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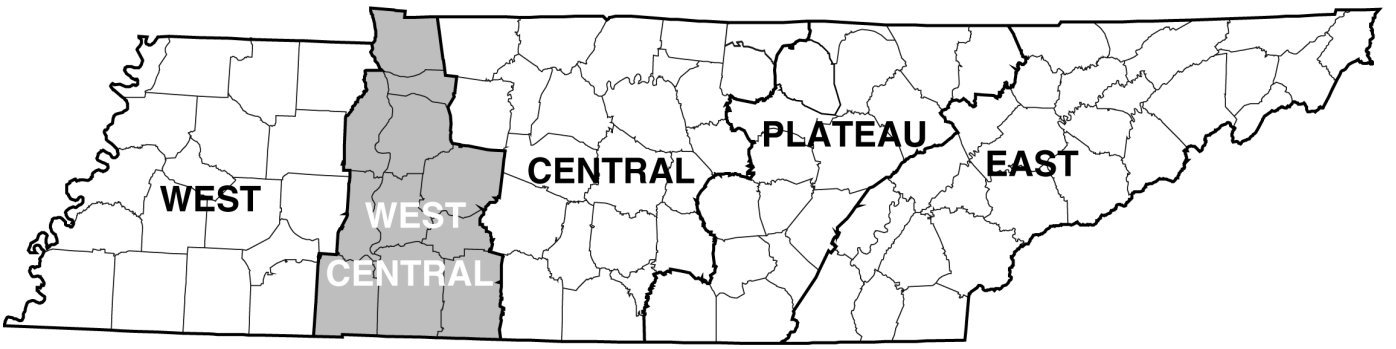
Forest Statistics for West Central Tennessee, 1997

Callie Jo Schweitzer



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Foreword

This report highlights the principal findings of the sixth forest survey of West Central Tennessee. Field work began in May 1997 and was completed in August 1997. Five previous surveys, completed in 1950, 1961, 1971, 1980, and 1989 provide the statistics for measuring changes and trends over the past 47 years. This report primarily emphasizes the changes and trends since 1989.

Periodic surveys of forest resources are authorized by the Forest and Rangeland Renewable Resources Research Act of 1978. These surveys are a continuing, nationwide undertaking by the Regional Experiment Stations of the U.S. Department of Agriculture, Forest Service. In the Southern United States, these surveys are conducted by the Forest Inventory and Monitoring (FIM) Research Work Unit at the Southern Research Station, Asheville, NC. The FIM unit operates out of two locations, one in Starkville, MS, and the other in Asheville, NC, and is responsible for inventories of 13 Southern States and the Commonwealth of Puerto Rico. The primary objective of these surveys is to periodically inventory and evaluate all forest and related resources. These multiresource data help provide a basis for formulating forest policies and programs and for the orderly development and use of the resources. This report discusses the extent and condition of forest land, associated timber volumes, and rates of timber growth, mortality, and removals.

Additional information about any aspect of this survey may be obtained from:

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Acknowledgment

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Contents

[a] All tables in this report are available in Microsoft® Excel workbook files. Upon request, these files will be supplied on 3½-inch diskettes.

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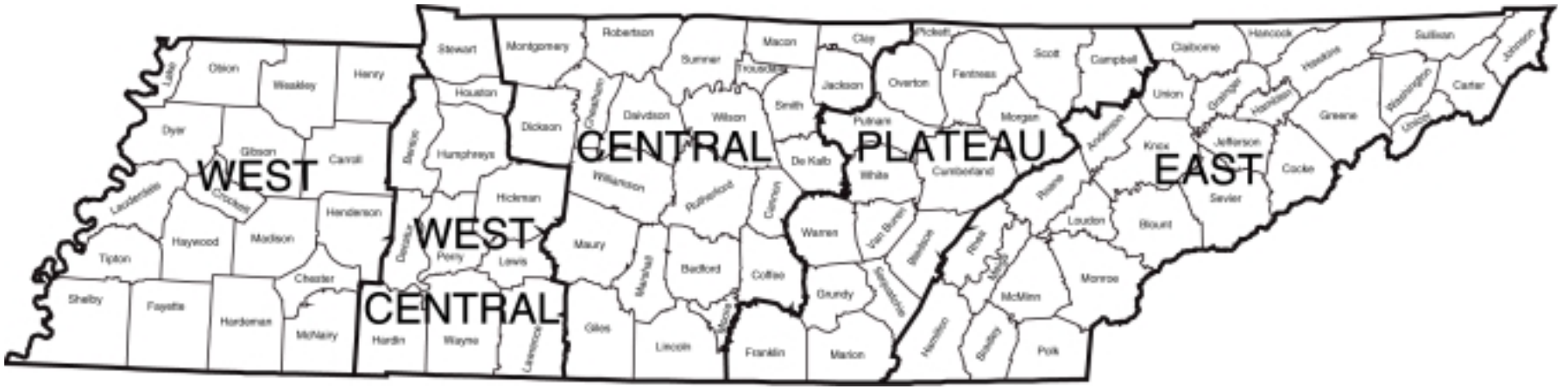

Figure 1—Forest survey regions in Tennessee.

Forest Statistics for West Central Tennessee, 1997

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Highlights

This report summarizes results from a 1997 inventory of the forest resources of West Central Tennessee (fig. 1). Current estimates of forest area, timberland area, related classifications such as ownership and forest type, and timber volumes are presented and compared with previous values. Average annual rates of net growth, removals, and mortality are summarized since the previous inventory in 1989. Resource data are presented in 51 tables and 9 graphs. A summary of major findings follows.

Timberland area—The area classified as timberland in the 11-county area has increased 1 percent since 1989, from 2.33 million acres to 2.36 million acres. Thirty-nine thousand three hundred acres were diverted from timberland to other uses, while 62,100 acres were added from previous nonforest use, resulting in a 22,800-acre net change. The majority of the diverted area was cleared for agriculture and urban-related land uses. Forests cover 72 percent of the land area in West Central Tennessee.

Ownership—Nonindustrial private forest (NIPF) land ownership increased 2 percent and totaled 1.73 million acres. NIPF land owners control 73 percent of the timberland in West Central Tennessee. The area of timberland also increased 2 percent on industry land, from 481,700 acres in 1989 to 490,200 acres in 1997. Public agencies control 134,100 acres, a 9-percent decrease.

Forest type—Forest stands classified as hardwood forest type occupy 2.19 million acres, or 93 percent of timberland in the region. Hardwood stands have decreased less than 1 percent, and softwood stands have increased 6 percent since 1989. Stands classified as oak-pine forest type increased 42.5 percent to 133,700 acres. Although stands classified as oak-hickory have declined by 3 percent since 1989, the oak-hickory forest type remains the predominant forest type in the region with 1.98 million acres.

Stand treatment—Harvesting and regeneration have been the predominant treatment and management activities in the timberland of West Central Tennessee since 1989. Final harvests occurred on 17,400 acres annually. Seventy-nine percent of final harvests was in hardwood stands, 16 percent occurred in pine stands, and 5 percent in oak-pine stands. A combination of reforestation and afforestation averaged 38,400 acres annually. Planting activities accounted for 15 percent of this total.

Hardwood volume—Volume of hardwood growing stock increased 33 percent to 3.2 billion cubic feet. On public lands, hardwood volume increased 35 percent to 249.4 million cubic feet. On NIPF land it increased by 29 percent to 2.3 billion cubic feet. Hardwood volume increased 53 percent to 619.6 million cubic feet on forest industry land. Oak species collectively accounted for 1.8 billion cubic feet, or 59 percent of hardwood volume; volume in hickories increased 27 percent to 377.0 million cubic feet, and yellow-poplar volume was up 52 percent to 277.4 million cubic feet. Volume of hardwood sawtimber increased 36 percent to 8.9 billion board feet.

Softwood volume—Volume of softwood growing stock increased 70 percent to 273.9 million cubic feet between 1989 and 1997. Softwood volume increased 175 percent to 91.6 million cubic feet on forest industry land, 66 percent to 12.3 million cubic feet on public land, and increased 41 percent to 170.0 million cubic feet on NIPF land. At 151.9 million cubic feet, loblolly pine remains the predominant softwood species. Volume of loblolly pine has increased 97 percent since 1989. Volume of shortleaf pine increased 46 percent to 63.5 million cubic feet. Volume of Virginia pine also increased, up 65 percent since 1989 to 23.4 million cubic feet. Other softwood volumes were classified under baldcypress and redcedar. The inventory of softwood sawtimber totals 682.0 million board feet, a 64-percent increase from the previous survey period.

Growth—Net annual growth of hardwood growing stock averaged 120.0 million cubic feet. Net annual growth of hardwoods increased 54 percent since the previous survey period. Hardwood growth increased 151 percent on public land, and increased 79 and 44 percent on forest

industry and NIPF lands, respectively.
Net annual growth of softwood growing stock averaged 18.1 million cubic feet. Net annual growth of softwoods has increased 118 percent since the previous survey period. Softwood growth increased 154 percent on public land, 113 percent on forest industry land, and 120 percent on NIPF land.

Removals—Annual removals of hardwood growing stock averaged 76.0 million cubic feet. Hardwood removals have increased 59 percent since the previous survey period. Eighty percent of hardwood removals occurred on NIPF lands, 18 percent on forest industry land, and 2 percent on public land. Across all ownerships, hardwood growth exceeded removals by 58 percent (or by a margin of 1.6 to 1).

Annual removals of softwood growing stock averaged 7.5 million cubic feet. Softwood removals have decreased 11 percent since the previous survey period. All softwood growing stock removals occurred on NIPF lands. Softwood growth exceeded removals by 142 percent (or by a margin of 2.4 to 1).

Mortality—Mortality of growing stock has decreased 6 percent to 23.4 million cubic feet since 1989. Hardwood mortality decreased 15 percent to 19.2 million cubic feet; mortality declined 62 percent and 37 percent on public and forest industry timberlands, respectively; and increased 28 percent on NIPF lands. Softwood mortality increased 78 percent to 4.1 million cubic feet. Eighty-seven percent of this total softwood mortality was accounted for on NIPF lands.

Inventory Methods

The Southern Research Station, Forest Inventory and Monitoring (FIM) unit secured data on forest acreage and timber volume using a three-step process. A forest-nonforest classification using aerial photographs was accomplished for points representing approximately 230 acres. These photo classifications were adjusted based on ground observations at sample locations representing approximately 3,840 acres. Finally, field measurements were made at forest locations on the intersections of grid lines spaced 3 miles apart.

The plot design at each ground sample location was based on a cluster of four points spaced 120 feet apart. Each point served as the center of a 1/24-acre circular subplot used to sample trees 5.0-inches in diameter at breast height (d.b.h.) and larger. A 1/300-acre circular microplot, located at the center of the subplot, was used to sample trees 1.0 through 4.9 inches d.b.h. and seedlings (trees less than 1.0 inch d.b.h.). These fixed-radius sample plots were established without regard to land use or forest cover. Forest and nonforest condition classes were delineated and recorded. Condition classes were defined by six attributes: land use, forest type, stand origin, stand size, stand density, and major ownership. All trees tallied were assigned to their respective condition class.

The cluster of four fixed plots sampled timberland at 445 ground sample locations in this survey unit. Estimates of timber volume and forest classification were derived from tree measurements and classifications made at these locations. Volumes for individual tally trees were computed using equations for each of the major species in the survey unit. The equations were developed from detailed measurements collected on standing trees in this survey unit and throughout the region.

Estimates of growth, removals, and mortality were determined from the remeasurement of 392 permanent sample plots established in the previous inventory. The plot design for the previous inventory was based on a cluster of 10 points. At each point, trees 5.0 inches d.b.h. and larger were selected for measurement on a variable-radius plot defined by a 37.5-factor prism. Trees less than 5.0 inches d.b.h. were tallied on a fixed-radius plot around each plot center.

Statistical Reliability

FIM inventories employ sampling methods designed to achieve reliable statistics at the survey unit and State levels. A measure of reliability of inventory statistics is provided by sampling errors. These sampling errors mean that the chances are two out of three that the true population value is within the limits indicated by a confidence interval. Sampling errors (in percent) and associated confidence intervals around the sample estimates for timberland area, inventory volumes, and components of change are presented in the following table.

