
Sassafras-persimmon									
Sawtimber	--	--	--	--	--	--	--	--	--
Poletimber	4.2	--	--	--	--	--	--	--	4.2
Sapling & seedling	15.6	--	--	--	--	--	6.7	2.1	6.8
All stands	19.8	--	--	--	--	--	6.7	2.1	11.0
Oak-gum									
Sawtimber	29.7	--	--	4.3	--	--	17.8	1.5	6.1
Poletimber	4.6	--	--	2.3	--	--	--	--	2.3
Sapling & seedling	17.4	--	--	--	--	--	5.2	4.7	7.5
All stands	51.7	--	--	6.6	--	--	23.0	6.2	15.9

(Table 22 continued on next page)

(Table 22 continued)

Forest type and stand-size class	Ownership class								
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer	Misc. priv.- corp.	Misc. priv.- indiv.
Lowland oak									
Sawtimber	25.3	--	--	--	--	--	13.8	4.4	7.1
Poletimber	3.6	--	--	--	--	--	2.4	--	1.2
Sapling & seedling	2.0	--	--	--	--	--	--	--	2.0
All stands	30.9	--	--	--	--	--	16.2	4.4	10.3
Elm-ash-soft maple									
Sawtimber	495.4	1.2	16.0	8.2	9.5	--	258.2	42.7	159.6
Poletimber	169.1	--	6.0	6.8	--	--	67.6	28.9	59.8
Sapling & seedling	166.0	0.8	6.4	2.8	2.0	--	48.9	31.5	73.6
All stands	830.5	2.0	28.4	17.8	11.5	--	374.7	103.1	293.0
Cottonwood									
Sawtimber	11.7	--	--	--	2.3	--	2.8	4.2	2.4
Poletimber	6.7	--	--	2.1	--	--	--	4.6	--
Sapling & seedling	--	--	--	--	--	--	--	--	--
All stands	18.4	--	--	2.1	2.3	--	2.8	8.8	2.4
Maple-beech									
Sawtimber	692.3	10.2	22.1	11.2	--	3.8	302.7	62.4	279.9
Poletimber	110.5	--	6.4	1.9	4.8	--	48.9	6.4	42.1
Sapling & seedling	181.9	0.5	13.6	--	--	--	70.5	20.1	77.2
All stands	984.7	10.7	42.1	13.1	4.8	3.8	422.1	88.9	399.2
Cherry-ash-yellow-poplar									
Sawtimber	394.7	5.6	11.8	17.4	2.0	--	184.1	28.7	145.1
Poletimber	112.3	3.2	5.1	--	--	--	47.0	11.3	45.7
Sapling & seedling	142.0	7.2	--	--	--	--	64.1	8.5	62.2
All stands	649.0	16.0	16.9	17.4	2.0	--	295.2	48.5	253.0
Nonstocked	40.5	1.7	2.7	--	--	2.1	14.9	2.4	16.7
All types									
Sawtimber	2,770.0	105.8	103.4	141.1	20.4	14.4	1,132.3	241.7	1,010.9
Poletimber	673.5	31.8	28.5	23.9	4.8	1.9	257.4	68.3	256.9
Sapling & seedling	811.8	26.7	28.0	12.4	3.7	--	299.3	94.7	347.0
Nonstocked	40.5	1.7	2.7	--	--	2.1	14.9	2.4	16.7
All stands	4,295.8	166.0	162.6	177.4	28.9	18.4	1,703.9	407.1	1,631.5

Table 23.--Area of timberland by forest type, stand-size class, and site class, Indiana, 1986

(In thousand acres)

Forest type and stand-size class	All classes	Site class (cubic feet of growth per acre per year)				
		165+	120-164	85-119	50-84	20-49
Jack-red-white pine						
Sawtimber	22.3	--	22.3	--	--	--
Poletimber	18.3	--	10.4	7.9	--	--
Sapling & seedling	14.1	--	14.1	--	--	--
All stands	54.7	--	46.8	7.9	--	--
Shortleaf pine						
Sawtimber	7.6	--	2.8	2.3	2.5	--
Poletimber	14.5	--	3.2	11.3	--	--
Sapling & seedling	1.8	--	--	--	--	1.8
All stands	23.9	--	6.0	13.6	2.5	1.8
Scotch-Virginia pine						
Sawtimber	24.4	--	10.4	9.4	4.6	--
Poletimber	14.1	--	7.9	--	3.9	2.3
Sapling & seedling	32.1	--	6.3	6.5	13.3	6.0
All stands	70.6	--	24.6	15.9	21.8	8.3
Oak-pine						
Sawtimber	44.6	--	6.4	19.4	15.0	3.8
Poletimber	25.8	--	--	7.8	18.0	--
Sapling & seedling	33.8	--	2.1	3.8	17.6	10.3
All stands	104.2	--	8.5	31.0	50.6	14.1
Oak-hickory						
Sawtimber	975.9	--	--	225.9	566.3	183.7
Poletimber	189.8	--	--	43.6	103.5	42.7
Sapling & seedling	205.1	--	--	38.3	105.6	61.2
All stands	1,370.8	--	--	307.8	775.4	287.6
Chestnut-scarlet oak						
Sawtimber	46.1	--	--	2.8	29.4	13.9
Poletimber	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--
All stands	46.1	--	--	2.8	29.4	13.9
Sassafras-persimmon						
Sawtimber	--	--	--	--	--	--
Poletimber	4.2	--	--	4.2	--	--
Sapling & seedling	15.6	--	--	4.7	8.3	2.6
All stands	19.8	--	--	8.9	8.3	2.6
Oak-gum						
Sawtimber	29.7	--	--	10.1	8.7	10.9
Poletimber	4.6	--	--	--	2.3	2.3
Sapling & seedling	17.4	--	--	--	4.5	12.9
All stands	51.7	--	--	10.1	15.5	26.1

(Table 23 continued on next page)

(Table 23 continued)

Forest type and stand-size class	All classes	Site class (cubic feet of growth per acre per year)				
		165+	120-164	85-119	50-84	20-49
Lowland oak						
Sawtimber	25.3	--	--	7.1	11.3	6.9
Poletimber	3.6	--	--	--	1.2	2.4
Sapling & seedling	2.0	--	--	--	--	2.0
All stands	30.9	--	--	7.1	12.5	11.3
Elm-ash-soft maple						
Sawtimber	495.4	--	--	200.1	207.6	87.7
Poletimber	169.1	--	--	66.3	53.5	49.3
Sapling & seedling	166.0	--	--	38.6	40.4	87.0
All stands	830.5	--	--	305.0	301.5	224.0
Cottonwood						
Sawtimber	11.7	--	--	2.8	6.8	2.1
Poletimber	6.7	--	--	--	--	6.7
Sapling & seedling	--	--	--	--	--	--
All stands	18.4	--	--	2.8	6.8	8.8
Maple-beech						
Sawtimber	692.3	--	259.5	355.0	54.9	22.9
Poletimber	110.5	--	29.7	62.2	13.8	4.8
Sapling & seedling	181.9	--	43.1	89.4	28.9	20.5
All stands	984.7	--	332.3	506.6	97.6	48.2
Cherry-ash-yellow-poplar						
Sawtimber	394.7	--	218.8	143.1	24.9	7.9
Poletimber	112.3	--	32.3	61.7	7.6	10.7
Sapling & seedling	142.0	--	26.4	68.6	31.8	15.2
All stands	649.0	--	277.5	273.4	64.3	33.8
Nonstocked	40.5	--	--	3.6	14.1	22.8
All types						
Sawtimber	2,770.0	--	520.2	978.0	932.0	339.8
Poletimber	673.5	--	83.5	265.0	203.8	121.2
Sapling & seedling	811.8	--	92.0	249.9	250.4	219.5
Nonstocked	40.5	--	--	3.6	14.1	22.8
All stands	4,295.8	--	695.7	1,496.5	1,400.3	703.3

Table 24.---Area of timberland by forest type and stand-age class, Indiana, 1986

(In thousand acres)

Forest type	All ages	Stand-age class (years)												
		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140	141+
All Units														
Jack-red-white pine	54.7	11.5	5.4	16.8	18.2	2.8	--	--	--	--	--	--	--	--
Shortleaf pine	23.9	1.8	3.2	--	13.8	2.8	2.3	--	--	--	--	--	--	--
Scotch-Virginia pine	70.6	11.4	20.6	5.7	17.3	10.9	2.8	1.9	--	--	--	--	--	--
Oak-pine	104.2	15.4	21.4	15.4	19.2	16.6	5.9	1.9	6.5	--	1.9	--	--	--
Oak-hickory	1,370.8	107.9	98.9	55.1	71.9	133.6	202.8	186.6	172.8	150.2	85.9	80.5	20.1	4.5
Chestnut-scarlet oak	46.1	--	--	--	1.2	--	1.9	9.7	3.8	13.7	8.0	1.9	5.9	--
Sassafras-persimmon	19.8	10.8	6.7	--	--	--	2.3	--	--	--	--	--	--	--
Oak-gum	51.7	7.5	9.9	--	2.3	13.3	4.1	5.5	--	4.3	2.3	2.5	--	--
Lowland oak	30.9	2.0	--	1.2	2.4	--	5.1	8.9	--	2.4	--	--	--	--
Elm-ash-soft maple	830.5	93.1	90.0	99.9	120.9	138.3	98.7	71.6	67.1	30.4	8.7	7.3	2.1	2.4
Cottonwood	18.4	--	2.3	7.2	--	2.4	2.3	2.1	2.1	--	--	--	--	--
Maple-beech	984.7	80.7	106.3	58.0	73.0	110.9	154.5	114.7	103.3	91.4	36.6	45.5	6.5	3.3
Cherry-ash-yellow-poplar	649.0	53.2	93.8	70.9	95.6	142.3	83.9	65.5	28.9	10.2	4.7	--	--	--
Nonstocked	40.5	--	--	--	--	--	--	--	--	--	--	--	--	--
All types	4,295.8	435.8	458.5	330.2	435.8	573.9	566.6	468.4	393.4	302.6	148.1	137.7	34.6	10.2
Lower Mabash Unit														
Jack-red-white pine	9.9	--	--	2.3	7.6	--	--	--	--	--	--	--	--	--
Shortleaf pine	3.7	--	3.2	--	0.5	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	17.3	3.1	3.7	1.6	1.5	4.6	2.8	--	--	--	--	--	--	--
Oak-pine	2.3	--	2.3	--	--	--	--	--	--	--	--	--	--	--
Oak-hickory	296.1	23.3	22.5	14.2	13.2	30.5	58.0	37.2	46.2	33.9	6.8	10.3	--	--
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	7.4	2.6	4.8	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	8.1	--	--	--	--	4.3	--	1.5	--	--	2.3	--	--	--
Lowland oak	8.3	2.0	--	--	--	--	2.3	2.0	2.0	--	--	--	--	--
Elm-ash-soft maple	224.4	18.3	44.1	24.6	31.4	41.2	33.7	11.4	13.1	6.6	--	--	--	--
Cottonwood	6.7	--	4.4	--	--	--	2.3	--	--	--	--	--	--	--
Maple-beech	159.4	14.9	10.5	17.3	7.9	27.6	28.8	15.3	18.3	8.6	6.2	2.0	--	--
Cherry-ash-yellow-poplar	114.7	2.0	18.5	8.7	20.2	31.7	8.0	13.6	8.0	4.0	--	--	--	--
Nonstocked	2.1	--	--	--	--	--	--	--	--	--	--	--	--	--
All types	860.4	68.3	107.3	75.4	82.3	139.9	135.9	81.0	87.6	53.1	15.3	12.3	2.0	--
Knobs Unit														
Jack-red-white pine	29.8	11.5	2.6	11.7	4.0	--	--	--	--	--	--	--	--	--
Shortleaf pine	20.2	1.8	--	--	13.3	2.8	2.3	--	--	--	--	--	--	--
Scotch-Virginia pine	45.7	8.3	14.9	4.1	10.2	6.3	--	1.9	--	--	--	--	--	--
Oak-pine	54.2	7.6	8.0	6.4	4.0	16.6	5.9	1.9	3.8	--	--	--	--	--
Oak-hickory	689.2	47.6	52.3	16.0	36.2	66.7	102.0	95.6	82.9	94.2	42.1	44.2	7.3	2.1
Chestnut-scarlet oak	39.7	--	--	--	--	--	1.9	6.9	3.8	11.3	8.0	1.9	5.9	--
Sassafras-persimmon	12.4	8.2	1.9	--	--	--	2.3	--	--	--	--	--	--	--
Oak-gum	25.6	2.1	4.5	--	2.3	4.2	4.1	4.0	--	1.9	--	2.5	--	--
Lowland oak	2.1	--	--	--	--	--	--	2.1	--	--	--	--	--	--
Elm-ash-soft maple	202.6	30.6	25.2	19.2	29.1	27.5	21.4	24.6	14.7	6.5	1.7	2.1	--	--
Cottonwood	4.4	--	2.3	--	--	--	--	2.1	--	--	--	--	--	--
Maple-beech	402.2	32.7	39.1	8.7	38.8	26.8	79.6	49.3	46.0	45.3	18.0	17.9	--	--
Cherry-ash-yellow-poplar	203.3	19.3	23.0	21.0	37.8	49.5	23.8	13.9	9.3	3.8	1.9	--	--	--
Nonstocked	9.7	--	--	--	--	--	--	--	--	--	--	--	--	--
All types	1,741.1	179.4	173.8	87.1	175.7	200.4	243.3	202.3	160.5	163.0	71.7	68.6	13.2	2.1

Table 24 continued on next page

(Table 24 continued on next page)

(Table 24 continued)

Forest type	All ages	Stand-age class (years)														141+
		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140			
Upland Flats Unit																
Jack-red-white pine	3.8	--	--	--	3.8	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	2.0	--	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--
Oak-pine	45.6	7.8	11.3	6.7	15.2	--	--	--	2.7	--	1.9	--	--	--	--	--
Oak-hickory	116.1	15.7	10.2	4.6	10.2	15.6	7.0	18.6	15.3	6.5	7.7	4.7	--	--	--	--
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	14.4	4.2	5.4	--	--	4.8	--	--	--	--	--	--	--	--	--	--
Lowland oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm-ash-soft maple	86.7	14.5	6.0	11.4	12.6	14.6	9.0	--	7.5	6.9	2.1	--	2.1	--	--	--
Cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Maple-beech	145.2	16.0	27.8	7.5	13.5	6.7	22.4	13.9	12.5	17.9	--	7.0	--	--	--	--
Cherry-ash-yellow-poplar	150.8	17.9	26.6	20.8	12.2	27.0	23.0	21.3	2.0	--	--	--	--	--	--	--
Nonstocked	6.5	6.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All types	571.1	82.6	89.3	51.0	67.5	68.7	61.4	53.8	40.0	31.3	11.7	11.7	2.1	--	--	--
Northern Unit																
Jack-red-white pine	11.2	--	2.8	2.8	2.8	2.8	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	5.6	--	--	--	5.6	--	--	--	--	--	--	--	--	--	--	--
Oak-pine	2.1	--	2.1	--	--	--	--	--	--	--	--	--	--	--	--	--
Oak-hickory	269.4	21.3	13.9	20.3	12.3	20.8	35.8	35.2	28.4	15.6	29.3	21.3	12.8	2.4	--	--
Chestnut-scarlet oak	6.4	--	--	--	1.2	--	--	2.8	--	2.4	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	3.6	1.2	--	--	--	--	--	--	--	2.4	--	--	--	--	--	--
Lowland oak	20.5	--	--	1.2	2.4	--	2.8	4.8	6.9	2.4	--	--	--	--	--	--
Elm-ash-soft maple	316.8	29.7	14.7	44.7	47.8	55.0	34.6	35.6	31.8	10.4	4.9	5.2	--	2.4	--	--
Cottonwood	7.3	--	--	2.8	--	2.4	--	--	2.1	--	--	--	--	--	--	--
Maple-beech	277.9	17.1	28.9	24.5	12.8	49.8	23.7	36.2	26.5	19.6	12.4	18.6	4.5	3.3	--	--
Cherry-ash-yellow-poplar	180.2	14.0	25.7	20.4	25.4	34.1	29.1	16.7	9.6	2.4	2.8	--	--	--	--	--
Nonstocked	22.2	22.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All types	1,123.2	105.5	88.1	116.7	110.3	164.9	126.0	131.3	105.3	55.2	49.4	45.1	17.3	8.1	--	--

Table 25.--Area of timberland by forest type, site-index class, and Forest Survey Unit, Indiana, 1986
(In thousand acres)

Unit and forest type	All classes	Site-index class (feet)								
		11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91+
All Units										
Jack-red-white pine	54.7	--	--	--	--	--	--	5.1	2.8	46.8
Shortleaf pine	23.9	--	--	--	--	1.8	0.4	4.0	14.1	3.6
Scotch-Virginia pine	70.6	--	--	6.3	--	3.6	15.6	14.4	16.9	13.8
Oak-pine	104.2	--	--	2.6	5.5	--	15.5	33.3	17.9	29.4
Oak-hickory	1,370.8	--	--	4.7	34.8	125.0	296.2	366.8	338.0	205.3
Chestnut-scarlet oak	46.1	--	--	--	2.1	4.0	13.7	21.1	5.2	--
Sassafras-persimmon	19.8	--	--	--	--	--	4.7	6.2	2.1	6.8
Oak-gum	51.7	--	--	--	1.2	2.7	19.5	11.9	6.3	10.1
Lowland oak	30.9	--	--	--	--	6.9	--	6.5	10.4	7.1
Elm-ash-soft maple	830.5	--	--	2.7	13.6	41.5	108.6	167.6	191.5	305.0
Cottonwood	18.4	--	--	--	--	4.2	4.6	--	6.8	2.8
Maple-beech	984.7	--	--	--	6.1	42.1	97.6	162.7	254.2	422.0
Cherry-ash-yellow-poplar	649.0	--	--	--	2.8	31.0	64.3	76.1	150.2	324.6
Nonstocked	40.5	--	--	3.8	3.8	11.9	6.2	6.7	5.7	2.4
All types	4,295.8	--	--	20.1	69.9	274.7	646.9	882.4	1,022.1	1,379.7
Lower Wabash Unit										
Jack-red-white pine	9.9	--	--	--	--	--	--	2.3	--	7.6
Shortleaf pine	3.7	--	--	--	--	--	--	--	0.5	3.2
Scotch-Virginia pine	17.3	--	--	--	--	1.6	5.2	4.4	2.3	3.8
Oak-pine	2.3	--	--	--	--	--	--	--	--	2.3
Oak-hickory	296.1	--	--	2.3	--	16.2	54.2	85.2	89.1	49.1
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	7.4	--	--	--	--	--	2.6	2.2	--	2.6
Oak-gum	8.1	--	--	--	--	--	3.8	--	2.3	2.0
Lowland oak	8.3	--	--	--	--	--	--	2.0	4.0	2.3
Elm-ash-soft maple	224.4	--	--	--	4.8	12.4	28.8	27.1	56.3	95.0
Cottonwood	6.7	--	--	--	--	2.1	2.3	--	2.3	--
Maple-beech	159.4	--	--	--	--	10.0	16.1	19.5	35.7	78.1
Cherry-ash-yellow-poplar	114.7	--	--	--	--	4.4	9.6	7.8	23.2	69.7
Nonstocked	2.1	--	--	--	--	--	--	--	2.1	--
All types	860.4	--	--	2.3	4.8	46.7	122.6	150.5	217.8	315.7
Knobs Unit										
Jack-red-white pine	29.8	--	--	--	--	--	--	--	--	29.8
Shortleaf pine	20.2	--	--	--	--	1.8	0.4	4.0	13.6	0.4
Scotch-Virginia pine	45.7	--	--	4.3	--	2.0	10.4	7.2	14.6	7.2
Oak-pine	54.2	--	--	2.6	--	--	7.6	24.0	8.3	11.7
Oak-hickory	689.2	--	--	--	22.1	73.9	157.1	190.7	173.1	72.3
Chestnut-scarlet oak	39.7	--	--	--	2.1	4.0	13.7	19.9	--	--
Sassafras-persimmon	12.4	--	--	--	--	--	2.1	4.0	2.1	4.2
Oak-gum	25.6	--	--	--	--	--	8.8	6.8	1.9	8.1
Lowland oak	2.1	--	--	--	--	2.1	--	--	--	--
Elm-ash-soft maple	202.6	--	--	--	--	4.5	15.6	40.5	43.3	92.3
Cottonwood	4.4	--	--	--	6.4	--	2.3	--	2.1	--
Maple-beech	402.2	--	--	--	--	--	--	--	--	--
Cherry-ash-yellow-poplar	203.3	--	--	--	4.0	12.1	30.9	74.6	113.8	166.8
Nonstocked	9.7	--	--	3.8	--	4.2	18.4	19.4	36.5	124.8
All types	1,741.1	--	--	10.7	34.6	106.7	271.1	391.1	409.3	517.6

(Table 25 continued on next page)

(Table 25 continued)

Unit and forest type	All classes	Site-index class (feet)								
		11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91+
Upland Flats Unit										
Jack-red-white pine	3.8	--	--	--	--	--	--	--	--	3.8
Shortleaf pine	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	2.0	--	--	2.0	--	--	--	--	--	--
Oak-pine	45.6	--	--	--	5.5	--	7.9	9.3	9.6	13.3
Oak-hickory	116.1	--	--	--	0.5	12.2	20.7	25.5	21.1	36.1
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--
Oak-gum	14.4	--	--	--	--	2.7	6.9	2.7	2.1	--
Lowland oak	--	--	--	--	--	--	--	--	--	--
Elm-ash-soft maple	86.7	--	--	2.7	--	12.8	20.5	22.1	14.0	14.6
Cottonwood	--	--	--	--	--	--	--	--	--	--
Maple-beech	145.2	--	--	--	2.1	6.2	23.2	13.4	37.4	62.9
Cherry-ash-yellow-poplar	150.8	--	--	--	--	19.6	16.5	20.5	48.7	45.5
Nonstocked	6.5	--	--	--	3.8	--	--	2.7	--	--
All types	571.1	--	--	4.7	11.9	53.5	95.7	96.2	132.9	176.2
Northern Unit										
Jack-red-white pine	11.2	--	--	--	--	--	--	2.8	2.8	5.6
Shortleaf pine	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	5.6	--	--	--	--	--	--	2.8	--	2.8
Oak-pine	2.1	--	--	--	--	--	--	--	--	2.1
Oak-hickory	269.4	--	--	2.4	12.2	22.7	64.2	65.4	54.7	47.8
Chestnut-scarlet oak	6.4	--	--	--	--	--	--	1.2	5.2	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--
Oak-gum	3.6	--	--	--	1.2	--	--	2.4	--	--
Lowland oak	20.5	--	--	--	--	4.8	--	4.5	6.4	4.8
Elm-ash-soft maple	316.8	--	--	--	2.4	11.8	43.7	77.9	77.9	103.1
Cottonwood	7.3	--	--	--	--	2.1	--	--	2.4	2.8
Maple-beech	277.9	--	--	--	--	13.8	27.4	55.2	67.3	114.2
Cherry-ash-yellow-poplar	180.2	--	--	--	2.8	2.8	19.8	28.4	41.8	84.6
Nonstocked	22.2	--	--	--	--	9.8	2.4	4.0	3.6	2.4
All types	1,123.2	--	--	2.4	18.6	67.8	157.5	244.6	262.1	370.2

Table 26.--Area of timberland by forest type, stand-size class, and basal-area class, Indiana, 1986

(In thousand acres)

Forest type and stand-size class	All classes	Basal-area class (square feet per acre)														181+
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-150	151-180		
Jack-red-white pine																
Sawtimber	22.3	--	--	--	--	1.5	--	--	--	4.1	--	8.0	--	8.7	--	
Poletimber	18.3	--	--	--	2.8	--	--	--	--	2.3	2.8	5.5	2.1	2.8	--	
Sapling & seedling	14.1	--	11.5	--	--	--	--	2.6	--	--	--	--	--	--	--	
All stands	54.7	--	11.5	--	2.8	1.5	--	2.6	--	6.4	2.8	13.5	2.1	11.5	--	
Shortleaf pine																
Sawtimber	7.6	--	--	--	--	--	--	--	0.5	2.3	--	2.9	1.9	--	--	
Poletimber	14.5	--	--	--	--	--	--	--	1.6	--	1.6	11.3	--	--	--	
Sapling & seedling	1.8	--	--	--	--	1.8	--	--	--	--	--	--	--	--	--	
All stands	23.9	--	--	--	--	1.8	--	--	2.1	2.3	1.6	14.2	1.9	--	--	
Scotch-Virginia pine																
Sawtimber	24.4	--	--	--	--	--	--	--	--	7.7	--	10.8	5.9	--	--	
Poletimber	14.1	--	--	--	--	2.3	--	--	3.9	1.7	1.9	1.5	--	2.8	--	
Sapling & seedling	32.1	--	4.6	1.8	2.1	--	5.4	4.6	3.3	--	--	2.0	--	--	8.3	
All stands	70.6	--	4.6	1.8	2.1	2.3	5.4	4.6	7.2	9.4	1.9	14.3	5.9	2.8	8.3	
Oak-pine																
Sawtimber	44.6	--	--	--	--	1.9	3.9	4.1	2.3	13.9	1.9	13.0	3.6	--	--	
Poletimber	25.8	--	--	--	--	--	2.0	5.0	8.5	2.1	--	4.4	3.8	--	--	
Sapling & seedling	33.8	2.1	1.8	--	7.8	2.6	6.1	4.3	5.2	3.9	--	--	--	--	--	
All stands	104.2	2.1	1.8	--	7.8	4.5	12.0	13.4	16.0	19.9	1.9	17.4	7.4	--	--	
Oak-hickory																
Sawtimber	975.9	--	2.1	2.2	4.5	21.7	54.1	42.0	106.5	203.9	130.9	292.9	105.0	8.2	1.9	
Poletimber	189.8	--	--	2.3	--	4.6	24.3	30.6	41.0	27.4	22.4	27.6	9.6	--	--	
Sapling & seedling	205.1	9.4	27.8	26.0	17.6	26.9	47.2	24.2	10.7	11.2	--	2.0	--	--	2.1	
All stands	1,370.8	9.4	29.9	30.5	22.1	53.2	125.6	96.8	158.2	242.5	153.3	322.5	114.6	8.2	4.0	
Chestnut-scarlet oak																
Sawtimber	46.1	--	--	1.2	--	--	2.1	2.1	--	13.7	7.3	15.9	3.8	--	--	
Poletimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sapling & seedling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
All stands	46.1	--	--	1.2	--	--	2.1	2.1	--	13.7	7.3	15.9	3.8	--	--	
Sassafras-persimmon																
Sawtimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Poletimber	4.2	--	--	--	--	--	--	--	1.9	--	--	2.3	--	--	--	
Sapling & seedling	15.6	4.7	2.1	2.2	--	--	--	2.6	--	--	--	--	--	--	2.1	
All stands	19.8	4.7	2.1	2.2	--	1.9	--	2.6	1.9	--	--	2.3	--	--	2.1	
Oak-gum																
Sawtimber	29.7	--	--	--	2.2	--	--	--	1.5	--	8.0	11.7	6.3	--	--	
Poletimber	4.6	--	--	--	--	--	--	--	--	2.3	--	2.3	--	--	--	
Sapling & seedling	17.4	1.2	4.1	2.1	2.5	2.7	2.1	2.7	--	--	--	--	--	--	--	
All stands	51.7	1.2	4.1	2.1	4.7	2.7	2.1	2.7	1.5	2.3	8.0	14.0	6.3	--	--	

(Table 26 continued on next page)

(Table 26 continued on next page)

(Table 26 continued)

Forest type and stand-size class		Basal-area class (square feet per acre)														
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-150	151-180	181+	
Lowland oak	Sawtimber	25.3	--	--	--	2.4	--	2.4	--	4.1	--	16.4	--	--	--	
	Polettinber	3.6	--	--	--	--	--	2.4	1.2	--	--	--	--	--	--	
	Sapling & seedling	2.0	--	2.0	--	--	--	--	--	--	--	--	--	--	--	
	All stands	30.9	--	2.0	--	2.4	--	4.8	1.2	4.1	--	16.4	--	--	--	
Elm-ash-soft maple	Sawtimber	495.4	--	8.4	16.9	22.3	10.5	32.1	76.4	76.4	70.9	107.3	58.1	13.3	2.8	
	Polettinber	169.1	--	4.2	9.2	15.3	16.8	18.3	36.8	25.9	21.1	21.5	--	--	--	
	Sapling & seedling	166.0	15.1	20.6	22.9	29.1	30.9	16.4	6.7	10.9	8.4	--	--	--	5.0	
	All stands	830.5	15.1	20.6	35.5	55.2	68.5	43.7	57.1	124.1	110.7	92.0	128.8	58.1	13.3	7.8
Cottonwood	Sawtimber	11.7	--	--	2.1	2.4	--	--	2.1	--	--	2.8	2.3	--	--	
	Polettinber	6.7	--	--	--	--	4.6	2.1	--	--	--	--	--	--	--	
	Sapling & seedling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	All stands	18.4	--	--	2.1	2.4	4.6	2.1	2.1	--	--	2.8	2.3	--	--	
Maple-beech	Sawtimber	692.3	--	4.4	4.9	24.2	67.2	44.2	106.5	105.6	84.3	175.7	63.8	11.5	--	
	Polettinber	110.5	--	--	2.7	2.1	10.5	18.3	20.0	15.8	6.1	33.0	2.0	--	--	
	Sapling & seedling	181.9	4.8	13.9	20.3	28.2	43.3	21.7	25.2	15.4	--	2.1	4.8	--	2.2	
	All stands	984.7	4.8	13.9	24.7	35.8	69.6	99.4	87.7	141.9	121.4	92.5	213.5	65.8	11.5	2.2
Cherry-ash-yellow-poplar	Sawtimber	394.7	2.1	--	4.4	1.9	10.2	16.4	27.8	29.3	69.0	132.7	54.8	7.3	1.9	
	Polettinber	112.3	--	--	4.9	--	15.5	12.1	20.1	28.7	9.8	14.0	7.2	--	--	
	Sapling & seedling	142.0	8.5	21.5	21.6	17.0	21.6	22.0	10.7	7.9	6.8	2.4	--	--	2.0	
	All stands	649.0	10.6	21.5	30.9	18.9	31.8	53.9	50.6	57.3	104.5	49.1	146.7	62.0	7.3	3.9
Nonstocked	40.5	6.6	6.7	8.7	--	4.1	4.8	--	1.2	3.9	2.4	--	--	--	2.1	
All types	Sawtimber	2,770.0	2.1	2.1	20.6	32.5	86.6	154.2	154.7	325.1	500.7	340.2	790.1	305.5	49.0	6.6
	Polettinber	673.5	--	--	11.4	14.7	24.3	73.7	88.8	135.0	106.2	65.7	123.4	24.7	5.6	--
	Sapling & seedling	811.8	45.8	107.9	98.9	104.3	131.7	120.9	83.6	53.4	30.3	4.5	8.8	--	--	21.7
	Nonstocked	40.5	6.6	6.7	8.7	--	4.1	4.8	--	1.2	3.9	2.4	--	--	--	2.1
All stands	4,295.8	54.5	116.7	139.6	151.5	246.7	353.6	327.1	514.7	641.1	412.8	922.3	330.2	54.6	30.4	

Table 27.--Area of timberland by stocking class based on selected stand components and Forest Survey Unit, Indiana, 1986

(In thousand acres)

Stocking class (percent)	Stocking classified in terms of:		
	All live trees	Growing- stock trees	Rough and rotten trees
All Units			
0-10	2.1	18.3	1,379.0
11-20	12.5	28.7	1,173.7
21-30	11.4	52.7	759.2
31-40	21.6	76.6	455.1
41-50	37.4	157.7	299.4
51-60	78.1	232.6	133.3
61-70	98.6	321.2	49.6
71-80	168.5	411.6	30.9
81-90	250.5	543.2	5.6
91-100	417.8	683.8	5.5
101-110	653.8	622.2	2.1
111-120	884.9	572.3	2.4
121-130	816.3	338.5	--
131-140	536.7	172.2	--
141-150	232.5	57.7	--
151-160	70.6	6.5	--
161+	2.5	--	--
All classes	4,295.8	4,295.8	4,295.8
Lower Wabash Unit			
0-10	--	2.1	325.3
11-20	2.1	--	257.2
21-30	--	7.1	151.1
31-40	5.2	6.2	71.6
41-50	4.3	21.8	38.8
51-60	11.0	29.7	8.8
61-70	16.5	69.6	7.6
71-80	48.8	74.1	--
81-90	32.9	127.1	--
91-100	86.8	162.1	--
101-110	156.7	130.1	--
111-120	199.1	108.4	--
121-130	171.2	81.4	--
131-140	71.3	31.2	--
141-150	50.5	9.5	--
151-160	4.0	--	--
161+	--	--	--
All classes	860.4	860.4	860.4

(Table 27 continued on next page)

(Table 27 continued)

Stocking class (percent)	Stocking classified in terms of:		
	All live trees	Growing- stock trees	Rough and rotten trees
Knobs Unit			
0-10	2.1	5.9	767.9
11-20	3.8	3.9	562.2
21-30	4.3	9.0	248.9
31-40	1.8	16.5	99.6
41-50	21.3	35.6	46.1
51-60	21.9	47.5	10.5
61-70	24.6	72.7	5.9
71-80	51.7	147.2	--
81-90	108.5	200.2	--
91-100	158.6	283.9	--
101-110	269.6	290.5	--
111-120	375.6	319.1	--
121-130	356.7	182.0	--
131-140	242.9	95.1	--
141-150	69.8	25.5	--
151-160	27.8	6.5	--
161+	0.1	--	--
All classes	1,741.1	1,741.1	1,741.1
Upland Flats Unit			
0-10	--	1.7	102.1
11-20	2.1	8.9	111.3
21-30	3.8	10.5	144.3
31-40	6.2	19.1	99.0
41-50	5.7	16.7	49.9
51-60	5.7	67.2	34.7
61-70	14.8	59.4	10.9
71-80	18.8	57.0	9.7
81-90	52.1	80.3	4.4
91-100	39.7	67.4	2.7
101-110	83.1	67.1	2.1
111-120	98.1	56.1	--
121-130	115.2	30.0	--
131-140	73.5	22.3	--
141-150	38.8	7.4	--
151-160	13.5	--	--
161+	--	--	--
All classes	571.1	571.1	571.1
Northern Unit			
0-10	--	8.6	183.7
11-20	4.5	15.9	243.0
21-30	3.3	26.1	214.9
31-40	8.4	34.8	184.9
41-50	6.1	83.6	164.6
51-60	39.5	88.2	79.3
61-70	42.7	119.5	25.2
71-80	49.2	133.3	21.2
81-90	57.0	135.6	1.2
91-100	132.7	170.4	2.8
101-110	144.4	134.5	--
111-120	212.1	88.7	2.4
121-130	173.2	45.1	--
131-140	149.0	23.6	--
141-150	73.4	15.3	--
151-160	25.3	--	--
161+	2.4	--	--
All classes	1,123.2	1,123.2	1,123.2

Table 28.--Area of timberland in plantations by forest type and stand-age class,
and Forest Survey Unit, 1986

(In thousand acres)

Unit and forest type	All ages	Stand-age class (years)						
		1-10	11-20	21-30	31-40	41-50	50-60	61-70
All Units								
Jack-red-white pine	40.2	11.5	5.4	9.8	13.5	--	--	--
Shortleaf pine	20.7	1.8	3.2	--	13.4	0.4	1.9	--
Scotch-Virginia pine	34.2	3.1	7.8	2.3	12.8	6.3	--	1.9
Oak-gum	1.5	--	--	--	--	--	--	1.5
Lowland oak	1.2	--	--	1.2	--	--	--	--
Elm-ash-soft-maple	3.7	--	--	3.7	--	--	--	--
Cherry-ash-yellow-poplar	3.7	--	2.1	1.6	--	--	--	--
All types	105.2	16.4	18.5	18.6	39.7	6.7	1.9	3.4
Lower Wabash Unit								
Jack-red-white pine	9.9	--	--	2.3	7.6	--	--	--
Shortleaf pine	3.7	--	3.2	--	0.5	--	--	--
Scotch-Virginia pine	6.7	3.1	2.1	--	1.5	--	--	--
Oak-gum	1.5	--	--	--	--	--	--	1.5
Elm-ash-soft maple	3.7	--	--	3.7	--	--	--	--
Cherry-ash-yellow-poplar	1.6	--	--	1.6	--	--	--	--
All types	27.1	3.1	5.3	7.6	9.6	--	--	1.5
Knobs Unit								
Jack-red-white pine	23.7	11.5	2.6	7.5	2.1	--	--	--
Shortleaf pine	17.0	1.8	--	--	12.9	0.4	1.9	--
Scotch-Virginia pine	21.9	--	5.7	2.3	5.7	6.3	--	1.9
All types	62.6	13.3	8.3	9.8	20.7	6.7	1.9	1.9
Upland Flats Unit								
Jack-red-white pine	3.8	--	--	--	3.8	--	--	--
Cherry-ash-yellow-poplar	2.1	--	2.1	--	--	--	--	--
All types	5.9	--	2.1	--	3.8	--	--	--
Northern Unit								
Jack-red-white pine	2.8	--	2.8	--	--	--	--	--
Scotch-Virginia pine	5.6	--	--	--	5.6	--	--	--
Lowland oak	1.2	--	--	1.2	--	--	--	--
All types	9.6	--	2.8	1.2	5.6	--	--	--

Table 29.--Area of reserved timberland by ownership class and Forest Survey Unit,
Indiana, 1986

(In thousand acres)

Ownership class	All Units	Forest Survey Unit			
		Lower Wabash Unit	Knobs Unit	Upland Flats Unit	Northern Unit
National forest	12.4	--	12.4	--	--
Miscellaneous federal	16.7	--	--	15.9	0.8
State	92.3	14.5	47.4	14.4	16.0
County and municipal	11.4	--	2.1	--	9.3
Forest industry	--	--	--	--	--
Farmer	--	--	--	--	--
Misc. private-corp.	9.1	2.0	2.3	2.8	2.0
Misc. private-indiv.	1.5	0.7	--	--	0.8
All owners	143.4	17.2	64.2	33.1	28.9

Table 30.--Area of reserved timberland by forest type and Forest Survey Unit,
Indiana, 1986

(In thousand acres)