Item	Sample estimate and confidence interval	Sampling error
		Percent
Timberland *(1,000 acres)*	2,356.6 ± 18.9	0.80
All live *(M ft³)*		
Inventory	3,868.0 ± 120.7	3.12
Net annual growth	152.5 ± 6.6	4.36
Annual removals	87.3 ± 9.4	10.79
Annual mortality	28.0 ± 3.1	11.05
Growing stock *(M ft³)*		
Inventory	3,427.7 ± 117.2	3.42
Net annual growth	138.1 ± 6.3	4.59
Annual removals	83.5 ± 9.1	10.93
Annual mortality	23.4 ± 2.8	12.12
Sawtimber *(M fbm)*		
Inventory	9,566.2 ± 487.9	5.10
Net annual growth	538.9 ± 25.8	4.79
Annual removals	281.4 ± 31.8	11.31
Annual mortality	53.4 ± 10.5	19.74

Sampling error increases as the area or volume considered decreases in magnitude. Sampling errors and associated confidence intervals are often unacceptably high for small components of the total resource. Statistical confidence may be computed for any subdivision of survey unit or State totals using the following formula. Sampling errors obtained from this method are only approximations of reliability because this process assumes constant variance across all subdivisions of totals.

$$SE_s = SE_t \frac{\sqrt{X_t}}{\sqrt{X_s}},$$

where

SE_s = sampling error for subdivision of survey unit or State total,

SE_t = sampling error for survey unit or State total,

X_s = sum of values for the variable of interest (area or volume) for subdivision of survey unit or State,

X_t = total area or volume for survey unit or State.

For example, the estimate of sampling error for hardwood growing-stock volume on NIPF land is computed as:

$$SE_s = 3.42 \frac{\sqrt{3{,}427.7}}{\sqrt{2{,}454.8}} = 4.04.$$

Thus, the sampling error is 4.04 percent, and the resulting confidence interval (two times out of three) for hardwood growing-stock inventory on NIPF land is 2,454.8 ± 99.2 million cubic feet.

County statistics are provided, but users are cautioned that the accuracy of individual county data is highly variable. Individual county statistics are provided so any combination of counties may be added together until the totals are large enough to meet the desired degree of reliability. Sampling errors for key resource items for individual counties are provided in the following table.

Sampling errors[a] by counties and survey unit for timberland, live trees, growing stock, and sawtimber, West Central Tennessee, 1997

Counties and survey unit	Timberland area	Live trees			Growing stock			Sawtimber		
		Volume	Growth	Removals	Volume	Growth	Removals	Volume	Growth	Removals
					Percent					
Benton	1.95	13.66	18.49	61.57	15.68	17.37	61.57	22.64	17.93	48.11
Decatur	3.31	15.69	10.81	30.26	16.96	12.05	30.26	23.64	14.27	32.46
Hardin	2.60	11.11	12.12	29.67	12.08	13.28	30.13	17.58	13.71	31.31
Hickman	2.13	6.90	7.24	34.65	7.86	8.17	35.24	11.03	11.06	33.78
Houston	3.51	15.23	17.71	40.31	16.07	20.41	40.65	23.34	23.45	44.28
Humphreys	2.45	9.11	10.82	38.05	10.08	11.03	38.09	16.78	14.63	39.97
Lawrence	2.16	13.50	14.54	37.13	14.18	14.43	37.64	22.14	18.64	38.33
Lewis	2.50	11.34	17.38	49.25	12.71	18.90	48.15	20.85	18.16	57.79
Perry	2.74	8.03	15.35	32.92	8.08	15.08	33.13	13.43	19.11	33.80
Stewart	3.44	10.52	16.04	27.23	11.48	16.78	28.51	14.81	14.44	30.90
Wayne	2.11	7.20	13.83	28.08	7.53	14.53	28.08	10.28	14.01	25.77
Survey unit	0.80	3.12	4.36	10.79	3.42	4.59	10.93	5.10	4.79	11.31

[a] By random-sampling formula.

Definitions

Average annual mortality. Average annual volume of trees 5.0 inches d.b.h. and larger that died from natural causes during the intersurvey period.

Average annual removals. Average annual volume of trees 5.0 inches d.b.h. and larger removed from the inventory by harvesting, cultural operations (such as timber-stand improvement), land clearing, or changes in land use during the intersurvey period.

Average net annual growth. Average annual net change in volume of trees 5.0 inches d.b.h. and larger in the absence of cutting (gross growth minus mortality) during the intersurvey period.

Basal area. The area in square feet of the cross section at breast height of a single tree or of all the trees in a stand, usually expressed in square feet per acre.

Biomass. The aboveground fresh weight of solid wood and bark in live trees 1.0 inch d.b.h. and larger from the ground to the tip of the tree. All foliage is excluded. The weight of wood and bark in lateral limbs, secondary limbs, and twigs under 0.5 inch in diameter at the point of occurrence on sapling-size trees is included but is excluded on poletimber and sawtimber-size trees.

Bole. That portion of a tree between a 1-foot stump and a 4-inch top d.o.b. in trees 5.0 inches d.b.h. and larger.

Census water. Streams, sloughs, estuaries, canals, and other moving bodies of water 200 feet wide and greater, and lakes, reservoirs, ponds, and other permanent bodies of water 4.5 acres in area and greater.

Commercial species. Tree species currently or potentially suitable for industrial wood products.

D.b.h. Tree diameter in inches (outside bark) at breast height (4.5 feet aboveground).

Diameter class. A classification of trees based on tree d.b.h. Two-inch diameter classes are commonly used by Forest Inventory and Monitoring, with the even inch as the approximate midpoint for a class. For example, the 6-inch class includes trees 5.0 through 6.9 inches d.b.h.

D.o.b. (diameter outside bark). Stem diameter including bark.

Forest land. Land at least 10 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use. The minimum area considered for classification is 1 acre. Forested strips must be at least 120 feet wide.

Forest management type. A classification of timberland based on forest type and stand origin.

Pine plantation. Stands that (a) have been artificially regenerated by planting or direct seeding, (b) are classed as a pine or other softwood forest type, and (c) have at least 10 percent stocking.

Natural pine. Stands that (a) have not been artificially regenerated, (b) are classed as a pine or other softwood forest type, and (c) have at least 10 percent stocking.

Oak-pine. Stands that have at least 10 percent stocking and classed as a forest type of oak-pine.

Upland hardwood. Stands that have at least 10 percent stocking and classed as an oak-hickory or maple-beech-birch forest type.

Lowland hardwood. Stands that have at least 10 percent stocking with a forest type of oak-gum-cypress, elm-ash-cottonwood, palm, or other tropical.

Nonstocked stands. Stands less than 10 percent stocked with live trees.

Forest type. A classification of forest land based on the species forming a plurality of live-tree stocking. Major eastern forest-type groups are:

White-red-jack pine. Forests in which eastern white pine, red pine, or jack pine, singly or in combination, constitute a plurality of the stocking. (Common associates include hemlock, birch, and maple.)

Spruce-fir. Forests in which spruce or true firs, singly or in combination, constitute a plurality of the stocking. (Common associates include maple, birch, and hemlock.)

Longleaf-slash pine. Forests in which longleaf or slash pine, singly or in combination, constitute a plurality of the stocking. (Common associates include oak, hickory, and gum.)

Loblolly-shortleaf pine. Forests in which loblolly pine, shortleaf pine, or other southern yellow pines, except longleaf or slash pine, singly or in combination, constitute a plurality of the stocking. (Common associates include oak, hickory, and gum.)

Oak-pine. Forests in which hardwoods (usually upland oaks) constitute a plurality of the stocking but in which pines account for 25 to 50 percent of the stocking. (Common associates include gum, hickory, and yellow-poplar.)

Oak-hickory. Forests in which upland oaks or hickory, singly or in combination, constitute a plurality of the stocking, except where pines account for 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include yellow-poplar, elm, maple, and black walnut.)

Oak-gum-cypress. Bottom-land forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, constitute a plurality of the stocking, except where pines account for 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include cottonwood, willow, ash, elm, hackberry, and maple.)

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

Maple-beech-birch. Forests in which maple, beech, or yellow birch, singly or in combination, constitute a plurality of the stocking. (Common associates include hemlock, elm, basswood, and white pine.)

Nonstocked stands. Stands less than 10 percent stocked with live trees.

Forested tract size. The area of forest within the contiguous tract containing each Forest Inventory and Monitoring sample plot.

Fresh weight. Mass of tree component at time of cutting.

Gross growth. Annual increase in volume of trees 5.0 inches d.b.h. and larger in the absence of cutting and mortality. (Gross growth includes survivor growth, ingrowth, growth on ingrowth, growth on removals before removal, and growth on mortality before death.)

Growing-stock trees. Living trees of commercial species classified as sawtimber, poletimber, saplings, and seedlings. Trees must contain at least one 12-foot or two 8-foot logs in the saw-log portion, currently or potentially (if too small to qualify), to be classed as growing stock. The log(s) must meet dimension and merchantability standards to qualify. Trees must also have, currently or potentially, one-third of the gross board-foot volume in sound wood.

Growing-stock volume. The cubic-foot volume of sound wood in growing-stock trees at least 5.0 inches d.b.h. from a 1-foot stump to a minimum 4.0-inch top d.o.b. of the central stem.

Hardwoods. Dicotyledonous trees, usually broadleaf and deciduous.

Soft hardwoods. Hardwood species with an average specific gravity of 0.50 or less, such as gums, yellow-poplar, cottonwoods, red maple, basswoods, and willows.

Hard hardwoods. Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maples, hickories, and beech.

Industrial wood. All roundwood products except fuelwood.

Land area. The area of dry land and land temporarily or partly covered by water, such as marshes, swamps, and river floodplains (omitting tidal flats below mean high tide), streams, sloughs, estuaries, and canals less than 200 feet wide, and lakes, reservoirs, and ponds less than 4.5 acres in area.

Live trees. All living trees. All size classes, all tree classes, and both commercial and noncommercial species are included.

Log grade. A classification of logs based on external characteristics indicating quality or value.

Logging residues. The unused merchantable portion of growing-stock trees cut or destroyed during logging operations.

Net annual change. Increase or decrease in volume of live trees at least 5.0 inches d.b.h. Net annual change is equal to net annual growth minus average annual removals.

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 timber production is precluded by development for other uses.

Nonstocked stands. Stands less than 10 percent stocked with live trees.

Other forest land. Forest land other than timberland and productive reserved forest land. It includes available and reserved forest land which is incapable of producing annually 20 cubic feet per acre of industrial wood under natural conditions, because of adverse site conditions such as sterile soils, dry climate, poor drainage, high elevation, steepness, or rockiness.

Other removals. The growing-stock volume of trees removed from the inventory by cultural operations such as timber stand improvement, land clearing, and other changes in land use, resulting in the removal of the trees from timberland.

Ownership. The property owned by one ownership unit, including all parcels of land in the United States.

National forest land. Federal land that has been legally designated as national forests or purchase units, and other land under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III land.

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

Forest industry-leased land. Land leased or under management contracts to forest industry from other owners for periods of one forest rotation or longer. Land under cutting contracts is not included.

Nonindustrial private forest (NIPF) land. Privately owned land excluding forest industry land or forest industry-leased land.

Corporate. Owned by corporations, including incorporated farm ownerships.

Individual. All lands owned by individuals, including farm operators.

Other public. An ownership class that includes all public lands except national forests.

Miscellaneous Federal land. Federal land other than national forests.

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

Plant residues. Wood material generated in the production of timber products at primary manufacturing plants.

Coarse residues. Material, such as slabs, edgings, trim, veneer cores and ends, suitable for chipping.

Fine residues. Material, such as sawdust, shavings, and veneer chippings, not suitable for chipping.

Plant byproducts. Residues (coarse or fine) used in the manufacture of industrial products or for consumer use or as fuel.

Unused plant residues. Residues (coarse or fine) not used for any product, including fuel.