Ownership class	All Units	Forest Survey Unit			
		Lower Wabash Unit	Knobs Unit	Upland Flats Unit	Northern Unit
Jack-red-white pine	6.8	2.1	--	4.7	--
Shortleaf pine	1.6	--	--	1.6	--
Scotch-Virginia pine	--	--	--	--	--
Oak-pine	--	--	--	--	--
Oak-hickory	79.8	12.3	45.5	10.0	12.0
Chestnut-scarlet oak	--	--	--	--	--
Sassafras-persimmon	4.4	--	4.4	--	--
Oak-gum	--	--	--	--	--
Lowland oak	--	--	--	--	--
Elm-ash-soft maple	9.3	2.8	4.1	1.6	0.8
Cottonwood	--	--	--	--	--
Maple-beech	39.4	--	10.2	15.2	14.0
Cherry-ash-yellow-poplar	2.1	--	--	--	2.1
Nonstocked	--	--	--	--	--
All types	143.4	17.2	64.2	33.1	28.9

Table 31.---Area of nonforest land with trees and by land use, forest type, and Forest Survey Unit, Indiana, 1986
(In thousand acres)

Unit and land use	All types	Forest type													Cherry-ash-yellow-poplar	Non-stocked
		Jack-red-white pine	Short-leaf pine	Scotch-Virginia pine	Oak-pine	Oak-hickory	Chestnut-scarlet oak	Sassafras-persimmon	Oak-gum	Lowland oak	Elm-ash-soft maple	Cotton-wood	Maple-beech			
All Units																
Cropland	78.1	--	--	--	--	37.1	--	--	--	2.0	21.1	--	10.4	7.5	--	--
Improved pasture	149.9	--	--	--	8.2	68.8	--	1.9	--	2.1	22.0	--	8.1	20.0	18.8	--
Wooded strips	111.7	--	--	--	--	35.5	--	--	--	--	43.8	2.4	20.6	9.4	--	--
Idle farmland	24.4	--	--	--	--	5.9	--	--	--	--	8.1	--	8.3	--	2.1	--
Marsh	12.1	--	--	--	--	2.8	--	--	--	--	7.4	--	--	--	1.9	--
Windbreaks	40.2	--	--	--	--	24.4	--	3.6	--	--	8.0	--	4.2	--	--	--
Wooded pasture	120.0	--	--	3.9	3.9	15.6	2.0	--	2.1	2.8	19.0	--	20.4	22.0	28.3	--
Urban forest	117.0	--	--	--	--	71.8	--	--	--	--	32.5	--	12.7	--	--	--
Urban and other	274.6	4.2	--	--	--	161.7	--	--	--	--	57.8	2.8	38.9	9.2	--	--
Total	928.0	4.2	--	3.9	12.1	423.6	2.0	5.5	2.1	6.9	219.7	5.2	123.6	68.1	51.1	--
Lower Wabash Unit																
Cropland	22.9	--	--	--	--	7.2	--	--	--	2.0	8.0	--	2.0	3.7	--	--
Improved pasture	33.3	--	--	--	--	22.3	--	--	--	--	2.1	--	2.0	2.1	4.8	--
Wooded strips	31.3	--	--	--	--	16.9	--	--	--	--	8.0	--	2.1	4.3	--	--
Idle farmland	4.1	--	--	--	--	--	--	--	--	--	--	--	4.1	--	--	--
Marsh	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Windbreaks	12.1	--	--	--	--	12.1	--	--	--	--	--	--	--	--	--	--
Wooded pasture	24.4	--	--	--	--	2.8	2.0	--	2.1	--	7.4	--	2.0	8.1	--	--
Urban forest	6.5	--	--	--	--	5.5	--	--	--	--	0.5	--	0.5	--	--	--
Urban and other	47.0	4.2	--	--	--	33.7	--	--	--	--	5.1	--	4.0	--	--	--
Total	181.6	4.2	--	--	--	100.5	2.0	--	2.1	2.0	31.1	--	16.7	18.2	4.8	--
Knobs Unit																
Cropland	19.6	--	--	--	--	11.5	--	--	--	--	4.3	--	--	3.8	--	--
Improved pasture	52.2	--	--	--	3.9	24.2	--	1.9	--	2.1	1.8	--	2.1	3.9	12.3	--
Wooded strips	28.0	--	--	--	--	7.8	--	--	--	--	13.9	--	6.3	--	--	--
Idle farmland	13.8	--	--	--	--	5.9	--	--	--	--	5.8	--	--	--	2.1	--
Marsh	1.9	--	--	--	--	--	--	--	--	--	--	--	--	--	1.9	--
Windbreaks	15.2	--	--	--	--	4.0	--	3.6	--	--	5.7	--	1.9	--	--	--
Wooded pasture	35.0	--	--	1.8	2.0	3.5	--	--	--	--	1.7	--	6.2	11.8	8.0	--
Urban forest	16.2	--	--	--	--	12.0	--	--	--	--	2.0	--	2.2	--	--	--
Urban and other	61.4	--	--	--	--	32.1	--	--	--	--	1.3	--	23.9	4.1	--	--
Total	243.3	--	--	1.8	5.9	101.0	--	5.5	--	2.1	36.5	--	42.6	23.6	24.3	--

(Table 31 continued on next page)

(Table 31 continued on next page)

(Table 31 continued)

Unit and land use	All types	Forest type													
		Jack-red- white pine	Short- leaf pine	Scotch- Virginia pine	Oak- pine	Oak- hickory	Chestnut- scarlet oak	Sassafras- persimmon	Oak- gum	Lowland oak	Elm-ash- soft maple	Cotton- wood	Maple- beech	Cherry-ash- yellow- poplar	Non- stocked
Upland Flats															
Cropland	10.1	--	--	--	--	2.1	--	--	--	--	4.2	--	3.8	--	--
Improved pasture	28.8	--	--	--	4.3	8.5	--	--	--	--	8.4	--	1.7	4.2	1.7
Wooded strips	14.3	--	--	--	--	3.8	--	--	--	--	6.1	--	1.7	2.7	--
Idle farmland	2.1	--	--	--	--	--	--	--	--	--	--	--	2.1	--	--
Marsh	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Windbreaks	1.7	--	--	--	--	1.7	--	--	--	--	--	--	--	--	--
Wooded pasture	29.4	--	--	2.1	1.9	4.2	--	--	--	4.3	--	--	8.9	--	8.0
Urban forest	4.9	--	--	--	--	0.2	--	--	--	4.7	--	--	--	--	--
Urban and other	27.0	--	--	--	--	9.9	--	--	--	7.9	--	--	9.2	--	--
Total	118.3	--	--	2.1	6.2	30.4	--	--	--	35.6	--	--	27.4	6.9	9.7
Northern															
Cropland	25.5	--	--	--	--	16.3	--	--	--	4.6	--	--	4.6	--	--
Improved pasture	35.6	--	--	--	--	13.8	--	--	--	9.7	--	--	2.3	9.8	--
Wooded strips	38.1	--	--	--	--	7.0	--	--	--	15.8	2.4	--	10.5	2.4	--
Idle farmland	4.4	--	--	--	--	--	--	--	--	2.3	--	--	2.1	--	--
Marsh	10.2	--	--	--	--	2.8	--	--	--	7.4	--	--	--	--	--
Windbreaks	11.2	--	--	--	--	6.6	--	--	--	2.3	--	--	2.3	--	--
Wooded pasture	31.2	--	--	--	--	5.1	--	--	--	5.6	--	--	3.3	2.1	12.3
Urban forest	89.4	--	--	--	--	54.1	--	--	--	25.3	--	--	10.0	--	--
Urban and other	139.2	--	--	--	--	86.0	--	--	--	43.5	2.8	--	1.8	5.1	--
Total	384.8	--	--	--	--	191.7	--	--	--	116.5	5.2	--	36.9	19.4	12.3

Table 32.--Number of all live trees on timberland by species group and diameter class, Indiana, 1986

(In thousand trees)

Species group	All classes	Diameter class (inches at breast height)																29.0-39.0+
		1.0-2.9	3.0-4.9	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	21.0-22.9	23.0-28.9					
Softwoods																		
Jack pine	1,597	318	285	309	404	184	75	6	10	3	3	--	--	--	--	--		
Red pine	1,421	--	--	546	619	244	12	--	--	--	--	--	--	--	--	--		
White pine	14,561	5,598	4,095	1,185	1,701	1,156	423	313	80	10	--	--	--	--	--	--		
Shortleaf pine	4,370	489	228	931	1,483	907	236	87	9	--	--	--	--	--	--	--		
Other yellow pines	16,293	6,522	3,093	2,787	1,413	1,303	621	434	97	4	9	6	4	--	--	--		
Tamarack	330	72	--	216	--	31	--	11	--	--	--	--	--	--	--	--		
Baldcypress	506	--	45	47	127	143	49	58	21	15	--	--	--	1	--	--		
Eastern redcedar	71,111	48,414	13,206	5,451	2,280	1,064	351	207	107	29	--	--	2	--	--	--		
Other softwoods	3,696	675	1,062	1,260	614	85	--	--	--	--	--	--	--	--	--	--		
Total	113,885	62,088	22,014	12,732	8,641	5,117	1,767	1,116	324	61	12	6	6	1	--	--		
Hardwoods																		
Select white oak	61,641	17,616	9,216	5,809	6,617	5,343	4,666	3,801	3,017	2,114	1,400	885	860	257	40	--		
Other white oak	10,996	2,382	1,428	946	1,296	985	1,287	1,087	845	448	180	69	43	--	--	--		
Select red oak	22,850	6,942	2,835	2,221	2,122	1,622	1,420	1,793	1,158	953	683	401	491	187	22	--		
Other red oak	58,408	24,054	7,284	5,496	4,184	3,897	3,579	2,835	2,632	1,739	1,180	598	751	165	14	--		
Select hickory	51,215	19,044	9,609	6,134	5,234	4,332	2,625	1,986	1,201	591	263	107	84	5	--	--		
Other hickory	58,996	23,322	9,801	7,312	6,691	4,334	3,374	1,996	1,083	541	291	125	114	12	--	--		
Basswood	24,442	14,454	4,044	2,024	1,266	934	479	398	295	248	99	82	90	26	3	--		
Beech	41,502	24,861	5,526	2,779	1,701	1,310	1,185	870	680	710	532	416	691	227	14	--		
Hard maple	277,041	181,356	44,628	20,071	11,396	6,921	4,759	3,095	1,968	1,147	696	477	417	105	5	--		
Soft maple	92,445	51,126	16,809	8,298	5,545	3,493	2,671	1,532	1,058	697	412	285	384	102	33	--		
Elm	238,137	159,126	45,603	16,918	8,425	4,240	2,039	945	459	183	88	40	62	9	--	--		
Ash	127,231	68,463	18,843	13,246	9,913	6,340	4,124	2,625	1,634	950	464	256	297	68	8	--		
Sycamore	16,058	3,573	1,941	2,700	1,605	1,814	1,267	967	637	464	409	222	338	112	9	--		
Cottonwood	7,230	1,401	1,263	552	731	676	537	624	383	348	175	115	284	120	21	--		
Willow	13,242	10,023	1,113	740	458	312	181	133	99	53	72	14	29	13	2	--		
Hackberry	32,530	20,157	5,460	2,960	1,409	983	658	349	245	139	76	47	42	2	3	--		
Aspen	6,616	2,601	1,356	830	475	279	341	272	195	48	10	6	2	--	1	--		
Birch	7,362	4,059	1,728	719	336	261	47	105	69	29	4	--	5	--	--	--		
Sweetgum	21,727	12,105	4,059	1,550	1,375	930	759	463	211	123	77	29	28	15	3	--		
Tupelo	30,010	20,358	4,695	1,625	1,222	957	442	324	141	116	53	29	45	3	--	--		
Black cherry	70,926	43,206	13,362	5,129	3,671	2,188	1,673	649	477	301	130	80	42	18	--	--		
Black walnut	25,975	7,737	4,605	3,323	3,655	2,357	1,728	1,060	813	386	178	62	56	12	3	--		
Butternut	531	123	--	102	67	45	90	34	57	5	5	--	3	--	--	--		
Yellow-poplar	59,731	27,516	8,868	5,405	3,832	3,520	2,668	2,501	1,910	1,590	864	494	492	65	6	--		
Persimmon	12,415	5,541	3,333	2,232	840	317	104	38	6	4	--	--	--	--	--	--		
Sassafras	127,639	72,756	30,252	13,561	6,361	2,455	1,168	467	346	164	62	14	31	2	--	--		
Other hardwoods	279,714	211,542	43,584	13,014	5,314	2,685	1,510	979	478	314	120	87	78	6	3	--		
Noncommercial spp.	207,195	164,448	31,416	7,775	2,199	782	255	165	83	43	14	5	4	6	--	--		
Total	1,983,805	1,199,892	332,661	153,471	97,940	64,512	45,636	32,093	22,180	14,448	8,537	4,945	5,763	1,537	190	--		
All species	2,097,690	1,261,980	354,675	166,203	106,581	69,629	47,403	33,209	22,504	14,509	8,549	4,951	5,769	1,538	190	--		

Table 33.---Number of growing stock trees on timberland by species group and diameter class, Indiana, 1986

(In thousand trees)

Species group	All classes	Diameter class (inches at breast height)																29.0-38.9	39.0+
		1.0-2.9	3.0-4.9	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	21.0-22.9	23.0-28.9						
Softwoods																			
Jack pine	1,512	318	285	260	404	148	75	6	10	3									
Red pine	1,349	--	--	504	589	244	12	--	--	--	--	--	--	--	--	--	--	--	--
White pine	14,440	5,541	4,095	1,141	1,690	1,147	423	313	80	10									
Shortleaf pine	4,133	489	228	886	1,426	806	206	83	9										
Other yellow pines	15,966	6,522	3,027	2,735	1,356	1,186	606	424	90	4	9	3	4						
Tamarack	330	72	--	216	--	31	--	11	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	505	--	45	47	127	143	49	58	21	15	--	--	--	--	--	--	--	--	--
Eastern redcedar	69,318	48,006	13,011	5,243	1,890	717	253	141	45	10	--	--	2						
Other softwoods	3,186	675	810	1,114	519	68	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	110,739	61,623	21,501	12,146	8,001	4,490	1,624	1,036	255	42	12	3	6						
Hardwoods																			
Select white oak	57,924	17,544	8,757	5,227	6,253	4,947	4,142	3,403	2,831	1,941	1,290	759	668	150	12				
Other white oak	10,468	2,382	1,428	902	1,196	948	1,154	995	792	406	168	63	34						
Select red oak	21,855	6,942	2,772	2,123	2,086	1,479	1,349	1,644	1,059	881	612	376	398	127	7				
Other red oak	55,937	24,054	7,215	5,251	3,768	3,715	3,231	2,577	2,364	1,542	1,003	512	602	98	5				
Select hickory	49,415	19,044	9,132	5,967	4,918	4,191	2,460	1,786	1,042	506	222	88	55	4	--				
Other hickory	56,897	23,259	9,546	6,976	6,292	4,139	3,052	1,747	949	511	241	102	78	5	--				
Basswood	22,448	14,397	3,501	1,429	985	751	376	351	264	189	76	74	49	6	--				
Beech	37,349	24,363	5,049	2,537	1,344	973	864	579	496	374	315	210	215	30	--				
Hard maple	267,805	180,525	43,542	17,965	10,261	6,079	3,805	2,332	1,525	761	487	303	178	40	2				
Soft maple	85,004	50,844	15,369	6,607	4,551	2,892	1,622	1,152	767	488	277	147	221	60	7				
Elm	227,516	158,451	42,357	13,803	6,681	3,511	1,374	710	377	128	64	21	33	6	--				
Ash	119,514	68,355	17,553	11,575	8,378	5,417	3,210	2,153	1,367	722	371	187	191	34	1				
Sycamore	15,043	3,573	1,941	2,587	1,453	1,633	1,123	840	583	434	335	201	255	78	7				
Cottonwood	6,591	1,401	1,119	503	635	589	483	535	378	338	145	99	260	91	15				
Willow	12,128	10,023	981	513	214	158	47	67	55	11	51	6	2						
Hackberry	30,277	19,749	5,043	2,268	1,200	770	554	285	173	116	63	37	19						
Aspen	6,396	2,601	1,356	773	412	407	331	254	195	48	10	6	2						
Birch	7,228	4,059	1,692	673	336	246	24	105	69	17	4		3						
Sweetgum	21,106	12,105	3,855	1,390	1,267	872	737	453	188	103	73	29	18	13	3				
Tupelo	29,309	20,358	4,695	1,443	1,080	747	405	263	102	100	53	26	34	3	--				
Black cherry	64,177	43,206	11,685	3,461	2,290	1,496	956	435	333	129	116	52	18	--					
Black walnut	22,691	7,737	4,167	2,740	2,946	1,814	1,365	835	657	252	123	27	25	3	--				
Butternut	387	123	--	33	67	45	57	12	40	5			--						
Yellow-poplar	58,682	27,459	8,733	5,332	3,712	3,429	2,474	2,392	1,880	1,505	835	459	441	31	--				
Persimmon	11,493	5,478	3,024	1,895	731	239	94	28		4		--	--						
Sassafras	116,769	71,604	26,700	10,326	4,832	1,893	757	332	206	90	12	8	9	--					
Other hardwoods	255,202	208,659	35,196	6,079	2,571	1,344	607	423	171	77	14	34	26	1	--				
Total	1,669,611	1,028,295	276,408	120,378	80,459	54,724	36,653	26,688	18,863	11,678	6,965	3,826	3,840	780	60				
All species	1,780,350	1,089,918	297,909	132,524	88,460	59,214	38,277	27,724	19,118	11,720	6,977	3,829	3,840	780	60				

Table 34.--Net volume of growing stock on timberland by species and Forest Survey Unit, 1967 and 1986
(In thousand cubic feet)

Species group	All Units		Lower Mabash Unit		Knobs Unit		Upland Flats Unit		Northern Unit	
	1967	1986	1967	1986	1967	1986	1967	1986	1967	1986
Softwoods										
Jack pine	--	6,119	--	555	--	3,468	--	153	--	1,943
Red pine	1,514	6,763	484	1,729	--	700	--	499	--	3,835
White pine	3,964	39,757	1,140	6,835	1,491	18,152	--	6,630	1,030	8,140
Shortleaf pine	22,592	29,314	646	4,127	21,888	25,187	--	258	1,333	--
Other yellow pines	21,425	46,661	521	7,136	20,518	38,552	--	696	386	277
Tamarack	2,251	1,585	--	--	--	--	--	--	2,251	1,585
Baldcypress	14,151	8,788	14,151	8,503	--	285	--	--	--	--
Eastern redcedar	16,110	52,586	--	1,603	14,566	34,862	1,544	15,512	--	609
Other softwoods	1,135	9,689	--	--	1,135	2,511	--	--	--	7,178
Total	83,142	201,262	16,942	30,488	59,398	123,717	1,544	23,490	5,258	23,567
Hardwoods										
Select white oak	598,374	670,710	104,964	124,886	333,476	358,681	57,720	64,215	102,214	122,928
Other white oak	138,817	123,634	3,038	2,475	126,111	116,406	721	830	8,947	3,923
Select red oak	265,208	291,878	55,703	57,012	118,597	121,917	24,197	32,119	66,711	80,830
Other red oak	442,432	497,322	86,011	112,967	242,402	255,746	30,102	34,480	83,917	94,129
Select hickory	234,007	274,705	66,587	68,745	100,800	103,846	13,028	23,526	53,592	78,588
Other hickory	247,510	299,253	63,564	73,384	139,477	139,132	17,763	35,055	26,706	51,682
Basswood	38,965	67,070	3,774	10,743	12,190	8,699	2,238	7,620	20,743	40,008
Beech	112,574	145,972	7,286	19,624	65,605	81,949	13,225	15,608	26,458	28,791
Hard maple	274,830	454,732	39,896	67,526	146,325	228,579	27,395	51,424	61,214	107,203
Soft maple	120,640	243,760	48,842	77,376	18,139	73,880	18,464	20,301	35,195	72,203
Elm	95,062	174,074	30,207	33,219	37,155	41,783	6,500	15,574	21,200	83,498
Ash	196,646	359,677	43,056	69,837	63,490	106,924	19,623	54,059	70,507	128,857
Sycamore	148,131	219,745	42,999	58,208	58,889	86,365	11,138	27,475	35,105	47,697
Cottonwood	70,408	129,300	10,574	33,721	5,980	15,762	4,870	5,174	48,984	74,643
Willow	17,275	13,501	5,652	5,586	2,638	925	1,522	439	7,463	6,551
Hackberry	24,603	51,859	4,117	7,643	5,604	16,890	3,246	7,085	11,636	20,241
Aspen	26,144	31,290	2,843	1,947	9,770	17,254	2,713	4,467	10,818	7,622
Birch	13,960	12,538	6,419	5,879	5,709	5,584	--	--	1,832	1,075
Sweetgum	44,404	62,099	16,598	12,637	16,065	33,470	8,342	13,198	3,399	2,794
Tupelo	34,367	46,152	8,994	11,060	18,615	24,078	5,615	9,616	1,183	1,398
Black cherry	54,705	102,003	6,710	15,599	21,733	35,326	5,263	8,920	20,999	42,158
Black walnut	83,589	127,229	20,551	31,134	27,212	32,050	7,879	19,844	27,947	44,201
Butternut	6,520	3,981	1,997	859	2,866	1,005	357	284	1,300	1,833
Yellow-poplar	187,961	432,602	53,522	100,111	90,634	236,003	16,475	53,366	27,330	43,122
Persimmon	6,850	12,010	3,047	4,063	3,314	7,544	--	--	489	254
Sassafras	42,938	97,800	15,839	29,979	20,660	53,507	3,064	10,009	3,375	4,305
Other hardwoods	43,512	71,696	23,567	20,533	10,678	14,722	3,333	10,887	5,934	25,554
Total	3,570,432	5,016,592	776,287	1,056,753	1,704,134	2,218,027	304,813	525,724	785,198	1,216,088
All species	3,653,574	5,217,854	793,229	1,087,241	1,763,532	2,341,744	306,357	549,214	790,456	1,239,655

Table 35.--Net volume of sawtimber on timberland by species and Forest Survey Unit, 1967 and 1986
(In thousand board feet)^{1/}

Species group	All Units		Lower Wabash Unit		Knobs Unit		Upland Flats Unit		Northern Unit	
	1967	1986	1967	1986	1967	1986	1967	1986	1967	1986
Softwoods										
Jack pine	--	18,409	--	--	--	11,740	--	838	--	5,831
Red pine	--	11,919	--	2,400	--	1,419	--	2,034	--	6,066
White pine	721	151,387	--	33,901	--	67,842	--	22,895	721	26,749
Shortleaf pine	43,960	87,129	2,312	18,399	41,648	68,730	--	--	--	--
Other yellow pines	46,947	183,341	--	14,548	46,947	166,036	--	2,757	--	--
Tamarack	10,481	4,208	--	--	--	--	--	--	10,481	4,208
Baldcypress	76,569	41,635	76,569	40,165	--	1,470	--	--	--	--
Eastern redcedar	31,982	113,761	--	6,459	30,097	85,749	1,885	20,810	--	743
Other softwoods	--	4,724	--	--	--	--	--	--	--	4,724
Total	210,660	616,513	78,881	115,872	118,692	402,986	1,885	49,334	11,202	48,321
Hardwoods										
Select white oak	2,255,688	2,875,793	406,542	552,678	1,180,493	1,513,684	227,448	264,678	441,205	544,753
Other white oak	514,562	533,134	14,299	6,233	459,481	504,344	3,623	2,805	37,159	19,752
Select red oak	1,088,064	1,316,182	233,765	263,412	471,247	528,072	105,250	152,029	277,812	372,669
Other red oak	1,800,589	2,163,418	350,399	502,357	967,537	1,114,880	119,608	151,715	363,045	394,466
Select hickory	699,687	939,742	213,540	237,469	287,096	365,595	39,632	77,251	159,419	259,427
Other hickory	716,406	1,003,171	202,476	252,430	400,892	473,390	45,261	114,386	67,777	162,965
Basswood	148,061	253,100	15,905	40,069	48,518	39,506	8,788	37,177	74,850	136,348
Beech	459,441	608,945	25,938	83,217	259,037	344,282	55,017	52,418	119,449	129,028
Hard maple	805,803	1,413,239	99,438	200,052	381,566	652,881	74,984	145,660	249,815	414,646
Soft maple	395,028	809,358	148,928	289,824	49,258	214,027	68,060	71,057	128,782	254,450
Elm	214,551	329,362	56,652	63,488	86,282	87,445	9,316	24,491	62,301	153,938
Ash	544,904	1,174,946	120,523	211,047	161,265	335,958	51,493	169,707	211,623	458,234
Sycamore	573,823	920,914	170,829	241,079	214,360	353,628	40,676	122,737	147,958	203,470
Cottonwood	298,321	587,853	51,178	147,077	25,013	70,251	21,751	24,979	200,379	345,546
Willow	48,460	45,497	16,491	22,732	6,203	875	5,349	1,171	20,417	20,719
Hackberry	83,726	171,147	12,462	28,489	20,279	54,805	9,685	21,250	41,300	66,603
Aspen	61,048	110,582	11,497	7,067	24,180	60,134	9,202	17,936	16,169	25,445
Birch	42,970	31,507	17,976	13,356	21,722	17,010	--	--	3,272	1,141
Sweetgum	147,812	222,029	54,434	38,947	50,106	124,250	36,328	51,045	6,944	7,767
Tupelo	115,425	155,667	25,825	29,687	63,255	81,172	21,948	38,960	4,397	5,848
Black cherry	152,679	318,703	18,611	43,078	69,470	121,534	11,372	33,453	53,226	120,638
Black walnut	242,027	427,405	58,569	104,374	82,768	111,301	10,105	49,535	90,585	162,195
Butternut	16,229	15,368	1,879	2,871	7,967	4,008	--	--	6,383	8,489
Yellow-poplar	724,174	1,840,013	206,283	433,923	341,026	998,660	70,738	223,645	106,127	183,785
Persimmon	1,154	10,011	--	1,261	1,154	7,502	--	--	--	1,248
Sassafras	58,058	162,154	28,613	62,350	23,070	76,266	4,822	16,100	1,553	7,438
Other hardwoods	95,473	168,454	39,680	52,329	27,712	30,399	3,715	13,022	24,366	72,704
Total	12,304,163	18,607,694	2,602,722	3,910,896	5,730,957	8,285,859	1,054,171	1,877,207	2,916,313	4,533,732
All species	12,514,823	19,224,207	2,681,603	4,026,768	5,849,649	8,688,845	1,056,056	1,926,541	2,927,515	4,582,053

^{1/} International 1/4-inch rule.

Table 36.--Net volume of all live trees ^{1/} on timberland by species group and diameter class, Indiana, 1986

Species group		All classes	Diameter class (inches at breast height)												29.0-39.0+
			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	21.0-22.9	23.0-28.9			
(In thousand cubic feet)															
Softwoods															
Jack pine	6,373	726	2,029	1,673	1,215	302	150	153							
Red pine	6,885	1,223	3,361	2,138	163										
White pine	39,965	2,886	9,120	11,056	6,237	7,414	2,808	444							
Shortleaf pine	30,573	3,068	10,041	10,482	4,203	2,446	333								
Other yellow pines	48,247	6,199	7,032	11,838	9,313	9,389	3,077	188	485	332	394				
Tamarack	1,585	800		461											
Baldcypress	8,961	196	1,020	2,405	1,132	1,995	975	1,065				173			
Eastern redcedar	60,447	17,821	15,329	10,814	6,207	5,314	3,362	1,347			253				
Other softwoods	10,386	4,716	4,621	1,049											
Total	213,422	37,635	52,553	51,916	28,470	27,007	10,857	3,194	638	332	647	173			
Hardwoods															
Select white oak	729,531	16,716	40,430	54,978	75,972	89,704	100,337	94,359	79,389	60,196	77,845	33,880	5,725		
Other white oak	129,754	2,712	7,535	10,202	19,867	24,751	26,993	19,350	9,968	4,748	3,628				
Select red oak	318,370	6,302	12,579	15,756	22,325	41,197	37,035	41,256	37,702	27,354	45,970	27,185	3,709		
Other red oak	544,919	14,648	23,191	39,047	55,684	64,512	82,754	72,472	62,761	39,446	66,652	21,053	2,699		
Select hickory	292,902	16,564	29,603	47,157	45,109	51,293	42,746	27,927	16,018	8,014	7,597	874			
Other hickory	320,324	19,039	38,647	48,386	58,768	50,547	38,737	26,336	17,609	9,751	10,900	1,604			
Basswood	79,096	4,839	6,635	8,943	7,389	19,479	9,810	10,553	5,256	5,770	7,446	2,499	477		
Beech	228,887	8,003	9,544	13,244	18,390	19,556	21,258	26,509	25,670	22,347	43,891	19,314	1,161		
Hard maple	549,772	55,303	66,720	70,315	74,674	70,077	61,698	44,499	35,014	28,997	30,105	11,656	714		
Soft maple	315,126	25,518	34,430	36,509	39,969	34,272	31,881	27,690	20,461	16,661	30,092	13,239	4,404		
Elm	206,134	41,630	43,901	39,557	28,474	20,018	14,116	6,766	4,231	2,125	4,321	995			
Ash	417,111	33,028	51,819	58,857	59,678	57,351	49,280	37,028	23,415	14,996	23,113	7,686	860		
Sycamore	240,068	8,266	10,225	21,735	23,800	25,926	25,280	23,669	26,552	18,150	35,937	18,533	1,995		
Cottonwood	141,017	1,608	4,669	7,558	9,324	16,686	12,794	16,779	10,226	9,212	28,586	18,629	4,946		
Willow	25,200	1,599	2,451	3,041	2,338	2,980	3,003	1,872	3,632	948	2,068	1,068	200		
Hackberry	61,774	6,458	6,646	8,441	9,645	7,376	6,842	5,711	3,845	2,933	3,213	166	498		
Aspen	32,258	2,712	2,905	4,674	5,682	6,598	6,490	1,986	481	383	214		133		
Birch	13,342	1,910	1,957	2,710	618	2,394	2,111	994	181		467				
Sweetgum	65,254	3,376	7,392	8,828	12,577	10,638	7,173	5,085	4,138	2,094	2,012	1,675	266		
Tupelo	51,626	3,711	5,667	8,540	7,133	7,413	4,474	4,899	3,458	1,989	3,993	349			
Black cherry	138,713	11,759	19,761	21,689	25,324	14,999	15,920	11,470	8,257	5,368	3,282	884			
Black walnut	155,300	8,505	20,010	23,137	27,409	23,375	24,631	13,785	7,648	2,859	3,176	645	120		
Butternut	5,193	236	418	430	1,420	580	1,572	209	206		122				
Yellow-poplar	448,063	14,805	22,620	36,965	42,947	59,312	64,775	69,228	48,442	34,344	46,530	7,686	409		
Persimmon	13,600	4,814	3,719	2,714	1,379	683	136	155							
Sassafras	124,221	28,903	29,016	21,270	15,593	9,425	9,168	5,840	2,042	763	1,969	232			
Other hardwoods	136,187	23,885	22,358	20,742	17,418	17,192	11,037	9,079	4,186	4,155	4,994	705	436		
Noncommercial spp.	32,124	12,789	7,375	4,485	2,276	2,128	1,342	874	344	150	133	228			
Total	5,815,866	379,638	532,223	639,910	711,182	740,462	713,393	606,380	461,132	323,753	488,256	190,785	28,752		
All species	6,029,288	417,273	584,776	691,826	739,652	767,469	724,250	609,574	461,770	324,085	488,903	190,958	28,752		

^{1/} Net volume of all live trees 5 inches dbh and larger from a 1-foot stump to a 4-inch top diameter outside bark.

Table 37.--Net volume of timber on timberland by class of timber
and species group, Indiana, 1986

(In thousand cubic feet)

Class of timber	All species	Species group			
		Pine	Other softwoods	Soft hardwoods	Hard hardwoods
Live trees					
Growing-stock trees					
Sawtimber					
Saw log portion	2,941,160	77,953	27,123	914,181	1,921,903
Upper stem portion	823,450	6,666	2,259	264,619	549,906
Total	3,764,610	84,619	29,382	1,178,800	2,471,809
Poletimber	1,453,244	53,684	33,577	519,204	846,779
All growing-stock trees	5,217,854	138,303	62,959	1,698,004	3,318,588
Cull trees					
Short-log trees	162,268	923	885	51,457	109,003
Rough trees					
Sawtimber	305,817	1,865	5,560	101,413	196,979
Poletimber	168,004	1,288	1,546	76,133	89,037
Total	473,821	3,153	7,106	177,546	286,016
Rotten trees					
Sawtimber	154,634	--	--	49,909	104,725
Poletimber	20,711	50	43	10,779	9,839
Total	175,345	50	43	60,688	114,564
All cull trees	811,434	4,126	8,034	289,691	509,583
All live trees	6,029,288	142,429	70,993	1,987,695	3,828,171
Salvable dead trees					
Sawtimber	52,654	1,652	852	11,100	15,739
Poletimber	29,343	1,533	1,299	13,688	36,134
Total	81,997	3,185	2,151	24,788	51,873
All classes	6,111,285	145,614	73,144	2,012,483	3,880,044

Table 38.--Net volume of growing stock in the saw-log portion of sawtimber trees on timberland by species group and diameter class, Indiana, 1986
(In thousand cubic feet)

Species group	All classes	Diameter class (inches at breast height)										23.0-28.9	29.0-38.9	39.0+
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9						
Softwoods														
Jack pine	3,141	1,300	1,158	119	285	141	138	--	--	--	--	--	--	--
Red pine	2,046	1,890	156	--	--	--	--	--	--	--	--	--	--	--
White pine	25,805	9,718	5,944	7,062	2,663	418	--	--	--	--	--	--	--	--
Shortleaf pine	14,942	8,685	3,662	2,280	315	--	--	--	--	--	--	--	--	--
Other yellow pines	31,210	9,816	8,743	8,806	2,744	177	437	176	311	--	--	--	--	--
Tamarack	716	407	--	309	--	--	--	--	--	--	--	--	--	--
Baldcypress	7,034	2,128	1,078	1,900	925	1,003	--	--	--	--	--	--	--	--
Eastern redcedar	19,373	7,754	4,784	4,056	1,875	704	--	--	200	--	--	--	--	--
Other softwoods	809	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	105,076	42,507	25,525	24,532	8,807	2,443	575	176	511	--	--	--	--	--
Hardwoods														
Select white oak	437,844	--	52,763	66,449	77,126	72,032	59,150	42,215	49,250	17,156	1,703	--	--	--
Other white oak	81,471	--	13,937	18,672	20,700	14,779	7,528	3,525	2,330	--	--	--	--	--
Select red oak	200,159	--	16,089	30,777	28,052	31,640	27,419	20,222	29,529	15,405	1,026	--	--	--
Other red oak	329,385	--	38,993	47,954	61,966	54,057	44,338	27,405	42,975	10,926	771	--	--	--
Select hickory	143,671	--	32,490	37,876	31,295	20,422	11,250	5,431	4,365	542	--	--	--	--
Other hickory	153,268	--	41,274	36,663	28,810	20,434	12,364	6,605	6,315	803	--	--	--	--
Basswood	38,579	--	4,800	7,002	7,333	7,274	3,601	4,202	3,727	640	--	--	--	--
Beech	92,575	--	11,049	10,980	13,614	13,450	14,082	11,131	15,073	3,196	--	--	--	--
Hard maple	215,607	--	47,310	45,029	41,244	26,853	21,471	16,669	12,373	4,334	324	--	--	--
Soft maple	123,308	--	20,613	22,297	20,234	16,949	12,001	7,763	15,097	7,098	1,256	--	--	--
Elm	50,359	--	16,453	13,069	9,954	4,306	2,716	1,062	2,211	588	--	--	--	--
Ash	179,348	--	37,672	39,615	35,054	24,836	15,769	9,567	12,879	3,814	142	--	--	--
Sycamore	140,002	--	16,754	18,847	19,123	18,508	18,511	13,291	22,609	11,156	1,203	--	--	--
Cottonwood	89,318	--	6,532	11,975	10,148	13,199	7,059	6,340	19,963	11,240	2,862	--	--	--
Willow	6,930	--	625	1,548	1,596	427	2,159	384	191	--	--	--	--	--
Hackberry	26,120	--	6,548	5,110	4,323	4,100	2,708	1,881	1,450	--	--	--	--	--
Aspen	16,932	--	4,175	5,038	5,197	1,597	376	294	157	--	--	--	--	--
Birch	4,829	--	311	1,894	1,690	575	141	--	218	--	--	--	--	--
Sweetgum	33,901	--	9,231	8,349	5,367	3,685	3,154	1,611	1,134	1,175	195	--	--	--
Tupelo	23,744	--	5,010	5,079	3,020	3,689	2,698	1,465	2,526	257	--	--	--	--
Black cherry	48,644	--	12,617	9,242	10,407	5,437	6,098	3,251	1,592	--	--	--	--	--
Black walnut	65,362	--	17,251	15,671	17,066	8,184	4,580	1,174	1,254	182	--	--	--	--
Butternut	2,349	--	752	217	1,051	168	161	--	--	--	--	--	--	--
Yellow-poplar	280,281	--	30,550	45,580	51,285	53,821	37,183	25,416	32,519	3,927	--	--	--	--
Persimmon	1,534	--	977	432	--	125	--	--	--	--	--	--	--	--
Sassafras	24,814	--	8,791	6,065	5,259	3,288	458	414	539	--	--	--	--	--
Other hardwoods	25,750	--	6,741	7,761	4,212	2,815	647	1,721	1,685	168	--	--	--	--
Total	2,836,084	460,308	519,191	515,126	426,650	426,650	317,622	213,039	281,961	92,607	9,580	--	--	--
All species	2,941,160	42,507	485,833	543,723	523,933	429,093	318,197	213,215	282,472	92,607	9,580	--	--	--

Table 39.--Net volume of growing stock, sawtimber, short-log, and rough and rotten trees on timberland by individual commercial species, Indiana, 1986