Poletimber-size trees. Softwoods 5.0 to 8.9 inches d.b.h. and hardwoods 5.0 to 10.9 inches d.b.h.

Primary wood-using plants. Industries receiving roundwood or chips from roundwood for the manufacture of products, such as veneer, pulp, and lumber.

Productive-reserved forest land. Forest land sufficiently productive to qualify as timberland but withdrawn from timber utilization through statute or administrative regulation.

Rotten trees. Live trees of commercial species not containing at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of rot or missing sections, and with less than one-third of the gross board-foot tree volume in sound material.

Rough trees. Live trees of commercial species not containing at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of roughness, poor form, splits, and cracks, and with less than one-third of the gross board-foot tree volume in sound material; and live trees of noncommercial species.

Roundwood (roundwood logs). Logs, bolts, or other round sections cut from trees for industrial or consumer uses.

Roundwood chipped. Any timber cut primarily for pulpwood, delivered to nonpulpmills, chipped, and then sold to pulpmills as residues, including chipped tops, jump sections, whole trees, and pulpwood sticks.

Roundwood products. Any primary product such as lumber, poles, pilings, pulp, or fuelwood, that is produced from roundwood.

Salvable dead trees. Standing or downed dead trees that were formerly growing stock and considered merchantable. Trees must be at least 5.0 inches d.b.h. to qualify.

Saplings. Live trees 1.0 to 5.0 inches d.b.h.

Saw log. A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, with a minimum diameter inside bark for softwoods of 6 inches (8 inches for hardwoods).

Saw-log portion. The part of the bole of sawtimber trees between a 1-foot stump and the saw-log top.

Saw-log top. The point on the bole of sawtimber trees above which a conventional saw log cannot be produced. The minimum saw-log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

Sawtimber-size trees. Softwoods 9.0 inches d.b.h. and larger and hardwoods 11.0 inches d.b.h. and larger.

Sawtimber volume. Growing-stock volume in the saw-log portion of sawtimber-size trees in board feet (International 1/4-inch rule).

Seedlings. Trees less than 1.0 inch d.b.h. and greater than 1 foot tall for hardwoods, greater than 6 inches tall for softwood, and greater than 0.5 inch in diameter at ground level for longleaf pine.

Select red oaks. A group of several red oak species composed of cherrybark, Shumard, and northern red oaks. Other red oak species are included in the "other red oaks" group.

Select white oaks. A group of several white oak species composed of white, swamp chestnut, swamp white, chinkapin, Durand, and bur oaks. Other white oak species are included in the "other white oaks" group.

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

Softwoods. Coniferous trees, usually evergreen, having leaves that are needles or scalelike.

Yellow pines. Loblolly, longleaf, slash, pond, shortleaf, pitch, Virginia, sand, spruce, and Table Mountain pines.

Other softwoods. Cypress, eastern redcedar, white-cedar, eastern white pine, eastern hemlock, spruce, and fir.

Stand age. The average age of dominant and codominant trees in the stand.

Stand origin. A classification of forest stands describing their means of origin.

Planted. Planted or artificially seeded.

Natural. No evidence of artificial regeneration.

Stand-size class. A classification of forest land based on the diameter class distribution of live trees in the stand.

Sawtimber stands. Stands at least 10 percent stocked with live trees, with half or more of total stocking in sawtimber and poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands. Stands at least 10 percent stocked with live trees, of which half or more of total stocking is in poletimber and sawtimber trees, and with pole-timber stocking exceeding that of sawtimber.

Sapling-seedling stands. Stands at least 10 percent stocked with live trees of which more than half of total stocking is saplings and seedlings.

Nonstocked stands. Stands less than 10 percent stocked with live trees.

Stocking. The degree of occupancy of land by trees, measured by basal area or the number of trees in a stand and spacing in the stand, compared with a minimum standard, depending on tree size, required to fully utilize the growth potential of the land.

Density of trees and basal area per acre required for full stocking

D.b.h. class	Trees per acre for full stocking	Basal area per acre
Seedlings	600	—
2	560	—
4	460	—
6	340	67
8	240	84
10	155	85
12	115	90
14	90	96
16	72	101
18	60	106
20	51	111

Timberland. Forest land capable of producing 20 cubic feet of industrial wood per acre per year and not with-drawn from timber utilization.

Timber products. Roundwood products and byproducts.

Tree. Woody plants having one erect perennial stem or trunk at least 3 inches d.b.h., a more or less definitely formed crown of foliage, and a height of at least 13 feet (at maturity).

Tree grade. A classification of the saw-log portion of sawtimber trees based on: (1) the grade of the butt log or (2) the ability to produce at least one 12-foot or two 8-foot logs in the upper section of the saw-log portion. Tree grade is an indicator of quality; grade 1 is the best quality.

Upper-stem portion. The part of the main stem or fork of sawtimber trees above the saw-log top to minimum top diameter 4.0 inches outside bark or to the point where the main stem or fork breaks into limbs.

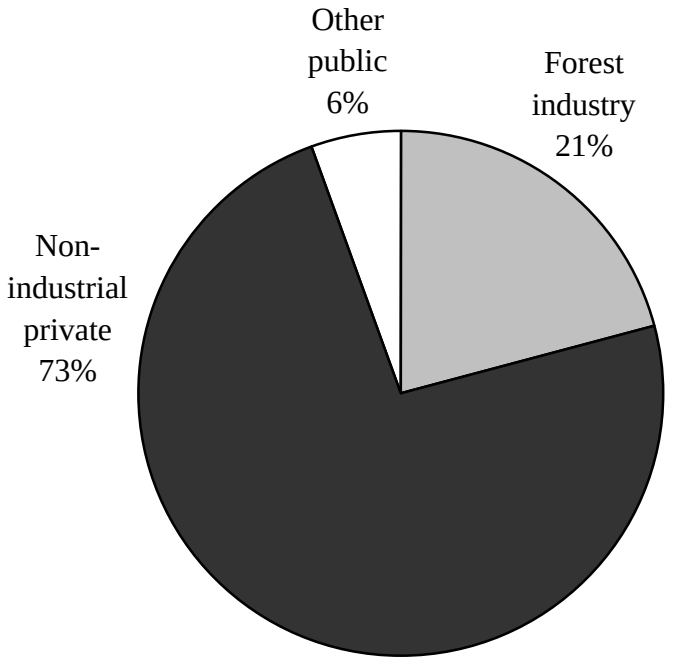
Volume of live trees. The cubic-foot volume of sound wood in live trees at least 5.0 inches d.b.h. from a 1-foot stump to a minimum 4.0-inch top d.o.b. of the central stem.

Volume of saw-log portion of sawtimber trees. The cubic-foot volume of sound wood in the saw-log portion of sawtimber trees. Volume is the net result after deduc-tions for rot, sweep, and other defects that affect use for lumber.

Metric Equivalents

1 acre = 4,046.86 square meters or 0.404686 hectare
1 cubic foot = 0.028317 cubic meter
1 inch = 2.54 centimeters or 0.0254 meter
Breast height = 1.4 meters aboveground level
1 square foot = 929.03 square centimeters or 0.0929 square meter
1 square foot per acre basal area = 0.229568 square meter per hectare
1 pound = 0.454 kilogram
1 ton = 0.907 metric ton

Graphs



2.4 Million acres

Figure 2—Distribution of timberland by ownership class, West Central Tennessee, 1997.

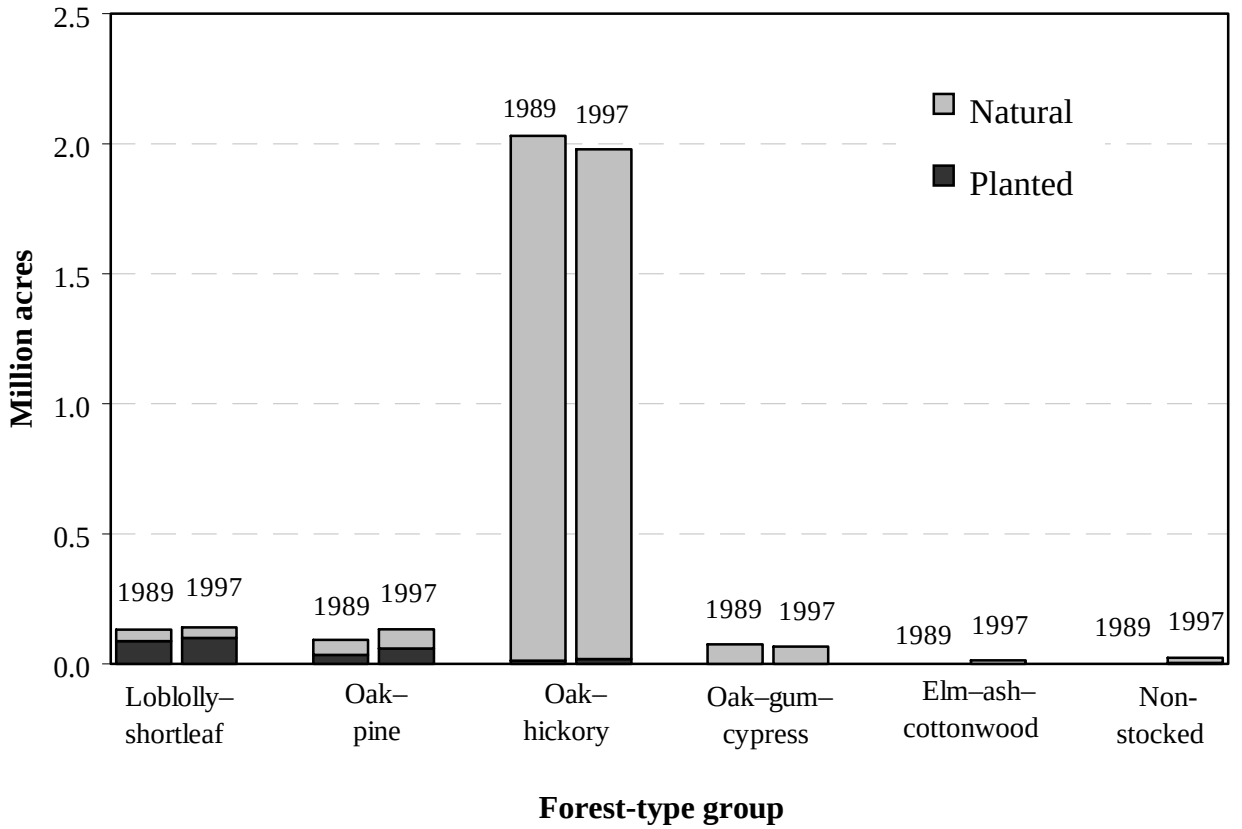


Figure 3—Area of timberland by forest-type group and stand origin, West Central Tennessee, 1989 and 1997.

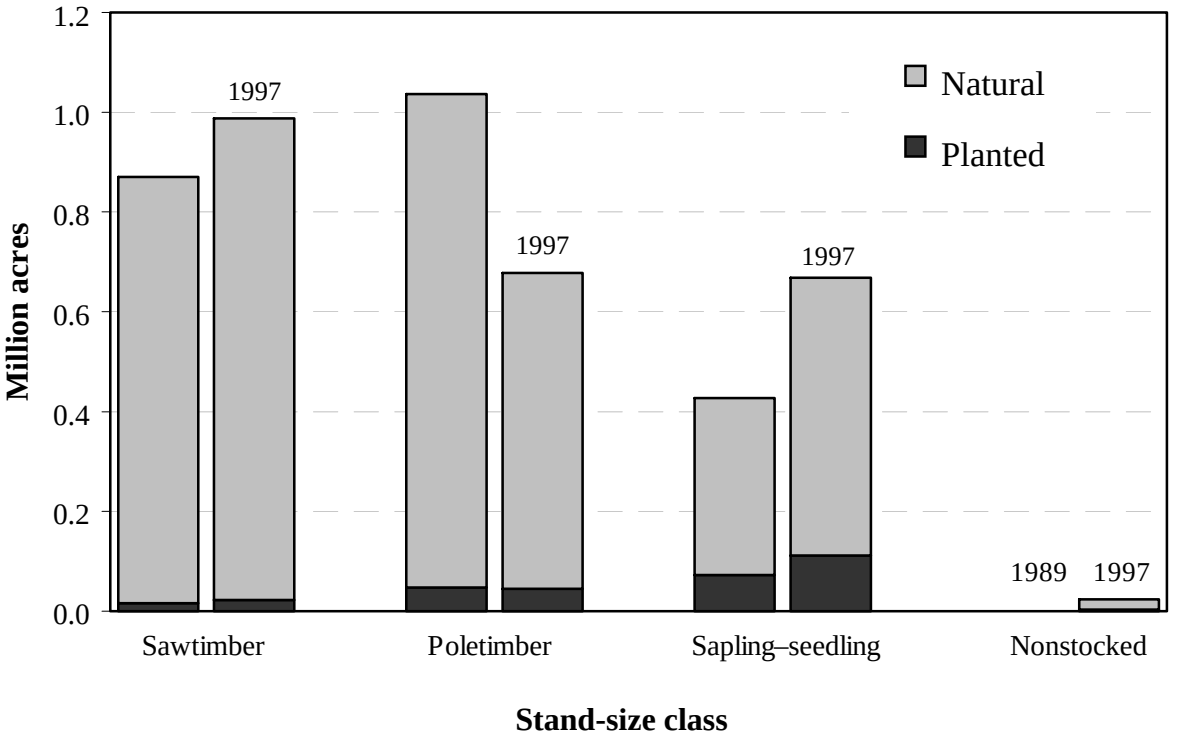


Figure 4—Area of timberland by stand-size class and stand origin, West Central Tennessee, 1997.

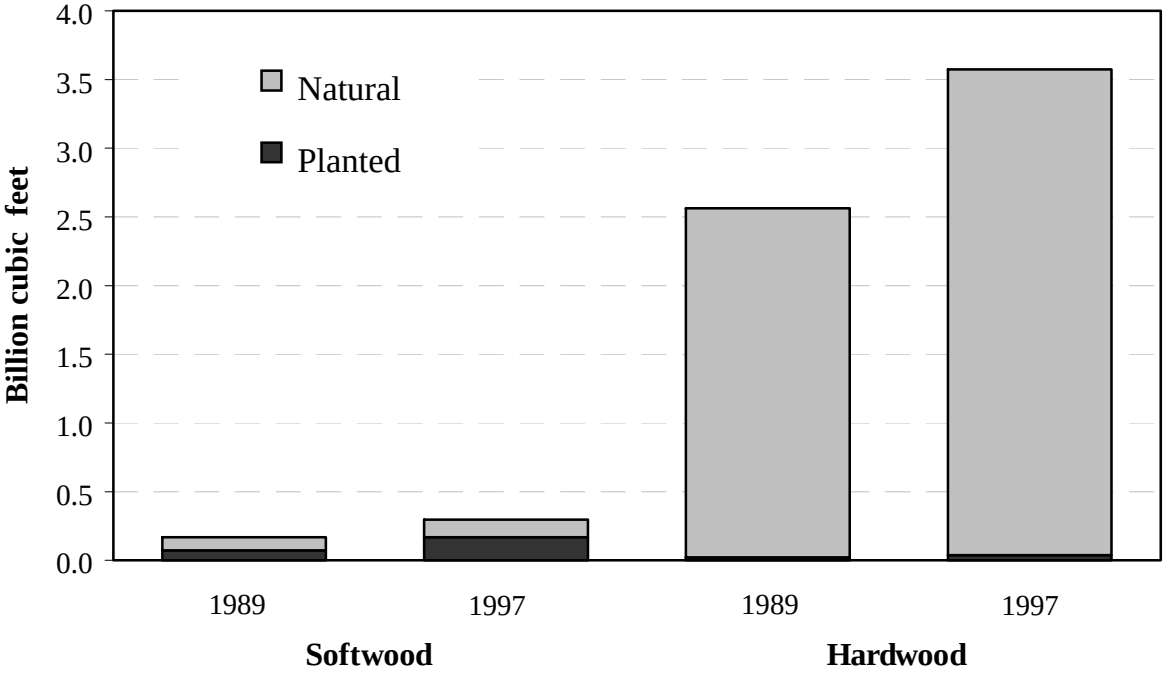


Figure 5—Volume of live trees on timberland by species group and stand origin, West Central Tennessee, 1989 and 1997.

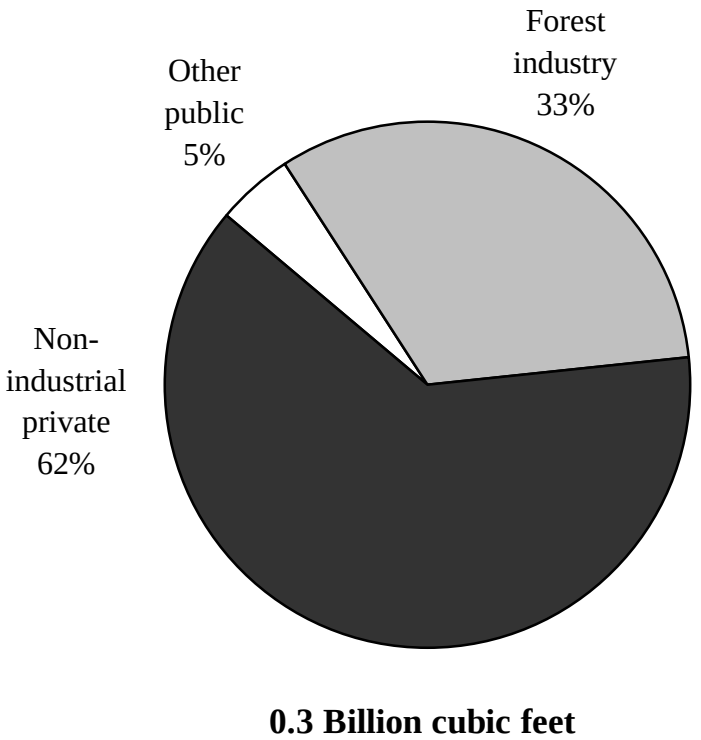


Figure 6—Distribution of softwood live tree volume by ownership class, West Central Tennessee, 1997.

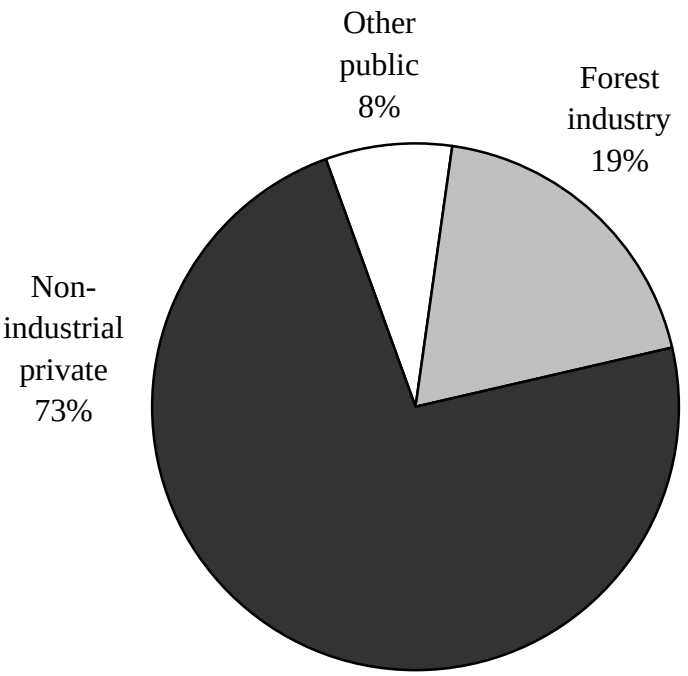


Figure 7—Distribution of hardwood live tree volume by ownership class, West Central Tennessee, 1997.

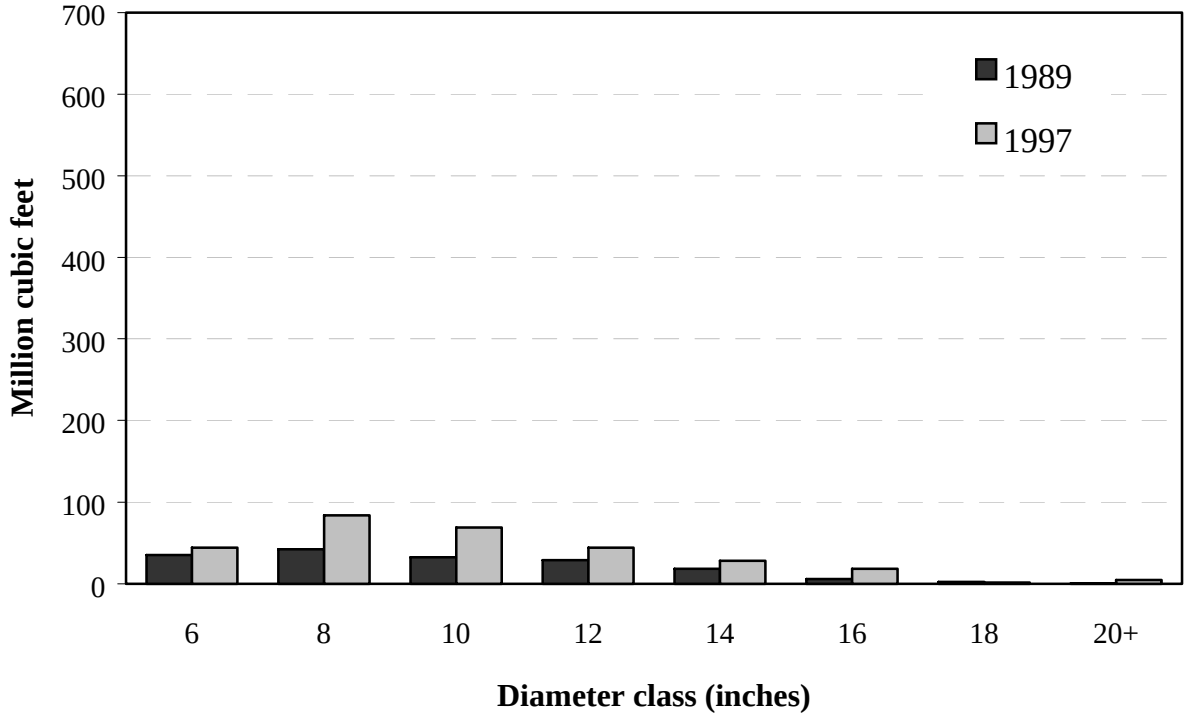


Figure 8—Volume of softwood live trees on timberland by diameter class, West Central Tennessee, 1989 and 1997.

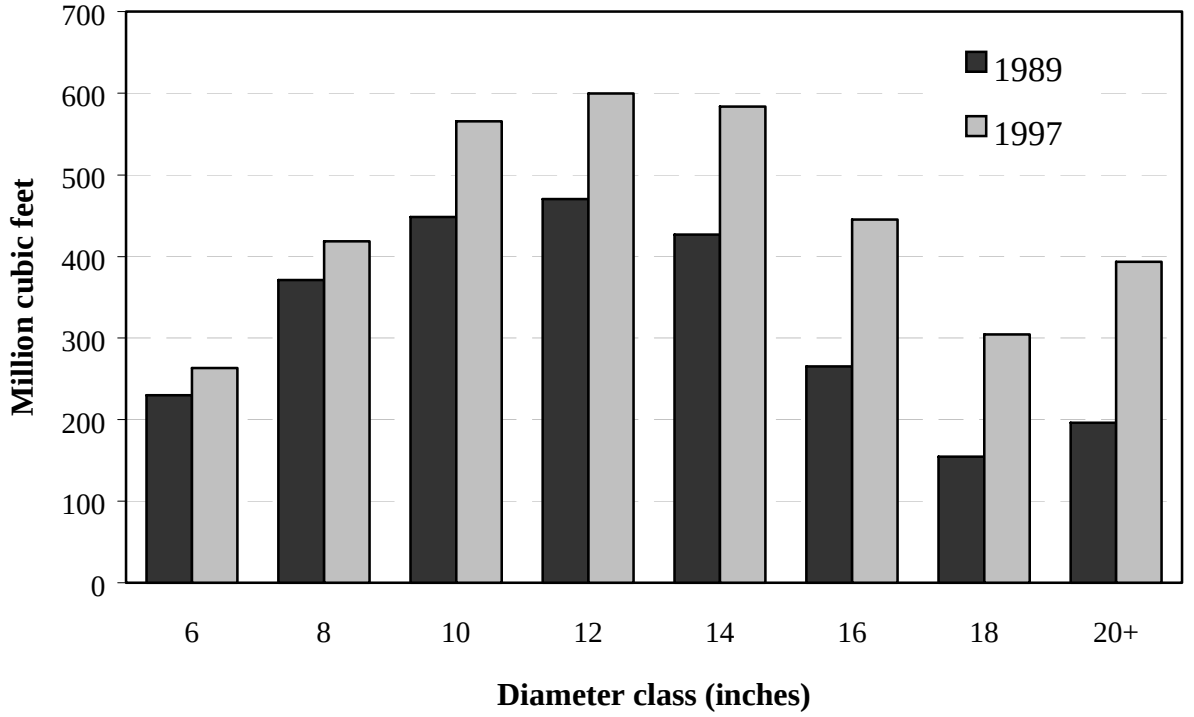


Figure 9—Volume of hardwood live trees on timberland by diameter class, West Central Tennessee, 1989 and 1997.