Species	Total all live	All live trees				Saw-log size trees		
		Growing stock	Short-log cull	Rough cull	Rotten cull	Total saw log	Sawtimber	Short-log
		Thousand cubic feet				Thousand board feet ^{1/}		
Jack pine	6,373	6,119	199	55	--	19,417	18,409	1,008
Red pine	6,885	6,763	--	122	--	11,919	11,919	--
White pine	39,965	39,757	--	208	--	151,387	151,387	--
Shortleaf pine	30,573	29,314	488	771	--	89,383	87,129	2,254
Virginia pine	48,247	46,661	236	1,300	50	184,228	183,341	887
Tamarack	1,585	1,585	--	--	--	4,208	4,208	--
Baldcypress	8,961	8,788	--	173	--	41,635	41,635	--
Eastern redcedar	60,447	52,586	885	6,933	43	117,751	113,761	3,990
Scotch pine	10,386	9,689	--	697	--	4,724	4,724	--
White oak	626,651	580,508	16,427	24,169	5,547	2,545,355	2,496,051	49,304
Swamp white oak	24,338	22,359	608	833	538	95,591	93,932	1,659
Bur oak	18,786	15,942	1,292	1,166	386	81,579	77,900	3,679
Swamp chestnut	3,920	3,657	175	--	88	17,594	17,131	463
Chinkapin oak	55,836	48,244	2,524	4,898	170	198,819	190,779	8,040
Overcup oak	639	639	--	--	--	3,357	3,357	--
Chestnut oak	116,203	111,322	1,646	1,828	1,407	498,282	492,882	5,400
Post oak	12,912	11,673	229	853	157	37,606	36,895	711
Cherrybark oak	2,833	2,576	147	110	--	12,647	12,134	513
Northern red oak	310,999	285,084	9,054	11,586	5,275	1,308,570	1,282,653	25,917
Shumard oak	4,538	4,218	320	--	--	22,243	21,395	848
Scarlet oak	44,774	42,522	760	1,016	476	176,430	174,182	2,248
Northern pin oak	17,852	14,601	548	2,422	281	59,614	57,759	1,855
Southern red oak	175	175	--	--	--	858	858	--
Shingle oak	16,421	13,467	575	2,319	60	32,089	30,224	1,865
Blackjack oak	298	298	--	--	--	1,021	1,021	--
Pin oak	66,439	59,723	1,961	3,676	1,079	282,487	276,591	5,896
Black oak	398,960	366,536	7,689	17,845	6,890	1,645,401	1,622,783	22,618
Pecan	2,012	1,822	190	--	--	8,922	8,382	540
Shellbark hickory	12,861	12,049	339	473	--	42,508	41,481	1,027
Shagbark hickory	229,321	215,109	5,453	7,982	777	742,762	724,909	17,853
Mockernut hickory	48,708	45,725	460	2,102	421	166,550	164,970	1,580
Bitternut hickory	108,679	99,551	2,792	5,096	1,240	340,086	331,222	8,864
Pignut hickory	211,645	199,702	3,097	7,398	1,448	682,115	671,949	10,166
American basswood	78,971	66,945	2,287	4,416	5,323	259,973	253,100	6,873
White basswood	125	125	--	--	--	--	--	--
Beech	228,887	145,972	8,899	27,774	46,242	636,113	608,945	27,168
Yellow birch	542	391	--	151	--	--	--	--
Black maple	2,737	1,639	315	542	241	5,435	4,472	963
Sugar maple	547,035	453,093	18,737	53,610	21,595	1,468,042	1,408,767	59,275
Red maple	170,236	125,651	7,372	29,504	7,709	390,157	366,741	23,416
Silver maple	144,890	118,109	7,656	13,436	5,689	465,782	442,617	23,165
Winged elm	1,702	1,702	--	--	--	1,671	1,671	--
American elm	118,400	95,365	3,977	18,252	806	163,792	150,469	13,323
Siberian elm	1,052	752	--	300	--	1,406	1,406	--
Slippery elm	81,732	74,754	762	5,285	931	177,130	174,499	2,631
Rock elm	3,248	1,501	--	1,747	--	1,317	1,317	--
Black ash	2,814	2,580	--	234	--	8,862	8,862	--
Blue ash	5,582	4,466	--	984	132	10,966	10,966	--
White ash	324,665	280,335	11,248	28,032	5,050	966,492	930,178	36,314
Green ash	84,050	72,296	3,166	6,930	1,658	235,377	224,940	10,437
Sycamore	240,068	219,745	4,151	8,999	7,173	934,006	920,914	13,092
Eastern cottonwood	141,017	129,300	4,127	5,632	1,958	599,991	587,853	12,138
Black willow	25,200	13,501	1,589	8,428	1,682	50,482	45,497	4,985
Hackberry	61,774	51,859	2,633	6,110	1,172	179,391	171,147	8,244
Balsam poplar	347	347	--	--	--	1,691	1,691	--
Bigtooth aspen	30,748	29,780	109	600	259	103,772	103,367	405
Quaking aspen	954	954	--	--	--	4,450	4,450	--
Paper birch	777	684	--	93	--	1,141	1,141	--
River birch	12,023	11,463	170	203	187	30,817	30,366	451
Sweetgum	65,254	62,099	586	1,562	1,007	223,784	222,029	1,755
Black tupelo	51,626	46,152	1,102	3,201	1,171	159,443	155,667	3,776
Swamp tupelo	967	856	--	--	111	4,433	4,433	--
Black cherry	138,713	102,003	6,192	27,222	3,296	339,168	318,703	20,465
Black walnut	155,300	127,229	6,385	18,171	3,515	448,667	427,405	21,262
Butternut	5,193	3,981	298	530	384	16,475	15,368	1,107
Yellow-poplar	448,063	432,602	3,874	6,428	5,159	1,852,429	1,840,013	12,416
Boxelder	33,032	9,691	1,099	16,763	5,479	23,880	20,118	3,762
Ohio buckeye	10,136	7,544	309	1,476	807	16,141	15,061	1,080
Northern catalpa	4,943	2,315	233	885	1,510	10,823	10,040	783
Persimmon	13,600	12,010	--	1,065	525	10,011	10,011	--
Kentucky coffeetree	3,523	2,824	332	--	367	11,755	10,596	1,159
Flowering dogwood	6,751	3,482	--	2,998	271	--	--	--
Honeylocust	28,041	18,949	799	7,350	943	56,939	54,155	2,784
White mulberry	628	--	--	477	151	--	--	--
Red mulberry	2,860	409	--	2,056	395	--	--	--
White poplar	399	399	--	--	--	1,074	1,074	--
Black locust	44,263	25,436	2,666	8,563	7,598	62,976	54,051	8,925
Sassafras	124,221	97,800	3,101	14,804	8,516	172,009	162,154	9,855
European alder	721	--	--	721	--	--	--	--
Yellow buckeye	132	--	--	132	--	--	--	--
All commercial species	5,997,164	5,217,854	162,268	441,697	175,345	19,735,401	19,224,207	511,194

^{1/} International 1/4-inch rule.

Table 40.--Net volume of noncommercial
species on timberland by individual
species, Indiana, 1986

(In thousand cubic feet)

Species	Cull volume
Osage-orange	13,358
Eastern hophornbeam	5,973
Eastern redbud	5,565
Hawthorn	3,349
American hornbeam	1,435
Apple	1,385
Ailanthus	641
Wild plum	196
Pawpaw	135
Chokecherry	87
All species	32,124

Table 41.--Net volume of growing stock on timberland by species group and diameter class, Indiana, 1986

Species group	All classes	Diameter class (inches at breast height)														(In thousand cubic feet)		
		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	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0-30.9	31.0-32.9	33.0-34.9	35.0-36.9	37.0-38.9
Softwoods																		
Jack pine	6,119	671	2,029	1,474	1,215	125	302	150	153	--	--	--	--	--	--	--	--	--
Red pine	6,763	1,179	3,283	2,138	163	--	--	--	--	--	--	--	--	--	--	--	--	--
White pine	39,757	2,788	9,068	10,998	6,237	7,414	2,808	444	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	29,314	3,013	9,903	9,827	3,845	2,393	333	--	--	--	--	--	--	--	--	--	--	--
Other yellow pines	46,661	6,109	6,867	11,111	9,173	9,242	2,892	188	485	200	394	--	--	--	--	--	--	--
Tamarack	1,585	800	--	461	--	324	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	8,788	196	1,020	2,405	1,132	1,995	975	1,065	--	--	--	--	--	--	--	--	--	--
Eastern redcedar	52,586	17,415	14,146	8,775	5,020	4,256	1,974	747	--	--	253	--	--	--	--	--	--	--
Other softwoods	9,689	4,461	4,313	915	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	201,262	36,632	50,629	48,104	26,785	25,749	9,284	2,594	638	200	647	--	--	--	--	--	--	--
Hardwoods																		
Select white oak	670,710	15,603	39,112	52,484	70,422	84,057	96,341	89,519	75,738	54,889	66,914	23,315	23,315	2,316	--	--	--	--
Other white oak	123,634	2,636	7,180	9,974	18,597	23,625	25,860	18,374	9,638	4,584	3,166	--	--	--	--	--	--	--
Select red oak	291,878	6,125	12,410	14,706	21,478	38,938	35,050	39,309	35,120	26,297	40,120	20,931	20,931	1,394	--	--	--	--
Other red oak	497,322	14,106	21,499	37,714	52,041	60,656	77,408	67,185	56,788	35,633	58,395	14,851	14,851	1,046	--	--	--	--
Select hickory	274,705	16,280	28,451	46,113	43,368	47,912	39,087	25,379	14,402	7,060	5,928	735	--	--	--	--	--	--
Other hickory	299,253	18,420	36,854	47,038	55,077	46,383	35,992	25,398	15,838	8,587	8,576	1,090	--	--	--	--	--	--
Basswood	67,070	3,891	5,684	8,029	6,406	8,862	9,163	9,036	4,609	5,463	5,059	868	--	--	--	--	--	--
Beech	145,972	7,570	8,123	10,590	14,749	13,889	17,008	16,713	18,038	14,473	20,479	4,340	--	--	--	--	--	--
Hard maple	454,732	51,110	62,034	64,259	63,140	56,969	51,526	33,387	27,492	21,673	16,817	5,885	440	--	--	--	--	--
Soft maple	243,760	22,144	30,271	31,954	27,519	28,205	25,272	21,059	15,372	10,094	20,512	9,650	1,708	--	--	--	--	--
Elm	174,074	36,697	37,658	34,778	21,962	16,532	12,436	5,350	3,478	1,379	3,003	801	--	--	--	--	--	--
Ash	359,677	30,259	45,945	52,912	50,286	50,126	43,780	30,861	20,194	12,442	17,500	5,179	193	--	--	--	--	--
Sycamore	219,745	8,040	9,563	20,531	22,364	23,839	23,896	23,003	23,713	17,278	30,728	15,156	1,634	--	--	--	--	--
Cottonwood	129,300	1,519	4,332	6,939	8,716	15,152	12,678	16,402	9,040	8,239	27,119	15,273	3,891	--	--	--	--	--
Willow	13,501	1,216	1,505	1,939	833	1,959	1,993	531	2,765	500	260	--	--	--	--	--	--	--
Hackberry	51,859	5,274	5,949	7,058	8,739	6,462	5,397	5,097	3,468	2,445	1,970	--	--	--	--	--	--	--
Aspen	31,290	2,628	2,649	4,377	5,573	6,376	6,490	1,986	481	383	214	--	--	--	--	--	--	--
Birch	12,538	1,822	1,957	2,645	415	2,394	2,111	716	181	--	297	--	--	--	--	--	--	--
Sweetgum	62,099	3,057	6,904	8,431	12,321	10,560	6,705	4,584	4,041	2,094	1,539	1,597	266	--	--	--	--	--
Tupelo	46,152	3,369	5,104	7,078	6,683	6,421	3,770	4,584	3,458	1,907	3,429	349	--	--	--	--	--	--
Black cherry	102,003	8,745	14,257	16,522	16,841	11,693	12,995	6,753	7,809	4,227	2,161	--	--	--	--	--	--	--
Black walnut	127,229	7,426	17,143	18,964	23,023	19,838	21,317	10,171	5,868	1,528	1,704	247	--	--	--	--	--	--
Butternut	3,981	128	418	430	1,004	275	1,311	209	206	--	--	--	--	--	--	--	--	--
Yellow-poplar	432,602	14,641	22,137	36,250	40,772	57,667	64,059	66,877	47,625	33,050	44,167	5,337	--	--	--	--	--	--
Persimmon	12,010	4,335	3,406	2,265	1,303	546	--	155	--	--	--	--	--	--	--	--	--	--
Sassafras	97,800	23,675	24,298	17,912	11,734	7,668	6,569	4,086	587	539	732	--	--	--	--	--	--	--
Other hardwoods	71,696	12,720	13,076	12,746	8,999	9,816	5,260	3,498	827	2,239	2,287	228	--	--	--	--	--	--
Total	5,016,592	323,436	467,919	574,628	614,365	656,820	643,474	530,222	406,776	277,003	383,096	125,832	13,021	--	--	--	--	--
All species	5,217,854	360,068	518,548	622,732	641,150	682,569	652,758	532,816	407,414	277,203	383,743	125,832	13,021	--	--	--	--	--

Table 42.--Net volume of sawtimber on timberland by species group and diameter class, Indiana, 1986
(In thousand board feet)^{1/}

Species group	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- 22.9	23.0- 24.9	25.0- 26.9	27.0- 28.9	29.0- 30.9	31.0- 32.9
Softwoods													
Jack pine	18,409	7,601	6,644	704	1,722	871	867						
Red pine	11,919	11,026	893										
White pine	151,387	56,747	34,104	41,894	16,063	2,579							
Shortleaf pine	87,129	50,686	21,019	13,521	1,903								
Other yellow pines	183,341	57,316	50,162	52,227	16,548	1,093	2,745	1,136	2,114				
Tamarack	4,208	2,377		1,831									
Baldcypress	41,635	12,411	6,189	11,265	5,583	6,187							
Eastern redcedar	113,761	45,260	27,450	24,056	11,299	4,338			1,358				
Other softwoods	4,724												
Total	616,513	248,148	146,461	145,498	53,118	15,068	3,612	1,136	3,472				
Hardwoods													
Select white oak	2,875,793	--	345,526	431,290	503,212	471,879	392,096	280,441	326,321	113,721	--	11,307	--
Other white oak	533,134	--	91,276	121,194	135,086	96,825	49,896	23,411	15,446	--	--	--	--
Select red oak	1,316,182	--	105,383	199,781	183,072	207,238	181,782	134,347	195,693	102,084	--	6,802	--
Other red oak	2,163,418	--	255,361	311,246	404,356	354,139	293,960	182,026	284,801	72,428	--	5,101	--
Select hickory	939,742	--	212,812	245,835	204,186	133,774	74,561	36,069	28,921	3,584	--	--	--
Other hickory	1,003,171	--	270,299	237,979	188,012	133,856	81,982	43,886	41,839	5,318	--	--	--
Basswood	253,100	--	31,440	45,458	47,859	47,651	23,859	27,913	24,682	4,238	--	--	--
Beech	608,945	--	72,371	71,277	88,837	88,099	93,368	73,937	99,882	21,174	--	--	--
Hard maple	1,413,239	--	309,851	292,294	269,157	175,957	142,346	110,740	82,036	28,712	--	2,146	--
Soft maple	809,358	--	135,029	144,729	131,988	111,029	79,574	51,572	100,057	47,052	--	8,328	--
Elm	329,362	--	107,749	84,859	64,946	28,209	18,005	7,046	14,646	3,902	--	--	--
Ash	1,174,946	--	246,716	257,205	228,685	162,697	104,521	63,570	85,345	25,265	--	942	--
Sycamore	920,914	--	109,723	122,326	124,834	121,252	122,751	88,291	149,847	73,922	--	7,968	--
Cottonwood	587,853	--	42,773	77,740	66,225	86,468	46,785	42,106	132,293	74,494	--	18,969	--
Willow	45,497	--	4,094	10,054	10,413	2,799	14,315	2,554	1,268	--	--	--	--
Hackberry	171,147	--	42,887	33,155	28,197	26,854	17,951	12,491	9,612	--	--	--	--
Aspen	110,582	--	27,347	32,716	33,918	10,466	2,490	1,954	1,042	--	--	649	--
Birch	31,507	--	2,036	12,295	11,023	3,772	934	--	1,447	--	--	--	--
Sweetgum	222,029	--	60,449	54,195	35,025	24,150	20,914	10,698	7,511	7,789	--	1,298	--
Tupelo	155,667	--	32,794	32,956	19,691	24,164	17,891	9,740	16,730	1,701	--	--	--
Black cherry	318,703	--	82,643	59,997	67,897	35,603	40,414	21,601	10,548	--	--	--	--
Black walnut	427,405	--	112,991	101,758	111,354	53,616	30,367	7,807	8,311	1,201	--	--	--
Butternut	15,368	--	4,929	1,412	6,857	1,101	1,069	--	--	--	--	--	--
Yellow-poplar	1,840,013	--	200,080	295,847	334,647	352,563	246,507	168,830	215,507	26,032	--	--	--
Persimmon	10,011	--	6,390	2,802	--	819	--	--	--	--	--	--	--
Sassafras	162,154	--	57,581	39,361	34,314	21,537	3,039	2,754	3,568	--	--	--	--
Other hardwoods	168,454	--	44,159	50,372	27,487	18,443	4,283	11,436	11,162	1,112	--	--	--
Total	18,607,694	--	3,014,689	3,370,133	3,361,278	2,794,960	2,105,660	1,415,220	1,868,515	613,729	613,729	63,510	63,510
All species	19,224,207	248,148	3,161,150	3,515,631	3,414,396	2,810,028	2,109,272	1,416,356	1,871,987	613,729	613,729	63,510	63,510

^{1/} International 1/4-inch rule.

Table 43.---Net volume of live trees and growing stock on timberland by ownership class and species group, Indiana, 1986
(In thousand cubic feet)

Ownership class	Live trees					Growing stock				
	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods
National forest	254,132	19,403	4,168	45,251	185,310	238,825	18,852	3,418	41,894	174,661
Miscellaneous federal	233,839	19,234	479	73,378	159,748	209,504	234	479	62,744	146,047
State	305,340	13,509	3,223	66,377	222,231	282,535	13,211	3,002	60,852	205,470
County and municipal	43,215	--	176	21,336	21,703	36,332	--	176	18,661	17,495
Forest industry	29,702	--	--	4,639	25,063	26,484	--	--	3,836	22,648
Farmer	2,385,968	38,538	29,107	884,352	1,433,971	2,006,762	37,841	24,587	737,712	1,206,622
Misc. private-corp.	522,104	25,906	4,535	173,911	317,752	449,452	25,076	4,399	147,238	1,272,739
Misc. private-indiv.	2,254,988	44,839	29,305	718,451	1,462,393	1,967,960	43,089	26,898	625,067	1,272,906
All owners	6,029,288	142,429	70,993	1,987,695	3,828,171	5,217,854	138,303	62,959	1,698,004	3,318,588

Table 44.--Net volume of growing stock on timberland by species group and forest type, Indiana, 1986

(In thousand cubic feet)

Species group	All types	Forest type						
		Jack-red-white pine	Short-leaf pine	Scotch-Virginia pine	Oak-pine	Oak-hickory	Chestnut-scarlet oak	Sassafras-Persimmon
Softwoods								
Jack pine	6,119	4,221	--	--	104	373	--	--
Red pine	6,763	5,325	--	--	--	1,101	--	--
White pine	39,757	31,951	--	948	2,753	2,016	--	--
Shortleaf pine	29,314	4,508	19,327	1,431	794	2,180	--	--
Other yellow pines	46,661	1,590	1,060	24,404	10,500	2,824	--	460
Tamarack	1,585	--	--	--	--	--	--	--
Baldcypress	8,788	--	--	--	--	--	--	--
Eastern redcedar	52,586	--	226	3,914	26,827	9,077	--	--
Other softwoods	9,689	--	--	8,411	--	--	--	--
Total	201,262	47,595	20,613	39,108	40,978	17,571	--	460
Hardwoods								
Select white oak	670,710	711	--	1,555	3,796	488,141	10,835	461
Other white oak	123,634	--	146	--	1,884	59,958	49,860	137
Select red oak	291,878	125	1,074	190	2,552	169,881	1,457	--
Other red oak	497,322	168	278	3,249	8,946	345,175	12,574	401
Select hickory	274,705	756	1,377	219	3,340	170,262	1,200	--
Other hickory	299,253	688	157	--	4,438	175,275	2,833	--
Basswood	67,070	--	--	--	2,136	9,386	238	--
Beech	145,972	--	51	--	--	21,737	--	--
Hard maple	454,732	166	1,031	355	2,474	79,205	2,358	755
Soft maple	243,760	719	239	624	763	17,475	460	--
Elm	174,074	772	26	130	1,224	27,233	--	--
Ash	359,677	2,211	1,350	885	5,261	63,773	--	--
Sycamore	219,745	1,822	365	3,051	1,049	23,083	--	--
Cottonwood	129,300	1,908	--	8,962	--	3,297	--	--
Willow	13,501	--	--	--	--	228	--	--
Hackberry	51,859	--	--	--	97	4,177	--	--
Aspen	31,290	--	--	--	--	13,723	--	--
Birch	12,538	--	--	600	--	789	--	--
Sweetgum	62,099	549	--	--	783	7,150	--	--
Tupelo	46,152	115	84	397	2,394	14,101	333	499
Black cherry	102,003	1,239	763	1,092	1,155	17,965	1,388	--
Black walnut	127,229	--	--	--	1,628	24,033	--	--
Butternut	3,981	--	--	--	--	128	--	--
Yellow-poplar	432,602	1,725	4,152	1,747	6,534	86,684	--	1,131
Persimmon	12,010	--	--	523	288	4,181	--	186
Sassafras	97,800	117	1,751	564	993	26,098	--	2,472
Other hardwoods	71,696	--	--	422	345	10,756	--	--
Total	5,016,592	13,791	12,844	24,565	52,080	1,863,894	83,536	6,042
All species	5,217,854	61,386	33,457	63,673	93,058	1,881,465	83,536	6,502

(Table 44 continued on next page)

(Table 44 continued)

Species group	Forest type						
	Oak-gum	Lowland oak	Elm-ash-soft maple	Cotton-wood	Maple-beech	Cherry-ash-yellow-poplar	Non-stocked
Softwoods							
Jack pine	--	--	153	101	--	1,167	--
Red pine	232	--	105	--	--	--	--
White pine	--	--	1,040	--	9	1,040	--
Shortleaf pine	--	--	517	--	--	557	--
Other yellow pines	270	--	1,702	494	2,934	423	--
Tamarack	--	--	1,585	--	--	--	--
Baldcypress	1,060	--	7,728	--	--	--	--
Eastern redcedar	151	--	2,600	--	4,273	5,518	--
Other softwoods	292	--	--	--	160	826	--
Total	2,005	--	15,430	595	7,376	9,531	--
Hardwoods							
Select white oak	3,002	7,645	33,106	--	81,173	40,074	211
Other white oak	391	746	198	--	8,196	2,118	--
Select red oak	1,403	300	11,222	--	71,057	32,617	--
Other red oak	7,046	18,447	35,574	147	38,267	26,574	476
Select hickory	2,649	1,226	21,965	--	53,441	18,270	--
Other hickory	--	924	13,488	--	64,675	36,775	--
Basswood	--	322	7,141	--	40,188	7,659	--
Beech	302	--	2,657	--	111,691	9,534	--
Hard maple	422	--	20,354	--	304,307	43,305	--
Soft maple	7,534	1,172	155,719	3,841	40,249	14,965	--
Elm	652	1,814	58,985	--	50,933	32,041	264
Ash	3,238	2,938	94,275	--	65,980	119,421	345
Sycamore	3,651	86	105,534	1,128	38,448	40,205	1,323
Cottonwood	--	605	86,021	21,287	2,713	3,823	684
Willow	--	--	11,883	697	313	277	103
Hackberry	--	--	28,614	--	11,338	7,633	--
Aspen	578	--	2,352	--	5,007	9,630	--
Birch	918	--	9,827	--	--	404	--
Sweetgum	20,301	1,455	17,668	--	7,496	6,697	--
Tupelo	3,558	1,091	5,312	--	12,714	5,554	--
Black cherry	481	425	13,405	--	37,170	26,780	140
Black walnut	396	--	29,651	--	27,690	43,831	--
Butternut	--	--	585	--	3,062	206	--
Yellow-poplar	4,567	--	37,499	110	96,201	192,252	--
Persimmon	526	--	1,339	--	4,143	824	--
Sassafras	1,949	556	15,116	--	28,600	19,584	--
Other hardwoods	249	199	28,107	338	23,880	7,330	70
Total	63,813	39,951	847,597	27,548	1,228,932	748,383	3,616
All species	65,818	39,951	863,027	28,143	1,236,308	757,914	3,616

Table 45.--Net volume of sawtimber on timberland by species group and forest type, Indiana, 1986

(In thousand board feet)^{1/}

Species group	Forest type							
	All types	Jack-red-white pine	Short-leaf pine	Scotch-Virginia pine	Oak-pine	Oak-hickory	Chestnut-scarlet oak	Sassafras-Persimmon
Softwoods								
Jack pine	18,409	10,073	--	--	539	1,921	--	--
Red pine	11,919	8,466	--	--	--	3,453	--	--
White pine	151,387	118,692	--	579	13,678	10,728	--	--
Shortleaf pine	87,129	16,448	50,918	5,677	4,093	4,875	--	--
Other yellow pines	183,341	2,974	5,710	87,993	51,885	11,725	--	2,622
Tamarack	4,208	--	--	--	--	--	--	--
Baldcypress	41,635	--	--	--	--	--	--	--
Eastern redcedar	113,761	--	--	9,073	61,713	21,582	--	--
Other softwoods	4,724	--	--	4,724	--	--	--	--
Total	616,513	156,653	56,628	108,046	131,908	54,284	--	2,622
Hardwoods								
Select white oak	2,875,793	3,490	--	7,974	16,370	2,084,914	45,833	1,594
Other white oak	533,134	--	751	--	4,390	245,587	227,598	--
Select red oak	1,316,182	--	5,658	971	11,510	762,853	6,926	--
Other red oak	2,163,418	--	789	16,698	39,191	1,485,849	53,870	1,480
Select hickory	939,742	1,103	6,870	1,075	14,469	560,064	4,595	--
Other hickory	1,003,171	2,076	675	--	7,323	566,174	10,340	--
Basswood	253,100	--	--	--	10,920	36,362	1,241	--
Beech	608,945	--	270	--	--	76,896	--	--
Hard maple	1,413,239	--	915	1,297	5,259	186,886	3,337	3,010
Soft maple	809,358	1,657	--	2,231	893	38,834	838	--
Elm	329,362	1,492	--	--	1,284	50,324	--	--
Ash	1,174,946	8,552	2,276	1,135	14,457	199,057	--	--
Sycamore	920,914	3,666	1,668	9,980	1,031	77,948	--	--
Cottonwood	587,853	5,160	--	43,275	--	16,564	--	--
Willow	45,497	--	--	--	--	--	--	--
Hackberry	171,147	--	--	--	--	13,986	--	--
Aspen	110,582	--	--	--	--	47,135	--	--
Birch	31,507	--	--	--	--	1,141	--	--
Sweetgum	222,029	--	--	--	1,979	29,614	--	--
Tupelo	155,667	--	436	--	4,958	38,499	1,673	--
Black cherry	318,703	--	--	3,866	2,505	61,996	6,006	--
Black walnut	427,405	--	--	--	2,437	73,344	--	--
Butternut	15,368	--	--	--	--	--	--	--
Yellow-poplar	1,840,013	2,683	17,386	7,391	25,327	364,770	--	5,871
Persimmon	10,011	--	--	--	--	3,354	--	--
Sassafras	162,154	--	--	835	643	34,545	--	1,492
Other hardwoods	168,454	--	--	--	--	29,694	--	--
Total	18,607,694	29,879	37,694	96,728	164,946	7,086,390	362,257	13,447
All species	19,224,207	186,532	94,322	204,774	296,854	7,140,674	362,257	16,069

(Table 45 continued on next page)

^{1/} International 1/4-inch rule.

(Table 45 continued)

Species group	Forest type						
	Oak-gum	Lowland oak	Elm-ash-soft maple	Cotton-wood	Maple-beech	Cherry-ash-yellow-poplar	Non-stocked
Softwoods							
Jack pine	--	--	838	--	--	5,038	--
Red pine	--	--	--	--	--	--	--
White pine	--	--	3,778	--	--	3,932	--
Shortleaf pine	--	--	2,579	--	--	2,539	--
Other yellow pines	1,424	--	3,029	--	14,156	1,823	--
Tamarack	--	--	4,208	--	--	--	--
Baldcypress	5,296	--	36,339	--	--	--	--
Eastern redcedar	--	--	1,661	--	10,810	8,922	--
Other softwoods	--	--	--	--	--	--	--
Total	6,720	--	52,432	--	24,966	22,254	--
Hardwoods							
Select white oak	11,331	31,470	148,035	--	365,697	157,992	1,093
Other white oak	2,059	3,878	1,010	--	39,995	7,866	--
Select red oak	7,343	976	52,253	--	326,168	141,524	--
Other red oak	35,838	86,430	157,943	--	167,248	115,764	2,318
Select hickory	8,355	1,755	77,267	--	207,026	57,163	--
Other hickory	--	2,886	51,402	--	241,169	121,126	--
Basswood	--	965	27,059	--	159,033	17,520	--
Beech	990	--	8,980	--	486,404	35,405	--
Hard maple	903	--	60,516	--	1,061,816	89,300	--
Soft maple	20,944	4,683	555,291	14,420	121,994	47,573	--
Elm	1,668	--	99,567	--	126,104	48,923	--
Ash	14,656	8,002	306,732	--	237,205	382,874	--
Sycamore	16,032	--	451,796	1,119	172,570	178,401	6,703
Cottonwood	--	3,062	401,670	83,258	12,252	19,185	3,427
Willow	--	--	44,769	--	--	728	--
Hackberry	--	--	95,901	--	41,655	19,605	--
Aspen	2,880	--	4,422	--	17,113	39,032	--
Birch	2,805	--	26,752	--	--	809	--
Sweetgum	70,981	5,649	66,919	--	25,443	21,444	--
Tupelo	11,599	4,619	24,088	--	48,592	21,203	--
Black cherry	2,484	2,085	23,688	--	136,346	79,727	--
Black walnut	2,067	--	103,811	--	102,410	143,336	--
Butternut	--	--	2,871	--	11,428	1,069	--
Yellow-poplar	23,044	--	159,026	--	419,008	815,507	--
Persimmon	--	--	--	--	4,459	2,198	--
Sassafras	670	1,200	35,667	--	61,185	25,917	--
Other hardwoods	894	978	73,399	1,750	49,879	11,860	--
Total	237,543	158,638	3,060,834	100,547	4,642,199	2,603,051	13,541
All species	244,263	158,638	3,113,266	100,547	4,667,165	2,625,305	13,541

Table 46.--Net volume of growing stock on timberland by species group and ownership class, Indiana, 1986

(In thousand cubic feet)

Species group	Ownership class								Misc. priv.- corp.	Misc. priv.- indiv.
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer			
Softwoods										
Jack pine	6,119	--	--	1,268	--	--	2,350	454	2,047	
Red pine	6,763	--	--	626	--	--	2,993	2,161	983	
White pine	39,757	2,049	--	4,355	--	--	8,296	10,895	14,162	
Shortleaf pine	29,314	16,803	154	--	--	--	3,678	3,331	5,348	
Other yellow pines	46,661	--	80	6,510	--	--	11,287	8,235	20,549	
Tamarack	1,585	--	--	1,585	--	--	--	--	--	
Baldcypress	8,788	--	--	--	--	--	--	1,345	7,443	
Eastern redcedar	52,586	3,418	479	1,417	176	--	24,587	3,054	19,455	
Other softwoods	9,689	--	--	452	--	--	9,237	--	--	
Total	201,262	22,270	713	16,213	176	--	62,428	29,475	69,987	
Hardwoods										
Select white oak	670,710	55,583	41,405	63,972	5,007	5,964	223,280	40,567	234,932	
Other white oak	123,634	19,312	2,365	29,731	1,502	798	12,095	5,842	51,989	
Select red oak	291,878	11,470	10,106	16,556	1,494	2,190	101,710	31,909	116,443	
Other red oak	497,322	31,279	27,596	44,626	1,382	3,493	163,599	42,037	183,310	
Select hickory	274,705	9,611	12,379	6,721	910	1,343	107,449	20,200	116,092	
Other hickory	299,253	16,934	14,937	13,052	516	2,627	114,339	17,543	119,305	
Basswood	67,070	142	2,805	3,549	277	--	28,712	6,751	24,834	
Beech	145,972	4,033	5,144	5,547	--	2,787	60,132	14,789	53,540	
Hard maple	454,732	15,277	16,610	9,619	1,241	3,100	181,452	44,123	183,310	
Soft maple	243,760	3,023	12,784	13,003	3,171	--	128,024	15,266	68,489	
Elm	174,074	1,373	1,785	3,511	1,636	745	82,508	22,092	60,424	
Ash	359,677	9,803	7,914	10,764	3,475	--	156,898	36,338	134,485	
Sycamore	219,745	6,784	8,924	6,081	830	--	96,313	20,186	80,627	
Cottonwood	129,300	--	2,245	1,907	8,656	--	78,220	15,321	22,951	
Willow	13,501	--	--	--	313	--	3,555	618	9,015	
Hackberry	51,859	--	543	628	208	--	23,660	4,211	22,609	
Aspen	31,290	2,496	2,907	153	--	--	10,535	3,997	11,202	
Birch	12,538	55	317	926	--	--	5,351	958	4,931	
Sweetgum	62,099	1,108	989	3,064	--	--	26,483	4,626	25,829	
Tupelo	46,152	2,699	1,150	3,504	--	340	17,806	2,615	18,038	
Black cherry	102,003	2,255	2,924	3,343	1,875	--	43,590	9,707	38,309	
Black walnut	127,229	475	4,581	2,384	994	346	61,561	12,378	44,510	
Butternut	3,981	--	--	--	783	--	2,123	585	490	
Yellow-poplar	432,602	17,209	22,547	17,411	582	921	154,595	32,255	187,082	
Persimmon	12,010	112	420	1,096	--	--	3,601	1,460	5,321	
Sassafras	97,800	4,576	2,058	4,610	--	1,830	29,143	7,368	48,215	
Other hardwoods	71,696	946	3,356	564	1,304	--	27,600	6,235	31,691	
Total	5,016,592	216,555	208,791	266,322	36,156	26,484	1,944,334	419,977	1,897,973	
All species	5,217,854	238,825	209,504	282,535	36,332	26,484	2,006,762	449,452	1,967,960	

Table 47.--Net volume of sawtimber on timberland by species group and ownership class, Indiana, 1986

(In thousand board feet)^{1/}

Species group	Ownership class								Misc. priv.- corp.	Misc. priv.- indiv.
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer			
Softwoods										
Jack pine	18,409	--	--	5,038	--	--	7,001	--	--	6,370
Red pine	11,919	--	--	2,034	--	--	5,127	2,400	--	2,358
White pine	151,387	7,729	--	18,080	--	--	33,407	49,426	--	42,745
Shortleaf pine	87,129	43,459	840	--	--	--	11,684	15,958	--	15,188
Other yellow pines	183,341	--	--	25,739	--	--	45,962	19,913	--	91,727
Tamarack	4,208	--	--	4,208	--	--	--	--	--	--
Baldcypress	41,635	--	--	--	--	--	--	6,766	--	34,869
Eastern redcedar	113,761	11,072	1,019	7,897	--	--	34,799	15,101	--	43,873
Other softwoods	4,724	--	--	--	--	--	4,724	--	--	--
Total	616,513	62,260	1,859	62,996	--	--	142,704	109,564	--	237,130
Hardwoods										
Select white oak	2,875,793	226,466	191,806	262,461	23,915	23,830	971,010	182,706	--	993,599
Other white oak	533,134	83,313	11,324	128,435	6,981	2,279	52,526	23,943	--	224,333
Select red oak	1,316,182	47,465	40,269	72,738	7,456	9,787	465,724	146,745	--	525,998
Other red oak	2,163,418	129,778	124,916	198,132	6,068	12,854	706,901	189,900	--	794,869
Select hickory	939,742	36,520	38,785	20,670	4,717	4,663	364,987	69,206	--	400,194
Other hickory	1,003,171	45,912	44,893	44,506	676	12,858	386,034	65,589	--	402,703
Basswood	253,100	--	11,088	14,881	1,422	--	107,267	26,630	--	91,812
Beech	608,945	12,122	16,963	26,647	--	14,463	254,479	64,954	--	219,317
Hard maple	1,413,239	38,545	45,865	14,923	6,222	12,381	628,041	129,204	--	538,058
Soft maple	809,358	6,674	33,394	44,161	10,888	--	450,388	46,128	--	217,725
Elm	329,362	718	2,328	8,687	1,717	821	155,771	48,169	--	111,151
Ash	1,174,946	18,139	18,528	34,313	5,432	--	529,626	118,473	--	450,435
Sycamore	920,914	12,979	38,186	22,595	3,025	--	424,873	65,644	--	353,612
Cottonwood	587,853	--	9,919	5,591	40,541	--	365,909	55,574	--	110,319
Willow	45,497	--	--	--	--	--	5,836	--	--	39,661
Hackberry	171,147	--	2,796	1,867	1,067	--	69,862	15,279	--	80,276
Aspen	110,582	8,509	12,676	--	--	--	38,430	14,068	--	36,899
Birch	31,507	124	903	1,862	--	--	16,027	--	--	12,591
Sweetgum	222,029	4,846	4,560	9,837	--	--	98,475	10,799	--	93,512
Tupelo	155,667	8,275	909	12,202	--	1,449	59,115	9,260	--	64,457
Black cherry	318,703	6,066	6,069	13,003	3,188	--	132,963	30,960	--	126,454
Black walnut	427,405	2,460	12,701	7,357	4,358	876	210,600	46,971	--	142,082
Butternut	15,368	--	--	--	4,008	--	7,420	2,871	--	1,069
Yellow-poplar	1,840,013	74,366	97,073	73,681	1,896	3,544	662,235	125,687	--	801,531
Persimmon	10,011	--	--	--	--	--	2,297	2,856	--	4,858
Sassafras	162,154	1,925	2,732	1,263	--	4,048	47,035	16,592	--	88,559
Other hardwoods	168,454	4,080	7,014	835	--	--	70,559	10,668	--	75,298
Total	18,607,694	769,282	775,697	1,020,647	133,577	103,853	7,284,390	1,518,876	--	7,001,372
All species	19,224,207	831,542	777,556	1,083,643	133,577	103,853	7,427,094	1,628,440	--	7,238,502

^{1/} International 1/4-inch rule.

Table 48.--Net volume of growing stock on timberland by forest type and stand-age class, Indiana, 1986

(In thousand cubic feet)															
Unit and forest type	All ages	Stand-age class (years)												141+	
		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140		
All Units															
Jack-red-white pine	61,386	--	5,275	22,067	26,164	7,880	--	--	--	--	--	--	--	--	--
Shortleaf pine	33,457	744	--	--	25,467	4,865	2,381	--	--	--	--	--	--	--	--
Scotch-Virginia pine	63,673	981	6,120	1,820	30,693	18,001	2,308	3,750	--	--	--	--	--	--	--
Oak-pine	93,058	4,306	12,267	11,855	19,583	23,869	9,891	2,828	7,141	--	1,318	--	--	--	--
Oak-hickory	1,881,465	46,683	43,933	55,331	77,277	179,086	312,109	304,755	288,844	269,798	130,592	139,654	26,033	7,370	--
Chestnut-scarlet oak	83,536	--	--	--	158	--	--	4,059	18,387	9,379	24,822	14,064	2,781	9,886	--
Sassafras-persimmon	6,502	1,459	2,728	--	--	--	--	2,315	--	--	--	--	--	--	--
Oak-gum	65,818	858	1,797	--	--	27,730	6,289	8,694	--	9,283	5,223	3,568	--	--	--
Lowland oak	39,951	408	--	987	1,130	--	6,958	14,409	9,452	6,607	--	--	--	--	--
Elm-ash-soft maple	863,027	25,894	44,728	86,048	127,803	194,654	126,343	103,967	88,264	39,659	10,598	10,100	605	4,364	--
Cottonwood	28,143	--	1,568	12,756	--	2,207	7,922	2,873	817	--	--	--	--	--	--
Maple-beech	1,236,308	30,275	47,387	50,517	86,573	146,673	233,430	196,923	167,378	136,890	51,312	66,992	12,458	9,500	--
Cherry-ash-yellow-poplar	757,914	16,833	30,986	71,246	135,901	214,869	132,889	90,439	36,520	19,805	8,426	--	--	--	--
Nonstocked	3,616	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5,217,854	132,057	196,789	312,627	533,125	819,834	846,894	747,025	607,795	506,864	221,533	223,095	48,982	21,234	--
Lower Mahabash Unit															
Jack-red-white pine	11,737	--	--	4,004	7,733	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	906	--	--	--	906	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	14,843	426	578	254	2,356	8,921	2,308	--	--	--	--	--	--	--	--
Oak-pine	1,309	--	--	1,309	--	--	--	--	--	--	--	--	--	--	--
Oak-hickory	422,436	15,501	6,855	17,821	13,649	35,574	92,704	61,916	75,157	71,988	10,929	20,342	--	--	--
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	847	--	847	--	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	14,317	--	--	--	--	7,374	--	1,720	--	--	5,223	--	--	--	--
Lowland oak	11,162	408	--	--	--	4,402	4,624	1,728	--	--	--	--	--	--	--
Elm-ash-soft maple	255,799	8,395	21,135	15,244	33,850	79,258	47,972	20,471	23,334	6,140	--	--	--	--	--
Cottonwood	11,132	--	--	3,210	--	--	7,922	--	--	--	--	--	--	--	--
Maple-beech	190,965	3,671	5,519	11,817	10,090	42,771	39,757	21,376	28,155	12,859	7,668	2,236	5,046	--	--
Cherry-ash-yellow-poplar	151,788	254	10,196	13,054	31,751	46,471	11,484	22,989	8,663	6,926	--	--	--	--	--
Nonstocked	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,087,241	28,655	45,130	66,713	100,335	220,369	206,549	133,096	137,037	97,913	23,820	22,578	5,046	--	--
Knobs Unit															
Jack-red-white pine	26,602	--	380	16,472	9,750	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	32,551	744	--	--	24,561	4,865	2,381	--	--	--	--	--	--	--	--
Scotch-Virginia pine	33,102	555	4,992	1,566	13,159	9,080	--	3,750	--	--	--	--	--	--	--
Oak-pine	60,671	3,067	3,949	6,127	5,203	23,869	9,891	2,828	5,737	--	--	--	--	--	--
Oak-hickory	992,343	19,305	27,479	17,151	44,160	95,179	157,208	167,782	135,235	163,537	74,817	76,550	12,201	1,739	--
Chestnut-scarlet oak	73,089	--	--	--	--	--	4,059	13,715	9,379	19,205	14,064	2,781	9,886	--	--
Sassafras-persimmon	5,655	1,459	1,881	--	--	--	2,315	--	--	--	--	--	--	--	--
Oak-gum	35,593	--	746	--	--	12,817	6,289	6,974	--	2,823	--	3,568	--	--	--
Lowland oak	2,690	--	--	--	--	--	2,690	--	--	--	--	--	--	--	--
Elm-ash-soft maple	239,219	12,344	17,085	20,694	35,641	40,528	37,378	40,380	25,374	8,198	846	751	--	--	--
Cottonwood	4,441	--	1,568	--	--	--	--	2,873	--	--	--	--	--	--	--
Maple-beech	547,210	20,420	20,145	9,984	56,104	37,188	116,711	84,027	76,489	70,140	29,509	26,493	--	--	--
Cherry-ash-yellow-poplar	288,395	9,158	9,499	24,862	59,797	92,344	43,120	18,293	17,886	8,079	5,357	--	--	--	--
Nonstocked	183	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,341,744	67,235	87,724	96,856	250,751	315,870	379,352	343,312	270,100	271,982	124,593	110,143	22,087	1,739	--

(Table 48 continued on next page)

(Table 48 continued on next page)

(Table 48 continued)

Unit and forest type	All ages	Stand-age class (years)													
		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140	141+	
Upland Flats Unit															
Jack-red-white pine	8,119	--	--	--	8,119	--	--	--	--	--	--	--	--	--	
Shortleaf pine	550	--	550	--	--	--	--	--	--	--	--	--	--	--	
Scotch-Virginia pine	30,878	1,239	8,118	4,419	14,380	--	--	1,404	--	1,318	--	--	--	--	
Oak-pine	150,883	5,081	3,333	3,814	6,945	25,555	13,478	28,448	33,270	9,438	13,938	7,583	--	--	
Oak-hickory	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Oak-gum	9,448	858	1,051	--	7,539	--	--	--	--	--	--	--	--	--	
Lowland oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Elm-ash-soft maple	59,961	844	1,444	9,088	7,326	16,459	7,520	--	6,139	7,557	2,979	--	605	--	
Cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Maple-beech	159,644	1,453	10,446	3,903	8,316	3,283	40,440	29,655	20,702	26,908	--	14,538	--	--	
Cherry-ash-yellow-poplar	128,960	4,454	6,858	17,464	11,541	26,324	35,983	25,162	1,174	--	--	--	--	--	
Nonstocked	771	771	--	--	--	--	--	--	--	--	--	--	--	--	
Total	549,214	14,700	31,800	38,688	56,627	79,160	97,421	83,265	62,689	43,903	18,235	22,121	605	--	
Northern Unit															
Jack-red-white pine	14,928	--	4,895	1,591	562	7,880	--	--	--	--	--	--	--	--	
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Scotch-Virginia pine	15,178	--	--	--	15,178	--	--	--	--	--	--	--	--	--	
Oak-pine	200	--	200	--	--	--	--	--	--	--	--	--	--	--	
Oak-hickory	315,803	6,796	6,266	16,545	12,523	22,778	48,719	46,609	45,182	24,835	30,908	35,179	13,832	5,631	
Chestnut-scarlet oak	10,447	--	--	--	158	--	--	4,672	--	5,617	--	--	--	--	
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Oak-gum	6,460	--	--	--	--	--	--	--	--	6,460	--	--	--	--	
Lowland oak	26,099	--	--	987	1,130	--	2,556	7,095	7,724	6,607	--	--	--	--	
Elm-ash-soft maple	308,048	4,311	5,064	41,022	50,986	58,409	33,473	43,116	33,417	17,764	6,773	9,349	--	4,364	
Cottonwood	12,570	--	--	9,546	2,207	--	--	--	817	--	--	--	--	--	
Maple-beech	338,489	4,731	11,277	24,813	12,063	63,431	36,522	61,865	42,032	26,983	14,135	23,725	7,412	9,500	
Cherry-ash-yellow-poplar	188,771	2,967	4,433	15,866	32,812	49,730	42,302	23,995	8,797	4,800	3,069	--	--	--	
Nonstocked	2,662	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total	1,239,655	21,467	32,135	110,370	125,412	204,435	163,572	187,352	137,969	93,066	54,885	68,253	21,244	19,495	

Table 49.--Net volume of sawtimber on timberland by forest type and stand-age class, Indiana, 1986

(In thousand board feet)^{1/}

Unit and forest type	All	Stand-age class (years)						
	ages	1-10	11-20	21-30	31-40	41-50	51-60	61-70
All Units								
Jack-red-white pine	186,532	--	10,261	59,495	86,894	29,882	--	--
Shortleaf pine	94,322	1,897	--	--	64,006	17,635	10,784	--
Scotch-Virginia pine	204,774	--	12,929	1,656	94,652	71,823	7,010	16,704
Oak-pine	296,854	9,205	38,607	17,954	55,803	95,286	41,561	15,044
Oak-hickory	7,140,674	154,929	118,979	136,933	201,876	614,746	1,143,155	1,186,182
Chestnut-scarlet oak	362,257	--	--	--	493	--	17,314	77,736
Sassafras-persimmon	16,069	5,696	2,485	--	--	--	7,888	--
Oak-gum	244,263	3,703	4,873	--	3,662	103,265	30,056	34,998
Lowland oak	158,638	1,990	--	--	3,681	--	31,345	60,667
Elm-ash-soft maple	3,113,266	61,130	122,552	234,502	402,317	730,049	494,910	431,643
Cottonwood	100,547	--	801	37,293	--	11,075	34,636	13,538
Maple-beech	4,667,165	79,022	121,294	115,164	251,405	580,452	903,930	790,170
Cherry-ash-yellow-poplar	2,625,305	53,154	66,630	178,728	461,012	787,693	482,213	340,685
Nonstocked	13,541	13,541	--	--	--	--	--	--
Total	19,224,207	384,267	499,411	781,725	1,625,801	3,041,906	3,204,802	2,967,367
Lower Wabash Unit								
Jack-red-white pine	38,863	--	--	12,982	25,881	--	--	--
Shortleaf pine	2,041	--	--	--	2,041	--	--	--
Scotch-Virginia pine	41,424	--	1,131	--	4,960	28,323	7,010	--
Oak-pine	4,093	--	--	4,093	--	--	--	--
Oak-hickory	1,645,880	55,438	15,756	47,941	39,267	124,612	364,829	254,137
Chestnut-scarlet oak	--	--	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--
Oak-gum	48,658	--	--	--	--	22,613	--	7,456
Lowland oak	51,044	1,990	--	--	--	--	21,247	20,758
Elm-ash-soft maple	941,337	19,948	56,315	41,909	115,432	309,262	188,065	94,933
Cottonwood	38,226	--	--	3,590	--	--	34,636	--
Maple-beech	674,013	9,652	15,691	26,249	27,583	159,597	132,593	74,830
Cherry-ash-yellow-poplar	541,189	--	23,278	53,764	113,671	176,716	40,993	78,481
Nonstocked	--	--	--	--	--	--	--	--
Total	4,026,768	87,028	112,171	190,528	328,835	821,123	789,373	530,595
Knobs Unit								
Jack-red-white pine	77,572	--	--	43,542	34,030	--	--	--
Shortleaf pine	92,281	1,897	--	--	61,965	17,635	10,784	--
Scotch-Virginia pine	118,557	--	10,900	1,656	45,797	43,500	--	16,704
Oak-pine	216,517	8,283	14,973	10,180	15,898	95,286	41,561	15,044
Oak-hickory	3,738,667	62,080	74,908	39,952	132,672	338,263	538,643	640,013
Chestnut-scarlet oak	315,322	--	--	--	--	--	17,314	58,968
Sassafras-persimmon	16,069	5,696	2,485	--	--	--	7,888	--
Oak-gum	137,441	--	3,839	--	3,662	49,111	30,056	27,542
Lowland oak	11,516	--	--	--	--	--	--	11,516
Elm-ash-soft maple	846,568	29,605	49,836	41,582	117,446	142,462	151,224	170,024
Cottonwood	14,339	--	801	--	--	--	--	13,538
Maple-beech	2,081,174	46,629	52,877	15,040	173,689	144,470	466,332	346,026
Cherry-ash-yellow-poplar	1,022,822	30,144	20,906	66,455	198,190	355,794	158,442	68,866
Nonstocked	--	--	--	--	--	--	--	--
Total	8,688,845	184,334	231,525	218,407	783,349	1,186,521	1,422,244	1,368,241

(Table 49 continued on next page)

^{1/} International 1/4-inch rule.

(Table 49 continued)

Unit and forest type	All	Stand-age class (years)						
	ages	1-10	11-20	21-30	31-40	41-50	51-60	61-70
Upland Flats Unit								
Jack-red-white pine	26,044	--	--	--	26,044	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--
Scotch-Virginia pine	898	--	898	--	--	--	--	--
Oak-pine	75,102	922	22,492	3,681	39,905	--	--	--
Oak-hickory	566,087	9,784	9,375	9,074	11,187	97,209	45,838	111,992
Chestnut-scarlet oak	--	--	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--
Oak-gum	36,278	3,703	1,034	--	--	31,541	--	--
Lowland oak	--	--	--	--	--	--	--	--
Elm-ash-soft maple	206,728	1,487	4,137	22,748	13,801	64,038	24,571	--
Cottonwood	--	--	--	--	--	--	--	--
Maple-beech	599,813	4,383	22,757	11,002	17,488	14,584	155,502	126,583
Cherry-ash-yellow-poplar	411,670	16,899	9,793	37,997	31,752	88,416	127,985	94,514
Nonstocked	3,921	3,921	--	--	--	--	--	--
Total	1,926,541	41,099	70,486	84,502	140,177	295,788	353,896	333,089
Northern Unit								
Jack-red-white pine	44,053	--	10,261	2,971	939	29,882	--	--
Shortleaf pine	--	--	--	--	--	--	--	--
Scotch-Virginia pine	43,895	--	--	--	43,895	--	--	--
Oak-pine	1,142	--	1,142	--	--	--	--	--
Oak-hickory	1,190,040	27,627	18,940	39,966	18,750	54,662	193,845	180,040
Chestnut-scarlet oak	46,935	--	--	--	493	--	--	18,768
Sassafras-persimmon	--	--	--	--	--	--	--	--
Oak-gum	21,886	--	--	--	--	--	--	--
Lowland oak	96,078	--	--	--	3,681	--	10,098	28,393
Elm-ash-soft maple	1,118,633	10,090	12,264	128,263	155,638	214,287	131,050	166,686
Cottonwood	47,982	--	--	33,703	--	11,075	--	--
Maple-beech	1,312,165	18,358	29,969	62,873	32,645	261,801	149,503	242,731
Cherry-ash-yellow-poplar	649,624	6,111	12,653	20,512	117,399	166,767	154,793	98,824
Nonstocked	9,620	9,620	--	--	--	--	--	--
Total	4,582,053	71,806	85,229	288,288	373,440	738,474	639,289	735,442

(Table 49 continued on next page)

(Table 49 continued)

Unit and forest type	Stand-age class (years)					
	71-80	81-90	91-100	101-120	121-140	141+
All Units						
Jack-red-white pine	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--
Scotch-Virginia pine	--	--	--	--	--	--
Oak-pine	18,945	--	4,449	--	--	--
Oak-hickory	1,174,673	1,115,503	538,470	604,004	118,792	32,432
Chestnut-scarlet oak	40,987	111,208	61,275	11,201	42,043	--
Sassafras-persimmon	--	--	--	--	--	--
Oak-gum	--	32,598	18,589	12,519	--	--
Lowland oak	40,259	20,696	--	--	--	--
Elm-ash-soft maple	340,109	177,578	49,198	45,987	3,063	20,228
Cottonwood	3,204	--	--	--	--	--
Maple-beech	678,821	545,424	218,480	291,071	47,487	44,445
Cherry-ash-yellow-poplar	139,622	83,524	32,044	--	--	--
Nonstocked	--	--	--	--	--	--
Total	2,436,620	2,086,531	922,505	964,782	211,385	97,105
Lower Mabash Unit						
Jack-red-white pine	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--
Scotch-Virginia pine	--	--	--	--	--	--
Oak-pine	--	--	--	--	--	--
Oak-hickory	307,069	309,538	40,501	86,792	--	--
Chestnut-scarlet oak	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--
Oak-gum	--	--	18,589	--	--	--
Lowland oak	7,049	--	--	--	--	--
Elm-ash-soft maple	93,462	22,011	--	--	--	--
Cottonwood	--	--	--	--	--	--
Maple-beech	110,837	55,887	32,407	10,452	18,235	--
Cherry-ash-yellow-poplar	27,466	26,820	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	545,883	414,256	91,497	97,244	18,235	--
Knobs Unit						
Jack-red-white pine	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--
Scotch-Virginia pine	--	--	--	--	--	--
Oak-pine	15,292	--	--	--	--	--
Oak-hickory	547,781	671,456	300,587	329,056	56,428	6,828
Chestnut-scarlet oak	40,987	83,534	61,275	11,201	42,043	--
Sassafras-persimmon	--	--	--	--	--	--
Oak-gum	--	10,712	--	12,519	--	--
Lowland oak	--	--	--	--	--	--
Elm-ash-soft maple	98,288	39,750	3,098	3,253	--	--
Cottonwood	--	--	--	--	--	--
Maple-beech	316,092	284,759	124,267	110,993	--	--
Cherry-ash-yellow-poplar	69,527	35,172	19,326	--	--	--
Nonstocked	--	--	--	--	--	--
Total	1,087,967	1,125,383	508,553	467,022	98,471	6,828

(Table 49 continued on next page)

(Table 49 continued)

Unit and forest type	Stand-age class (years)					
	71-80	81-90	91-100	101-120	121-140	141+
Upland Flats Unit						
Jack-red-white pine	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--
Scotch-Virginia pine	--	--	--	--	--	--
Oak-pine	3,653	--	4,449	--	--	--
Oak-hickory	139,495	37,856	60,606	33,671	--	--
Chestnut-scarlet oak	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--
Oak-gum	--	--	--	--	--	--
Lowland oak	--	--	--	--	--	--
Elm-ash-soft maple	26,694	32,352	13,837	--	3,063	--
Cottonwood	--	--	--	--	--	--
Maple-beech	75,849	105,722	--	65,943	--	--
Cherry-ash-yellow-poplar	4,314	--	--	--	--	--
Nonstocked	--	--	--	--	--	--
Total	250,005	175,930	78,892	99,614	3,063	--
Northern Unit						
Jack-red-white pine	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--
Scotch-Virginia pine	--	--	--	--	--	--
Oak-pine	--	--	--	--	--	--
Oak-hickory	180,328	96,653	136,776	154,485	62,364	25,604
Chestnut-scarlet oak	--	27,674	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--
Oak-gum	--	21,886	--	--	--	--
Lowland oak	33,210	20,696	--	--	--	--
Elm-ash-soft maple	121,665	83,465	32,263	42,734	--	20,228
Cottonwood	3,204	--	--	--	--	--
Maple-beech	176,043	99,056	61,806	103,683	29,252	44,445
Cherry-ash-yellow-poplar	38,315	21,532	12,718	--	--	--
Nonstocked	--	--	--	--	--	--
Total	552,765	370,962	243,563	300,902	91,616	90,277

Table 50.--Net volume of growing stock on timberland by forest type, stand-size class, and basal-area class, Indiana, 1986
(In thousand cubic feet)

Forest type and stand-size class		Basal-area class (square feet per acre)														
		All classes	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-150	151-180	181+
Jack-red-white pine																
Sawtimber	38,835	--	--	--	--	1,368	--	--	--	--	3,842	--	12,002	--	21,623	--
Poletimber	22,171	--	--	--	562	--	--	--	--	--	2,493	1,591	9,130	3,500	4,895	--
Sapling & seedling	380	--	--	--	--	--	--	380	--	--	--	--	--	--	--	--
All stands	61,386	--	--	--	562	1,368	--	380	--	6,335	1,591	21,132	3,500	26,518	--	--
Shortleaf pine																
Sawtimber	12,388	--	--	--	--	--	--	--	613	2,220	--	6,302	3,253	--	--	--
Poletimber	20,325	--	--	--	--	--	--	--	--	--	--	20,325	--	--	--	--
Sapling & seedling	744	--	--	--	--	744	--	--	--	--	--	--	--	--	--	--
All stands	33,457	--	--	--	--	744	--	--	613	2,220	--	26,627	3,253	--	--	--
Scotch-Virginia pine																
Sawtimber	35,302	--	--	--	--	--	--	--	--	--	8,071	--	15,668	11,563	--	--
Poletimber	22,120	--	--	--	--	1,458	--	--	1,832	958	3,753	--	2,356	--	11,763	--
Sapling & seedling	6,251	--	603	108	84	--	1,207	2,868	831	--	--	--	550	--	--	--
All stands	63,673	--	603	108	84	1,458	1,207	2,868	2,663	9,029	3,753	--	18,574	11,563	11,763	--
Oak-pine																
Sawtimber	56,363	--	--	--	--	1,086	2,919	2,926	1,309	12,332	3,107	--	25,572	7,112	--	--
Poletimber	25,707	--	--	--	--	--	2,066	4,354	7,735	2,791	--	--	3,744	5,017	--	--
Sapling & seedling	10,988	--	104	--	852	605	3,820	2,508	2,025	1,074	--	--	--	--	--	--
All stands	93,058	--	104	--	852	1,691	8,805	9,788	11,069	16,197	3,107	--	29,316	12,129	--	--
Oak-hickory																
Sawtimber	1,605,516	--	345	542	1,722	16,771	48,950	42,139	128,584	316,757	224,327	--	551,789	244,607	25,551	3,432
Poletimber	185,569	--	--	964	--	2,750	19,462	29,331	40,904	25,866	25,730	--	30,496	10,066	--	--
Sapling & seedling	90,380	287	3,163	8,495	6,564	12,355	25,952	14,341	10,538	7,767	--	--	918	--	--	--
All stands	1,881,465	287	3,508	10,001	8,286	31,876	94,364	85,811	180,026	350,390	250,057	--	583,203	254,673	25,551	3,432
Chestnut-scarlet oak																
Sawtimber	83,536	--	--	158	--	--	1,755	3,076	--	21,648	14,175	--	32,132	10,592	--	--
Poletimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All stands	83,536	--	--	158	--	--	1,755	3,076	--	21,648	14,175	--	32,132	10,592	--	--
Sassafras-persimmon																
Sawtimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Poletimber	4,196	--	--	--	--	--	--	--	1,881	--	--	--	2,315	--	--	--
Sapling & seedling	2,306	--	--	--	--	1,459	--	847	--	--	--	--	--	--	--	--
All stands	6,502	--	--	--	--	1,459	--	847	1,881	--	--	--	2,315	--	--	--
Oak-gum																
Sawtimber	57,835	--	--	--	227	--	--	--	--	1,720	--	12,693	26,251	16,944	--	--
Poletimber	5,328	--	--	--	--	--	--	--	--	2,952	--	--	2,376	--	--	--
Sapling & seedling	2,655	--	393	465	746	384	--	667	--	--	--	--	--	--	--	--
All stands	65,818	--	393	465	973	384	--	667	1,720	2,952	12,693	--	28,627	16,944	--	--

(Table 50 continued on next page)

(Table 50 continued on next page)

(Table 50 continued)

Forest type and stand-size class	All classes	Basal-area class (square feet per acre)													
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-150	151-180	181+
Lowland oak															
Sawtimber	37,426	--	--	--	--	880	--	1,623	--	4,418	--	30,505	--	--	--
Poletimber	2,117	--	--	--	--	--	--	1,130	987	--	--	--	--	--	--
Sapling & seedling	408	--	--	408	--	--	--	--	--	--	--	--	--	--	--
All stands	39,951	--	--	408	--	880	--	2,753	987	4,418	--	30,505	--	--	--
Elm-ash-soft maple															
Sawtimber	678,726	--	--	4,929	7,121	13,209	7,444	30,811	66,754	84,831	97,993	184,284	126,103	44,002	11,245
Poletimber	132,945	--	--	660	4,387	4,960	8,983	13,945	28,461	25,123	16,504	29,922	--	--	--
Sapling & seedling	51,356	139	1,644	2,875	9,381	10,683	7,166	3,697	9,139	6,632	--	--	--	--	--
All stands	863,027	139	1,644	8,464	20,889	28,852	23,593	48,453	104,354	116,586	114,497	214,206	126,103	44,002	11,245
Cottonwood															
Sawtimber	23,365	--	--	--	817	2,207	--	--	2,873	--	--	9,546	7,922	--	--
Poletimber	4,778	--	--	--	--	--	3,882	896	--	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All stands	28,143	--	--	--	817	2,207	3,882	896	2,873	--	--	9,546	7,922	--	--
Maple-beech															
Sawtimber	1,055,981	--	--	1,435	2,475	17,517	59,723	48,006	131,700	154,424	132,572	328,793	150,786	28,550	--
Poletimber	106,014	--	--	--	643	2,002	7,990	11,483	18,182	16,010	7,050	37,728	4,926	--	--
Sapling & seedling	74,313	--	2,707	979	5,705	17,196	12,369	18,997	10,529	--	2,097	3,734	--	--	--
All stands	1,236,308	--	2,707	2,414	8,823	36,715	80,082	78,486	160,411	170,434	141,719	370,255	155,712	28,550	--
Cherry-ash-yellow-poplar															
Sawtimber	612,421	1,325	--	1,655	761	6,478	13,101	31,994	37,204	84,592	58,812	232,651	120,719	15,768	7,361
Poletimber	101,661	--	--	1,070	--	--	7,150	6,132	20,370	25,904	8,930	18,082	14,023	--	--
Sapling & seedling	43,832	536	1,955	4,510	3,735	9,290	6,932	4,250	7,341	3,929	1,354	--	--	--	--
All stands	757,914	1,861	1,955	7,235	4,496	15,768	27,183	42,376	64,915	114,425	69,096	250,733	134,742	15,768	7,361
Nonstocked	3,616	367	80	1,116	--	70	1,469	--	60	--	454	--	--	--	--
All types															
Sawtimber	4,297,694	1,325	345	8,719	13,123	59,516	133,892	160,575	370,757	693,135	543,679	1,455,495	699,601	135,494	22,038
Poletimber	632,931	--	--	2,694	5,592	11,170	49,533	67,271	120,352	102,097	63,558	156,474	37,532	16,658	--
Sapling & seedling	283,613	962	10,569	17,840	27,067	52,716	57,446	48,555	40,403	19,402	3,451	5,202	--	--	--
Nonstocked	3,616	367	80	1,116	--	70	1,469	--	60	--	454	--	--	--	--
All stands	5,217,854	2,654	10,994	30,369	45,782	123,472	242,340	276,401	531,572	814,634	611,142	1,617,171	737,133	152,152	22,038

Table 51.--Net volume of sawtimber on timberland by forest type, stand-size class, and basal-area class, Indiana, 1986

(In thousand board feet)^{1/}

Forest type and stand-size class	All classes	Basal area class (square feet per acre)							
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80
Jack-red-white pine									
Sawtimber	143,529	--	--	--	--	6,036	--	--	--
Poletimber	43,003	--	--	--	939	--	--	--	--
Sapling & seedling	--	--	--	--	--	--	--	--	--
All stands	186,532	--	--	--	939	6,036	--	--	--
Shortleaf pine									
Sawtimber	46,294	--	--	--	--	--	--	--	2,509
Poletimber	46,131	--	--	--	--	--	--	--	--
Sapling & seedling	1,897	--	--	--	--	1,897	--	--	--
All stands	94,322	--	--	--	--	1,897	--	--	2,509
Scotch-Virginia pine									
Sawtimber	138,901	--	--	--	--	--	--	--	--
Poletimber	52,966	--	--	--	--	1,099	--	--	6,864
Sapling & seedling	12,907	--	1,223	557	--	--	1,131	9,098	--
All stands	204,774	--	1,223	557	--	1,099	1,131	9,098	6,864
Oak-pine									
Sawtimber	216,546	--	--	--	--	3,939	9,945	8,661	4,093
Poletimber	53,949	--	--	--	--	--	2,642	6,383	17,021
Sapling & seedling	26,359	--	539	--	1,142	--	13,902	8,815	--
All stands	296,854	--	539	--	1,142	3,939	26,489	23,859	21,114
Oak-hickory									
Sawtimber	6,483,936	--	1,063	1,533	8,018	65,353	196,577	155,277	508,292
Poletimber	383,685	--	--	1,133	--	5,709	38,456	68,028	80,069
Sapling & seedling	273,053	769	10,853	23,129	20,537	29,560	80,324	42,166	40,263
All stands	7,140,674	769	11,916	25,795	28,555	100,622	315,357	265,471	628,624
Chestnut-scarlet oak									
Sawtimber	362,257	--	--	493	--	--	5,167	13,284	--
Poletimber	--	--	--	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--	--	--	--
All stands	362,257	--	--	493	--	--	5,167	13,284	--
Sassafras-persimmon									
Sawtimber	--	--	--	--	--	--	--	--	--
Poletimber	10,373	--	--	--	--	--	--	--	2,485
Sapling & seedling	5,696	--	--	--	--	5,696	--	--	--
All stands	16,069	--	--	--	--	5,696	--	--	2,485
Oak-gum									
Sawtimber	224,884	--	--	--	1,184	--	--	--	7,456
Poletimber	10,803	--	--	--	--	--	--	--	--
Sapling & seedling	8,576	--	2,052	1,651	3,839	1,034	--	--	--
All stands	244,263	--	2,052	1,651	5,023	1,034	--	--	7,456

(Table 51 continued on next page)

^{1/} International 1/4-inch rule.

(Table 51 continued)

Forest type and stand-size class	All classes	Basal area class (square feet per acre)							
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80
Lowland oak									
Sawtimber	152,967	--	--	--	--	4,312	--	8,390	--
Poletimber	3,681	--	--	--	--	--	--	3,681	--
Sapling & seedling	1,990	--	--	1,990	--	--	--	--	--
All stands	158,638	--	--	1,990	--	4,312	--	12,071	--
Elm-ash-soft-maple									
Sawtimber	2,705,465	--	--	21,965	29,635	54,018	30,908	116,132	249,419
Poletimber	286,612	--	--	1,033	9,631	10,862	13,981	34,791	52,264
Sapling & seedling	121,189	--	4,656	6,918	20,144	26,512	25,070	9,630	19,835
All stands	3,113,266	--	4,656	29,916	59,410	91,392	69,959	160,553	321,518
Cottonwood									
Sawtimber	96,156	--	--	--	3,204	11,075	--	--	13,538
Poletimber	4,391	--	--	--	--	--	4,391	--	--
Sapling & seedling	--	--	--	--	--	--	--	--	--
All stands	100,547	--	--	--	3,204	11,075	4,391	--	13,538
Maple-beech									
Sawtimber	4,248,799	--	--	5,852	11,046	74,196	236,741	189,959	524,838
Poletimber	222,226	--	--	--	1,047	4,458	20,382	25,715	28,795
Sapling & seedling	196,140	--	8,065	1,661	15,811	41,888	28,662	57,585	28,164
All stands	4,667,165	--	8,065	7,513	27,904	120,542	285,785	273,259	581,797
Cherry-ash-yellow-poplar									
Sawtimber	2,322,789	5,023	--	7,869	2,724	29,308	50,486	118,999	148,627
Poletimber	185,051	--	--	1,484	--	--	14,822	5,181	32,640
Sapling & seedling	117,465	--	1,175	8,425	9,749	27,253	25,462	4,322	20,868
All stands	2,625,305	5,023	1,175	17,778	12,473	56,561	90,770	128,502	202,135
Nonstocked	13,541	--	--	3,921	--	--	7,408	--	--
All types									
Sawtimber	17,142,523	5,023	1,063	37,712	55,811	248,237	529,824	610,702	1,458,772
Poletimber	1,302,871	--	--	3,650	11,617	22,128	94,674	143,779	220,138
Sapling & seedling	765,272	769	28,563	44,331	71,222	133,840	174,551	131,616	109,130
Nonstocked	13,541	--	--	3,921	--	--	7,408	--	--
All stands	19,224,207	5,792	29,626	89,614	138,650	404,205	806,457	886,097	1,788,040

(Table 51 continued on next page)

(Table 51 continued)

Forest type and stand-size class	Basal area class (square feet per acre)					
	81-90	91-100	101-120	121-150	151-180	181+
Jack-red-white pine						
Sawtimber	17,110	--	46,382	--	74,001	--
Poletimber	2,400	2,971	18,668	7,764	10,261	--
Sapling & seedling	--	--	--	--	--	--
All stands	19,510	2,971	65,050	7,764	84,262	--
Shortleaf pine						
Sawtimber	9,869	--	22,232	11,684	--	--
Poletimber	--	--	46,131	--	--	--
Sapling & seedling	--	--	--	--	--	--
All stands	9,869	--	68,363	11,684	--	--
Scotch-Virginia pine						
Sawtimber	32,554	--	59,383	46,964	--	--
Poletimber	579	10,139	4,960	--	29,325	--
Sapling & seedling	--	--	898	--	--	--
All stands	33,133	10,139	65,241	46,964	29,325	--
Oak-pine						
Sawtimber	39,236	7,686	112,430	30,556	--	--
Poletimber	5,020	--	7,711	15,172	--	--
Sapling & seedling	1,961	--	--	--	--	--
All stands	46,217	7,686	120,141	45,728	--	--
Oak-hickory						
Sawtimber	1,255,399	921,227	2,229,496	1,018,708	108,927	14,066
Poletimber	57,498	59,329	53,232	20,231	--	--
Sapling & seedling	24,590	--	862	--	--	--
All stands	1,337,487	980,556	2,283,590	1,038,939	108,927	14,066
Chestnut-scarlet oak						
Sawtimber	91,179	62,472	142,576	47,086	--	--
Poletimber	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--
All stands	91,179	62,472	142,576	47,086	--	--
Sassafras-persimmon						
Sawtimber	--	--	--	--	--	--
Poletimber	--	--	7,888	--	--	--
Sapling & seedling	--	--	--	--	--	--
All stands	--	--	7,888	--	--	--
Oak-gum						
Sawtimber	--	51,562	98,452	66,230	--	--
Poletimber	7,141	--	3,662	--	--	--
Sapling & seedling	--	--	--	--	--	--
All stands	7,141	51,562	102,114	66,230	--	--

(Table 51 continued on next page)

(Table 51 continued)

Forest type and stand-size class	Basal area class (square feet per acre)					
	81-90	91-100	101-120	121-150	151-180	181+
Lowland oak						
Sawtimber	18,565	--	121,700	--	--	--
Poletimber	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--
All stands	18,565	--	121,700	--	--	--
Elm-ash-soft-maple						
Sawtimber	338,791	390,027	721,452	513,363	190,648	49,107
Poletimber	60,704	29,572	73,774	--	--	--
Sapling & seedling	8,424	--	--	--	--	--
All stands	407,919	419,599	795,226	513,363	190,648	49,107
Cottonwood						
Sawtimber	--	--	33,703	34,636	--	--
Poletimber	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--
All stands	--	--	33,703	34,636	--	--
Maple-beech						
Sawtimber	614,695	519,970	1,320,443	630,264	120,795	--
Poletimber	34,471	9,892	85,612	11,854	--	--
Sapling & seedling	--	2,522	11,782	--	--	--
All stands	649,166	532,384	1,417,837	642,118	120,795	--
Cherry-ash-yellow-poplar						
Sawtimber	294,233	221,293	902,754	452,755	52,466	36,252
Poletimber	57,380	16,702	28,337	28,505	--	--
Sapling & seedling	14,100	6,111	--	--	--	--
All stands	365,713	244,106	931,091	481,260	52,466	36,252
Nonstocked	--	2,212	--	--	--	--
All types						
Sawtimber	2,711,631	2,174,237	5,811,003	2,852,246	546,837	99,425
Poletimber	225,193	128,605	329,975	83,526	39,586	--
Sapling & seedling	49,075	8,633	13,542	--	--	--
Nonstocked	--	2,212	--	--	--	--
All stands	2,985,899	2,313,687	6,154,520	2,935,772	586,423	99,425

Table 52.--Net volume of growing stock and sawtimber on timberland by county and species group, Indiana, 1986

Unit and county	Growing stock					Sawtimber				
	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods
----- Thousand cubic feet ----- Thousand board feet ^{1/} -----										
Lower Wabash Unit										
Clay	54,350	2,139	683	19,875	31,653	201,560	7,336	3,187	72,457	118,580
Daviess	51,379	834	480	19,272	30,793	190,478	2,793	2,216	67,843	117,626
Gibson	49,000	1,129	663	19,476	27,732	176,850	3,862	3,089	67,290	102,609
Greene	124,809	4,199	1,638	46,837	72,135	452,848	14,001	7,761	159,881	271,205
Knox	34,410	224	119	12,608	21,459	125,878	712	437	45,522	79,207
Martin	182,406	768	173	58,748	122,717	707,052	1,713	456	220,816	484,067
Parke	113,973	3,278	2,044	46,542	62,109	413,849	11,729	9,692	164,619	227,809
Pike	106,030	2,499	1,529	41,793	60,209	384,936	8,848	7,229	145,734	223,125
Posey	60,703	765	482	22,213	37,243	229,581	2,704	2,188	81,677	143,012
Putnam	98,882	383	141	34,410	63,948	374,028	1,120	352	133,362	239,194
Sullivan	81,544	2,056	1,062	31,031	47,395	298,467	7,278	5,016	107,987	178,186
Vanderburgh	29,304	434	237	11,067	17,566	106,337	1,470	1,073	39,582	64,212
Vermillion	41,650	477	169	14,517	26,487	153,001	1,608	747	50,764	99,882
Vigo	58,801	1,197	686	22,997	33,921	211,903	4,074	3,181	79,378	125,270
Total	1,087,241	20,382	10,106	401,386	655,367	4,026,768	69,248	46,624	1,436,912	2,473,984
Knobs Unit										
Brown	190,259	8,195	2,461	48,910	130,693	714,793	29,540	6,691	174,604	503,958
Clark	112,526	7,291	1,740	31,268	72,227	420,750	27,797	4,946	110,599	277,408
Crawford	157,423	4,623	2,146	42,229	108,425	582,098	15,055	5,262	148,508	413,273
Dubois	124,001	4,060	1,594	34,760	83,587	470,282	16,686	3,692	125,336	324,568
Floyd	47,433	1,374	543	14,521	30,995	180,034	5,916	1,206	54,808	118,104
Harrison	175,761	6,689	3,656	51,713	113,703	641,916	24,888	8,139	178,209	430,680
Jackson	159,454	5,021	2,711	44,822	106,900	575,103	13,959	6,485	151,358	403,301
Lawrence	180,706	3,411	1,620	45,880	129,795	687,495	12,534	4,411	166,445	504,105
Monroe	165,021	3,820	1,713	45,161	114,327	618,137	12,813	4,049	160,031	441,244
Morgan	109,257	3,048	1,986	32,002	72,221	401,468	10,326	4,788	113,332	273,022
Orange	176,616	6,318	3,205	47,124	119,969	648,722	19,654	8,536	164,657	455,875
Owen	140,177	4,755	2,055	43,397	89,970	528,332	20,687	4,748	162,214	340,683
Perry	213,369	12,765	3,221	51,015	146,368	778,940	38,823	9,271	175,047	555,799
Scott	55,632	2,236	924	15,822	36,650	205,427	8,010	2,247	54,767	140,403
Spencer	78,458	2,959	1,315	22,610	51,574	291,161	11,500	3,100	78,946	197,615
Warrick	95,835	4,284	2,011	30,517	59,023	340,965	13,605	4,750	102,429	220,181
Washington	159,816	7,721	2,246	49,255	100,594	603,222	33,974	4,898	183,363	380,987
Total	2,341,744	88,570	35,147	651,006	1,567,021	8,688,845	315,767	87,219	2,304,653	5,981,206
Upland Flats Unit										
Dearborn	86,497	154	2,306	30,892	53,145	300,737	495	3,042	112,604	184,596
Fayette	25,332	92	442	9,049	15,749	81,280	426	775	31,055	49,024
Franklin	61,558	278	1,616	20,519	39,145	199,848	1,063	2,961	69,953	125,871
Jefferson	85,451	4,381	3,844	27,589	49,637	305,240	15,438	4,592	103,230	181,980
Jennings	82,835	170	2,082	29,975	50,608	288,264	674	3,101	110,005	174,484
Ohio	25,277	49	679	8,894	15,655	86,903	174	912	32,085	53,732
Ripley	76,125	2,648	2,759	24,366	46,352	271,884	9,438	3,628	90,054	168,764
Switzerland	90,286	151	1,364	31,045	57,726	341,015	602	1,059	121,672	217,682
Union	15,853	55	420	5,641	9,737	51,370	214	740	19,137	31,279
Total	549,214	7,978	15,512	187,970	337,754	1,926,541	28,524	20,810	689,795	1,187,412

^{1/}International 1/4-inch rule.