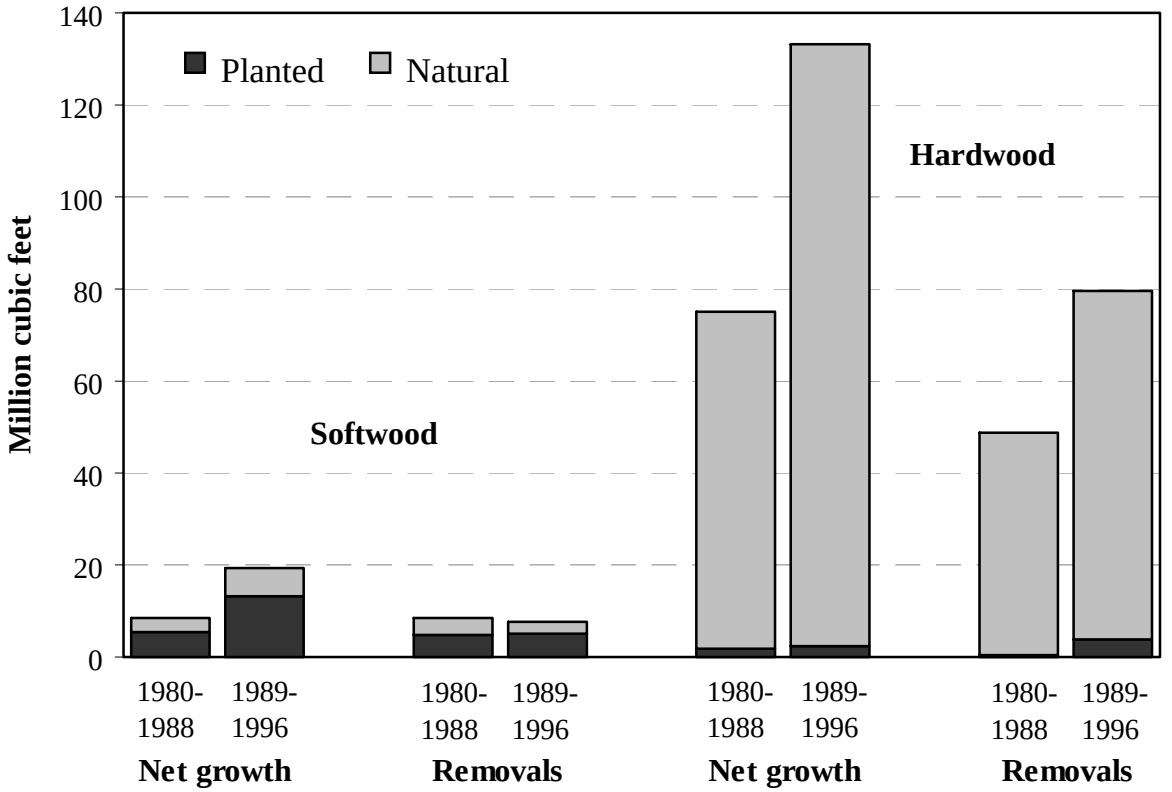


Figure 10—Average net annual growth and removals of live trees on timberland by species group and stand origin, West Central Tennessee, 1980-1988 and 1989-1996.

Cross Reference of Eastern Core Tables

Core table	Corresponding table number in this report	Core table	Corresponding table number in this report
1	1	14	22
2	3	15	24, 26
3	4	16	27
4	5	17	28
5	6	18	32, 34
6	7	19	35, 37
7	8	20	38
8	10	21	38
9	11	22	40
10	17	23	41
11	18	24	43
12	20	25	23
13	21		

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25. Volume of live trees on timberland by county and species group

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27. Volume of timber on timberland by class of timber and species group

28. Volume of live and growing-stock trees on timberland by ownership class and species group

29. Volume of sawtimber on timberland by ownership class, species group, and size class

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40. Average annual mortality of live trees, growing stock, and sawtimber on timberland by species

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Table 1—Land area by county and land class, West Central Tennessee, 1997

County	Total land area[a]	Forest land: Total forest	Forest land: Timberland	Forest land: Productive reserved	Forest land: Other	Other land[b]
	Thousand acres					
Benton	252.7	178.6	178.6	—	—	74.0
Decatur	213.7	148.3	148.3	—	—	65.4
Hardin	369.9	229.3	225.6	3.7	—	140.5
Hickman	392.1	318.9	318.9	—	—	73.2
Houston	128.1	88.4	88.4	—	—	39.7
Humphreys	340.6	231.2	231.2	—	—	109.4
Lawrence	395.0	191.1	191.1	—	—	203.9
Lewis	180.6	152.8	151.0	1.7	—	27.8
Perry	265.5	229.0	229.0	—	—	36.5
Stewart	292.9	212.3	212.3	—	—	80.6
Wayne	469.8	381.9	381.9	—	—	87.9
Total	3,301.0	2,362.0	2,356.6	5.5	—	938.9

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

[a] From the U.S. Bureau of the Census, 1990.

[b] Includes 26.4 thousand acres of water according to Forest Inventory and Monitoring standards of area classification, but defined by the Bureau of Census as land.

Table 2—Area of forest land by forest-type group and ownership class, West Central Tennessee, 1997

Forest-type group	All classes	Ownership class: National forest	Ownership class: Miscellaneous Federal	Ownership class: State	Ownership class: County and municipal	Ownership class: Forest industry	Ownership class: Nonindustrial private
	Thousand acres						
Loblolly–shortleaf pine	140.9	—	7.6	—	—	71.9	61.3
Oak–pine	133.7	—	5.9	—	—	18.9	109.0
Oak–hickory	1,982.3	—	78.8	31.8	—	395.9	1,475.7
Oak–gum–cypress	67.5	—	6.5	8.9	—	—	52.2
Elm–ash–cottonwood	13.9	—	—	—	—	—	13.9
Nonstocked	23.7	—	—	—	—	3.5	20.2
Total	2,362.0	—	98.8	40.7	—	490.2	1,732.3

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 3—Area of timberland by county and ownership class, West Central Tennessee, 1997

County	All classes	Ownership class: National forest	Miscellaneous Federal	State	County and municipal	Forest industry	Nonindustrial private: Corporate	Nonindustrial private: Individual
	Thousand acres							
Benton	178.6	—	15.6	3.0	—	7.6	12.2	140.2
Decatur	148.3	—	6.5	—	—	11.9	—	129.9
Hardin	225.6	—	—	12.3	—	7.2	19.5	186.5
Hickman	318.9	—	—	—	—	82.4	5.5	231.1
Houston	88.4	—	1.7	—	—	6.7	—	80.1
Humphreys	231.2	—	—	—	—	6.1	19.4	205.7
Lawrence	191.1	—	—	18.3	—	24.0	6.5	142.3
Lewis	151.0	—	2.0	5.9	—	50.2	—	92.9
Perry	229.0	—	6.2	—	—	89.3	6.2	127.4
Stewart	212.3	—	62.6	—	—	55.0	6.1	88.7
Wayne	381.9	—	—	—	—	149.7	13.3	218.9
Total	2,356.6	—	94.5	39.6	—	490.2	88.7	1,643.6

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 4—Area of timberland by county and forest-type group, West Central Tennessee, 1997

County	All groups	Forest-type group: Loblolly–shortleaf	Oak–pine	Oak–hickory	Oak–gum–cypress	Elm–ash–cottonwood	Nonstocked
	Thousand acres						
Benton	178.6	20.8	8.6	129.1	18.6	—	1.5
Decatur	148.3	7.4	1.3	129.7	8.1	1.8	—
Hardin	225.6	27.9	43.0	121.9	22.9	8.7	1.2
Hickman	318.9	1.5	5.9	311.6	—	—	—
Houston	88.4	1.7	6.7	78.4	—	—	1.7
Humphreys	231.2	—	1.5	223.6	1.5	—	4.6
Lawrence	191.1	13.2	8.2	169.4	—	—	0.3
Lewis	151.0	6.0	5.9	131.9	7.2	—	—
Perry	229.0	6.2	8.0	211.6	1.7	—	1.5
Stewart	212.3	22.9	12.0	167.2	6.1	1.7	2.4
Wayne	381.9	33.3	32.6	302.7	1.2	1.7	10.4
Total	2,356.6	140.9	133.7	1,977.0	67.3	13.9	23.7

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 5—Area of timberland by county and stand-size class, West Central Tennessee, 1997

County	All classes	Stand-size class: Sawtimber	Poletimber	Sapling-seedling	Nonstocked
		Thousand acres			
Benton	178.6	74.2	44.6	58.3	1.5
Decatur	148.3	71.4	32.6	44.3	—
Hardin	225.6	77.3	52.7	94.3	1.2
Hickman	318.9	192.3	66.2	60.5	—
Houston	88.4	28.8	32.8	25.2	1.7
Humphreys	231.2	89.5	74.1	63.1	4.6
Lawrence	191.1	58.0	46.2	86.5	0.3
Lewis	151.0	50.4	61.7	38.9	—
Perry	229.0	97.1	69.5	60.9	1.5
Stewart	212.3	99.7	61.8	48.4	2.4
Wayne	381.9	148.8	135.1	87.5	10.4
Total	2,356.6	987.6	677.3	667.9	23.7

Numbers in rows and columns may not sum to totals due to rounding.
A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 6—Area of timberland by county and site class, West Central Tennessee, 1997

County	All classes	Site class (cubic feet/acre/year): 20-49	50-84	85-119	120-164	>165
		Thousand acres				
Benton	178.6	21.8	106.3	47.5	3.0	—
Decatur	148.3	11.7	75.0	41.5	20.1	—
Hardin	225.6	3.7	84.5	76.1	50.3	11.0
Hickman	318.9	29.4	195.7	87.9	—	5.9
Houston	88.4	6.7	27.2	30.2	—	24.4
Humphreys	231.2	74.5	98.4	35.3	16.9	6.1
Lawrence	191.1	6.5	146.7	32.4	5.5	—
Lewis	151.0	4.7	121.5	24.9	—	—
Perry	229.0	40.9	140.0	41.9	6.2	—
Stewart	212.3	8.9	66.5	96.8	38.6	1.5
Wayne	381.9	25.1	205.2	136.7	15.0	—
Total	2,356.6	234.0	1,266.9	651.2	155.6	49.0

Numbers in rows and columns may not sum to totals due to rounding.
A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 7—Area of timberland by county and stocking class of growing-stock trees, West Central Tennessee, 1997