(Table 52 continued on next page)

(Table 52 continued)

Unit and county	Growing stock					Sawtimber				
	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods
	Thousand cubic feet					Thousand board feet ^{1/}				
Northern Unit										
Adams	16,408	220	38	5,997	10,153	61,593	451	91	21,026	40,025
Allen	26,954	591	32	10,026	16,305	96,699	1,296	22	32,849	62,532
Bartholomew	53,422	428	111	18,788	34,095	203,754	879	267	66,389	136,219
Benton	1,938	30	3	708	1,197	7,241	59	8	2,463	4,711
Blackford	12,009	50	29	4,127	7,803	46,569	97	74	14,906	31,492
Boone	17,396	70	46	5,937	11,343	66,503	142	108	20,781	45,472
Carroll	21,031	237	49	7,455	13,290	79,198	480	120	25,982	52,616
Cass	26,154	662	33	10,177	15,282	94,732	1,350	70	34,654	58,658
Clinton	11,342	34	27	3,690	7,591	44,083	75	66	13,207	30,735
Decatur	30,582	164	72	10,322	20,024	118,120	330	178	36,884	80,728
De Kalb	29,326	830	32	11,661	16,803	105,108	1,676	67	39,410	63,955
Delaware	16,516	368	20	6,219	9,909	59,820	755	30	20,762	38,273
Elkhart	30,309	570	81	11,437	18,221	110,484	1,146	203	38,812	70,323
Fountain	41,490	1,026	53	16,130	24,281	151,318	2,088	123	55,548	93,559
Fulton	22,328	478	31	8,532	13,287	81,940	994	65	29,399	51,482
Grant	22,802	296	47	8,119	14,340	86,318	591	116	28,643	56,968
Hamilton	21,539	481	48	8,176	12,834	77,697	937	115	27,288	49,357
Hancock	12,774	373	14	5,007	7,380	45,787	751	27	16,873	28,136
Hendricks	19,187	174	37	6,815	12,161	72,388	368	86	23,696	48,238
Henry	22,631	365	37	8,255	13,974	83,665	725	84	28,106	54,750
Howard	8,030	104	12	2,786	5,128	29,480	246	7	9,131	20,096
Huntington	23,195	621	21	8,827	13,726	83,370	1,285	25	29,101	52,959
Jasper	28,446	459	65	10,555	17,367	104,622	934	155	35,934	67,599
Jay	30,777	109	73	10,530	20,065	119,725	234	190	38,230	81,071
Johnson	24,206	101	55	8,241	15,809	93,398	203	138	29,390	63,667
Kosciusko	41,899	212	96	14,490	27,101	162,276	454	244	52,413	109,165
La Grange	34,854	728	45	13,430	20,651	124,862	1,410	100	44,087	79,265
Lake	20,362	378	36	7,578	12,370	74,951	742	83	25,851	48,275
La Porte	44,163	619	119	16,257	27,168	162,766	1,199	300	55,203	106,064
Madison	15,891	177	31	5,601	10,082	60,440	371	71	19,838	40,160
Marion	466	--	--	89	377	1,675	--	--	190	1,485
Marshall	32,896	608	48	12,497	19,743	121,437	1,281	107	43,267	76,782
Miami	32,495	278	70	11,441	20,706	124,540	557	178	40,900	82,905
Montgomery	25,962	780	26	10,087	15,069	92,788	1,598	30	33,747	57,413
Newton	22,640	436	39	8,429	13,736	84,216	865	90	29,384	53,877
Noble	33,525	823	38	12,876	19,788	120,885	1,691	60	43,149	75,985
Porter	31,638	733	52	11,989	18,864	112,945	1,382	121	39,047	72,395
Pulaski	29,497	655	50	11,265	17,527	107,732	1,346	113	38,583	67,690
Randolph	25,180	105	61	8,287	16,727	97,813	218	156	29,782	67,657
Rush	11,146	239	10	4,059	6,838	40,171	524	1	13,299	26,347
St. Joseph	22,949	509	53	8,822	13,565	82,525	1,010	130	29,470	51,915
Shelby	15,851	146	35	5,594	10,076	60,697	293	86	20,014	40,304
Starke	30,066	524	62	11,120	18,360	111,362	1,062	151	38,421	71,728
Steuben	32,116	803	38	12,370	18,905	115,318	1,636	60	41,185	72,437
Tiptecanoe	23,654	730	21	9,280	13,623	84,092	1,497	23	30,902	51,670
Tipton	4,204	86	4	1,487	2,627	15,186	185	2	4,831	10,168
Wabash	24,763	570	34	9,339	14,820	88,725	1,097	69	30,550	57,009
Warren	27,035	385	52	9,798	16,800	101,332	798	120	34,187	66,227
Wayne	33,800	698	46	12,833	20,223	123,515	1,412	103	43,664	78,336
Wells	17,862	453	22	6,848	10,539	64,464	915	37	22,972	40,540
White	12,425	338	14	4,884	7,189	43,779	675	25	15,879	27,200
Whitley	21,524	519	26	8,375	12,604	77,949	1,060	56	28,446	48,387
Total	1,239,655	21,373	2,194	457,642	758,446	4,582,053	43,370	4,951	1,568,725	2,965,007
All counties	5,217,854	138,303	62,959	1,698,004	3,318,588	19,224,207	456,909	159,604	6,000,085	12,607,609

^{1/} International 1/4-inch rule.

Table 53.--Net volume of sawtimber on timberland by species group and tree grade, Indiana, 1986

(In thousand board feet)^{1/}

Species group	All species	Tree grade			
		1	2	3	Tie and timber
Softwoods					
Jack pine	18,409	--	--	18,409	--
Red pine	11,919	--	--	11,919	--
White pine	151,387	6,862	1,475	126,306	16,744
Shortleaf pine	87,129	--	7,837	79,292	--
Other yellow pines	183,341	--	6,658	175,749	934
Tamarack	4,208	--	--	4,208	--
Baldcypress	41,635	--	2,098	39,537	--
Eastern redcedar	113,761	--	2,177	110,712	872
Other softwoods	4,724	--	--	4,724	--
Total	616,513	6,862	20,245	570,856	18,550
Hardwoods					
Select white oak	2,875,793	457,221	781,401	1,016,708	620,463
Other white oak	533,134	15,331	99,798	229,002	189,003
Select red oak	1,316,182	89,266	187,078	387,335	652,503
Other red oak	2,163,418	110,707	260,533	569,454	1,222,724
Select hickory	939,742	31,885	99,488	310,018	498,351
Other hickory	1,003,171	46,503	145,824	375,600	435,244
Basswood	253,100	35,682	71,475	114,921	31,022
Beech	608,945	--	4,637	48,263	556,045
Hard maple	1,413,239	39,780	134,478	488,919	750,062
Soft maple	809,358	5,742	68,788	203,212	531,616
Elm	329,362	20,241	70,656	156,033	82,432
Ash	1,174,946	155,788	336,442	491,615	191,101
Sycamore	920,914	203,738	256,111	320,924	140,141
Cottonwood	587,853	74,377	164,863	181,615	166,998
Willow	45,497	2,635	3,946	11,781	27,135
Hackberry	171,147	11,996	53,025	74,387	31,739
Aspen	110,582	--	5,409	20,879	84,294
Birch	31,507	2,827	3,504	6,849	18,327
Sweetgum	222,029	14,347	48,417	79,708	79,557
Tupelo	155,667	11,453	31,317	42,258	70,639
Black cherry	318,703	17,220	60,998	122,139	118,346
Black walnut	427,405	46,038	126,987	214,268	40,112
Butternut	15,368	--	3,658	9,197	2,513
Yellow-poplar	1,840,013	191,596	216,972	391,441	1,040,004
Persimmon	10,011	--	1,909	8,102	--
Sassafras	162,154	5,558	30,387	90,469	35,740
Other hardwoods	168,454	1,083	16,323	54,608	96,440
Total	18,607,694	1,591,014	3,284,424	6,019,705	7,712,551
All species	19,224,207	1,597,876	3,304,669	6,590,561	7,731,101

^{1/} International 1/4-inch rule.

Table 54.--Net volume of sawtimber on timberland by species group, log grade and diameter class, Indiana, 1986

(In thousand board feet)^{1/}

Species group	All grades					Log grade 1				
	Diameter class (inches at breast height)					Diameter class (inches at breast height)				
	Total	9.0-14.9	15.0-18.9	19.0-22.9	23.0+	Total	9.0-14.9	15.0-18.9	19.0-22.9	23.0+
Softwoods										
Jack pine	18,409	14,949	2,593	867	--	--	--	--	--	--
Red pine	11,919	11,919	--	--	--	--	--	--	--	--
White pine	151,387	132,745	18,642	--	--	3,601	--	3,601	--	--
Shortleaf pine	87,129	85,226	1,903	--	--	--	--	--	--	--
Other yellow pines	183,341	159,705	17,641	3,881	2,114	--	--	--	--	--
Tamarack	4,208	4,208	--	--	--	--	--	--	--	--
Baldcypress	41,635	29,865	11,770	--	--	--	--	--	--	--
Eastern redcedar	113,761	96,766	15,637	--	1,358	--	--	--	--	--
Other softwoods	4,724	4,724	--	--	--	--	--	--	--	--
Total	616,513	540,107	68,186	4,748	3,472	3,601	--	3,601	--	--
Hardwoods										
Select white oak	2,875,793	776,816	975,091	672,537	451,349	240,312	2,350	67,495	103,222	67,245
Other white oak	533,134	212,470	231,911	73,307	15,446	7,510	--	3,281	4,229	--
Select red oak	1,316,182	305,164	390,310	316,129	304,579	50,395	--	8,686	10,713	30,996
Other red oak	2,163,418	566,607	758,495	475,986	362,330	60,804	--	12,743	22,466	25,595
Select hickory	939,742	458,647	337,960	110,630	32,505	19,540	1,515	6,832	11,193	--
Other hickory	1,003,171	508,278	321,868	125,868	47,157	27,000	3,582	8,827	12,982	1,609
Basswood	253,100	76,898	95,510	51,772	28,920	19,103	320	4,491	8,043	6,249
Beech	608,945	143,648	176,936	167,305	121,056	--	--	--	--	--
Hard maple	1,413,239	602,145	445,114	253,086	112,894	20,092	406	5,849	8,931	4,906
Soft maple	809,358	279,758	243,017	131,146	155,437	2,925	--	5,827	1,740	1,185
Elm	329,362	192,608	93,155	25,051	18,548	10,179	--	--	2,323	2,029
Sycamore	1,174,946	503,921	391,382	168,091	111,552	78,085	3,823	34,048	22,925	17,289
Ash	920,914	232,049	246,086	211,042	231,737	110,575	3,073	23,805	33,274	50,423
Cottonwood	587,853	120,513	152,693	88,891	225,756	45,227	--	2,448	13,034	29,745
Willow	45,497	14,148	13,212	16,869	1,268	1,284	--	581	703	--
Hackberry	171,147	76,042	55,051	30,442	9,612	6,355	--	1,413	4,272	670
Aspen	110,582	60,063	44,384	4,444	1,691	--	--	--	--	--
Birch	31,507	14,331	14,795	934	1,447	1,189	--	1,189	--	--
Sweetgum	222,029	114,644	59,175	31,612	16,598	7,240	--	3,772	3,468	--
Tupelo	155,667	65,750	43,855	27,631	18,431	5,779	--	2,467	1,825	1,487
Black cherry	318,703	142,640	103,500	62,015	10,548	8,736	--	2,436	5,259	1,041
Black walnut	427,405	214,749	164,970	38,174	9,512	22,833	2,399	14,263	5,084	1,087
Butternut	15,368	6,341	7,958	1,069	--	--	--	--	--	--
Yellow-poplar	1,840,013	495,927	687,210	415,337	241,539	96,916	401	24,500	34,604	37,411
Persimmon	10,011	9,192	819	--	--	--	--	--	--	--
Sassafras	162,154	96,942	55,851	5,793	3,568	2,741	--	1,433	604	704
Other hardwoods	168,454	94,531	45,930	15,719	12,274	711	--	--	--	711
Total	18,607,694	6,384,822	6,156,238	3,520,880	2,545,754	845,531	17,869	236,386	310,894	280,382
All species	19,224,207	6,924,929	6,224,424	3,525,628	2,549,226	849,132	17,869	239,987	310,894	280,382

^{1/} International 3/4-inch rule.

(Table 54 continued on the next page)

(Table 54 continued)

Species group	Log grade 2				Log grades 3 and 4						
	Diameter class (inches at breast height)				Diameter class (inches at breast height)						
	Total	9.0-14.9	15.0-18.9	19.0-22.9	23.0+	Total	9.0-14.9	15.0-18.9	19.0-22.9	23.0+	
Softwoods											
Jack pine	222	222	--	--	--	18,187	14,727	2,593	867	--	
Red pine	177	177	--	--	--	11,742	11,742	--	--	--	
White pine	3,784	2,545	1,239	--	--	144,002	130,200	13,802	--	--	
Shortleaf pine	4,277	4,277	--	--	--	82,852	80,949	1,903	--	--	
Other yellow pines	5,092	4,603	489	--	--	178,249	155,102	17,152	3,881	2,114	
Tamarack	62	62	--	--	--	4,146	4,146	--	--	--	
Baldcypress	1,656	446	1,210	--	--	39,979	29,419	10,560	--	--	
Eastern redcedar	2,876	1,756	--	--	1,120	110,885	95,010	15,637	--	238	
Other softwoods	70	70	--	--	--	4,654	4,654	--	--	--	
Total	18,216	14,158	2,938	--	1,120	594,696	525,949	61,647	4,748	2,352	
Hardwoods											
Select white oak	636,627	132,713	249,733	155,289	98,892	1,998,854	641,753	657,863	414,026	285,212	
Other white oak	96,965	22,086	53,913	17,946	3,020	428,659	190,384	174,717	51,132	12,426	
Select red oak	143,160	16,632	30,393	42,401	53,734	1,122,627	288,532	351,231	263,015	219,849	
Other red oak	200,379	26,274	55,821	63,818	54,466	1,902,235	540,333	689,931	389,702	282,269	
Select hickory	53,707	14,298	28,291	5,922	5,196	866,495	442,834	302,837	93,515	27,309	
Other hickory	83,906	17,216	39,390	22,529	4,771	892,265	487,480	273,651	90,357	40,777	
Basswood	48,106	8,511	22,912	13,126	3,557	185,891	68,107	68,107	30,603	19,114	
Beech	18,114	--	17,396	718	--	590,831	143,648	159,540	166,587	121,056	
Hard maple	122,619	21,884	33,443	55,137	12,155	1,270,528	579,855	405,822	189,018	95,833	
Soft maple	64,858	8,443	7,045	28,018	21,352	741,575	271,315	235,972	101,388	132,900	
Elm	45,698	13,862	18,399	8,469	4,968	273,485	178,746	68,929	14,259	11,551	
Ash	229,774	61,069	80,085	53,805	34,815	867,087	439,029	277,249	91,361	59,448	
Sycamore	182,824	25,122	67,988	35,936	53,778	627,515	203,854	154,293	141,832	127,536	
Cottonwood	105,816	15,726	36,377	13,892	39,821	436,810	104,787	113,868	61,965	156,190	
Willow	3,806	562	1,480	1,764	--	40,407	13,586	11,151	14,402	1,268	
Hackberry	31,825	5,871	14,741	8,719	2,494	132,967	70,171	38,897	17,451	6,448	
Aspen	6,452	911	4,933	--	608	104,130	59,152	39,451	4,444	1,083	
Birch	3,427	1,160	2,267	--	--	26,891	13,171	11,339	934	1,447	
Sweetgum	33,297	7,606	10,461	10,515	4,715	181,492	107,038	44,942	17,629	11,883	
Tupelo	23,601	2,655	6,263	9,427	5,256	126,287	63,095	35,125	16,379	11,688	
Black cherry	42,405	9,697	9,261	21,700	1,747	267,562	132,943	91,803	35,056	7,760	
Black walnut	78,350	26,498	40,560	10,743	549	326,222	185,852	110,147	22,347	7,876	
Butternut	2,020	126	1,290	604	--	13,348	6,215	6,668	465	--	
Yellow-poplar	218,773	23,188	51,594	99,848	44,143	1,524,324	472,338	611,116	280,885	159,985	
Persimmon	881	481	400	--	--	9,130	8,711	419	--	--	
Sassafras	19,668	7,006	9,763	1,295	1,604	139,745	89,936	44,655	3,894	1,260	
Other hardwoods	11,873	3,621	5,937	1,509	806	155,870	90,910	39,993	14,210	10,757	
Total	2,508,931	473,218	900,136	683,130	452,447	15,253,232	5,893,735	5,019,716	2,526,856	1,812,925	
All species	2,527,147	487,376	903,074	683,130	453,567	15,847,928	6,419,684	5,081,363	2,531,604	1,815,277	

Table 55.--Net volume of short-log trees on timberland by species group and diameter class, Indiana, 1986

(In thousand cubic feet)

		Diameter class (inches at breast height)									
Species group	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	21.0-22.9	23.0-28.9	29.0-38.9	39.0+
Softwoods											
Jack pine	199	199	--	--	--	--	--	--	--	--	--
Red pine	--	--	--	--	--	--	--	--	--	--	--
White pine	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	488	130	358	--	--	--	--	--	--	--	--
Other yellow pines	236	104	--	--	--	--	--	132	--	--	--
Tamarack	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--
Eastern redcedar	885	465	130	140	--	150	--	--	--	--	--
Other softwoods	--	--	--	--	--	--	--	--	--	--	--
Total	1,808	898	488	140	--	150	--	132	--	--	--
Hardwoods											
Select white oak	21,026	--	2,284	2,290	1,501	2,443	1,279	2,397	4,289	3,177	1,366
Other white oak	1,875	--	359	103	829	128	170	--	286	--	--
Select red oak	9,521	--	--	504	633	1,096	1,443	620	1,731	2,058	1,436
Other red oak	11,533	--	1,113	170	1,161	1,601	2,039	1,397	1,400	1,488	1,164
Select hickory	6,442	--	631	1,651	1,341	1,268	828	395	328	--	--
Other hickory	5,889	--	1,438	1,053	906	335	291	731	1,135	--	--
Basswood	2,287	--	256	122	155	616	134	--	749	255	--
Beech	8,899	--	138	1,512	879	1,781	1,548	748	1,183	951	159
Hard maple	19,052	--	3,115	3,260	3,028	1,439	1,600	2,013	3,570	1,027	--
Soft maple	15,028	--	2,654	1,258	1,493	2,208	1,696	1,150	2,719	1,230	620
Elm	4,739	--	1,419	1,322	539	648	242	214	241	114	--
Ash	14,414	--	3,442	1,974	2,207	2,244	1,475	888	1,063	814	307
Sycamore	4,151	--	137	1,214	805	134	798	--	511	472	80
Cottonwood	4,127	--	286	574	--	--	1,010	--	528	1,373	356
Willow	1,589	--	238	230	501	--	--	--	393	227	--
Hackberry	2,633	--	444	478	373	128	154	132	426	--	498
Aspen	109	--	109	--	--	--	--	--	--	--	--
Birch	170	--	--	--	--	--	--	--	170	--	--
Sweetgum	586	--	--	--	147	232	--	--	129	78	--
Tupelo	1,102	--	348	316	339	--	--	--	99	--	--
Black cherry	6,192	--	2,229	798	752	837	--	758	518	300	--
Black walnut	6,385	--	1,968	1,609	689	579	276	399	587	158	120
Butternut	298	--	298	--	--	--	--	--	--	--	--
Yellow-poplar	3,874	--	1,030	693	124	817	46	56	698	260	150
Persimmon	--	--	--	--	--	--	--	--	--	--	--
Sassafras	3,101	--	565	313	592	589	297	--	513	232	--
Other hardwoods	5,438	--	1,500	1,657	874	624	596	--	187	--	--
Total	160,460	--	26,001	23,101	19,868	19,747	15,922	11,898	23,453	14,214	6,256
All species	162,268	898	26,489	23,241	19,868	19,897	15,922	12,030	23,453	14,214	6,256

Table 56.--Net volume of short-log trees on timberland by species group and diameter class, Indiana, 1986
(In thousand board feet)^{1/}

Species group	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- 22.9	23.0- 28.9	29.0- 38.9	39.0+
Softwoods											
Jack pine	1,008	1,008	--	--	--	--	--	--	--	--	--
Red pine	--	--	--	--	--	--	--	--	--	--	--
White pine	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	2,254	654	1,600	--	--	--	--	362	--	--	--
Other yellow pines	887	525	--	--	--	--	--	--	--	--	--
Tamarack	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--
Eastern redcedar	3,990	2,353	581	557	--	499	--	--	--	--	--
Other softwoods	--	--	--	--	--	--	--	--	--	--	--
Total	8,139	4,540	2,181	557	--	499	--	362	--	--	--
Hardwoods											
Select white oak	63,145	--	8,474	7,991	4,968	7,567	3,924	6,814	11,365	8,419	3,623
Other white oak	6,111	--	1,332	358	2,745	397	522	--	757	--	--
Select red oak	27,278	--	--	1,760	2,095	3,391	4,423	1,763	4,583	5,454	3,809
Other red oak	34,482	--	4,132	594	3,847	4,960	6,248	3,968	3,704	3,945	3,084
Select hickory	21,000	--	2,341	5,766	4,442	3,925	2,534	1,123	869	--	--
Other hickory	19,030	--	5,342	3,679	2,997	1,037	893	2,076	3,006	--	--
Basswood	6,873	--	949	428	515	1,909	411	--	1,986	675	--
Beech	27,168	--	512	5,281	2,910	5,521	4,747	2,125	3,133	2,519	420
Hard maple	60,238	--	11,568	11,385	10,019	4,456	4,905	5,721	9,460	2,724	--
Soft maple	46,581	--	9,847	4,390	4,944	6,836	5,198	3,268	7,200	3,260	1,638
Elm	15,954	--	5,264	4,614	1,785	2,005	740	607	639	300	--
Ash	46,751	--	12,776	6,897	7,301	6,946	4,523	2,524	2,817	2,157	810
Sycamore	13,092	--	508	4,240	2,666	415	2,446	--	1,354	1,252	211
Cottonwood	12,138	--	1,061	2,003	--	--	3,096	--	1,399	3,637	942
Willow	4,985	--	881	803	1,658	--	--	--	1,042	601	--
Hackberry	8,244	--	1,651	1,667	1,235	396	472	376	1,130	--	1,317
Aspen	405	--	405	--	--	--	--	--	--	--	--
Birch	451	--	--	--	--	--	--	--	451	--	--
Sweetgum	1,755	--	--	--	488	720	--	--	341	206	--
Tupelo	3,776	--	1,291	1,102	1,121	--	--	--	262	--	--
Black cherry	20,465	--	8,275	2,786	2,490	2,593	--	2,155	1,375	791	--
Black walnut	21,262	--	7,302	5,623	2,280	1,790	845	1,134	1,553	417	318
Butternut	1,107	--	1,107	--	--	--	--	--	--	--	--
Yellow-poplar	12,416	--	3,823	2,419	409	2,532	140	159	1,850	688	396
Persimmon	--	--	--	--	--	--	--	--	--	--	--
Sassafras	9,855	--	2,095	1,093	1,960	1,823	909	--	1,360	615	--
Other hardwoods	18,493	--	5,565	5,784	2,891	1,932	1,825	--	496	--	--
Total	503,055	--	96,501	80,663	65,766	61,151	48,801	33,813	62,132	37,660	16,568
All species	511,194	4,540	98,682	81,220	65,766	61,650	48,801	34,175	62,132	37,660	16,568

^{1/} International 1/4-inch rule.

Table 57.--Net annual growth of growing stock and sawtimber on timberland by softwoods and hardwoods and Forest Survey Unit, Indiana, 1966 and 1985

Species group	Growing stock		Sawtimber	
	1966 ^{1/}	1985	1966 ^{1/}	1985
	Thousand cubic feet		Thousand board feet ^{2/}	
All Units				
Softwoods	4,446	6,638	11,613	39,303
Hardwoods	99,099	146,997	258,332	686,641
All species	103,545	153,635	269,945	725,944
Lower Wabash Unit				
Softwoods	637	1,108	183	5,599
Hardwoods	17,573	31,034	40,518	148,202
All species	18,210	32,142	40,701	153,801
Knobs Unit				
Softwoods	2,929	4,013	6,305	24,785
Hardwoods	39,758	64,933	94,041	321,337
All species	42,687	68,946	100,346	346,122
Upland Flats				
Softwoods	10	856	77	713
Hardwoods	7,036	15,911	15,763	61,647
All species	7,046	16,767	15,840	62,360
Northern Unit				
Softwoods	870	661	5,048	8,206
Hardwoods	34,732	35,119	108,010	155,455
All species	35,602	35,780	113,058	163,661

^{1/} Figures have been adjusted from those published after the 1967 survey to conform to 1985 volumes because of changes in survey procedures.

^{2/} International 1/4-inch rule.

Table 58.--Net annual growth of growing stock on timberland by species group and ownership class, Indiana, 1985
(In thousand cubic feet)

Species group	Ownership class								Misc. priv.- corp.	Misc. priv.- indiv.
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer			
Softwoods										
Jack pine	135	--	--	24	--	--	19	8	84	
Red pine	198	--	--	12	--	--	87	74	25	
White pine	1,600	137	--	251	--	--	412	435	365	
Shortleaf pine	-85	-383	5	--	--	--	88	133	72	
Other yellow pines	1,990	-5	--	138	--	--	601	415	841	
Tamarack	2	--	--	2	--	--	--	--	--	
Baldcypress	138	--	--	--	--	--	--	--	--	
Eastern redcedar	2,133	13	11	-7	8	--	--	58	80	
Other softwoods	527	--	--	145	--	--	1,127	4	977	
Total	6,638	-238	16	565	8	--	382	--	--	
Hardwoods							2,716	1,127	2,444	
Select white oak	15,350	915	886	1,365	102	121	5,232	931	5,798	
Other white oak	2,425	262	45	484	42	22	309	147	1,114	
Select red oak	8,276	200	272	334	39	55	3,242	772	3,362	
Other red oak	14,388	533	696	966	50	111	5,216	1,091	5,725	
Select hickory	5,583	43	217	115	17	26	2,117	392	2,656	
Other hickory	6,402	227	287	216	17	36	2,680	311	2,628	
Basswood	1,693	4	90	133	-42	--	761	133	614	
Beech	1,504	34	-2	63	--	18	762	123	506	
Hard maple	13,833	432	618	427	18	50	4,850	1,306	6,132	
Soft maple	12,287	94	590	683	108	--	5,753	1,355	3,704	
Elm	4,654	14	4	-5	94	83	2,244	560	1,660	
Ash	10,079	301	225	230	82	--	4,473	1,102	3,666	
Sycamore	6,232	380	242	285	13	--	2,556	654	2,102	
Cottonwood	3,789	--	14	89	191	--	2,493	603	399	
Willow	204	--	-15	--	-22	--	47	29	165	
Hackberry	2,319	--	21	29	2	--	1,262	142	863	
Aspen	728	114	128	6	--	--	109	166	205	
Birch	450	1	9	8	--	--	136	40	256	
Sweetgum	3,203	12	39	110	--	--	1,163	383	1,496	
Tupelo	1,134	46	34	59	--	-34	461	72	496	
Black cherry	2,961	17	49	72	85	-11	1,350	154	1,245	
Black walnut	3,959	-36	113	66	29	4	1,935	397	1,451	
Butternut	3	--	--	--	5	--	-10	22	-14	
Yellow-poplar	20,032	383	1,197	704	91	13	7,201	1,791	8,652	
Persimmon	423	1	6	3	--	--	175	36	202	
Sassafras	3,295	458	17	120	--	44	705	130	1,821	
Other hardwoods	1,791	23	91	-21	18	--	663	251	766	
Total	146,997	4,458	5,873	6,541	939	538	57,885	13,093	57,670	
All species	153,635	4,220	5,889	7,106	947	538	60,601	14,220	60,114	

Table 59.--Net annual growth of sawtimber on timberland by species group and ownership class, Indiana, 1985

(In thousand board feet)^{1/}

Species group	Ownership class								Misc. priv.- corp.	Misc. priv.- indiv.
	All owners	National forest	Misc. federal	State	County & municipal	Forest industry	Farmer			
Softwoods										
Jack pine	479	--	--	253	--	--	5	--	--	221
Red pine	4,432	--	--	45	--	--	3,424	891	--	72
White pine	14,553	6,264	--	1,010	--	--	3,131	2,470	--	1,678
Shortleaf pine	2,520	944	25	--	--	--	223	654	--	674
Other yellow pines	6,884	--	--	698	--	--	1,792	744	--	3,650
Tamarack	-131	--	--	-131	--	--	--	--	--	--
Baldcypress	744	--	--	--	--	--	--	311	--	433
Eastern redcedar	6,237	80	16	-45	--	--	1,865	26	--	4,295
Other softwoods	3,585	--	--	--	--	--	3,585	--	--	--
Total	39,303	7,288	41	1,830	--	--	14,025	5,096	--	11,023
Hardwoods										
Select white oak	79,020	6,335	4,524	5,916	726	949	25,313	9,527	--	25,730
Other white oak	13,109	1,774	237	2,272	177	57	1,878	601	--	6,113
Select red oak	50,361	1,511	1,958	1,720	189	412	24,294	3,890	--	16,387
Other red oak	77,947	3,468	3,114	4,259	208	1,044	28,585	5,348	--	31,921
Select hickory	28,196	366	1,340	603	82	90	9,380	1,441	--	14,894
Other hickory	35,440	2,034	2,069	775	16	208	12,870	1,666	--	15,802
Basswood	9,019	--	1,756	719	36	--	2,737	857	--	2,914
Beech	5,676	23	-6	311	--	53	2,968	601	--	1,726
Hard maple	59,429	1,354	1,915	385	91	175	19,788	4,091	--	31,630
Soft maple	36,743	143	1,591	1,228	963	--	18,839	2,438	--	11,541
Elm	6,401	-16	-151	273	-13	-118	3,665	948	--	1,813
Ash	49,560	1,296	502	1,454	592	--	20,818	9,015	--	15,883
Sycamore	31,449	584	1,450	558	43	--	12,476	5,964	--	10,374
Cottonwood	19,464	--	8	491	1,181	--	11,335	3,450	--	2,999
Willow	378	--	-64	--	--	--	-574	-40	--	1,056
Hackberry	10,351	--	110	320	11	--	4,546	1,000	--	4,364
Aspen	5,517	262	390	16	--	--	690	3,439	--	720
Birch	1,262	9	22	48	--	--	403	--	--	780
Sweetgum	11,577	105	203	361	--	--	5,600	210	--	5,098
Tupelo	5,201	96	16	235	--	-188	1,426	541	--	3,075
Black cherry	16,699	94	148	203	69	-58	10,391	896	--	4,956
Black walnut	19,928	44	774	474	132	6	10,086	2,083	--	6,329
Butternut	46	--	--	--	28	--	-84	145	--	-43
Yellow-poplar	90,476	1,509	4,560	2,921	82	38	30,400	7,811	--	43,155
Persimmon	2,198	--	--	--	--	--	710	180	--	1,308
Sassafras	7,878	36	312	-24	--	104	3,011	394	--	4,045
Other hardwoods	13,316	114	395	-25	--	--	7,384	398	--	5,050
Total	686,641	21,141	27,173	25,493	4,613	2,772	268,935	66,894	--	269,620
All species	725,944	28,429	27,214	27,323	4,613	2,772	282,960	71,990	--	280,643

^{1/} International 1/4-inch rule.

Table 60.--Net annual growth of growing stock on timberland by species group and forest type, Indiana, 1985
(In thousand cubic feet)

Table 61.--Net annual growth of sawtimber on timberland by species group and forest type, Indiana, 1985
(In thousand board feet)^{1/}

Species group	Forest type													Cherry-ash- yellow- poplar	Non- stocked
	All types	Jack-red- white pine	Short- leaf pine	Scotch- virginia pine	Oak- pine	Oak- hickory	Chestnut- scarlet oak	Sassafras- persimmon	Oak- gum	Lowland oak	Elm-ash- soft maple	Cotton- wood	Maple- beech		
Softwoods															
Jack pine	479	171	--	--	12	32	--	--	--	--	11	--	--	253	--
Red pine	4,432	4,344	--	--	--	88	--	--	--	--	--	--	--	--	--
White pine	14,553	11,725	--	397	873	938	--	--	--	--	557	--	--	63	--
Shortleaf pine	2,520	370	497	619	246	95	--	--	--	--	60	--	--	633	--
Other yellow pines	6,884	82	-21	3,958	1,337	627	--	52	52	--	175	217	345	60	--
Tamarack	-131	--	--	--	--	--	--	--	--	--	-131	--	--	--	--
Baldcypress	744	--	--	--	--	--	--	--	210	--	534	--	--	--	--
Eastern redcedar	6,237	--	--	588	2,253	-37	--	--	--	--	37	--	2,887	509	--
Other softwoods	3,585	--	--	3,585	--	--	--	--	--	--	--	--	--	--	--
Total	39,303	16,692	476	9,147	4,721	1,743	--	52	262	--	1,243	217	3,232	1,518	--
Hardwoods															
Select white oak	79,020	231	--	150	462	52,353	1,406	305	201	673	9,443	--	9,593	4,184	19
Other white oak	13,109	--	21	--	86	7,215	3,982	--	62	28	-40	--	1,300	455	--
Select red oak	50,361	67	--	--	511	29,686	--	--	98	66	1,977	--	12,743	5,212	--
Other red oak	77,947	319	38	455	3,424	55,392	1,423	58	928	1,786	5,098	--	5,080	3,918	28
Select hickory	28,196	20	--	31	212	17,092	15	--	314	219	1,440	--	6,874	1,979	--
Other hickory	35,440	31	12	--	128	22,699	-127	--	-60	58	1,137	--	9,136	2,426	--
Basswood	9,019	--	--	--	196	1,566	23	--	--	25	499	--	5,589	1,121	--
Beech	5,676	--	8	--	--	278	--	--	--	--	120	--	4,921	349	--
Hard maple	59,429	--	27	33	1,499	6,646	111	103	17	--	5,992	--	42,487	2,514	--
Soft maple	36,743	81	--	87	29	1,683	31	--	460	189	23,228	1,066	7,871	2,220	-202
Elm	6,401	11	--	--	-14	560	--	-47	43	-51	2,099	--	2,344	1,456	--
Ash	49,560	428	55	27	384	6,249	--	-55	428	451	15,803	--	6,728	19,062	--
Sycamore	31,449	465	110	321	51	3,182	--	--	581	--	16,728	17	4,218	5,550	226
Cottonwood	19,464	560	--	1,164	--	369	--	--	--	60	12,659	3,728	449	445	30
Willow	378	--	--	--	--	-49	--	--	--	--	490	--	-28	29	-64
Hackberry	10,351	--	--	--	--	1,578	--	--	--	--	3,461	--	2,683	2,629	--
Aspen	5,517	--	--	--	--	4,147	--	--	49	--	129	--	667	525	--
Birch	1,262	--	--	--	--	38	--	--	68	--	1,129	--	--	27	--
Sweetgum	11,577	--	--	--	150	1,121	--	--	3,641	276	2,604	--	2,043	1,742	--
Tupelo	5,201	--	6	222	138	783	-26	--	526	68	495	--	2,501	488	--
Black cherry	16,699	303	--	94	-57	1,344	124	--	47	71	1,150	--	4,966	8,657	--
Black walnut	19,928	--	--	--	63	2,688	--	--	29	--	7,115	--	3,291	6,742	--
Butternut	46	--	--	--	--	--	--	--	--	--	201	--	-160	5	--
Yellow-poplar	90,476	967	28	259	1,058	16,279	--	200	1,002	--	9,000	--	18,316	43,367	--
Persimmon	2,198	--	--	--	--	1,721	--	--	238	--	124	--	78	37	--
Sassafras	7,878	--	--	30	18	1,556	--	40	327	344	1,633	--	2,412	1,518	--
Other hardwoods	13,316	--	--	--	--	1,138	--	--	-38	13	4,735	-37	7,025	536	-56
Total	686,641	3,483	305	2,874	8,338	237,314	6,962	604	8,961	4,276	128,449	4,774	163,127	117,193	-19
All species	725,944	20,175	781	12,021	13,059	239,057	6,962	656	9,223	4,276	129,692	4,991	166,359	118,711	-19

^{1/} International 1/4-inch rule.

Table 62.--Net annual growth of growing stock on timberland by forest type, stand-age class, and Forest Survey Unit, Indiana, 1985

(In thousand cubic feet)

Unit and forest type	All ages	Stand-age class (years)													141+
		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140		
All Units															
Jack-red-white pine	2,174	--	191	994	780	209	--	--	--	--	--	--	--	--	--
Shortleaf pine	31	-51	--	--	16	44	-40	--	--	--	--	--	--	--	--
Scotch-Virginia pine	3,185	91	868	112	1,330	623	76	85	--	--	--	--	--	--	--
Oak-pine	3,027	133	560	697	480	750	159	15	167	--	66	--	--	--	--
Oak-hickory	49,837	2,349	2,665	2,213	3,585	5,191	8,132	8,087	6,544	5,446	2,638	2,589	305	93	--
Chestnut-scarlet oak	1,454	--	--	--	10	--	--	84	302	284	307	64	286	--	--
Sassafras-persimmon	139	50	59	--	--	--	30	--	--	--	--	--	--	--	--
Oak-gum	2,601	25	392	--	60	1,173	172	401	--	191	102	85	--	--	--
Lowland oak	993	5	--	73	44	--	84	394	193	200	--	--	--	--	--
Elm-ash-soft maple	28,454	1,130	2,460	4,122	5,220	5,691	3,845	2,564	1,999	946	231	178	10	58	--
Cottonwood	878	--	145	431	--	55	183	40	24	--	--	--	--	--	--
Maple-beech	33,654	1,684	2,498	2,243	3,498	4,011	5,997	4,697	3,263	2,945	1,200	1,271	260	87	--
Cherry-ash-yellow-poplar	27,213	879	2,107	4,098	5,314	7,314	3,684	2,340	823	464	190	--	--	--	--
Nonstocked	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	153,635	6,352	11,945	14,983	20,337	25,061	22,406	18,925	13,130	10,476	4,734	4,187	861	238	--
Lower Wabash Unit															
Jack-red-white pine	587	--	--	251	336	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	591	60	69	16	96	274	76	--	--	--	--	--	--	--	--
Oak-pine	72	--	--	72	--	--	--	--	--	--	--	--	--	--	--
Oak-hickory	11,264	805	432	804	668	968	2,478	1,335	1,674	1,411	328	361	--	--	--
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	31	--	31	--	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	248	--	--	--	--	83	--	63	--	--	102	--	--	--	--
Lowland oak	212	5	--	--	--	--	98	61	48	--	--	--	--	--	--
Elm-ash-soft maple	8,147	388	1,147	587	1,001	2,222	1,560	498	571	173	--	--	--	--	--
Cottonwood	349	--	--	166	--	--	183	--	--	--	--	--	--	--	--
Maple-beech	5,475	259	361	455	461	1,015	900	741	542	411	154	106	70	--	--
Cherry-ash-yellow-poplar	5,166	46	554	715	1,079	1,384	460	507	234	187	--	--	--	--	--
Nonstocked	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	32,142	1,563	2,594	3,066	3,641	5,946	5,755	3,205	3,069	2,182	584	467	70	--	--
Knobs Unit															
Jack-red-white pine	939	--	77	656	206	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	31	-51	--	--	16	44	-40	--	--	--	--	--	--	--	--
Scotch-Virginia pine	1,950	71	755	96	634	349	--	85	--	--	--	--	--	--	--
Oak-pine	1,590	31	155	228	71	750	159	15	141	--	--	--	--	--	--
Oak-hickory	26,437	946	1,913	665	2,140	2,736	3,838	4,586	3,115	3,364	1,497	1,510	128	-1	--
Chestnut-scarlet oak	1,241	--	--	--	--	--	84	166	117	217	307	64	286	--	--
Sassafras-persimmon	108	50	28	--	--	--	30	--	--	--	--	--	--	--	--
Oak-gum	1,484	-7	15	--	60	733	172	338	--	88	--	85	--	--	--
Lowland oak	136	--	--	--	--	--	--	136	--	--	--	--	--	--	--
Elm-ash-soft maple	8,857	394	1,020	1,417	1,798	1,214	1,187	981	711	82	19	34	--	--	--
Cottonwood	185	--	145	--	--	--	--	40	--	--	--	--	--	--	--
Maple-beech	15,268	1,169	1,052	620	2,294	875	2,972	1,961	1,599	1,448	726	552	--	--	--
Cherry-ash-yellow-poplar	10,728	428	762	1,205	2,483	3,464	1,196	534	368	153	135	--	--	--	--
Nonstocked	54	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	68,946	3,085	5,922	4,887	9,702	10,165	9,598	8,842	6,051	5,352	2,684	2,245	414	-1	--

Table 62 continued on next page

(Table 62 continued on next page)

(Table 62 continued)

Unit and forest type	All ages	Stand-age class (years)												
		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140	141+
Upland Flats Unit														
Jack-red-white pine	218	--	--	--	218	--	--	--	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	44	--	44	--	--	--	--	--	--	--	--	--	--	--
Oak-pine	1,362	62	402	397	409	--	--	26	--	66	--	--	--	--
Oak-hickory	3,793	258	156	179	323	619	289	739	659	206	229	136	--	--
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	766	32	377	--	--	357	--	--	--	--	--	--	--	--
Lowland oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm-ash-soft maple	1,773	161	46	246	216	417	340	--	134	167	36	--	10	--
Cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Maple-beech	4,058	75	505	125	280	125	1,161	631	376	513	--	267	--	--
Cherry-ash-yellow-poplar	4,807	103	498	1,028	574	806	971	745	82	--	--	--	--	--
Nonstocked	-54	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	16,767	637	2,028	1,975	2,020	2,324	2,761	2,115	1,277	886	331	403	10	--
Northern Unit														
Jack-red-white pine	430	--	114	87	20	209	--	--	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	600	--	--	--	600	--	--	--	--	--	--	--	--	--
Oak-pine	3	--	3	--	--	--	--	--	--	--	--	--	--	--
Oak-hickory	8,343	340	164	565	454	868	1,527	1,427	1,096	465	584	582	177	94
Chestnut-scarlet oak	213	--	--	--	10	--	--	136	--	67	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	103	--	--	--	--	--	--	--	--	--	--	--	--	--
Lowland oak	645	--	--	73	44	--	--	--	--	103	--	--	--	--
Elm-ash-soft maple	9,677	187	247	1,872	2,205	1,838	758	1,085	583	524	176	144	--	58
Cottonwood	344	--	265	--	55	--	--	24	--	--	--	--	--	--
Maple-beech	8,853	181	580	1,043	463	1,996	964	1,364	746	573	320	346	190	87
Cherry-ash-yellow-poplar	6,512	302	293	1,150	1,178	1,660	1,057	554	139	124	55	--	--	--
Nonstocked	57	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	35,780	1,067	1,401	5,055	4,974	6,626	4,292	4,763	2,733	2,056	1,135	1,072	367	239

Table 63.--Net annual growth of sawtimber on timberland by forest type, stand-age class, and Forest Survey Unit, Indiana, 1985
(In thousand board feet)^{1/}

Unit and forest type	All ages	Stand-age class (years)												141+
		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140	
All Units														
Jack-red-white pine	20,175	--	360	10,868	4,732	4,215	--	--	--	--	--	--	--	--
Shortleaf pine	781	65	--	--	379	236	101	--	--	--	--	--	--	--
Scotch-Virginia pine	12,021	--	1,168	316	7,129	2,869	206	333	--	--	--	--	--	--
Oak-pine	13,059	858	3,542	1,122	1,255	3,649	2,113	104	347	--	69	--	--	--
Oak-hickory	239,057	8,510	10,515	7,955	10,168	29,665	46,770	35,322	27,972	33,453	15,214	11,960	1,306	247
Chestnut-scarlet oak	6,962	--	--	--	19	--	391	2,195	552	1,377	1,494	195	739	--
Sassafras-persimmon	656	415	66	--	--	--	175	--	--	--	--	--	--	--
Oak-gum	9,223	382	472	--	123	4,755	842	1,298	--	582	451	318	--	--
Lowland oak	4,276	25	--	--	132	--	475	1,978	1,079	587	--	--	--	--
Elm-ash-soft maple	129,692	8,187	8,866	12,440	25,342	35,948	15,768	10,738	6,933	3,428	1,058	724	56	204
Cottonwood	4,991	--	664	2,362	--	305	1,277	284	99	--	--	--	--	--
Maple-beech	166,359	6,499	13,283	8,652	12,327	23,808	31,349	25,380	17,382	17,378	5,033	4,064	841	363
Cherry-ash-yellow-poplar	118,711	2,473	2,875	10,347	29,639	31,273	22,861	10,817	5,673	2,095	658	--	--	--
Nonstocked	-19	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	725,944	27,395	41,811	54,062	91,245	136,723	122,328	88,449	60,037	58,900	23,977	17,261	2,942	814
Lower Wabash Unit														
Jack-red-white pine	3,422	--	--	1,117	2,305	--	--	--	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	1,870	--	31	--	237	1,396	206	--	--	--	--	--	--	--
Oak-pine	246	--	--	246	--	--	--	--	--	--	--	--	--	--
Oak-hickory	60,050	2,046	3,478	3,368	2,374	8,046	15,839	7,317	6,859	6,787	2,441	1,495	--	--
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	970	--	--	--	--	243	--	276	--	--	451	--	--	--
Lowland oak	919	25	--	--	--	--	474	253	167	--	--	--	--	--
Elm-ash-soft maple	39,204	5,596	4,715	2,453	3,546	12,228	5,683	2,079	2,447	457	--	--	--	--
Cottonwood	2,232	--	--	955	--	--	1,277	--	--	--	--	--	--	--
Maple-beech	27,002	206	568	3,755	658	5,617	5,161	3,875	2,492	3,254	613	549	254	--
Cherry-ash-yellow-poplar	17,886	250	1,250	2,400	4,182	5,613	1,723	1,713	518	237	--	--	--	--
Nonstocked	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	153,801	8,123	10,042	14,294	13,302	33,143	30,363	15,513	12,483	10,735	3,505	2,044	254	--
Knobs Unit														
Jack-red-white pine	10,937	--	--	9,617	1,320	--	--	--	--	--	--	--	--	--
Shortleaf pine	781	65	--	--	379	236	101	--	--	--	--	--	--	--
Scotch-Virginia pine	5,705	--	1,112	316	2,471	1,473	--	333	--	--	--	--	--	--
Oak-pine	10,974	853	3,062	751	123	3,649	2,113	104	319	--	--	--	--	--
Oak-hickory	122,325	4,478	6,122	2,645	6,668	14,365	20,552	19,590	12,979	19,537	7,922	6,825	629	13
Chestnut-scarlet oak	5,134	--	--	--	--	--	391	869	552	894	1,494	195	739	--
Sassafras-persimmon	656	415	66	--	--	--	175	--	--	--	--	--	--	--
Oak-gum	5,721	--	77	--	123	3,121	842	1,022	--	218	--	318	--	--
Lowland oak	644	--	--	--	--	--	644	--	--	--	--	--	--	--
Elm-ash-soft maple	44,651	1,498	3,081	3,012	10,353	14,191	4,836	4,992	2,027	466	67	128	--	--
Cottonwood	948	--	664	--	--	--	284	--	--	--	--	--	--	--
Maple-beech	80,653	5,457	9,855	1,257	9,145	4,931	15,742	13,051	9,820	6,924	2,905	1,566	--	--
Cherry-ash-yellow-poplar	56,993	1,853	1,201	3,725	18,082	14,225	12,457	1,617	2,287	1,401	445	--	--	--
Nonstocked	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	346,122	14,319	25,240	21,323	48,664	56,191	57,209	42,506	27,984	29,440	12,833	9,032	1,368	13

(Table 63 continued on next page)

^{1/} International 1/4-inch rule.

(Table 63 continued)

Unit and forest type	All ages	Stand-age class (years)													141+
		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-140		
Upland Flats Unit															
Jack-red-white pine	1,064	--	--	--	1,064	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	25	--	25	--	--	--	--	--	--	--	--	--	--	--	--
Oak-pine	1,821	5	462	125	1,132	--	--	28	--	69	--	--	--	--	--
Oak-hickory	14,969	923	490	341	605	2,440	1,356	2,483	2,827	738	2,108	658	--	--	--
Chestnut-scarlet oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	2,168	382	395	--	--	1,391	--	--	--	--	--	--	--	--	--
Lowland oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm-ash-soft maple	6,077	331	348	1,034	229	1,932	684	--	833	517	113	--	56	--	--
Cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Maple-beech	18,667	120	1,857	223	768	564	4,527	3,770	1,407	4,493	--	938	--	--	--
Cherry-ash-yellow-poplar	17,727	364	204	2,614	1,609	3,810	4,050	4,638	438	--	--	--	--	--	--
Nonstocked	-158	-158	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	62,360	1,967	3,781	4,337	5,407	10,137	10,617	10,891	5,533	5,748	2,290	1,596	56	--	--
Northern Unit															
Jack-red-white pine	4,752	--	360	134	43	4,215	--	--	--	--	--	--	--	--	--
Shortleaf pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Scotch-Virginia pine	4,421	--	--	--	4,421	--	--	--	--	--	--	--	--	--	--
Oak-pine	18	--	18	--	--	--	--	--	--	--	--	--	--	--	--
Oak-hickory	41,713	1,063	425	1,601	521	4,814	9,023	5,932	5,307	6,391	2,743	2,982	677	234	--
Chestnut-scarlet oak	1,828	--	--	--	19	--	--	1,326	--	483	--	--	--	--	--
Sassafras-persimmon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oak-gum	364	--	--	--	--	--	--	--	--	364	--	--	--	--	--
Lowland oak	2,713	--	--	--	132	--	1	1,081	912	587	--	--	--	--	--
Elm-ash-soft maple	39,760	762	722	5,941	11,214	7,597	4,565	3,667	1,626	1,988	878	596	--	204	--
Cottonwood	1,811	--	--	1,407	--	305	--	--	99	--	--	--	--	--	--
Maple-beech	40,037	716	1,003	3,417	1,756	12,696	5,919	4,684	3,663	2,707	1,515	1,011	587	363	--
Cherry-ash-yellow-poplar	26,105	306	220	1,608	5,766	7,625	4,631	2,849	2,430	457	213	--	--	--	--
Nonstocked	139	139	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	163,661	2,986	2,748	14,108	23,872	37,252	24,139	19,539	14,037	12,977	5,349	4,589	1,264	801	--

Table 64.--Net annual growth of growing stock on timberland by forest type, stand-size class, and basal-area class, and basal-area class, Indiana, 1985
(In thousand cubic feet)

Forest type and stand-size class	All classes	Basal-area class (square feet per acre)														181+
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-150	151-180		
Jack-red-white pine																
Sawtimber	1,018	--	--	--	--	62	--	--	--	-79	--	515	--	520	--	
Poletimber	1,079	--	--	--	20	--	--	--	--	123	87	554	181	114	--	
Sapling & seedling	77	--	--	--	--	--	--	77	--	--	--	--	--	--	--	
All stands	2,174	--	--	--	20	62	--	77	--	44	87	1,069	181	634	--	
Shortleaf pine																
Sawtimber	20	--	--	--	--	--	--	--	-16	-36	--	12	60	--	--	
Poletimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sapling & seedling	-51	--	--	--	--	-51	--	--	--	--	--	--	--	--	--	
All stands	-31	--	--	--	--	-51	--	--	-16	-36	--	12	60	--	--	
Scotch-Virginia pine																
Sawtimber	1,151	--	--	--	--	--	--	--	--	277	--	495	379	--	--	
Poletimber	1,189	--	--	--	--	87	--	--	105	123	274	96	--	504	--	
Sapling & seedling	845	85	52	9	48	--	149	382	76	--	--	44	--	--	--	
All stands	3,185	85	52	9	48	87	149	382	181	400	274	635	379	504	--	
Oak-pine																
Sawtimber	1,420	--	--	--	--	36	77	16	72	386	106	644	83	--	--	
Poletimber	957	--	--	--	--	--	110	118	347	93	--	146	143	--	--	
Sapling & seedling	650	3	--	--	95	23	115	98	193	123	--	--	--	--	--	
All stands	3,027	3	--	--	95	59	302	232	612	602	106	790	226	--	--	
Oak-hickory																
Sawtimber	37,850	--	55	--	65	475	1,313	1,106	3,951	7,354	5,410	12,240	5,384	497	--	
Poletimber	6,951	--	--	44	--	138	654	1,210	1,905	950	676	1,016	358	--	--	
Sapling & seedling	5,036	133	507	739	309	722	992	531	709	317	--	77	--	--	--	
All stands	49,837	133	562	783	374	1,335	2,959	2,847	6,565	8,621	6,086	13,333	5,742	497	--	
Chestnut-scarlet oak																
Sawtimber	1,454	--	--	10	--	--	42	-24	--	379	155	744	148	--	--	
Poletimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sapling & seedling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
All stands	1,454	--	--	10	--	--	42	-24	--	379	155	744	148	--	--	
Sassafras-persimmon																
Sawtimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Poletimber	58	--	--	--	--	--	--	--	28	--	--	30	--	--	--	
Sapling & seedling	81	31	--	--	--	50	--	--	--	--	--	--	--	--	--	
All stands	139	31	--	--	--	50	--	--	28	--	--	30	--	--	--	
Oak-gum																
Sawtimber	2,120	--	--	--	39	--	--	--	63	--	565	1,138	315	--	--	
Poletimber	64	--	--	--	--	--	--	--	--	4	--	60	--	--	--	
Sapling & seedling	417	--	8	24	15	81	-7	296	--	--	--	--	--	--	--	
All stands	2,601	--	8	24	54	81	-7	296	63	4	565	1,198	315	--	--	

(Table 64 continued on next page)

(Table 64 continued)

Forest type and stand-size class	All classes	Basal-area class (square feet per acre)													
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-150	151-180	181+
Lowland oak															
Sawtimber	871	--	--	--	--	-27	--	56	--	184	--	658	--	--	--
Poletimber	117	--	--	--	--	--	--	44	73	--	--	--	--	--	--
Sapling & seedling	5	--	--	5	--	--	--	--	--	--	--	--	--	--	--
All stands	993	--	--	5	--	-27	--	100	73	184	--	658	--	--	--
Elm-ash-soft maple															
Sawtimber	19,497	--	--	157	135	323	224	864	2,064	2,516	3,025	5,806	3,337	933	113
Poletimber	6,281	--	--	35	299	91	588	489	1,493	1,067	817	1,402	--	--	--
Sapling & seedling	2,676	56	157	157	338	700	202	252	463	351	--	--	--	--	--
All stands	28,454	56	157	349	772	1,114	1,014	1,605	4,020	3,934	3,842	7,208	3,337	933	113
Cottonwood															
Sawtimber	567	--	--	--	24	55	--	--	40	--	--	265	183	--	--
Poletimber	311	145	--	--	--	--	114	52	--	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All stands	878	145	--	--	24	55	114	52	40	--	--	265	183	--	--
Maple-beech															
Sawtimber	25,382	--	--	44	82	470	1,747	1,366	3,625	3,779	3,106	7,719	2,878	566	--
Poletimber	4,216	43	--	--	25	62	453	369	901	624	354	1,287	98	--	--
Sapling & seedling	4,056	--	370	99	406	962	691	791	460	--	82	195	--	--	--
All stands	33,654	43	370	143	513	1,494	2,891	2,526	4,986	4,403	3,542	9,201	2,976	566	--
Cherry-ash-yellow-poplar															
Sawtimber	18,893	34	--	53	21	161	425	1,138	1,340	2,957	1,692	6,976	3,432	423	241
Poletimber	5,700	--	--	49	--	--	539	396	1,534	1,257	544	851	530	--	--
Sapling & seedling	2,620	60	258	379	341	487	245	230	443	142	35	--	--	--	--
All stands	27,213	94	258	481	362	648	1,209	1,764	3,317	4,356	2,271	7,827	3,962	423	241
Nonstocked	57	65	-2	38	--	1	27	--	1	-79	6	--	--	--	--
All types															
Sawtimber	110,243	34	55	264	366	1,555	3,828	4,522	11,139	17,717	14,059	37,212	16,199	2,939	354
Poletimber	26,923	188	--	128	344	378	2,458	2,678	6,386	4,241	2,752	5,442	1,310	618	--
Sapling & seedling	16,412	368	1,352	1,412	1,552	2,974	2,387	2,657	2,344	933	117	316	--	--	--
Nonstocked	57	65	-2	38	--	1	27	--	1	-79	6	--	--	--	--
All stands	153,635	655	1,405	1,842	2,262	4,908	8,700	9,857	19,870	22,812	16,934	42,970	17,509	3,557	354

Table 65.--Net annual growth of sawtimber on timberland by forest type, stand-size class, and basal-area class, Indiana, 1985
(In thousand board feet)^{1/}

Forest type and stand-size class	All classes	Basal-area class (square feet per acre)													181+
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-150	151-180	
Jack-red-white pine															
Sawtimber	15,171	--	--	--	--	357	--	--	--	6,356	--	2,541	--	5,917	
Poletimber	5,004	--	--	--	43	--	--	--	--	1,206	134	1,702	1,559	360	
Sapling & seedling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
All stands	20,175	--	--	--	43	357	--	--	--	7,562	134	4,243	1,559	6,277	
Shortleaf pine															
Sawtimber	716	--	--	--	--	--	--	--	-34	32	--	495	223	--	
Poletimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sapling & seedling	65	--	--	--	--	65	--	--	--	--	--	--	--	--	
All stands	781	--	--	--	--	65	--	--	-34	32	--	495	223	--	
Scotch-Virginia pine															
Sawtimber	5,222	--	--	--	--	--	--	--	--	1,443	--	1,855	1,924	--	
Poletimber	5,979	--	--	--	--	267	--	--	581	397	566	237	--	3,931	
Sapling & seedling	820	45	--	49	--	--	31	670	--	--	--	25	--	--	
All stands	12,021	45	--	49	--	267	31	670	581	1,840	566	2,117	1,924	3,931	
Oak-pine															
Sawtimber	7,171	--	--	--	--	118	219	154	246	992	255	4,799	388	--	
Poletimber	1,931	--	--	--	--	--	106	134	1,047	194	--	229	221	--	
Sapling & seedling	3,957	12	--	--	18	--	--	1,274	2,629	24	--	--	--	--	
All stands	13,059	12	--	--	18	118	1,599	2,917	1,293	1,210	255	5,028	609	--	
Oak-hickory															
Sawtimber	197,796	--	274	--	349	2,903	6,732	5,803	17,804	39,573	25,013	69,290	27,218	2,837	
Poletimber	22,069	--	--	8	--	623	1,688	7,371	2,968	5,109	1,549	2,091	662	--	
Sapling & seedling	19,192	631	2,440	2,444	522	3,259	3,132	2,972	2,979	521	--	292	--	--	
All stands	239,057	631	2,714	2,452	871	6,785	11,552	16,146	23,751	45,203	26,562	71,673	27,880	2,837	
Chestnut-scarlet oak															
Sawtimber	6,962	--	--	19	--	--	223	-149	--	2,447	654	3,060	708	--	
Poletimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sapling & seedling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
All stands	6,962	--	--	19	--	--	223	-149	--	2,447	654	3,060	708	--	
Sassafras-persimmon															
Sawtimber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Poletimber	241	--	--	--	--	--	--	--	66	--	--	175	--	--	
Sapling & seedling	415	--	--	--	--	415	--	--	--	--	--	--	--	--	
All stands	656	--	--	--	--	415	--	--	66	--	--	175	--	--	
Oak-gum															
Sawtimber	8,228	--	--	--	156	--	--	--	276	--	2,650	3,871	1,275	--	
Poletimber	--	--	--	--	--	--	--	--	--	18	--	123	--	--	
Sapling & seedling	854	--	36	346	77	395	--	--	--	--	--	--	--	--	
All stands	9,223	--	36	346	233	395	--	--	276	18	2,650	3,994	1,275	--	

(Table 65 continued on next page)

^{1/} International 1/4-inch rule.

(Table 65 continued)

Forest type and stand-size class	All classes	Basal-area class (square feet per acre)														
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-120	121-150	151-180	181+	
Lowland oak																
Sawtimber	4,119	--	--	--	--	-57	--	293	--	811	--	3,072	--	--	--	--
Polettinber	132	--	--	--	--	--	--	132	--	--	--	--	--	--	--	--
Sapling & seedling	25	--	--	25	--	--	--	--	--	--	--	--	--	--	--	--
All stands	4,276	--	--	25	--	-57	--	425	--	811	--	3,072	--	--	--	--
Elm-ash-soft maple																
Sawtimber	99,509	--	--	4,718	838	1,325	1,181	8,305	7,843	12,701	13,300	29,989	12,441	6,352	516	--
Polettinber	17,667	--	--	36	181	2,106	694	1,259	3,528	4,263	1,551	4,049	--	--	--	--
Sapling & seedling	12,516	365	620	430	1,372	1,235	589	539	1,948	5,418	--	--	--	--	--	--
All stands	129,692	365	620	5,184	2,391	4,666	2,464	10,103	13,319	22,382	14,851	34,038	12,441	6,352	516	--
Cottonwood																
Sawtimber	3,372	--	--	--	99	305	--	--	284	--	--	1,407	1,277	--	--	--
Polettinber	1,619	664	--	--	--	--	738	217	--	--	--	--	--	--	--	--
Sapling & seedling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All stands	4,991	664	--	--	99	305	738	217	284	--	--	1,407	1,277	--	--	--
Maple-beech																
Sawtimber	130,777	--	--	183	553	2,891	11,240	10,234	18,828	16,341	14,428	37,438	15,740	2,901	--	--
Polettinber	16,426	270	--	--	28	103	4,014	2,948	2,266	1,513	1,047	3,624	613	--	--	--
Sapling & seedling	19,156	2	1,874	62	963	5,055	740	8,585	1,550	--	97	228	--	--	--	--
All stands	166,359	272	1,874	245	1,544	8,049	15,994	21,767	22,644	17,854	15,572	41,290	16,353	2,901	--	--
Cherry-ash-yellow-poplar																
Sawtimber	98,118	100	--	266	321	1,117	1,852	8,611	5,426	15,218	6,443	37,848	18,529	1,653	734	--
Polettinber	15,685	--	--	57	--	--	1,169	831	2,558	4,463	1,533	3,497	1,577	--	--	--
Sapling & seedling	4,908	250	193	201	183	1,243	938	307	919	545	129	--	--	--	--	--
All stands	118,711	350	193	524	504	2,360	3,959	9,749	8,903	20,226	8,105	41,345	20,106	1,653	734	--
Nonstocked	-19	--	-31	164	--	--	144	--	--	-322	26	--	--	--	--	--
All types																
Sawtimber	577,161	100	274	5,186	2,316	8,959	21,447	33,251	50,673	95,914	62,743	195,665	79,723	19,660	1,250	--
Polettinber	86,894	934	--	101	252	3,099	8,409	12,892	13,014	17,163	6,380	15,727	4,632	4,291	--	--
Sapling & seedling	61,908	1,305	5,163	3,557	3,135	11,667	6,704	15,702	7,396	6,508	226	545	--	--	--	--
Nonstocked	-19	--	-31	164	--	--	144	--	--	-322	26	--	--	--	--	--
All stands	725,944	2,339	5,406	9,008	5,703	23,725	36,704	61,845	71,083	119,263	69,375	211,937	84,355	23,951	1,250	--

Table 66.--Net annual growth of growing stock and sawtimber on timberland by county and species group, Indiana, 1985

Unit and county	Growing stock					Sawtimber				
	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods
	Thousand cubic feet					Thousand board feet ^{1/}				
Lower Wabash Unit										
Clay	1,635	105	20	696	814	8,293	464	83	2,808	4,938
Daviess	1,522	40	9	714	759	7,045	227	20	2,716	4,082
Gibson	1,536	53	10	746	727	6,931	307	27	2,756	3,841
Greene	3,875	193	33	1,768	1,881	17,306	986	140	6,394	9,786
Knox	1,043	12	8	446	577	5,265	46	5	1,834	3,380
Martin	4,673	19	6	1,911	2,737	23,816	61	8	8,168	15,579
Parke	3,544	145	20	1,753	1,626	16,252	926	81	6,626	8,619
Pike	3,278	110	15	1,598	1,555	14,694	694	60	5,969	7,971
Posey	1,728	36	9	772	911	8,591	211	19	3,169	5,192
Putnam	2,811	30	9	1,098	1,674	16,013	61	10	5,024	10,918
Sullivan	2,473	93	17	1,157	1,206	11,208	528	62	4,384	6,234
Vanderburgh	917	20	4	409	484	4,367	106	11	1,550	2,700
Vermillion	1,247	22	6	529	690	5,783	102	17	2,023	3,641
Vigo	1,860	54	10	903	893	8,237	309	28	3,301	4,599
Total	32,142	932	176	14,500	16,534	153,801	5,028	571	56,722	91,480
Knobs Unit										
Brown	5,261	212	89	1,893	3,067	27,360	1,640	538	9,031	16,151
Clark	3,452	245	68	1,292	1,847	17,252	933	349	6,795	9,175
Crawford	4,600	77	78	1,767	2,678	22,989	1,442	412	7,487	13,648
Dubois	3,727	186	69	1,369	2,103	19,040	740	401	6,514	11,385
Floyd	1,394	56	17	505	816	7,961	254	126	2,364	5,217
Harrison	5,593	275	150	2,232	2,936	25,693	1,294	442	9,949	14,008
Jackson	4,692	128	138	1,932	2,494	21,718	1,381	322	7,452	12,563
Lawrence	4,999	113	56	1,776	3,054	26,324	1,269	502	7,973	16,580
Monroe	4,811	143	85	1,830	2,753	23,521	661	475	7,720	14,665
Morgan	3,499	130	73	1,396	1,900	16,010	491	275	6,196	9,048
Orange	4,946	81	103	1,904	2,858	25,061	2,060	372	7,995	14,634
Owen	4,219	180	95	1,537	2,407	22,905	822	476	6,963	14,644
Perry	5,441	66	76	1,970	3,329	29,490	2,681	409	8,394	18,006
Scott	1,763	101	42	689	931	8,198	376	157	3,165	4,500
Spencer	2,477	136	67	963	1,311	11,357	545	232	4,254	6,326
Warrick	3,279	196	118	1,397	1,568	14,014	624	257	5,875	7,258
Washington	4,793	287	77	1,729	2,700	27,229	1,381	446	8,178	17,224
Total	68,946	2,612	1,401	26,181	38,752	346,122	18,594	6,191	116,305	205,032
Upland Flats Unit										
Dearborn	2,699	5	121	1,100	1,473	9,668	11	31	4,327	5,299
Fayette	897	1	19	387	490	2,997	8	-12	1,323	1,678
Franklin	2,175	7	97	856	1,215	7,406	19	18	3,077	4,292
Jefferson	2,402	97	114	899	1,292	9,598	271	58	3,991	5,278
Jennings	2,615	4	102	1,092	1,417	9,405	13	23	4,273	5,096
Ohio	808	1	38	329	440	2,843	3	8	1,250	1,582
Ripley	2,202	58	99	808	1,237	8,791	164	59	3,552	5,016
Switzerland	2,414	5	64	925	1,420	9,774	8	22	4,181	5,563
Union	555	1	23	229	302	1,878	4	5	832	1,037
Total	16,767	179	677	6,625	9,286	62,360	501	212	26,806	34,841

^{1/} International 1/4-inch rule.

(Table 66 continued on next page)

(Table 66 continued)

Unit and county	Growing stock					Sawtimber				
	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods
	Thousand cubic feet					Thousand board feet ^{1/}				
Northern Unit										
Adams	462	7	--	200	255	2,175	86	-2	785	1,306
Allen	832	19	1	378	434	3,442	225	--	1,209	2,008
Bartholomew	1,434	13	1	597	823	6,962	159	-8	2,468	4,343
Benton	56	1	--	24	31	253	12	--	94	147
Blackford	310	1	--	126	183	1,563	19	-2	557	989
Boone	467	2	--	193	272	2,191	24	-3	776	1,394
Carroll	585	7	--	250	328	2,726	92	-3	983	1,654
Cass	788	20	--	359	409	3,588	261	-2	1,320	2,009
Clinton	292	1	--	116	175	1,401	13	-2	486	904
Decatur	796	4	1	322	469	3,891	62	-5	1,377	2,457
De Kalb	901	25	--	417	459	4,041	330	-2	1,526	2,187
Delaware	496	11	--	225	260	2,171	144	-1	801	1,227
Elkhart	909	18	1	410	480	4,005	219	-2	1,460	2,328
Fountain	1,236	31	1	560	644	5,711	412	-4	2,125	3,178
Fulton	658	15	--	294	349	3,022	189	-2	1,105	1,730
Grant	625	8	--	266	351	2,995	120	-3	1,094	1,784
Hamilton	651	13	1	298	339	2,858	186	-1	1,070	1,603
Hancock	392	11	--	181	200	1,747	150	-1	663	935
Hendricks	531	6	--	225	300	2,482	62	-3	872	1,551
Henry	648	11	--	285	352	2,967	141	-3	1,084	1,745
Howard	237	3	--	104	130	964	39	--	336	589
Huntington	709	19	--	319	371	3,073	244	-1	1,105	1,725
Jasper	834	15	1	370	448	3,741	173	-2	1,343	2,227
Jay	793	3	1	319	470	3,989	43	-6	1,406	2,546
Johnson	633	3	1	258	371	3,106	37	-4	1,100	1,973
Kosciusko	1,092	6	1	444	641	5,469	83	-7	1,933	3,460
La Grange	1,056	22	--	484	550	4,591	274	-3	1,724	2,596
Lake	589	11	--	261	317	2,715	147	-2	1,003	1,567
La Porte	1,282	19	1	567	695	5,767	228	-4	2,088	3,455
Madison	432	5	--	181	246	2,073	70	-2	739	1,266
Marion	14	--	--	6	8	37	--	--	11	26
Marshall	959	20	--	425	514	4,441	237	-3	1,595	2,612
Miami	866	8	1	360	497	4,275	110	-6	1,543	2,628
Montgomery	803	22	1	372	408	3,503	314	-1	1,328	1,862
Newton	644	12	--	283	349	3,059	176	-3	1,143	1,743
Noble	1,016	24	1	463	528	4,480	322	-2	1,656	2,504
Porter	959	21	1	440	497	4,174	278	-2	1,578	2,320
Pulaski	879	20	1	396	462	3,978	260	-2	1,463	2,257
Randolph	647	3	--	258	386	3,155	42	-4	1,105	2,012
Rush	341	8	--	153	180	1,407	92	--	497	818
St. Joseph	703	16	1	321	365	3,052	195	-1	1,129	1,729
Shelby	425	4	--	177	244	2,085	59	-3	758	1,271
Starke	868	16	1	383	468	3,998	206	-3	1,458	2,337
Steuben	981	24	1	450	506	4,270	316	-2	1,597	2,359
Tippecanoe	738	22	--	344	372	3,205	293	-1	1,209	1,704
Tipton	128	3	--	57	68	519	34	--	187	298
Wabash	747	17	--	341	389	3,262	216	-2	1,224	1,824
Warren	761	12	--	329	420	3,554	153	-3	1,289	2,115
Wayne	995	21	--	446	528	4,545	270	-3	1,658	2,620
Wells	540	13	--	246	281	2,393	180	-1	902	1,312
White	392	10	--	183	199	1,652	130	--	619	903
Whitley	648	16	--	295	337	2,938	203	-2	1,077	1,660
Total	35,780	642	19	15,761	19,358	163,661	8,330	-124	59,658	95,797
All counties	153,635	4,365	2,273	63,067	83,930	725,944	32,453	6,850	259,491	427,150

^{1/} International 1/4-inch rule.

Table 67.--Current annual timber removals from growing stock and sawtimber on timberland by species group, Indiana, 1966 and 1985

Species group	Growing stock		Sawtimber	
	1966	1985	1966	1985
	Thousand cubic feet		Thousand board feet ^{1/}	
Softwoods				
Pine	142	184	297	826
Baldcypress	164	--	607	--
Other softwoods	94	119	96	231
Total	400	303	1,000	1,057
Hardwoods				
Select white oak	7,056	12,310	37,744	61,583
Other white oak	1,193	2,700	6,315	12,740
Select red oak	5,998	9,976	33,206	51,242
Other red oak	10,442	17,035	53,589	86,148
Hickory	3,485	7,022	15,479	33,678
Basswood	753	935	4,837	4,452
Beech	3,588	3,426	18,252	17,612
Hard maple	5,238	5,437	31,517	25,614
Soft maple	4,613	3,150	21,838	15,098
Elm	675	888	4,014	3,929
Ash	3,500	7,781	18,886	36,840
Sycamore	2,988	3,242	16,870	16,304
Cottonwood	4,258	1,920	20,481	11,072
Aspen	253	285	1,131	1,078
Sweetgum	1,515	1,049	5,902	5,410
Tupelo	571	538	2,965	2,748
Black cherry	424	1,519	2,782	7,761
Black walnut	2,810	1,924	17,782	11,003
Yellow-poplar	3,902	9,663	24,625	50,667
Other hardwoods	1,238	1,722	5,822	6,174
Total	64,500	92,522	344,037	461,153
All species	64,900	92,825	345,037	462,210

^{1/} International 1/4-inch rule.