County	All classes	Stocking class (percent) <16.7	16.7-59	60-99	100-130	>130
		Thousand acres				
Benton	178.6	2.9	23.8	82.3	55.1	14.6
Decatur	148.3	—	13.5	65.9	58.3	10.6
Hardin	225.6	2.4	23.2	86.4	77.3	36.3
Hickman	318.9	8.5	52.2	161.2	68.2	29.0
Houston	88.4	1.7	1.7	38.0	21.1	26.1
Humphreys	231.2	6.1	48.3	122.9	27.7	26.2
Lawrence	191.1	0.3	9.6	68.0	86.9	26.2
Lewis	151.0	—	30.8	83.4	36.7	—
Perry	229.0	1.5	45.6	114.3	56.7	11.0
Stewart	212.3	16.1	8.6	87.7	69.5	30.5
Wayne	381.9	10.4	35.5	178.5	105.8	51.8
Total	2,356.6	50.0	292.6	1,088.6	663.2	262.1

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 8—Area of timberland by forest-type group, stand origin, and ownership class, West Central Tennessee, 1997

Forest-type group and stand origin	All classes	Ownership class: National forest	Other public	Forest industry	Nonindustrial private
		Thousand acres			
Softwood types					
Loblolly–shortleaf pine					
Planted	100.4	—	1.5	59.6	39.3
Natural	40.5	—	6.1	12.3	22.0
Total	140.9	—	7.6	71.9	61.3
Total softwoods	140.9	—	7.6	71.9	61.3
Hardwood types					
Oak–pine					
Planted	60.2	—	—	14.9	45.3
Natural	73.5	—	5.9	3.9	63.7
Total	133.7	—	5.9	18.9	109.0
Oak–hickory	1,977.0	—	105.4	395.9	1,475.7
Oak–gum–cypress	67.3	—	15.1	—	52.2
Elm–ash–cottonwood	13.9	—	—	—	13.9
Total hardwoods	2,192.0	—	126.4	414.8	1,650.8
Nonstocked	23.7	—	—	3.5	20.2
All groups	2,356.6	—	134.1	490.2	1,732.3

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 9—Area of timberland by forest-type group, detailed forest type, and ownership class, West Central Tennessee, 1997

Forest-type group and detailed forest type	All classes	Ownership class: National forest	Other public	Forest industry	Nonindustrial private
		Thousand acres			
Softwood types					
Loblolly–shortleaf					
Loblolly pine	102.7	—	1.5	60.1	41.0
Shortleaf pine	10.2	—	—	—	10.2
Virginia pine	15.3	—	—	6.6	8.6
Eastern redcedar	12.7	—	6.1	5.1	1.5
Total	140.9	—	7.6	71.9	61.3
Total softwoods	140.9	—	7.6	71.9	61.3
Hardwood types					
Oak–pine					
Eastern redcedar–hardwood	16.4	—	3.1	—	13.3
Shortleaf pine–oak	19.9	—	—	1.2	18.7
Virginia pine–s. red oak	20.2	—	—	—	20.2
Loblolly pine–hardwood	70.6	—	2.8	17.6	50.1
Other oak–pine	6.7	—	—	—	6.7
Total	133.7	—	5.9	18.9	109.0
Oak–hickory					
Post oak–black oak	49.8	—	5.1	9.1	35.6
Chestnut oak	177.0	—	—	78.6	98.4
White oak–red oak–hickory	755.4	—	47.2	116.2	592.0
White oak	103.1	—	18.1	29.2	55.8
Yellow-poplar–white oak–n. red oak	187.6	—	6.5	57.5	123.6
Sweetgum–yellow-poplar	150.4	—	—	14.8	135.6
Mixed hardwood	553.6	—	28.5	90.4	434.8
Total	1,977.0	—	105.4	395.9	1,475.7
Oak–gum–cypress					
Swamp chestnut oak–cherrybark oak	4.2	—	1.6	—	2.6
Sweetgum–water oak–willow oak	29.7	—	5.5	—	24.2
Sugarberry–elm–green ash	28.5	—	3.1	—	25.4
Cypress–water tupelo	4.9	—	4.9	—	—
Total	67.3	—	15.1	—	52.2
Elm–ash–cottonwood					
River birch–sycamore	4.9	—	—	—	4.9
Willow	1.8	—	—	—	1.8
Sycamore–pecan–elm	7.2	—	—	—	7.2
Total	13.9	—	—	—	13.9
Total hardwoods	2,192.0	—	126.4	414.8	1,650.8
Nonstocked	23.7	—	—	3.5	20.2
All groups	2,356.6	—	134.1	490.2	1,732.3

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 10—Area of timberland by ownership and stocking class of growing-stock trees, West Central Tennessee, 1997

Ownership class	All classes	Stocking class (percent) <16.7	16.7-59	60-99	100-130	>130
		Thousand acres				
National forest	—	—	—	—	—	—
Other public	134.1	6.1	21.1	62.4	37.2	7.3
Forest industry	490.2	5.1	54.1	207.2	141.8	82.0
Nonindustrial private	1,732.3	38.8	217.4	819.0	484.2	172.9
All ownerships	2,356.6	50.0	292.6	1,088.6	663.2	262.1

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 11—Area of timberland by forest-type group, stand origin, and stand-size class, West Central Tennessee, 1997

Forest-type group and stand origin	All classes	Stand-size class Sawtimber	Poletimber	Sapling-seedling	Nonstocked
		Thousand acres			
Softwood types					
Loblolly–shortleaf pine					
Planted	100.4	16.6	43.2	40.6	—
Natural	40.5	16.3	5.2	19.0	—
Total	140.9	32.9	48.4	59.6	—
Total softwoods	140.9	32.9	48.4	59.6	—
Hardwood types					
Oak–pine					
Planted	60.2	5.8	1.5	52.9	—
Natural	73.5	12.8	29.8	30.9	—
Total	133.7	18.6	31.3	83.8	—
Oak–hickory	1,977.0	911.3	563.8	501.9	—
Oak–gum–cypress	67.3	14.3	32.1	20.9	—
Elm–ash–cottonwood	13.9	10.5	1.7	1.7	—
Total hardwoods	2,192.0	954.8	629.0	608.3	—
Nonstocked	23.7	—	—	—	23.7
All groups	2,356.6	987.6	677.3	667.9	23.7

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 12—Area of timberland by stand-age class and forest management type, all ownerships, West Central Tennessee, 1997

Stand-age class	All types	Forest management type: Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
Years				*Thousand acres*			
0-10	328.1	26.5	7.8	39.5	228.8	11.7	13.8
11-20	152.4	34.0	4.9	20.4	85.3	6.1	1.6
21-30	132.4	24.6	7.2	20.8	69.2	10.3	0.2
31-40	185.7	7.1	10.3	13.0	145.5	8.2	1.5
41-50	369.4	8.2	—	28.9	320.7	11.5	0.1
51-60	406.3	—	1.5	10.7	371.6	22.5	—
61-70	406.7	—	8.7	0.4	387.3	7.2	3.1
71-80	261.5	—	—	—	254.4	3.8	3.3
81+	114.1	—	—	—	114.1	—	—
All classes	2,356.6	100.4	40.5	133.7	1,977.0	81.2	23.7

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 13—Area of timberland by stand-age class and forest management type, public ownerships, West Central Tennessee, 1997

Stand-age class	All types	Forest management type: Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
Years				*Thousand acres*			
0-10	—	—	—	—	—	—	—
11-20	6.1	1.5	—	—	4.6	—	—
21-30	10.7	—	6.1	3.1	—	1.5	—
31-40	1.7	—	—	—	1.7	—	—
41-50	33.2	—	—	—	28.7	4.6	—
51-60	26.9	—	—	2.8	15.4	8.6	—
61-70	21.6	—	—	—	21.2	0.4	—
71-80	27.4	—	—	—	27.4	—	—
81+	6.5	—	—	—	6.5	—	—
All classes	134.1	1.5	6.1	5.9	105.4	15.1	—

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 14—Area of timberland by stand-age class and forest management type, forest industry ownerships, West Central Tennessee, 1997

Stand-age class	All types	Forest management type: Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
Years				*Thousand acres*			
0-10	78.4	20.4	6.1	9.4	40.5	—	2.0
11-20	57.1	24.4	—	5.9	26.8	—	—
21-30	30.6	12.3	1.1	—	17.2	—	—
31-40	23.4	1.0	5.1	2.3	15.0	—	—
41-50	60.2	1.5	—	1.2	57.5	—	—
51-60	75.7	—	—	—	75.7	—	—
61-70	104.7	—	—	—	103.1	—	1.5
71-80	36.1	—	—	—	36.1	—	—
81+	24.1	—	—	—	24.1	—	—
All classes	490.2	59.6	12.3	18.9	395.9	—	3.5

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 15—Area of timberland by stand-age class and forest management type, nonindustrial private ownerships, West Central Tennessee, 1997

Stand-age class	All types	Forest management type: Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
Years				*Thousand acres*			
0-10	249.7	6.1	1.7	30.1	188.3	11.7	11.8
11-20	89.2	8.1	4.9	14.5	54.0	6.1	1.6
21-30	91.1	12.3	—	17.7	52.0	8.8	0.2
31-40	160.6	6.1	5.2	10.7	128.9	8.2	1.5
41-50	276.0	6.7	—	27.6	234.6	6.9	0.1
51-60	303.8	—	1.5	7.9	280.6	13.8	—
61-70	280.5	—	8.7	0.4	263.0	6.8	1.5
71-80	197.9	—	—	—	190.8	3.8	3.3
81+	83.6	—	—	—	83.6	—	—
All classes	1,732.3	39.3	22.0	109.0	1,475.7	66.1	20.2

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 16—Area of nonindustrial private timberland by ownership, forested tract-size class, and forest management type, West Central Tennessee, 1997

Ownership and forested tract-size class	All types	Forest management type: Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
Acres	*Thousand acres*						
Individual							
⌠10	95.9	—	6.5	—	80.9	6.0	2.5
11-50	334.1	6.0	—	24.7	281.0	19.2	3.2
51-100	303.9	12.5	9.9	22.0	245.9	13.4	0.3
101-200	427.1	—	1.7	15.7	378.5	19.9	11.3
201-500	369.3	—	—	22.3	337.7	6.5	2.8
∫ 501	113.3	12.3	4.0	6.7	89.1	1.2	—
Total	1,643.6	30.8	22.0	91.4	1,413.1	66.1	20.2
Corporate							
⌠10	—	—	—	—	—	—	—
11-50	6.2	—	—	—	6.2	—	—
51-100	—	—	—	—	—	—	—
101-200	11.7	—	—	—	11.7	—	—
201-500	20.6	—	—	1.2	19.4	—	—
∫ 501	50.3	8.5	—	16.3	25.4	—	—
Total	88.7	8.5	—	17.6	62.7	—	—
All nonindustrial private							
⌠10	95.9	—	6.5	—	80.9	6.0	2.5
11-50	340.3	6.0	—	24.7	287.2	19.2	3.2
51-100	303.9	12.5	9.9	22.0	245.9	13.4	0.3
101-200	438.8	—	1.7	15.7	390.1	19.9	11.3
201-500	389.9	—	—	23.6	357.1	6.5	2.8
∫ 501	163.6	20.9	4.0	23.0	114.5	1.2	—
Total	1,732.3	39.3	22.0	109.0	1,475.7	66.1	20.2

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 17—Number of live trees on timberland by species and diameter class, West Central Tennessee, 1997