Table 68.--Average annual timber removals from growing stock and sawtimber on timberland by county and species group, Indiana, 1966-1985

Unit and county	Growing stock					Sawtimber				
	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods
	----- Thousand cubic feet -----					----- Thousand board feet ^{1/} -----				
Lower Wabash Unit										
Clay	811	--	--	220	591	3,553	--	--	892	2,661
Daviess	849	--	84	264	501	3,757	--	459	1,087	2,211
Gibson	1,001	--	170	308	523	4,436	--	918	1,236	2,282
Greene	1,471	--	--	475	996	6,411	--	--	1,983	4,428
Knox	757	--	82	204	471	3,284	--	444	767	2,073
Martin	2,587	--	34	759	1,794	11,877	--	183	3,319	8,375
Parke	1,843	--	114	625	1,104	8,126	--	612	2,720	4,794
Pike	1,292	--	12	427	853	5,696	--	61	1,890	3,745
Posey	1,551	--	179	520	852	6,923	--	963	2,167	3,793
Putnam	1,756	--	19	404	1,333	8,012	--	106	1,690	6,216
Sullivan	1,166	--	71	387	708	5,125	--	383	1,629	3,113
Vanderburgh	489	--	3	128	358	1,954	--	16	484	1,454
Vermillion	564	--	3	168	393	2,467	--	16	678	1,773
Vigo	797	--	16	249	532	3,403	--	92	1,026	2,285
Total	16,934	--	787	5,138	11,009	75,024	--	4,253	21,568	49,203
Knobs Unit										
Brown	2,994	7	11	305	2,671	12,877	29	34	1,265	11,549
Clark	1,247	3	4	183	1,057	5,436	15	14	759	4,648
Crawford	2,412	4	5	271	2,132	9,645	16	18	1,081	8,530
Dubois	1,375	6	15	187	1,167	6,153	28	41	797	5,287
Floyd	777	35	17	87	638	3,483	186	18	388	2,891
Harrison	1,764	5	17	331	1,411	7,575	26	82	1,359	6,108
Jackson	1,940	2	6	262	1,670	7,986	9	24	1,067	6,886
Lawrence	2,330	6	11	240	2,073	9,744	30	25	966	8,723
Monroe	4,194	6	12	398	3,778	17,000	30	27	1,625	15,318
Morgan	1,271	2	6	230	1,033	5,317	10	21	949	4,337
Orange	2,063	3	6	285	1,769	8,297	12	24	1,135	7,126
Owen	1,570	9	28	224	1,309	7,013	41	43	979	5,950
Perry	2,968	7	5	274	2,682	11,895	13	19	1,105	10,758
Scott	651	1	3	94	553	2,874	5	16	388	2,465
Spencer	910	2	5	133	770	3,913	9	21	543	3,340
Warrick	1,023	4	4	176	839	4,356	16	16	734	3,590
Washington	1,811	9	40	268	1,494	7,998	44	75	1,172	6,707
Total	31,300	111	195	3,948	27,046	131,562	519	518	16,312	114,213
Upland Flats Unit										
Dearborn	673	--	7	262	404	3,222	--	--	1,294	1,928
Fayette	182	--	6	62	114	814	--	--	277	537
Franklin	421	--	10	115	296	1,904	--	--	511	1,393
Jefferson	750	--	12	151	587	3,533	--	--	690	2,843
Jennings	682	--	9	272	401	3,213	--	--	1,332	1,881
Ohio	188	--	2	70	116	900	--	--	339	561
Ripley	730	--	15	135	580	3,349	--	--	587	2,762
Switzerland	898	--	4	284	610	4,354	--	--	1,399	2,955
Union	123	--	5	40	78	536	--	--	179	357
Total	4,647	--	70	1,391	3,186	21,825	--	--	6,608	15,217

^{1/} International 1/4-inch rule.

(Table 68 continued on next page)

(Table 68 continued)

Unit and county	Growing stock				Sawtimber					
	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods
	Thousand cubic feet					Thousand board feet ^{1/}				
Northern Unit										
Adams	257	--	--	76	181	1,132	--	--	327	805
Allen	599	1	--	218	380	2,596	--	--	905	1,691
Bartholomew	846	--	--	265	581	3,803	--	--	1,167	2,636
Benton	56	--	--	16	40	208	--	--	60	148
Blackford	190	--	--	59	131	857	--	--	262	595
Boone	335	--	--	107	228	1,490	--	--	469	1,021
Carroll	355	--	--	107	248	1,572	--	--	462	1,110
Cass	320	1	--	91	228	1,363	--	--	366	997
Clinton	241	--	--	64	177	1,047	--	--	279	768
Decatur	549	1	--	158	390	2,455	--	--	703	1,752
De Kalb	318	1	--	91	226	1,345	--	--	359	986
Delaware	278	--	--	97	181	1,174	--	--	396	778
Elkhart	486	1	--	130	355	2,128	--	--	533	1,595
Fountain	475	1	--	138	336	2,064	--	--	566	1,498
Fulton	303	--	--	94	209	1,323	--	--	395	928
Grant	394	--	--	117	277	1,724	--	--	497	1,227
Hamilton	324	--	--	91	233	1,383	--	--	367	1,016
Hancock	160	--	--	48	112	660	--	--	183	477
Hendricks	320	--	--	99	221	1,414	--	--	430	984
Henry	351	--	--	107	244	1,513	--	--	447	1,066
Howard	235	--	--	90	145	1,022	--	--	384	638
Huntington	315	1	--	107	207	1,339	--	--	434	905
Jasper	460	--	--	133	327	2,014	--	--	559	1,455
Jay	504	--	--	152	352	2,283	--	--	678	1,605
Johnson	400	--	--	126	274	1,801	--	--	557	1,244
Kosciusko	689	1	--	212	476	3,107	--	--	941	2,166
La Grange	422	1	--	122	299	1,789	--	--	492	1,297
Lake	425	--	--	127	298	1,768	--	--	498	1,270
La Porte	735	1	--	202	532	3,232	--	--	850	2,382
Madison	311	--	--	91	220	1,344	--	--	386	958
Marion	463	--	--	146	317	1,928	--	--	554	1,374
Marshall	432	--	--	128	304	1,903	--	--	541	1,362
Miami	502	--	--	157	345	2,252	--	--	691	1,561
Montgomery	372	1	--	129	242	1,566	--	--	518	1,048
Newton	316	--	--	99	217	1,364	--	--	415	949
Noble	476	1	--	160	315	2,049	--	--	664	1,385
Porter	472	1	--	133	338	1,958	--	--	520	1,438
Pulaski	405	1	--	121	283	1,772	--	--	506	1,266
Randolph	487	--	--	129	358	2,161	--	--	570	1,591
Rush	227	--	--	82	145	977	--	--	346	631
St. Joseph	419	1	--	114	304	1,777	--	--	449	1,328
Shelby	250	--	--	77	173	1,097	--	--	332	765
Starke	427	--	--	125	302	1,898	--	--	529	1,369
Steuben	445	1	--	152	292	1,919	--	--	624	1,295
Tippecanoe	333	1	--	111	221	1,387	--	--	439	948
Tipton	95	--	--	34	61	399	--	--	138	261
Wabash	340	1	--	102	237	1,418	--	--	406	1,012
Warren	411	--	--	131	280	1,832	--	--	566	1,266
Wayne	471	1	--	137	333	2,042	--	--	564	1,478
Wells	263	--	--	89	174	1,104	--	--	360	744
White	196	--	--	58	138	792	--	--	225	567
Whitley	254	--	--	71	183	1,085	--	--	286	799
Total	19,709	19	--	6,020	13,670	85,630	--	--	25,195	60,435
All counties	72,590	130	1,052	16,497	54,911	314,041	519	4,771	69,683	239,068

^{1/} International 1/4-inch rule.

Table 69.--Average annual removals of growing stock on timberland by species group and Forest Survey Unit, Indiana, 1966-1985

(In thousand cubic feet per year)

Species group	All Units	Forest Survey Unit			
		Lower Wabash	Knobs	Upland Flats	Northern
Softwoods					
Shortleaf pine	6	--	6	--	--
Other yellow pines	124	--	105	--	19
Baldcypress	787	787	--	--	--
Eastern redcedar	265	--	195	70	--
Total	1,182	787	306	70	19
Hardwoods					
Select white oak	13,618	2,191	7,439	932	3,056
Other white oak	3,007	142	2,712	--	153
Select red oak	7,576	1,679	3,312	535	2,050
Other red oak	10,406	2,038	5,356	621	2,391
Select hickory	3,544	1,127	1,692	129	596
Other hickory	3,395	1,275	1,580	112	428
Basswood	679	19	136	13	511
Beech	1,486	50	714	289	433
Hard maple	4,589	836	2,019	220	1,514
Soft maple	2,685	1,202	410	342	731
Elm	1,348	413	419	25	491
Ash	4,724	875	1,502	289	2,058
Sycamore	2,224	778	546	37	863
Cottonwood	1,485	77	39	10	1,359
Willow	302	116	52	--	134
Hackberry	499	33	74	24	368
Aspen	386	21	32	65	268
Birch	465	109	273	--	83
Sweetgum	701	325	191	162	23
Tupelo	375	133	150	92	--
Black cherry	1,115	230	301	104	480
Black walnut	1,600	384	321	53	842
Butternut	82	58	24	--	--
Yellow-poplar	3,813	1,486	1,194	497	636
Persimmon	58	27	31	--	--
Sassafras	615	198	294	20	103
Other hardwoods	631	325	181	6	119
Total	71,408	16,147	30,994	4,577	19,690
All species	72,590	16,934	31,300	4,647	19,709

Table 70.--Average annual removals of sawtimber on timberland by species group and Forest Survey Unit, Indiana, 1966-1985

(In thousand board feet per year)^{1/}

Species group	All Units	Forest Survey Unit			
		Lower Wabash	Knobs	Upland Flats	Northern
Softwoods					
Shortleaf pine	--	--	--	--	--
Other yellow pines	519	--	519	--	--
Baldcypress	4,253	4,253	--	--	--
Eastern redcedar	518	--	518	--	--
Total	5,290	4,253	1,037	--	--
Hardwoods					
Select white oak	61,606	9,836	32,619	4,668	14,483
Other white oak	12,500	655	11,150	--	695
Select red oak	34,846	7,628	15,647	2,692	8,879
Other red oak	48,688	9,839	25,022	2,985	10,842
Select hickory	13,819	5,155	6,121	551	1,992
Other hickory	13,031	5,419	5,620	499	1,493
Basswood	3,066	99	640	71	2,256
Beech	6,873	256	3,081	1,385	2,151
Hard maple	18,650	3,251	7,250	945	7,204
Soft maple	11,185	5,055	1,670	1,567	2,893
Elm	4,346	1,357	1,404	63	1,522
Ash	19,564	3,805	5,352	1,303	9,104
Sycamore	10,474	3,705	2,535	144	4,090
Cottonwood	7,240	372	77	51	6,740
Willow	638	270	205	--	163
Hackberry	2,138	101	330	123	1,584
Aspen	964	111	--	337	516
Birch	1,936	554	1,219	--	163
Sweetgum	3,230	1,603	821	721	85
Tupelo	1,688	575	632	481	--
Black cherry	4,149	622	1,124	391	2,012
Black walnut	6,550	1,927	1,221	189	3,213
Butternut	199	199	--	--	--
Yellow-poplar	18,258	6,988	5,881	2,554	2,835
Persimmon	--	--	--	--	--
Sassafras	1,334	412	531	105	286
Other hardwoods	1,779	977	373	--	429
Total	308,751	70,771	130,525	21,825	85,630
All species	314,041	75,024	131,562	21,825	85,630

^{1/}International 1/4-inch rule.

Table 71.--Current annual timber removals from growing stock and sawtimber on timberland by item and species group, Indiana, 1985

GROWING STOCK						
Item	All species	Species group				
		Softwoods	Oak	Maple	Yellow-poplar	Other hardwoods
			Thousand cubic feet			
Roundwood products						
Sawlogs	55,317	155	25,357	5,160	6,677	17,968
Veneer logs	1,896	3	1,114	74	78	627
Pulpwood ^{1/}	1,842	--	620	232	247	743
Fuelwood	4,729	7	1,933	509	142	2,138
Handle bolts	1,069	--	--	158	--	911
Cooperage	589	--	589	--	--	--
Other	254	14	13	50	--	177
Total	65,696	179	29,626	6,183	7,144	22,564
Logging residue	17,640	11	7,943	1,594	2,102	5,990
Other removals	9,489	113	4,452	810	417	3,697
All removals	92,825	303	42,021	8,587	9,663	32,251
SAWTIMBER						
			Thousand board feet ^{2/}			
Roundwood products						
Sawlogs	331,139	837	148,762	30,373	40,697	110,470
Veneer logs	13,807	21	8,152	548	565	4,521
Pulpwood ^{1/}	8,023	--	2,697	1,013	1,076	3,237
Fuelwood	14,624	27	5,927	1,582	399	6,689
Handle bolts	5,182	--	--	765	--	4,417
Cooperage	3,545	--	3,545	--	--	--
Other	1,006	8	29	273	--	696
Total	377,326	893	169,112	34,554	42,737	130,030
Logging residue	51,762	18	25,317	3,846	5,869	16,712
Other removals	33,122	146	17,284	2,312	2,061	11,319
All removals	462,210	1,057	211,713	40,712	50,667	158,061

^{1/} Includes particle board and waferboard bolts.

^{2/} International 1/4-inch rule.

Table 72.--Net annual growth and current annual timber removals from growing stock on timberland by species group and Forest Survey Unit, Indiana, 1985

(In thousand cubic feet)

Species group	Growth					Removals				
	All Units	Lower Wabash Unit	Knobs Unit	Upland Flats Unit	Northern Unit	All Units	Lower Wabash Unit	Knobs Unit	Upland Flats Unit	Northern Unit
Softwoods										
Pine	3,838	932	2,331	179	396	184	2	151	1/	31
Baldcypress	138	119	19	--	--	--	--	--	--	--
Eastern redcedar	2,133	57	1,382	677	17	119	1	101	17	--
Other softwoods	529	--	281	--	248	--	--	--	--	--
Total	6,638	1,108	4,013	856	661	303	3	252	17	31
Hardwoods										
Select white oak	15,350	2,735	8,369	1,479	2,767	12,310	2,804	5,191	796	3,519
Other white oak	2,425	83	2,334	1	7	2,700	162	2,306	12	220
Select red oak	8,276	1,686	3,386	830	2,374	9,976	2,089	4,366	726	2,795
Other red oak	14,388	3,316	7,257	968	2,847	17,035	3,836	9,200	744	3,255
Select hickory	5,583	1,354	1,937	640	1,652	3,397	1,101	1,320	106	870
Other hickory	6,402	1,548	2,511	952	1,391	3,625	1,142	1,800	162	521
Basswood	1,693	250	124	197	1,122	935	147	156	66	566
Beech	1,504	61	900	177	366	3,426	496	1,410	333	1,187
Hard maple	13,833	2,249	7,127	1,816	2,641	5,437	882	2,646	203	1,706
Soft maple	12,287	3,472	4,951	744	3,120	3,150	854	771	184	1,341
Elm	4,654	452	362	581	3,259	888	260	247	10	371
Ash	10,079	2,002	3,132	1,514	3,431	7,781	1,878	2,448	696	2,759
Sycamore	6,232	1,658	2,688	653	1,233	3,242	815	1,079	212	1,136
Cottonwood	3,789	972	478	99	2,240	1,920	508	304	160	948
Aspen	728	52	517	120	39	285	24	65	15	181
Birch	450	193	202	--	55	332	41	221	19	51
Sweetgum	3,203	680	1,589	879	55	1,049	279	486	221	63
Tupelo	1,134	295	603	228	8	538	143	282	88	25
Black cherry	2,961	511	944	325	1,181	1,519	321	476	86	636
Black walnut	3,959	927	883	707	1,442	1,924	496	479	153	796
Yellow-poplar	20,032	4,918	10,946	2,171	1,997	9,663	2,816	5,192	604	1,051
Other hardwoods	8,035	1,620	3,693	830	1,892	1,390	359	282	68	681
Total	146,997	31,034	64,933	15,911	35,119	92,522	21,453	40,727	5,664	24,678
All species	153,635	32,142	68,946	16,767	35,780	92,825	21,456	40,979	5,681	24,709

1/ Less than 500 cubic feet.

Table 73.--Net annual growth and current annual timber removals from sawtimber on timberland by species group and Forest Survey Unit, Indiana, 1985

(In thousand board feet)^{1/}

Species group	Growth					Removals				
	All Units	Lower Wabash Unit	Knobs Unit	Upland Flats Unit	Northern Unit	All Units	Lower Wabash Unit	Knobs Unit	Upland Flats Unit	Northern Unit
Softwoods										
Pine	28,868	5,028	18,343	501	4,996	826	14	721	2	89
Baldcypress	744	643	101	--	--	--	--	--	--	--
Eastern redcedar	6,237	-72	6,090	212	7	231	5	179	47	--
Other softwoods	3,454	--	251	--	3,203	--	--	--	--	--
Total	39,303	5,599	24,785	713	8,206	1,057	19	900	49	89
Hardwoods										
Select white oak	79,020	12,302	48,329	5,639	12,750	61,583	14,125	25,305	4,208	17,945
Other white oak	13,109	742	12,192	-24	199	12,740	695	10,908	47	1,090
Select red oak	50,361	8,458	17,443	4,365	20,095	51,242	10,702	22,166	3,947	14,427
Other red oak	77,947	17,130	41,071	3,870	15,876	86,148	19,477	47,087	3,798	15,786
Select hickory	28,196	9,622	8,735	3,547	6,292	16,538	5,522	6,408	533	4,075
Other hickory	35,440	11,171	16,989	3,185	4,095	17,140	5,633	8,213	788	2,506
Basswood	9,019	2,651	795	1,537	4,036	4,452	763	739	351	2,599
Beech	5,676	400	3,301	402	1,573	17,612	2,581	7,195	1,700	6,136
Hard maple	59,429	14,850	32,476	3,776	8,327	25,614	4,230	12,196	902	8,286
Soft maple	36,743	15,176	11,058	1,882	8,627	15,098	4,171	3,736	921	6,270
Elm	6,401	53	1,246	306	4,796	3,929	1,313	1,009	44	1,563
Ash	49,560	6,306	16,259	6,756	20,239	36,840	9,105	11,284	3,295	13,156
Sycamore	31,449	7,065	15,371	3,611	5,402	16,304	4,016	5,419	1,123	5,746
Cottonwood	19,464	4,536	2,651	395	11,882	11,072	2,949	1,660	943	5,520
Aspen	5,517	--	4,602	370	545	1,078	127	271	81	599
Birch	1,262	426	798	--	38	1,679	227	1,085	99	268
Sweetgum	11,577	1,331	6,916	3,221	109	5,410	1,397	2,558	1,162	293
Tupelo	5,201	435	3,678	1,031	57	2,748	711	1,436	462	139
Black cherry	16,699	1,724	8,857	1,311	4,807	7,761	1,673	2,464	453	3,171
Black walnut	19,928	6,405	6,323	3,021	4,179	11,003	2,993	2,865	987	4,158
Yellow-poplar	90,476	19,746	54,629	8,630	7,471	50,667	14,714	27,323	3,185	5,445
Other hardwoods	34,167	7,673	7,618	4,816	14,060	4,495	1,012	995	240	2,248
Total	686,641	148,202	321,337	61,647	155,455	461,153	108,136	202,322	29,269	121,426
All species	725,944	153,801	346,122	62,360	163,661	462,210	108,155	203,222	29,318	121,515

^{1/} International 1/4-inch rule.

Table 74.--Net annual growth and current annual timber removals of growing stock on timberland by ownership class and species group, Indiana, 1985

(In thousand cubic feet)

Ownership class	Growth				Removals			
	All species	Pine	Other softwoods	Hard hardwoods	All species	Pine	Other softwoods	Hard hardwoods
National forest	4,220	-251	13	1,523	2,935	8	--	221
Miscellaneous federal	5,889	5	11	2,423	3,450	--	--	40
State	7,106	570	-5	2,284	4,257	4	8	262
County and municipal	947	--	8	538	401	56	--	28
Forest industry	538	--	--	95	443	1	--	60
Farmer and other private	134,935	4,041	2,246	56,204	72,444	155	111	23,968
All ownerships	153,635	4,365	2,273	63,067	83,930	184	119	24,579
								67,943

Table 75.--Net annual growth and current annual timber removals of sawtimber on timberland by ownership class and species group, Indiana, 1985

(In thousand board feet)^{1/}

Ownership class	Growth				Removals			
	All species	Pine	Other softwoods	Hard hardwoods	All species	Pine	Other softwoods	Hard hardwoods
National forest	28,429	7,208	80	2,820	18,321	32	--	957
Miscellaneous federal	27,214	25	16	10,662	16,521	--	--	214
State	27,323	2,006	-176	7,301	18,192	24	36	1,787
County and municipal	4,613	--	--	2,400	2,213	--	--	1,244
Forest industry	2,772	--	--	-222	2,994	6	--	14
Farmer and other private	635,593	23,214	6,930	236,540	368,909	764	195	324
All ownerships	725,944	32,453	6,850	259,491	427,150	826	231	120,261
								123,014
								338,139

^{1/} International 1/4-inch rule.

Table 76.--Annual mortality of growing stock and sawtimber on timberland by softwoods and hardwoods, Indiana, 1966 and 1985

Species group	Growing stock		Sawtimber	
	1966 ^{1/}	1985	1966 ^{1/}	1985
	Thousand cubic feet		Thousand board feet ^{2/}	
Softwoods	207	2,180	176	4,532
Hardwoods	12,038	35,345	37,090	96,717
All species	12,245	37,525	37,266	101,249

^{1/} Figures have been adjusted from those published after the 1966 survey to conform to 1985 volumes because of changes in survey procedures.

^{2/} International 1/4-inch rule.

Table 77.--Annual mortality of growing stock and sawtimber on timberland by species group, Indiana, 1985

Species group	Growing stock	Sawtimber
	Thousand cubic feet	Thousand board feet ^{1/}
Softwoods		
Jack pine	42	160
Red pine	16	34
White pine	197	243
Shortleaf pine	812	931
Other yellow pines	531	1,215
Tamarack	46	249
Baldcypress	156	703
Eastern redcedar	329	988
Other softwoods	51	9
Total	2,180	4,532
Hardwoods		
Select white oak	1,548	5,140
Other white oak	548	1,903
Select red oak	1,465	5,737
Other red oak	3,139	11,857
Select hickory	1,264	3,866
Other hickory	1,472	4,314
Basswood	509	1,278
Beech	515	1,945
Hard maple	2,022	5,302
Soft maple	2,237	6,757
Elm	4,275	9,453
Ash	2,195	5,561
Sycamore	1,761	6,902
Cottonwood	956	3,944
Willow	581	2,088
Hackberry	1,004	2,787
Aspen	739	1,598
Birch	94	45
Sweetgum	615	1,929
Tupelo	228	814
Black cherry	1,754	2,729
Black walnut	1,146	1,964
Butternut	135	454
Yellow-poplar	1,005	4,264
Persimmon	282	93
Sassafras	1,994	1,702
Other hardwoods	1,862	2,291
Total	35,345	96,717
All species	37,525	101,249

^{1/} International 1/4-inch rule.

Table 78.--Annual mortality of growing stock on timberland by species group and cause of death, Indiana, 1985
(In thousand cubic feet)

Species group	All causes	Cause of death						Unknown and other
		Insects	Disease	Fire	Animals	Weather	Suppression	
Softwoods								
Jack pine	42	--	--	--	--	--	--	42
Red pine	16	--	--	--	--	--	--	16
White pine	197	--	8	--	--	--	19	170
Shortleaf pine	812	--	--	--	--	25	57	730
Other yellow pines	531	--	--	15	--	173	--	343
Tamarack	46	--	--	--	--	--	--	46
Baldcypress	156	--	--	--	--	--	--	156
Eastern redcedar	329	--	--	--	--	--	3	326
Other softwoods	51	--	--	--	--	--	--	51
Total	2,180	--	8	15	--	198	79	1,880
Hardwoods								
Select white oak	1,548	1	86	--	--	11	25	1,425
Other white oak	548	--	83	13	--	77	--	375
Select red oak	1,465	--	116	57	10	74	--	1,208
Other red oak	3,139	2	292	50	--	331	--	2,464
Select hickory	1,264	--	22	--	--	60	1	1,181
Other hickory	1,472	10	111	--	--	70	1	1,280
Basswood	509	--	46	--	--	162	--	301
Beech	515	--	1	--	--	53	9	452
Hard maple	2,022	--	58	--	2	131	--	1,831
Soft maple	2,237	8	101	--	--	160	25	1,943
Elm	4,275	15	134	--	22	141	29	3,934
Ash	2,195	--	74	39	4	113	19	1,946
Sycamore	1,761	--	78	--	--	137	2	1,544
Cottonwood	956	--	6	--	--	231	--	719
Willow	581	--	8	--	--	30	--	543
Hackberry	1,004	--	77	--	--	51	87	789
Aspen	739	--	100	--	--	31	--	608
Birch	94	--	--	--	--	--	--	94
Sweetgum	615	--	4	--	--	27	6	578
Tupelo	228	--	18	--	--	--	--	210
Black cherry	1,754	70	77	--	--	28	77	1,502
Black walnut	1,146	2	108	--	--	2	54	980
Butternut	135	--	--	--	--	10	--	125
Yellow-poplar	1,005	3	34	--	--	217	--	751
Persimmon	282	--	--	--	--	--	--	282
Sassafras	1,994	6	232	--	--	--	69	1,687
Other hardwoods	1,862	--	118	--	--	14	24	1,706
Total	35,345	117	1,984	159	38	2,161	428	30,458
All species	37,525	117	1,992	174	38	2,359	507	32,338

Table 79.--Annual mortality of sawtimber on timberland by species group and cause of death, Indiana, 1985
(In thousand board feet)^{1/}

Species group	All causes	Cause of death						Unknown and other
		Insects	Disease	Fire	Animals	Weather	Suppression	
Softwoods								
Jack pine	160	--	--	--	--	--	--	160
Red pine	34	--	--	--	--	--	--	34
White pine	243	--	--	--	--	61	--	182
Shortleaf pine	931	--	--	--	--	--	--	931
Other yellow pines	1,215	--	--	--	--	486	--	729
Tamarack	249	--	--	--	--	--	--	249
Baldcypress	703	--	--	--	--	--	--	703
Eastern redcedar	988	--	--	--	--	--	--	988
Other softwoods	9	--	--	--	--	--	--	9
Total	4,532	--	--	--	--	547	--	3,985
Hardwoods								
Select white oak	5,140	20	500	--	4	2	4	4,610
Other white oak	1,903	--	474	--	--	384	--	1,045
Select red oak	5,737	--	469	299	--	357	--	4,612
Other red oak	11,857	3	1,098	186	--	1,433	--	9,137
Select hickory	3,866	--	10	--	--	296	--	3,560
Other hickory	4,314	--	260	--	--	402	--	3,652
Basswood	1,278	--	170	--	--	130	--	978
Beech	1,945	--	7	--	--	198	41	1,699
Hard maple	5,302	--	213	--	5	322	--	4,762
Soft maple	6,757	35	396	--	--	420	--	5,906
Elm	9,453	21	294	--	49	480	42	8,567
Ash	5,561	--	229	115	6	449	--	4,762
Sycamore	6,902	--	397	--	--	673	--	5,832
Cottonwood	3,944	--	27	--	--	1,039	--	2,878
Willow	2,088	--	--	--	--	142	--	1,946
Hackberry	2,787	--	151	--	--	257	--	2,379
Aspen	1,598	--	--	--	--	--	--	1,598
Birch	45	--	--	--	--	--	--	45
Sweetgum	1,929	--	25	--	--	165	--	1,739
Tupelo	814	--	91	--	--	--	--	723
Black cherry	2,729	231	43	--	--	119	256	2,080
Black walnut	1,964	11	14	--	--	20	--	1,919
Butternut	454	--	--	--	--	52	--	402
Yellow-poplar	4,264	12	202	--	--	1,241	--	2,809
Persimmon	93	--	--	--	--	--	--	93
Sassafras	1,702	20	155	--	--	--	--	1,527
Other hardwoods	2,291	--	16	--	--	33	--	2,242
Total	96,717	353	5,241	600	64	8,614	343	81,502
All species	101,249	353	5,241	600	64	9,161	343	85,487

^{1/}International 1/4-inch rule.

Table 80.--Annual mortality of growing stock and sawtimber on timberland by ownership class and species group, Indiana, 1985

Ownership class	Growing stock			Sawtimber		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
	- - - Thousand cubic feet - - -			- - - Thousand board feet ^{1/} - - -		
National forest	1,769	693	1,076	3,241	766	2,475
Miscellaneous federal	1,368	21	1,347	3,909	5	3,904
State	1,903	279	1,624	5,552	823	4,729
County and municipal	418	--	418	1,221	--	1,221
Forest industry	194	--	194	833	--	833
Farmer	14,241	263	13,978	38,833	501	38,332
Misc. private-corp.	3,828	201	3,627	10,846	443	10,403
Misc. private-indiv.	13,804	723	13,081	36,814	1,994	34,820
All owners	37,525	2,180	35,345	101,249	4,532	96,717

^{1/}International 1/4-inch rule.

Table 81.--Output of timber products by product, softwoods and hardwoods, and source of material, Indiana, 1984

Product	Standard units	Roundwood products							Plant byproducts		
		Total		Growing stock		Non-growing stock			No. of units		Thousand cubic feet
		No. of units	Thousand cubic feet	No. of units	Thousand cubic feet	No. of units	Thousand cubic feet	Thousand cubic feet	No. of units	Thousand cubic feet	
Saw logs											
Softwoods	Thousand ^{1/} board feet	847	155	847	155	--	--	--	--	--	--
Hardwoods		352,662	58,737	331,197	55,162	21,465	3,575	3,575	--	--	--
Total		353,509	58,892	332,044	55,317	21,465	3,575	3,575	--	--	--
Veneer logs											
Softwoods	Thousand ^{1/} board feet	21	3	21	3	--	--	--	--	--	--
Hardwoods		14,156	1,945	13,778	1,893	378	52	52	--	--	--
Total		14,177	1,948	13,799	1,896	378	52	52	--	--	--
Pulpwood^{2/}											
Softwoods	Standard ^{3/} cords	--	--	--	--	--	--	--	--	--	--
Hardwoods		205,900	16,266	23,318	1,842	12,014	949	949	170,568	13,475	13,475
Total		205,900	16,266	23,318	1,842	12,014	949	949	170,568	13,475	13,475
Fuelwood											
Softwoods	Standard ^{3/} cords	1,493	100	109	7	713	46	46	671	47	47
Hardwoods		691,694	48,382	67,527	4,722	435,638	30,463	30,463	188,529	13,197	13,197
Total		693,187	48,482	67,636	4,729	436,351	30,509	30,509	189,200	13,244	13,244
Handle bolts											
Softwoods	Thousand ^{1/} board feet	--	--	--	--	--	--	--	--	--	--
Hardwoods		7,422	1,203	6,595	1,069	827	134	134	--	--	--
Total		7,422	1,203	6,595	1,069	827	134	134	--	--	--
Cooperage											
Softwoods	Thousand ^{1/} board feet	--	--	--	--	--	--	--	--	--	--
Hardwoods		3,949	650	3,578	589	371	61	61	--	--	--
Total		3,949	650	3,578	589	371	61	61	--	--	--
Other^{4/}											
Softwoods	Thousand cubic feet	30	30	14	14	6	6	6	10	10	10
Hardwoods		5,207	5,207	240	240	47	47	47	4,920	4,920	4,920
Total		5,237	5,237	254	254	53	53	53	4,930	4,930	4,930
All products											
Softwoods	Thousand cubic feet	--	288	--	179	--	52	52	--	57	57
Hardwoods		--	132,390	--	65,517	--	35,281	35,281	--	31,592	31,592
Total		--	132,678	--	65,696	--	35,333	35,333	--	31,649	31,649

^{1/} International 1/4-inch rule.^{2/} Includes roundwood and plant byproducts used for particleboard and waferboard.^{3/} 128 cubic feet; includes wood, bark, and air space.^{4/} Other (industrial production) includes cabin logs, charcoal wood, shingle bolts, pilings, etc.

Table 82.--Output of roundwood products by product softwoods and hardwoods, and source of material, Indiana, 1984
(In thousand cubic feet)

Product and species group	All sources	Growing-stock trees			Rough and rotten trees	Salvable dead trees	Other sources
		Total	Sawtimber	Poletimber			
Industrial products							
Saw logs							
Softwoods	155	155	155	--	--	--	--
Hardwoods	58,737	55,162	55,162	--	236	920	2,419
Subtotal	58,892	55,317	55,317	--	236	920	2,419
Veneer logs							
Softwoods	3	3	3	--	--	--	--
Hardwoods	1,945	1,893	1,893	--	--	--	52
Subtotal	1,948	1,896	1,896	--	--	--	52
Pulpwood ^{1/}							
Softwoods	--	--	--	--	--	--	--
Hardwoods	2,791	1,842	1,735	107	452	15	482
Subtotal	2,791	1,842	1,735	107	452	15	482
Cooperage							
Softwoods	--	--	--	--	--	--	--
Hardwoods	650	589	589	--	59	--	2
Subtotal	650	589	589	--	59	--	2
Piling							
Softwoods	--	--	--	--	--	--	--
Hardwoods	3	3	3	--	--	--	--
Subtotal	3	3	3	--	--	--	--
Poles							
Softwoods	--	--	--	--	--	--	--
Hardwoods	13	13	--	13	--	--	--
Subtotal	13	13	--	13	--	--	--
Handle bolts							
Softwoods	--	--	--	--	--	--	--
Hardwoods	1,203	1,069	824	245	134	--	--
Subtotal	1,203	1,069	824	245	134	--	--
Posts (Round and split)							
Softwoods	20	14	4	10	--	1	5
Hardwoods	150	103	74	29	21	1	25
Subtotal	170	117	78	39	21	2	30
Other							
Softwoods	--	--	--	--	--	--	--
Hardwoods	121	121	108	13	--	--	--
Subtotal	121	121	108	13	--	--	--
All industrial products							
Softwoods	178	172	162	10	--	1	5
Hardwoods	65,613	60,795	60,388	407	902	936	2,980
Total	65,791	60,967	60,550	417	902	937	2,985
Fuelwood							
Softwoods	53	7	4	3	1	14	31
Hardwoods	35,185	4,722	2,829	1,893	959	9,691	19,813
Total	35,238	4,729	2,833	1,896	960	9,705	19,844
All products							
Softwoods	231	179	166	13	1	15	36
Hardwoods	100,798	65,517	63,217	2,300	1,861	10,627	22,793
Total	101,029	65,696	63,383	2,313	1,862	10,642	22,829

^{1/} Includes particleboard and waferboard bolts.

Table 83.--Timber products from roundwood by species group and product, Indiana, 1984

Species group	All products	Saw logs		Veneer logs		Pulpwood ^{1/}	
	Thousand	Thousand	Thousand	Thousand	Thousand	Standard	Thousand
	cubic feet	board feet ^{2/}	cubic feet	board feet ^{2/}	cubic feet	cords ^{3/}	cubic feet
Softwoods							
Pine	162	613	106	21	3	--	--
Baldcypress	4/	--	--	--	--	--	--
Eastern redcedar	69	234	49	--	--	--	--
Other softwoods	--	--	--	--	--	--	--
Total	231	847	155	21	3	--	--
Hardwoods							
Select white oak	14,086	41,751	7,064	4,362	596	5,264	417
Other white oak	1,958	5,801	982	606	83	732	58
Select red oak	10,213	41,560	7,032	1,165	159	2,149	170
Other red oak	17,694	71,992	12,182	2,019	276	3,722	295
Select hickory	4,364	12,539	2,059	205	28	1,953	154
Other hickory	4,709	13,529	2,222	221	30	2,108	166
Basswood	1,069	3,416	562	16	2	515	40
Beech	3,744	14,532	2,388	116	16	1,009	78
Hard maple	6,236	19,969	3,401	234	32	2,146	170
Soft maple	3,935	11,999	2,045	314	42	2,311	182
Elm	1,405	2,464	403	19	2	213	17
Ash	7,993	24,599	4,043	461	64	1,337	106
Sycamore	3,648	11,922	1,958	330	45	3,692	294
Cottonwood	2,170	9,358	1,453	383	52	762	59
Aspen	188	794	129	--	--	--	--
Birch	174	674	110	14	2	--	--
Sweetgum	1,120	4,556	750	111	15	596	46
Tupelo	647	2,024	334	54	7	887	70
Black cherry	1,467	6,543	1,074	34	4	879	68
Black walnut	1,891	8,845	1,354	2,889	407	--	--
Yellow-poplar	8,224	42,749	7,021	565	78	4,737	376
Other hardwoods	3,863	1,046	171	38	5	320	25
Total	100,798	352,662	58,737	14,156	1,945	35,332	2,791
All species	101,029	353,509	58,892	14,177	1,948	35,332	2,791

(Table 83 continued on next page)

^{1/} Includes particleboard and waferboard bolts.^{2/} International 1/4-inch rule.^{3/} 128 cubic feet; includes wood, bark, and air space.^{4/} Less than 500 cubic feet.

(Table 83 continued)

Species group	Fuelwood		Handle Bolts		Cooperage		Other products
	Standard cords ^{3/}	Thousand cubic feet	Thousand board feet ^{2/}	Thousand cubic feet	Thousand board feet ^{2/}	Thousand cubic feet	Thousand cubic feet
Softwoods							
Pine	782	50	--	--	--	--	3
Baldcypress	--	--	--	--	--	--	4/
Eastern redcedar	40	3	--	--	--	--	17
Other softwoods	--	--	--	--	--	--	--
Total	822	53	--	--	--	--	20
Hardwoods							
Select white oak	77,609	5,432	--	--	3,467	571	6
Other white oak	10,784	755	--	--	482	79	1
Select red oak	40,705	2,850	--	--	--	--	2
Other red oak	70,512	4,937	--	--	--	--	4
Select hickory	29,984	2,096	156	25	--	--	2
Other hickory	32,353	2,261	169	27	--	--	3
Basswood	6,659	465	--	--	--	--	--
Beech	18,007	1,262	--	--	--	--	--
Hard maple	35,110	2,455	1,095	178	--	--	--
Soft maple	23,106	1,616	--	--	--	--	50
Elm	14,091	983	--	--	--	--	--
Ash	40,039	2,801	6,002	973	--	--	6
Sycamore	19,236	1,345	--	--	--	--	6
Cottonwood	7,938	553	--	--	--	--	53
Aspen	907	59	--	--	--	--	--
Birch	873	56	--	--	--	--	6
Sweetgum	4,459	308	--	--	--	--	1
Tupelo	3,370	236	--	--	--	--	--
Black cherry	4,618	321	--	--	--	--	--
Black walnut	1,875	130	--	--	--	--	--
Yellow-poplar	10,670	749	--	--	--	--	--
Other hardwoods	50,260	3,515	--	--	--	--	147
Total	503,165	35,185	7,422	1,203	3,949	650	287
All species	503,987	35,238	7,422	1,203	3,949	650	307

^{2/} International 1/4-inch rule.^{3/} 128 cubic feet; includes wood, bark, and air space.^{4/} Less than 500 cubic feet.

Table 84.--Volume of primary plant residue by use and type of residue, Indiana, 1984
(In thousand cubic feet)

Use	Wood residue							
	Total		Coarse ^{1/}		Fine ^{2/}		Bark	
	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods	Softwoods	Hardwoods
Fiber products ^{3/}	7.7	11,983.1	5.8	11,526.9	1.9	456.2	--	54.3
Charcoal	--	19.4	--	--	--	19.4	--	--
Industrial fuel	28.2	7,013.0	11.0	1,326.7	17.2	5,686.3	13.9	4,287.8
Domestic fuel	19.2	6,183.9	19.2	5,821.5	--	362.4	10.0	3,275.9
Miscellaneous ^{4/}	9.7	4,901.2	--	320.2	9.7	4,581.0	0.1	4,902.9
Not used ^{5/}	24.0	2,980.3	14.7	1,114.0	9.3	1,866.3	9.9	1,354.8
Total	88.8	33,080.9	50.7	20,109.3	38.1	12,971.6	33.9	13,875.7

^{1/} Suitable for chipping such as slabs, edgings, veneer cores, etc.

^{2/} Not suitable for chipping such as sawdust, veneer clippings, etc.

^{3/} For manufacture of pulp, hardboard, or roofing felt.

^{4/} Livestock bedding, mulch, small dimension, and specialty items.

^{5/} Includes residue burned as waste.

Table 85.--All live above-ground tree biomass yields on timberland by species group and forest type, Indiana, 1986

(In pounds per acre)

Species group	Forest type													
	Jack-red- white pine	Short- leaf pine	Scotch- Virginia pine	Oak- pine	Oak- hickory	Chestnut- scarlet oak	Sassafras- persimmon	Oak- gum	Lowland oak	Elm-ash- soft maple	Cotton- wood	Maple- beech	Cherry-ash- yellow- poplar	Non- stocked
Softwoods														
Jack pine	5,408	--	117	89	32	--	--	--	--	19	367	--	116	--
Red pine	6,521	--	--	--	56	--	--	311	--	8	--	--	--	--
White pine	45,578	37	1,506	1,761	108	--	--	--	--	92	--	6	165	--
Shortleaf pine	7,856	62,868	2,507	590	127	--	--	--	--	87	--	2	65	--
Other yellow pines	3,581	2,741	26,115	7,207	170	--	1,443	327	--	135	3,260	194	61	--
Tamarack	--	--	--	--	--	--	--	--	--	141	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	1,905	--	837	--	--	--	--
Eastern redcedar	704	987	11,532	29,988	835	235	31	540	--	494	--	545	1,131	--
Other softwoods	8	--	11,420	--	3	--	--	542	--	32	--	16	90	--
Total	69,656	66,633	53,197	39,635	1,331	235	1,474	3,625	--	1,845	3,627	763	1,628	--
Hardwoods														
Select white oak	1,954	4	2,186	5,787	39,453	24,324	2,301	7,235	29,623	4,880	--	8,564	7,638	7,428
Other white oak	--	583	25	2,726	4,729	114,745	697	717	2,277	41	--	840	322	--
Select red oak	1,057	4,576	267	2,851	14,746	3,309	--	3,114	1,043	1,739	248	8,042	6,019	--
Other red oak	360	1,272	6,124	11,207	30,443	30,070	4,103	15,378	74,837	5,755	885	4,593	5,012	5,050
Select hickory	1,474	5,549	861	4,308	14,575	2,845	--	5,840	4,871	3,373	--	6,124	3,759	1,767
Other hickory	1,222	802	10	5,978	14,014	6,334	--	821	3,179	2,215	--	7,115	6,490	--
Basswood	--	--	--	1,409	854	409	--	--	737	1,302	--	3,814	1,002	--
Beech	--	196	24	592	3,321	1,306	--	1,876	--	894	--	19,163	3,517	--
Hard maple	1,434	7,791	1,161	6,951	9,664	9,240	7,588	1,751	1,290	4,298	--	42,645	11,563	--
Soft maple	5,397	1,399	1,513	1,038	2,049	1,970	--	18,236	5,098	24,493	18,233	6,122	3,425	4,192
Elm	3,411	929	1,155	3,350	3,374	228	45	2,671	7,999	12,365	--	7,255	8,611	1,374
Ash	4,115	9,558	1,797	7,002	5,341	27	312	5,802	9,229	12,717	798	7,438	21,758	3,521
Sycamore	3,806	1,353	3,881	1,120	1,674	--	--	7,923	262	13,219	7,895	3,945	6,206	3,615
Cottonwood	5,762	--	11,226	--	248	--	--	--	1,593	9,625	103,477	344	517	2,800
Willow	--	--	--	11	--	--	--	--	2,794	2,794	3,166	110	178	895
Hackberry	--	297	--	186	391	--	--	9	73	4,366	--	1,355	1,871	479
Aspen	--	--	--	--	952	848	--	888	21	259	--	439	1,240	--
Birch	209	1,231	980	--	78	--	--	2,123	--	1,390	--	5	76	--
Sweetgum	1,085	--	20	1,485	650	--	--	47,146	7,140	2,345	--	929	1,075	--
Tupelo	217	327	745	2,945	1,566	844	2,595	8,507	5,814	834	--	1,537	955	--
Black cherry	4,492	2,638	2,497	2,387	2,167	2,484	157	893	5,160	2,793	669	4,032	6,701	1,928
Black walnut	--	--	196	2,977	2,032	--	335	1,371	553	4,283	--	3,215	8,784	--
Butternut	--	--	--	--	7	--	--	--	--	110	--	324	23	--
Yellow-poplar	3,214	23,502	2,381	6,955	5,721	6	5,091	7,634	--	4,103	581	9,169	27,455	53
Persimmon	147	--	1,275	472	406	--	984	1,356	--	326	--	477	170	--
Sassafras	1,325	11,358	1,900	2,909	3,732	1,570	24,992	5,183	2,786	2,669	483	3,871	4,132	--
Other hardwoods	533	3,817	4,390	5,052	3,159	1,160	854	3,935	683	9,354	3,303	4,630	4,572	11,152
Noncommercial spp.	1,937	666	445	2,035	1,864	239	--	1,433	248	2,715	186	2,808	2,153	13,200
Total	43,151	77,848	45,070	81,722	167,292	201,958	50,054	151,842	164,516	135,257	139,924	158,905	145,224	57,454
All species	112,807	144,481	98,267	121,357	168,623	202,193	51,528	155,467	164,516	137,102	143,551	159,668	146,852	57,454

Table 86.--All live tree biomass on timberland by species group and forest type, Indiana, 1986

(In green tons)

Species group	All types	Forest type						Sassafras-persimmon
		Jack-red-white pine	Shortleaf pine	Scotch-Virginia pine	Oak-pine	Oak-hickory	Chestnut-scarlet oak	
Softwoods								
Jack pine	227,313	147,906	--	4,131	4,624	21,825	--	--
Red pine	228,049	178,336	--	--	--	38,171	--	--
White pine	1,560,109	1,246,546	447	53,160	91,734	73,682	--	--
Shortleaf pine	1,230,559	214,856	751,276	88,511	30,745	86,712	--	--
Other yellow pines	1,768,840	97,946	32,749	921,862	375,489	116,261	--	14,290
Tamarack	58,668	--	--	--	--	--	--	--
Baldcypress	396,597	--	--	--	--	--	--	--
Eastern redcedar	3,433,201	19,250	11,800	407,084	1,562,383	572,359	5,410	306
Other softwoods	469,673	210	--	403,140	--	1,954	--	--
Total	9,373,009	1,905,050	796,272	1,877,888	2,064,975	910,964	5,410	14,596
Hardwoods								
Select white oak	37,573,334	53,455	44	77,178	301,520	27,040,923	560,659	22,778
Other white oak	6,631,031	--	6,966	899	142,008	3,241,047	2,644,865	6,902
Select red oak	17,158,051	28,900	54,687	9,442	148,526	10,106,626	76,270	--
Other red oak	30,366,402	9,841	15,205	216,165	583,871	20,865,569	693,110	40,619
Select hickory	16,314,212	40,323	66,311	30,405	224,424	9,989,676	65,576	--
Other hickory	16,705,280	33,410	9,580	368	311,438	9,604,995	146,007	--
Basswood	3,423,210	--	--	--	73,427	585,298	9,420	--
Beech	13,336,226	--	2,339	832	30,860	2,276,099	30,106	--
Hard maple	34,045,942	39,207	93,103	40,968	362,165	6,623,953	212,992	75,119
Soft maple	16,820,474	147,621	16,723	53,396	54,057	1,404,695	45,397	--
Elm	14,359,453	93,283	11,097	40,785	174,525	2,312,744	5,263	448
Ash	20,693,753	112,545	114,214	63,423	364,816	3,661,000	621	3,091
Sycamore	11,262,692	104,089	16,173	137,002	58,345	1,147,523	--	--
Cottonwood	6,091,407	157,591	--	396,268	--	169,983	--	--
Willow	1,375,575	--	--	392	--	55,890	--	--
Hackberry	3,379,454	--	3,551	--	9,667	268,159	--	--
Aspen	1,421,627	--	--	--	--	652,541	19,542	--
Birch	767,662	5,710	14,710	34,591	--	53,571	--	--
Sweetgum	3,662,670	29,671	--	713	77,358	445,620	--	--
Tupelo	3,030,861	5,946	3,905	26,293	153,454	1,073,205	19,459	25,692
Black cherry	7,378,323	122,861	31,519	88,150	124,379	1,485,236	57,262	1,558
Black walnut	7,813,803	--	--	6,924	155,119	1,392,820	--	3,319
Butternut	217,724	--	--	--	--	5,099	--	--
Yellow-poplar	20,117,950	87,912	280,848	84,051	362,366	3,921,082	141	50,397
Persimmon	822,557	4,024	--	44,990	24,577	278,454	--	9,742
Sassafras	7,768,847	36,239	135,723	67,074	151,567	2,557,795	36,180	247,423
Other hardwoods	10,694,649	14,586	45,619	154,955	263,217	2,165,018	26,747	8,454
Noncommercial spp.	4,984,080	52,990	7,961	15,691	106,028	1,277,553	5,509	--
Total	318,217,249	1,180,204	930,278	1,590,955	4,257,714	114,662,174	4,655,126	495,542
All species	327,590,258	3,085,254	1,726,550	3,468,843	6,322,689	115,573,138	4,660,536	510,138

(Table 86 continued on next page)

(Table 86 continued)

Species group	Forest type						
	Oak-gum	Lowland oak	Elm-ash-soft maple	Cotton-wood	Maple-beech	Cherry-ash-yellow-poplar	Non-stocked
Softwoods							
Jack pine	--	--	7,810	3,378	--	37,639	--
Red pine	8,045	--	3,497	--	--	--	--
White pine	--	--	38,195	--	2,871	53,474	--
Shortleaf pine	--	--	36,149	--	1,199	21,111	--
Other yellow pines	8,456	--	56,253	29,992	95,739	19,803	--
Tamarack	--	--	58,668	--	--	--	--
Baldcypress	49,236	--	347,361	--	--	--	--
Eastern redcedar	13,949	--	205,277	--	268,256	367,127	--
Other softwoods	14,013	--	13,101	--	8,034	29,221	--
Total	93,699	--	766,311	33,370	376,099	528,375	--
Hardwoods							
Select white oak	187,025	457,678	2,026,460	--	4,216,552	2,478,646	150,416
Other white oak	18,545	35,181	16,822	--	413,413	104,383	--
Select red oak	80,506	16,108	722,141	2,285	3,959,294	1,953,266	--
Other red oak	397,516	1,156,237	2,389,821	8,143	2,261,600	1,626,445	102,260
Select hickory	150,969	75,260	1,400,445	--	3,015,172	1,219,861	35,790
Other hickory	21,229	49,114	919,960	--	3,503,239	2,105,940	--
Basswood	--	11,381	540,752	--	1,877,838	325,094	--
Beech	48,496	--	371,225	--	9,434,995	1,141,274	--
Hard maple	45,260	19,936	1,784,790	--	20,996,312	3,752,137	--
Soft maple	471,390	78,771	10,170,578	167,741	3,013,951	1,111,261	84,893
Elm	69,050	123,582	5,134,477	--	3,571,964	2,794,413	27,822
Ash	149,976	142,593	5,280,579	7,338	3,661,859	7,060,407	71,291
Sycamore	204,808	4,046	5,489,062	72,633	1,942,124	2,013,693	73,194
Cottonwood	--	24,607	3,996,921	951,986	169,541	167,806	56,704
Willow	--	--	1,160,043	29,128	54,222	57,775	18,125
Hackberry	222	1,135	1,812,925	--	666,920	607,177	9,698
Aspen	22,945	319	107,753	--	216,143	402,384	--
Birch	54,888	--	577,204	--	2,371	24,617	--
Sweetgum	1,218,716	110,315	973,885	--	457,616	348,776	--
Tupelo	219,916	89,822	346,348	--	756,907	309,914	--
Black cherry	23,076	79,723	1,159,717	6,158	1,985,131	2,174,503	39,050
Black walnut	35,453	8,537	1,778,479	--	1,582,665	2,850,487	--
Butternut	--	--	45,885	--	159,426	7,314	--
Yellow-poplar	197,348	--	1,703,767	5,342	4,514,556	8,909,059	1,081
Persimmon	35,040	--	135,546	--	234,993	55,191	--
Sassafras	133,984	43,038	1,108,347	4,441	1,906,083	1,340,953	--
Other hardwoods	101,728	10,551	3,884,441	30,392	2,279,344	1,483,760	225,837
Noncommercial spp.	37,046	3,829	1,127,593	1,707	1,382,344	698,534	267,295
Total	3,925,132	2,541,763	56,165,966	1,287,294	78,236,575	47,125,070	1,163,456
All species	4,018,831	2,541,763	56,932,277	1,320,664	78,612,674	47,653,445	1,163,456

Table 87.--All live tree biomass in timberland by species group and tree biomass component, Indiana, 1986

(In green tons)

Species group	All components	Biomass component						
		All live 1- to 5-inch trees	Growing-stock trees			Cull trees		
			Stumps	Boles	Tops and limbs	Stumps	Boles	Tops and limbs
Softwoods								
Jack pine	227,313	16,095	12,659	166,640	19,846	888	9,934	1,251
Red pine	228,049	--	15,593	183,229	23,025	529	4,971	702
White pine	1,560,109	282,725	86,038	1,058,365	123,336	775	7,859	1,011
Shortleaf pine	1,230,559	20,803	56,727	949,392	114,672	4,394	75,659	8,912
Other yellow pines	1,768,840	237,944	91,906	1,226,282	143,274	4,197	58,471	6,766
Tamarack	58,668	1,439	3,410	47,683	6,136	--	--	--
Baldcypress	396,597	3,414	13,549	287,415	74,747	420	14,726	2,326
Eastern redcedar	3,433,201	1,146,926	92,815	1,272,642	397,010	24,076	393,973	105,759
Other softwoods	469,673	71,743	16,837	242,250	82,031	2,962	40,634	13,216
Total	9,373,009	1,781,089	389,534	5,433,898	984,077	38,241	606,227	139,943
Hardwoods								
Select white oak	37,573,334	659,349	1,711,623	24,007,314	6,624,399	242,895	3,470,659	857,095
Other white oak	6,631,031	87,948	336,134	4,420,686	1,273,562	29,334	376,795	106,572
Select red oak	17,158,051	227,813	733,837	11,200,867	2,970,788	96,770	1,563,368	364,608
Other red oak	30,366,402	599,452	1,325,100	19,252,866	5,292,458	192,755	2,962,793	740,978
Select hickory	16,314,212	735,952	711,765	10,239,058	3,142,701	68,383	1,108,641	307,712
Other hickory	16,705,280	751,759	723,782	10,369,469	3,201,602	76,742	1,232,569	349,357
Basswood	3,423,210	339,856	126,298	1,712,148	499,181	41,518	555,315	148,894
Beech	13,336,226	478,576	368,441	4,817,754	1,334,657	336,460	4,859,011	1,141,327
Hard maple	34,045,942	3,757,758	1,236,793	16,616,065	5,205,299	357,697	5,402,825	1,469,505
Soft maple	16,820,474	1,308,040	520,295	7,860,317	2,371,207	223,263	3,562,483	974,869
Elm	14,359,453	3,758,342	575,609	5,654,842	1,953,672	164,502	1,693,455	559,031
Ash	20,693,753	1,518,343	862,666	11,108,156	3,419,115	204,858	2,781,789	798,826
Sycamore	11,262,692	142,020	403,728	7,168,640	1,953,565	66,548	1,225,535	302,656
Cottonwood	6,091,407	84,880	288,381	3,981,908	1,014,215	40,425	551,987	129,611
Willow	1,375,575	127,337	33,280	389,891	118,571	43,596	520,521	142,379
Hackberry	3,379,454	453,247	155,661	1,615,412	501,323	44,548	471,389	137,874
Aspen	1,421,627	104,995	51,264	963,927	227,856	3,384	55,785	14,416
Birch	767,662	126,206	30,829	413,127	136,137	3,281	44,958	13,124
Sweetgum	3,662,670	323,914	172,070	2,231,820	675,802	14,057	189,857	55,150
Tupelo	3,030,861	417,119	123,111	1,601,750	486,088	23,045	292,850	86,898
Black cherry	7,378,323	1,052,705	201,231	2,866,484	899,375	119,606	1,714,507	524,415
Black walnut	7,813,803	330,602	313,866	4,076,009	1,268,458	102,157	1,329,898	392,813
Butternut	217,724	1,629	7,868	106,551	32,254	3,774	50,510	15,138
Yellow-poplar	20,117,950	741,504	916,131	13,547,203	3,778,868	54,708	865,177	214,359
Persimmon	822,557	234,288	36,692	328,325	123,749	7,070	67,828	24,605
Sassafras	7,768,847	2,219,446	259,229	2,681,865	951,072	103,743	1,170,887	382,605
Other hardwoods	10,694,649	3,880,471	181,686	1,970,950	660,593	247,002	2,850,743	903,204
Noncommercial spp.	4,984,080	2,892,354	--	--	--	151,751	1,421,609	518,366
Total	318,217,249	27,355,905	12,407,370	171,203,404	50,116,567	3,063,872	42,393,744	11,676,387
All species	327,590,258	29,136,994	12,796,904	176,637,302	51,100,644	3,102,113	42,999,971	11,816,330

Table 88.--All live tree biomass on timberland by species group and tree biomass component, Indiana, 1986

(In thousand cubic feet)

Species group	Biomass component							
	All components	All live 1- to 5-inch trees	Growing-stock trees			Cull trees		
			Stumps	Boles	Tops and limbs	Stumps	Boles	Tops and limbs
Softwoods								
Jack pine	9,889	702	554	7,247	861	38	432	55
Red pine	9,864	--	679	7,923	993	23	215	31
White pine	69,167	12,653	3,809	46,826	5,452	34	348	45
Shortleaf pine	44,242	763	2,040	34,118	4,123	157	2,720	321
Other yellow pines	78,627	10,578	4,094	54,503	6,366	187	2,598	301
Tamarack	2,233	57	130	1,813	233	--	--	--
Baldcypress	13,973	120	478	10,128	2,631	15	519	82
Eastern redcedar	161,076	53,933	4,351	59,629	18,613	1,134	18,461	4,955
Other softwoods	21,443	3,275	764	11,059	3,750	137	1,855	603
Total	410,514	82,081	16,899	233,246	43,022	1,725	27,148	6,393
Hardwoods								
Select white oak	1,293,756	22,710	58,971	826,628	228,077	8,368	119,490	29,512
Other white oak	228,337	3,028	11,581	152,228	43,847	1,008	12,974	3,671
Select red oak	533,260	7,082	22,811	348,109	92,334	2,998	48,589	11,337
Other red oak	942,554	18,643	41,118	597,599	164,256	5,981	91,956	23,001
Select hickory	514,483	23,259	22,447	322,866	99,100	2,151	34,957	9,703
Other hickory	566,294	25,491	24,529	351,514	108,531	2,602	41,781	11,846
Basswood	162,421	16,319	5,982	81,135	23,649	1,968	26,314	7,054
Beech	451,602	16,209	12,495	163,126	45,193	11,403	164,532	38,644
Hard maple	1,084,652	119,846	39,420	529,285	165,794	11,398	172,098	46,811
Soft maple	608,015	47,206	18,818	284,162	85,721	8,078	128,780	35,250
Elm	527,535	142,416	20,928	205,429	70,961	5,974	61,516	20,311
Ash	809,695	60,873	33,686	433,773	133,525	8,012	108,634	31,192
Sycamore	389,361	4,921	13,933	247,825	67,548	2,299	42,370	10,465
Cottonwood	238,089	3,325	11,289	155,616	39,636	1,585	21,574	5,064
Willow	57,609	5,372	1,395	16,315	4,961	1,826	21,784	5,956
Hackberry	129,661	17,393	5,981	61,968	19,237	1,708	18,084	5,290
Aspen	56,711	4,236	2,043	38,415	9,082	135	2,226	574
Birch	28,011	4,621	1,129	15,086	4,969	119	1,616	471
Sweetgum	121,827	10,767	5,733	74,235	22,475	470	6,313	1,834
Tupelo	104,498	14,371	4,243	55,232	16,762	800	10,095	2,995
Black cherry	299,951	42,723	8,185	116,561	36,573	4,864	69,723	21,322
Black walnut	292,133	12,957	11,713	152,069	47,315	3,808	49,616	14,655
Butternut	9,723	73	353	4,757	1,441	168	2,256	675
Yellow-poplar	771,842	28,458	35,158	519,741	144,968	2,089	33,201	8,227
Persimmon	35,658	10,158	1,595	14,234	5,358	305	2,941	1,067
Sassafras	336,779	96,179	11,238	116,275	41,237	4,510	50,755	16,585
Other hardwoods	463,656	168,216	7,884	85,457	28,641	10,710	123,597	39,151
Noncommercial spp.	199,403	115,731	--	--	--	6,076	56,866	20,730
Total	11,257,516	1,042,583	434,658	5,969,640	1,751,191	111,413	1,524,638	423,393
All species	11,668,030	1,124,664	451,557	6,202,886	1,794,213	113,138	1,551,786	429,786

Table 89.--All live shrub^{1/} biomass yields on timberland by shrub species group and forest type, Indiana, 1986

(In pounds per acre green weight)

Shrub species group	Forest type						
	Pine	Oak-pine	Oak-hickory	Oak-gum	Elm-ash-soft maple	Maple-beech	Cherry-ash-yellow poplar
Tall shrubs							
White pine	171	--	--	--	--	--	--
Virginia pine	--	--	8	--	--	--	--
Eastern redcedar	--	165	8	114	18	15	21
Select white oak	--	6	31	--	24	12	44
Other white oak	--	--	1	--	--	--	--
Select red oak	113	5	17	5	1	4	--
Other red oak	77	29	20	295	15	4	6
Select hickory	--	--	32	7	18	1	17
Other hickory	34	8	9	11	22	39	26
Basswood	--	1	7	--	--	56	--
Beech	116	84	92	14	3	87	41
Hard maple	170	37	255	11	66	411	181
Soft maple	43	132	56	1,089	47	9	3
Elm	145	11	225	10	112	178	165
Black ash	--	--	4	--	--	23	3
White & green ash	197	90	178	156	91	90	391
Sycamore	--	4	--	--	--	18	--
Willow	--	--	--	--	25	1	--
Hackberry	34	3	44	--	22	9	43
Sweetgum	--	1	--	248	26	--	--
Tupelo	64	--	48	44	6	6	24
Black cherry	585	33	80	151	29	103	41
Black walnut	--	--	7	--	18	1	1
Yellow-poplar	232	3	5	66	15	6	9
Other hardwoods	583	528	267	482	340	307	544
American hornbeam	3	--	78	--	2	119	84
Eastern redbud	--	58	37	--	34	36	30
Osage-orange	--	--	10	--	3	--	--
Apple	--	1	25	--	1	6	--
Eastern hophornbeam	1	2	102	--	13	65	25
Chokecherry	6	--	4	--	8	12	2
Dogwood	1	21	52	13	154	13	70
Pawpaw	--	7	33	841	9	110	49
Witch hazel	--	--	1	--	357	--	29
Juneberry	--	--	11	--	--	--	43
Hazel	--	--	1	--	3	9	19
Prickly ash	--	--	14	--	23	93	1,456
Alder buckthorn	--	--	2	--	--	1	--
Viburnum	--	--	9	--	6	2	3
Elder	--	--	1	--	2	76	2
Sumac	--	386	43	1,204	61	7	148
Shrubby willows	--	--	--	--	33	--	379
Misc. tall shrubs	1	1	214	112	743	77	68
Total tall shrubs	2,576	1,616	2,031	4,873	2,350	2,006	3,967
Low shrubs							
Virginia creeper	243	38	134	23	91	91	43
Gooseberry-current	4	4	4	--	8	13	9
Raspberry-blackberry	58	5	75	634	82	44	145
Rose	4	7	7	6	27	12	12
Bilberry-blueberry	--	3	10	--	--	--	3
Honeysuckle	132	140	16	89	24	36	86
Snowberry	--	--	--	9	--	--	--
Poison ivy	164	82	148	169	115	54	109
Greenbriar	25	11	54	11	19	8	22
Grape	4	6	12	6	7	9	18
Misc. low shrubs	9	5	23	2	38	11	47
Total low shrubs	643	301	483	949	411	278	494
All shrub species	3,219	1,917	2,514	5,822	2,761	2,284	4,461
Number of plots ^{2/}	14	15	148	7	96	130	85

^{1/} Trees under 1.0 inch d.b.h. are also included.

^{2/} Number of plots by forest type from which average yields were derived.

Table 90.--Sampling errors for Forest Survey Unit and county totals of volume, net annual growth, average annual removals, and area of timberland

(In percent)

		Growing stock			Sawtimber		
Unit and county	Area	Volume	Growth	Removals ^{2/}	Volume	Growth	Removals
Lower Wabash Unit							
Clay	11.11	15.76	21.69	55.98	18.42	12.59	57.45
Daviess	11.46	16.21	22.69	54.71	18.94	14.10	55.87
Gibson	11.41	16.60	22.52	50.38	19.66	14.34	51.42
Greene	7.20	10.38	13.99	41.57	12.29	8.93	42.77
Knox	13.32	19.81	27.71	57.93	23.30	15.90	59.76
Martin	6.52	8.60	12.85	31.34	9.83	7.40	31.42
Parke	7.90	10.88	14.72	37.13	12.85	9.37	37.99
Pike	8.07	11.29	15.39	44.35	13.33	9.84	45.38
Posey	11.01	14.91	21.30	40.47	17.26	12.58	41.16
Putnam	8.45	11.69	16.75	38.04	13.52	8.96	38.26
Sullivan	9.19	12.87	17.66	46.68	15.13	11.21	47.84
Vanderburgh	14.87	21.47	29.17	72.12	25.36	17.48	77.48
Vermillion	12.55	18.01	25.02	67.11	21.14	15.20	68.94
Vigo	10.37	15.15	20.66	56.46	17.96	13.07	58.71
Total	2.52	3.53	4.92	12.28	4.13	2.98	12.54
Knobs Unit							
Brown	3.02	6.85	11.65	23.60	8.35	19.72	25.25
Clark	3.76	8.91	14.77	36.58	10.88	25.57	38.87
Crawford	3.17	7.54	12.56	26.30	9.25	21.65	29.18
Dubois	3.59	8.49	14.26	34.83	10.29	24.18	36.53
Floyd	5.90	13.73	23.10	46.32	16.64	36.57	48.56
Harrison	3.01	7.13	11.64	30.75	8.81	20.99	32.93
Jackson	3.15	7.49	12.13	29.32	9.31	22.07	32.07
Lawrence	3.09	7.03	12.03	26.75	8.51	20.09	29.03
Monroe	3.20	7.36	12.30	19.94	8.98	21.47	21.98
Morgan	3.72	9.04	14.76	36.23	11.14	26.64	39.30
Orange	3.05	7.11	11.90	28.43	8.76	20.45	31.46
Owen	3.34	7.98	13.24	32.59	9.71	21.69	34.22
Perry	2.80	6.47	10.95	23.70	8.00	18.46	26.28
Scott	5.28	12.67	20.69	50.61	15.57	37.26	53.45
Spencer	4.38	10.67	17.40	42.81	13.08	31.55	45.81
Warrick	3.84	9.66	15.07	40.38	12.09	28.82	43.42
Washington	3.17	7.48	12.44	30.35	9.09	19.83	32.04
Total	0.83	1.95	3.24	7.26	2.39	5.58	7.87
Upland Flats Unit							
Dearborn	8.86	13.38	18.54	55.22	16.95	28.63	54.87
Fayette	14.62	24.73	32.24	* ^{1/}	32.61	51.41	*
Franklin	9.43	15.86	20.44	69.80	20.80	32.71	71.39
Jefferson	9.56	13.47	19.66	52.28	16.83	26.89	52.41
Jennings	9.04	13.68	18.85	54.85	17.32	28.96	54.95
Ohio	16.02	24.76	33.84	*	31.54	52.83	*
Ripley	9.72	14.27	20.45	53.03	17.83	28.43	53.82
Switzerland	9.76	13.10	19.81	47.80	15.92	27.36	47.20
Union	18.29	31.26	41.02	*	41.02	65.45	*
Total	3.54	5.32	7.45	21.06	6.71	11.01	21.13

(Table 90 continued on next page)

^{1/} * indicates a sampling error over 99.00 percent.

^{2/} Error figures are for average annual removals.

(Table 90 continued)

Unit and county	Area	Growing stock			Sawtimber		
		Volume	Growth	Removals ^{2/}	Volume	Growth	Removals
Northern Unit							
Adams	21.78	33.52	88.35	97.99	37.45	*	*
Allen	14.98	26.15	57.03	64.17	29.89	93.49	66.06
Bartholomew	12.22	18.57	53.20	53.96	20.59	80.92	54.59
Benton	66.77	97.55	*	*	*	*	*
Blackford	26.67	39.18	*	*	43.07	*	*
Boone	20.97	32.55	84.96	85.78	36.04	*	87.23
Carroll	19.06	29.60	75.87	83.35	33.03	*	84.91
Cass	16.62	26.55	68.63	87.75	30.20	*	91.19
Clinton	26.96	40.31	*	*	44.26	*	*
Decatur	16.66	24.55	71.15	67.00	27.04	*	67.94
De Kalb	15.65	25.07	64.78	88.02	28.67	*	91.80
Delaware	20.57	33.41	80.82	94.08	38.00	*	98.27
Elkhart	15.16	24.66	56.11	71.24	27.96	93.44	72.97
Fountain	13.52	21.08	56.43	71.98	23.89	84.76	74.10
Fulton	18.11	28.73	76.03	90.00	32.47	*	92.55
Grant	19.17	28.43	78.90	79.05	31.63	*	81.07
Hamilton	18.29	29.25	67.22	87.21	33.34	*	90.54
Hancock	23.81	37.99	95.59	*	43.44	*	*
Hendricks	19.44	30.99	83.79	87.75	34.54	*	89.52
Henry	18.02	28.54	74.28	83.82	32.13	*	86.54
Howard	27.88	47.91	*	*	54.14	*	*
Huntington	17.09	28.19	71.11	88.43	32.19	*	92.00
Jasper	15.74	25.45	61.10	73.21	28.73	99.00	75.01
Jay	16.69	24.47	75.50	69.90	26.86	*	70.46
Johnson	18.24	27.59	80.06	78.46	30.41	*	79.34
Kosciusko	14.24	20.97	63.66	59.82	23.07	96.49	60.40
La Grange	13.65	23.00	58.10	76.41	26.30	88.49	79.60
Lake	19.38	30.09	78.14	76.14	33.95	*	80.07
La Porte	12.71	20.43	48.50	57.89	23.04	79.20	59.22
Madison	22.68	34.06	97.00	89.00	37.80	*	91.83
Marion	*	*	*	72.98	*	*	*
Marshall	14.69	23.67	64.29	75.52	26.67	98.85	77.16
Miami	16.23	23.82	70.00	70.04	26.34	*	70.94
Montgomery	16.69	26.65	63.63	81.44	30.51	97.74	85.08
Newton	19.33	28.53	78.14	88.30	32.03	*	91.16
Noble	14.39	23.45	57.58	71.98	26.73	88.83	74.37
Porter	14.78	24.14	56.83	72.28	27.66	87.19	76.08
Pulaski	15.74	25.00	62.24	77.98	28.32	97.83	79.98
Randolph	18.42	27.05	78.78	71.17	29.72	*	72.42
Rush	23.22	40.67	90.34	*	46.38	*	*
St. Joseph	17.24	28.34	64.29	76.68	32.35	*	79.87
Shelby	23.13	34.10	*	99.34	37.72	*	*
Starke	15.77	24.76	62.53	75.96	27.85	98.62	77.28
Steuben	14.57	23.96	58.00	74.42	27.37	89.87	76.84
Tippecanoe	17.20	27.92	66.57	86.03	32.05	*	90.38
Tipton	37.72	66.21	*	*	75.43	*	*
Wabash	16.69	27.28	65.69	85.15	31.20	*	89.39
Warren	16.76	26.11	68.91	77.41	29.20	*	78.65
Wayne	14.48	23.35	61.74	72.36	26.45	93.45	74.49
Wells	20.32	32.12	79.20	96.87	36.61	*	*
White	22.68	38.52	89.81	*	44.42	*	*
Whitley	18.06	29.26	76.57	98.56	33.29	*	*
Total	2.44	3.88	9.96	11.23	4.37	15.47	11.56
All counties	1.00	1.57	3.42	5.40	1.86	5.47	5.68

^{1/} * indicates a sampling error over 99.00 percent.^{2/} Error figures are for average annual removals.

Table 91.--Net volume of sawtimber (Doyle rule) on timberland by species group and diameter class, Indiana, 1986
(In thousand board feet)^{1/}

Species group	All classes	Diameter class (inches at breast height)										29.0-38.9	39.0+
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-28.9				
Softwoods													
Jack pine	8,948	2,695	3,223	424	1,196	680	730	--	--	--	--	--	--
Red pine	4,346	3,913	433	--	--	--	--	--	--	--	--	--	--
White pine	75,101	20,132	16,538	25,262	11,157	2,012	--	--	--	--	--	--	--
Shortleaf pine	37,657	17,984	10,197	8,154	1,322	--	--	--	--	--	--	--	--
Other yellow pines	93,886	20,329	24,331	31,492	11,492	852	2,311	989	2,090	--	--	--	--
Tamarack	1,947	843	--	1,104	--	--	--	--	--	--	--	--	--
Baldcypress	22,901	4,403	3,001	6,795	3,877	4,825	--	--	--	--	--	--	--
Eastern redcedar	56,414	16,052	13,311	14,507	7,847	3,384	--	--	1,313	--	--	--	--
Other softwoods	1,675	1,675	--	--	--	--	--	--	--	--	--	--	--
Total	302,875	88,026	71,034	87,738	36,891	11,753	3,041	989	3,403	--	--	--	--
Hardwoods													
Select white oak	1,910,837	--	148,458	225,250	301,076	313,915	285,109	222,723	288,417	114,505	11,384	--	--
Other white oak	316,099	--	39,216	63,295	80,822	64,409	36,280	18,592	13,485	--	--	--	--
Select red oak	919,975	--	45,276	104,331	109,529	137,859	132,173	106,699	174,464	102,793	6,851	--	--
Other red oak	1,438,444	--	109,710	162,550	241,940	235,570	213,747	144,564	252,297	72,928	5,138	--	--
Select hickory	543,071	--	91,446	128,391	122,166	88,997	54,216	28,647	25,599	3,609	--	--	--
Other hickory	578,837	--	116,142	124,282	112,484	89,054	59,618	34,856	37,047	5,354	--	--	--
Basswood	163,379	--	13,506	23,741	28,635	31,702	17,349	22,166	22,013	4,267	--	--	--
Beech	416,468	--	31,096	37,227	53,155	58,600	67,891	58,719	88,462	21,318	--	--	--
Hard maple	858,959	--	133,131	152,653	161,045	117,039	103,495	87,947	72,576	28,911	2,162	--	--
Soft maple	529,520	--	58,017	75,584	78,981	73,846	57,860	40,957	88,511	47,379	8,385	--	--
Elm	183,835	--	46,295	44,317	38,865	18,764	13,090	5,596	12,978	3,930	--	--	--
Ash	713,641	--	105,992	134,325	136,842	108,227	75,999	50,487	75,381	25,439	949	--	--
Sycamore	640,939	--	47,146	63,887	74,682	80,669	89,255	70,120	132,724	74,436	8,020	--	--
Cottonwood	434,569	--	18,379	40,600	39,623	57,524	34,019	33,443	116,865	75,012	19,104	--	--
Willow	28,672	--	1,759	5,251	6,229	1,863	10,409	2,028	1,133	--	--	--	--
Hackberry	102,036	--	18,423	17,312	16,872	17,861	13,052	9,920	8,596	--	--	--	--
Aspen	61,065	--	11,749	17,086	20,293	6,963	1,811	1,552	958	--	--	--	--
Birch	18,411	--	875	6,421	6,596	2,510	679	--	1,330	--	--	--	--
Sweetgum	130,715	--	25,971	28,302	20,955	16,066	15,207	8,495	6,567	7,845	1,307	--	--
Tupelo	96,314	--	14,093	17,212	11,782	16,075	13,010	7,735	14,694	1,713	--	--	--
Black cherry	187,102	--	35,509	31,336	40,618	23,684	29,385	17,153	9,417	--	--	--	--
Black walnut	240,804	--	48,550	53,146	66,632	35,671	22,084	6,199	7,311	1,211	--	--	--
Butternut	8,465	--	2,117	737	4,102	732	777	--	--	--	--	--	--
Yellow-poplar	1,205,171	--	85,959	154,516	200,229	234,522	179,234	134,084	190,414	26,213	--	--	--
Persimmon	4,754	--	2,746	1,463	--	545	--	--	--	--	--	--	--
Sassafras	87,682	--	24,733	20,555	20,530	14,327	2,211	2,187	3,139	--	--	--	--
Other hardwoods	97,113	--	18,974	26,304	16,447	12,269	3,115	9,083	9,801	1,120	--	--	--
Total	11,916,877	--	1,295,268	1,760,074	2,011,130	1,859,263	1,531,075	1,123,952	1,654,179	617,983	63,953	--	--
All species	12,219,752	88,026	1,366,302	1,847,812	2,048,021	1,871,016	1,534,116	1,124,941	1,657,582	617,983	63,953	--	--

^{1/}Doyle rule.

Smith, W. Brad; Golitz, Mark F.

1988. Indiana forest statistics, 1986. Resour. Bull. NC-108. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 139 p.

The third inventory of Indiana's timber resource shows that timberland area in Indiana climbed from 3.9 to 4.3 million acres between 1967 and 1986, an increase of more than 10 percent. During the same period growing-stock volume increased 43 percent. Highlights and statistics are presented on area, volume, growth, mortality, and removals.

KEY WORDS: Area, volume, growth, mortality, removals.