Species	All classes	Diameter class (inches at breast height) 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	21.0-28.9	29.0 and larger
						Thousand trees							
Softwood													
Shortleaf pine	7,834	2,794	—	1,431	1,374	1,135	589	345	100	—	—	66	—
Loblolly pine	63,286	25,234	11,917	11,437	9,278	3,548	1,216	407	214	35	—	—	—
Virginia pine	11,762	7,413	959	908	1,569	658	144	37	74	—	—	—	—
Eastern white pine	36	—	—	36	—	—	—	—	—	—	—	—	—
Baldcypress	90	—	—	—	60	—	—	30	—	—	—	—	—
Redcedars	32,352	15,937	9,000	3,899	1,885	949	467	104	111	—	—	—	—
Total softwoods	115,360	51,378	21,876	17,711	14,166	6,290	2,416	923	499	35	—	66	—
Hardwood													
Select white oaks	106,323	31,725	14,049	15,422	12,817	11,186	8,884	6,382	3,394	1,575	515	374	—
Select red oaks	11,585	3,561	1,886	873	1,234	864	1,081	642	618	514	103	209	—
Other white oaks	69,725	18,890	14,885	10,164	8,208	7,184	4,489	2,947	1,479	894	287	258	40
Other red oaks	69,178	30,874	8,862	4,472	5,966	6,318	3,911	4,101	2,353	1,124	595	526	76
Hickory	113,512	53,422	21,223	13,586	10,943	6,697	3,980	2,266	912	335	111	37	—
Hard maple	78,408	53,764	14,458	4,361	2,271	1,856	755	370	435	101	—	37	—
Soft maple	76,770	51,898	15,734	4,039	2,319	1,180	820	405	148	148	79	—	—
Beech	22,598	16,026	1,329	1,657	826	721	700	297	296	196	170	309	71
Sweetgum	69,136	45,304	8,671	5,106	3,759	2,786	1,903	832	333	276	127	39	—
Tupelo and blackgum	145,205	117,870	18,237	4,779	2,296	963	491	344	77	111	—	37	—
Ash	34,277	22,003	6,621	2,126	1,081	1,078	576	494	222	40	—	36	—
Cottonwood	36	—	—	—	—	—	—	—	—	—	—	36	—
Basswood	181	—	—	111	—	35	35	—	—	—	—	—	—
Yellow-poplar	77,692	52,184	9,980	4,773	3,319	2,202	1,703	1,097	1,008	512	630	284	—
Bay and magnolia	568	490	—	78	—	—	—	—	—	—	—	—	—
Black cherry	40,096	27,060	7,872	2,711	1,454	519	181	149	113	—	—	37	—
Black walnut	3,019	441	923	527	191	339	255	192	76	—	75	—	—
Sycamore	4,891	2,433	498	320	363	227	258	227	172	176	111	69	37
Black locust	171	—	—	74	—	67	30	—	—	—	—	—	—
Elm	57,479	41,709	8,616	3,739	1,780	876	364	251	39	35	70	—	—
Other Eastern hardwoods	406,940	307,035	67,263	22,729	6,396	2,116	912	197	107	77	69	39	—
Total hardwoods	1,387,790	876,689	221,107	101,647	65,223	47,214	31,328	21,193	11,782	6,114	2,942	2,327	224
All species	1,503,150	928,067	242,983	119,358	79,389	53,504	33,744	22,116	12,281	6,149	2,942	2,393	224

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell.

Table 18—Number of growing-stock trees on timberland by species and diameter class, West Central Tennessee, 1997

Species	All classes	Diameter class (inches at breast height) 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	21.0-28.9	29.0 and larger
		Thousand trees											
Softwood													
Shortleaf pine	6,568	1,604	—	1,431	1,338	1,135	549	345	100	—	—	66	—
Loblolly pine	55,558	19,890	10,963	10,725	8,757	3,478	1,126	407	177	35	—	—	—
Virginia pine	9,669	6,303	461	829	1,340	588	74	37	37	—	—	—	—
Eastern white pine	36	—	—	36	—	—	—	—	—	—	—	—	—
Baldcypress	90	—	—	—	60	—	—	30	—	—	—	—	—
Redcedars	24,718	12,349	6,327	3,256	1,594	694	320	104	74	—	—	—	—
Total softwoods	96,639	40,146	17,751	16,277	13,089	5,895	2,069	923	388	35	—	66	—
Hardwood													
Select white oaks	76,037	10,704	10,035	13,082	11,931	10,632	8,140	5,939	3,250	1,472	515	337	—
Select red oaks	7,830	2,055	—	806	1,161	864	971	602	618	477	67	209	—
Other white oaks	48,336	5,227	12,641	8,679	7,265	6,371	3,728	2,248	1,172	746	147	112	—
Other red oaks	48,372	15,809	6,239	3,644	5,663	5,822	3,469	3,664	2,093	986	520	427	36
Hickory	72,414	20,204	16,542	12,147	10,174	6,180	3,725	2,160	875	295	75	37	—
Hard maple	33,037	14,308	10,675	3,508	1,974	1,449	366	295	324	101	—	37	—
Soft maple	24,238	12,168	7,673	1,814	1,350	570	330	185	111	37	—	—	—
Beech	7,771	3,608	888	1,068	519	498	517	297	226	76	—	74	—
Sweetgum	47,641	27,019	7,429	4,319	3,293	2,418	1,764	730	296	246	127	—	—
Tupelo and blackgum	44,282	23,439	13,459	3,710	1,976	747	456	344	40	74	—	37	—
Ash	16,055	7,034	4,672	1,548	730	822	457	494	222	40	—	36	—
Cottonwood	36	—	—	—	—	—	—	—	—	—	—	36	—
Basswood	146	—	—	111	—	35	—	—	—	—	—	—	—
Yellow-poplar	64,566	42,383	7,662	4,440	2,953	2,007	1,664	1,097	1,008	512	556	284	—
Bay and magnolia	568	490	—	78	—	—	—	—	—	—	—	—	—
Black cherry	16,714	10,835	2,748	1,525	982	293	106	112	76	—	—	37	—
Black walnut	1,937	—	923	147	114	268	182	152	76	—	75	—	—
Sycamore	4,020	1,935	498	245	252	227	221	227	135	100	74	69	37
Black locust	60	—	—	—	—	30	30	—	—	—	—	—	—
Elm	17,440	7,218	5,012	2,478	1,380	730	292	216	39	35	40	—	—
Other Eastern hardwoods	113,717	78,887	21,177	9,092	2,744	1,072	365	127	107	77	30	39	—
Total hardwoods	645,217	283,323	128,273	72,441	54,461	41,035	26,783	18,889	10,668	5,274	2,226	1,771	73
All species	741,856	323,469	146,024	88,718	67,550	46,930	28,852	19,812	11,056	5,309	2,226	1,837	73

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell.

Table 19—Volume of live trees on timberland by species and diameter class, West Central Tennessee, 1997

Species	All classes	Diameter class (inches at breast height) 5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
						Million cubic feet					
Softwood											
Shortleaf pine	64.4	5.1	10.7	15.7	12.8	11.3	4.2	—	—	4.6	—
Loblolly pine	158.5	25.4	51.2	37.1	22.2	12.8	8.0	1.7	—	—	—
Virginia pine	27.8	3.5	11.1	7.2	2.6	0.9	2.6	—	—	—	—
Eastern white pine	0.2	0.2	—	—	—	—	—	—	—	—	—
Baldcypress	1.5	—	0.6	—	—	0.8	—	—	—	—	—
Redcedars	41.9	10.1	10.3	8.9	6.7	2.2	3.6	—	—	—	—
Total softwoods	294.3	44.2	84.0	68.9	44.2	28.1	18.5	1.7	—	4.6	—
Hardwood											
Select white oaks	919.5	42.3	87.2	143.0	177.8	182.9	134.1	82.9	34.5	34.8	—
Select red oaks	138.6	3.0	8.6	12.9	21.4	19.6	23.0	25.8	6.4	17.9	—
Other white oaks	437.7	27.8	52.0	82.3	80.3	74.9	49.0	42.0	13.3	14.9	1.2
Other red oaks	524.2	12.5	40.8	73.7	70.4	104.1	82.2	55.9	31.3	43.2	10.2
Hickory	399.4	35.4	71.6	81.5	78.4	66.0	37.9	17.5	8.3	2.9	—
Hard maple	95.9	14.2	14.3	20.7	12.9	10.1	15.4	5.6	—	2.6	—
Soft maple	72.3	10.6	13.9	12.3	12.6	9.8	4.2	4.8	4.1	—	—
Beech	87.1	3.9	5.2	7.3	12.3	8.1	11.2	7.5	6.2	18.0	7.4
Sweetgum	183.6	14.0	26.2	37.9	41.1	25.4	15.1	15.2	8.6	0.2	—
Tupelo and blackgum	63.1	11.9	13.4	10.5	9.1	8.4	2.3	3.9	—	3.6	—
Ash	62.2	5.5	6.6	12.3	11.0	13.9	9.2	2.3	—	1.5	—
Cottonwood	6.7	—	—	—	—	—	—	—	—	6.7	—
Basswood	1.5	0.5	—	0.4	0.7	—	—	—	—	—	—
Yellow-poplar	287.1	13.9	23.3	28.9	38.0	35.4	44.3	28.9	46.3	28.2	—
Bay and magnolia	0.2	0.2	—	—	—	—	—	—	—	—	—
Black cherry	36.0	6.5	9.1	5.6	3.9	3.9	3.9	—	—	3.1	—
Black walnut	23.6	1.2	1.1	3.8	4.4	4.8	2.6	—	5.7	—	—
Sycamore	53.3	1.4	2.4	2.8	5.4	6.1	6.3	7.4	6.5	7.0	8.0
Black locust	0.9	0.1	—	0.5	0.3	—	—	—	—	—	—
Elm	49.8	9.8	10.9	9.7	6.6	6.0	1.1	1.8	3.9	—	—
Other Eastern hardwoods	131.1	48.6	32.2	19.9	13.0	3.9	3.9	2.9	3.7	3.1	—
Total hardwoods	3,573.8	263.4	418.6	565.8	599.4	583.3	445.4	304.4	178.8	187.8	26.8
All species	3,868.0	307.7	502.6	634.8	643.7	611.4	463.8	306.1	178.8	192.5	26.8

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 20—Volume of growing-stock trees on timberland by species and diameter class, West Central Tennessee, 1997

Species	All classes	Diameter class (inches at breast height) 5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
					Million cubic feet						
Softwood											
Shortleaf pine	63.5	5.1	10.5	15.7	12.0	11.3	4.2	—	—	4.6	—
Loblolly pine	151.9	24.1	48.5	36.5	21.0	12.8	7.2	1.7	—	—	—
Virginia pine	23.4	3.3	10.0	6.5	1.5	0.9	1.3	—	—	—	—
Eastern white pine	0.2	0.2	—	—	—	—	—	—	—	—	—
Baldcypress	1.5	—	0.6	—	—	0.8	—	—	—	—	—
Redcedars	33.5	8.7	8.8	6.4	4.8	2.2	2.6	—	—	—	—
Total softwoods	273.9	41.3	78.4	65.1	39.3	28.1	15.3	1.7	—	4.6	—
Hardwood											
Select white oaks	870.9	37.0	82.1	137.4	165.8	172.8	129.9	79.1	34.5	32.2	—
Select red oaks	132.7	2.9	8.2	12.9	20.1	18.7	23.0	24.5	4.7	17.9	—
Other white oaks	369.7	24.8	47.3	75.6	68.3	59.5	40.3	36.7	8.5	8.6	—
Other red oaks	475.9	10.7	39.3	68.6	63.6	96.3	74.2	49.5	29.7	37.0	7.2
Hickory	377.0	33.1	68.3	76.0	74.6	63.4	36.8	15.7	6.2	2.9	—
Hard maple	76.0	12.0	12.7	16.2	6.8	8.1	12.0	5.6	—	2.6	—
Soft maple	36.1	5.5	8.8	6.2	5.9	4.9	3.4	1.3	—	—	—
Beech	49.0	2.8	3.4	5.1	9.4	8.1	9.5	4.0	—	6.7	—
Sweetgum	168.2	12.8	23.8	34.0	38.7	22.9	13.4	14.0	8.6	—	—
Tupelo and blackgum	55.0	9.8	11.8	8.9	8.4	8.4	1.2	3.0	—	3.6	—
Ash	55.1	4.2	4.4	10.1	9.4	13.9	9.2	2.3	—	1.5	—
Cottonwood	6.7	—	—	—	—	—	—	—	—	6.7	—
Basswood	0.9	0.5	—	0.4	—	—	—	—	—	—	—
Yellow-poplar	277.4	13.0	21.0	26.8	37.5	35.4	44.3	28.9	42.3	28.2	—
Bay and magnolia	0.2	0.2	—	—	—	—	—	—	—	—	—
Black cherry	25.9	4.0	6.3	3.6	2.4	3.2	3.2	—	—	3.1	—
Black walnut	19.4	0.4	0.6	3.1	3.2	3.9	2.6	—	5.7	—	—
Sycamore	46.9	1.1	1.8	2.8	4.7	6.1	5.3	4.9	5.2	7.0	8.0
Black locust	0.5	—	—	0.2	0.3	—	—	—	—	—	—
Elm	40.5	7.0	8.6	8.4	5.6	5.1	1.1	1.8	2.7	—	—
Other Eastern hardwoods	69.8	22.3	15.9	11.3	6.1	3.0	3.9	2.9	1.3	3.1	—
Total hardwoods	3,153.8	204.3	364.3	507.7	530.9	533.7	413.1	274.1	149.4	161.1	15.2
All species	3,427.7	245.6	442.7	572.9	570.1	561.7	428.4	275.8	149.4	165.8	15.2

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 21—Volume in the saw-log portion of sawtimber trees on timberland by species and diameter class, West Central Tennessee, 1997

Species	All classes	Diameter class (inches at breast height) 9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
		Million cubic feet							
Softwood									
Shortleaf pine	42.9	12.5	11.0	10.8	4.1	—	—	4.6	—
Loblolly pine	67.5	28.0	18.7	12.1	7.0	1.7	—	—	—
Virginia pine	8.3	5.0	1.3	0.8	1.2	—	—	—	—
Baldcypress	0.7	—	—	0.7	—	—	—	—	—
Redcedars	14.0	5.2	4.3	2.1	2.5	—	—	—	—
Total softwoods	133.5	50.6	35.3	26.5	14.8	1.7	—	4.6	—
Hardwood									
Select white oaks	509.3	—	118.9	142.1	114.1	71.7	31.9	30.5	—
Select red oaks	91.0	—	14.4	15.0	19.3	21.4	4.2	16.6	—
Other white oaks	182.5	—	49.5	49.1	35.1	33.0	7.8	8.0	—
Other red oaks	302.0	—	45.0	78.4	64.5	44.8	27.4	34.8	6.9
Hickory	160.3	—	53.6	52.0	32.0	14.1	5.7	2.7	—
Hard maple	29.5	—	4.8	6.6	10.5	5.1	—	2.4	—
Soft maple	12.0	—	4.0	4.0	2.9	1.1	—	—	—
Beech	30.9	—	6.7	6.6	8.1	3.5	—	6.0	—
Sweetgum	79.1	—	27.3	18.9	12.0	12.9	8.1	—	—
Tupelo and blackgum	19.7	—	5.9	6.7	1.0	2.7	—	3.4	—
Ash	29.2	—	6.5	11.3	8.0	2.1	—	1.4	—
Cottonwood	6.5	—	—	—	—	—	—	6.5	—
Yellow-poplar	189.1	—	26.7	29.1	39.3	26.7	40.1	27.2	—
Black cherry	10.1	—	1.7	2.7	2.8	—	—	2.9	—
Black walnut	12.7	—	2.3	3.1	2.2	—	5.1	—	—
Sycamore	35.3	—	3.0	4.7	4.5	4.3	4.7	6.6	7.6
Black locust	0.2	—	0.2	—	—	—	—	—	—
Elm	13.0	—	4.0	4.1	0.9	1.6	2.4	—	—
Other Eastern hardwoods	15.3	—	4.0	2.3	3.1	2.0	1.2	2.6	—
Total hardwoods	1,727.6	—	378.6	436.6	360.4	247.1	138.6	151.7	14.6
All species	1,861.2	50.6	413.9	463.1	375.2	248.8	138.6	156.2	14.6

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 22—Volume of sawtimber on timberland by species and diameter class, West Central Tennessee, 1997

Species	All classes	Diameter class (inches at breast height) 9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
				Million board feet					
Softwood									
Shortleaf pine	224.2	57.7	55.1	58.2	23.5	—	—	29.7	—
Loblolly pine	340.1	129.3	93.6	65.9	40.8	10.4	—	—	—
Virginia pine	39.0	22.5	6.1	3.9	6.6	—	—	—	—
Baldcypress	3.5	—	—	3.5	—	—	—	—	—
Redcedars	75.2	26.1	22.7	11.5	14.8	—	—	—	—
Total softwoods	682.0	235.7	177.4	143.0	85.8	10.4	—	29.7	—
Hardwood									
Select white oaks	2,553.8	—	566.6	688.4	576.4	375.9	172.7	173.8	—
Select red oaks	475.5	—	67.7	73.3	97.8	113.6	23.6	99.5	—
Other white oaks	897.8	—	232.7	236.0	175.2	169.8	40.9	43.2	—
Other red oaks	1,561.8	—	219.2	384.9	328.9	236.9	148.3	200.7	42.8
Hickory	801.4	—	256.0	256.0	165.2	76.0	32.4	15.8	—
Hard maple	148.2	—	25.0	32.7	52.1	25.8	—	12.6	—
Soft maple	59.6	—	19.2	19.5	15.1	5.8	—	—	—
Beech	145.2	—	34.2	30.7	36.9	16.0	—	27.4	—
Sweetgum	422.3	—	138.7	97.5	65.5	73.1	47.4	—	—
Tupelo and blackgum	96.9	—	27.5	31.9	4.9	13.7	—	18.9	—
Ash	141.6	—	30.3	53.4	39.4	10.6	—	7.9	—
Cottonwood	41.2	—	—	—	—	—	—	41.2	—
Yellow-poplar	1,077.9	—	137.8	153.4	218.2	155.4	241.8	171.3	—
Black cherry	53.5	—	8.2	13.6	14.6	—	—	17.1	—
Black walnut	58.2	—	11.0	14.1	9.7	—	23.4	—	—
Sycamore	195.5	—	14.7	23.2	22.9	22.6	26.0	38.4	47.7
Black locust	1.1	—	1.1	—	—	—	—	—	—
Elm	65.1	—	19.5	19.8	4.7	8.2	12.9	—	—
Other Eastern hardwoods	87.7	—	20.6	12.9	17.4	13.7	6.4	16.8	—
Total hardwoods	8,884.2	—	1,830.0	2,141.4	1,844.9	1,317.0	775.8	884.5	90.6
All species	9,566.2	235.7	2,007.4	2,284.4	1,930.7	1,327.5	775.8	914.2	90.6

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 23—Volume of sawtimber on timberland by species, size class, and tree grade, West Central Tennessee, 1997

	All size classes						Trees ∫ 15.0 inches d.b.h.					
	All	Tree grade					All	Tree grade				
Species	grades	1	2	3	4	5	grades	1	2	3	4	5
	Million board feet											
Softwood												
Shortleaf pine	224.2	68.9	62.6	92.7	—	—	53.2	9.1	7.4	36.7	—	—
Loblolly pine	340.1	29.4	76.8	233.9	—	—	51.3	10.3	21.4	19.5	—	—
Virginia pine	39.0	—	—	33.9	—	5.2	6.6	—	—	6.6	—	—
Baldcypress	3.5	—	—	3.5	—	—	—	—	—	—	—	—
Redcedars	75.2	1.8	—	73.4	—	—	14.8	—	—	14.8	—	—
Total softwoods	682.0	100.1	139.4	437.3	—	5.2	125.9	19.4	28.8	77.6	—	—
Hardwood												
Select white oaks	2,553.8	631.5	780.2	951.1	92.9	98.0	1,298.8	628.5	419.1	187.3	13.6	50.2
Select red oaks	475.5	103.1	129.7	170.9	25.5	46.3	334.6	103.1	96.2	83.3	5.7	46.3
Other white oaks	897.8	73.8	255.2	442.9	64.9	61.0	429.0	73.8	132.9	153.6	29.5	39.2
Other red oaks	1,561.8	340.1	409.3	540.8	243.6	27.9	957.7	340.1	269.1	237.9	92.2	18.4
Hickory	801.4	74.6	208.6	376.9	93.4	48.0	289.4	74.6	93.4	61.6	33.1	26.7
Hard maple	148.2	—	29.5	75.9	33.0	9.8	90.5	—	20.5	49.0	21.0	—
Soft maple	59.6	5.8	9.5	32.1	3.9	8.3	20.9	5.8	—	9.0	—	6.2
Beech	145.2	—	11.4	42.7	91.1	—	80.2	—	7.0	33.1	40.1	—
Sweetgum	422.3	89.1	108.7	170.2	27.2	27.1	186.0	83.1	73.1	15.7	4.9	9.2
Tupelo and blackgum	96.9	18.9	31.2	32.8	1.8	12.1	37.5	18.9	6.2	4.9	—	7.5
Ash	141.6	19.7	60.0	56.8	—	5.1	57.9	19.7	25.8	12.4	—	—
Cottonwood	41.2	41.2	—	—	—	—	41.2	41.2	—	—	—	—
Yellow-poplar	1,077.9	501.9	231.5	278.9	21.9	43.6	786.7	501.9	124.0	116.1	5.2	39.4
Black cherry	53.5	—	21.2	8.2	7.0	17.1	31.8	—	7.7	—	7.0	17.1
Black walnut	58.2	23.4	16.2	14.3	—	4.3	33.1	23.4	5.4	—	—	4.3
Sycamore	195.5	89.0	67.6	21.5	—	17.3	157.6	89.0	52.0	5.0	—	11.5
Black locust	1.1	—	—	1.1	—	—	—	—	—	—	—	—
Elm	65.1	12.9	4.5	27.1	12.4	8.2	25.8	12.9	—	4.7	—	8.2
Other Eastern hardwoods	87.7	24.2	25.9	21.4	8.4	7.8	54.3	24.2	18.9	6.3	—	4.8
Total hardwoods	8,884.2	2,049.2	2,400.1	3,265.7	727.0	442.1	4,912.8	2,040.3	1,351.2	979.9	252.3	289.0
All species	9,566.2	2,149.3	2,539.5	3,703.1	727.0	447.3	5,038.7	2,059.7	1,380.1	1,057.5	252.3	289.0

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 24—Volume of growing stock on timberland by county and species group, West Central Tennessee, 1997

County	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
	Million cubic feet						
Benton	254.4	9.8	8.1	1.6	244.6	61.6	182.9
Decatur	233.5	28.5	24.5	3.9	205.1	64.3	140.8
Hardin	314.6	86.2	80.9	5.3	228.4	88.2	140.2
Hickman	527.1	11.3	10.8	0.5	515.9	80.2	435.7
Houston	158.3	2.2	—	2.2	156.1	36.6	119.5
Humphreys	314.2	3.0	2.4	0.6	311.2	61.9	249.3
Lawrence	232.2	3.3	3.2	0.1	228.8	65.4	163.5
Lewis	203.1	12.7	12.4	0.3	190.4	25.4	164.9
Perry	297.8	9.7	2.5	7.3	288.0	32.2	255.8
Stewart	318.7	14.0	3.6	10.4	304.7	77.5	227.2
Wayne	573.9	93.2	90.5	2.8	480.7	82.5	398.1
Total	3,427.7	273.9	238.8	35.1	3,153.8	675.8	2,478.0

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 25—Volume of live trees on timberland by county and species group, West Central Tennessee, 1997

County	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
	Million cubic feet						
Benton	297.6	13.4	9.4	4.0	284.2	70.1	214.1
Decatur	257.2	31.4	25.0	6.3	225.8	73.4	152.4
Hardin	355.9	90.7	85.1	5.6	265.2	98.6	166.6
Hickman	586.1	11.4	10.8	0.6	574.7	93.6	481.1
Houston	168.8	2.3	—	2.3	166.5	38.6	127.9
Humphreys	371.1	3.6	2.4	1.3	367.4	73.6	293.8
Lawrence	261.2	3.6	3.4	0.2	257.5	75.6	182.0
Lewis	240.1	13.5	13.1	0.3	226.6	32.8	193.8
Perry	347.9	11.6	3.8	7.8	336.3	45.4	290.9
Stewart	345.0	15.7	3.6	12.1	329.3	86.1	243.3
Wayne	637.1	97.0	94.1	2.9	540.1	93.5	446.7
Total	3,868.0	294.3	250.7	43.5	3,573.8	781.3	2,792.5

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 26—Volume of sawtimber on timberland by county and species group, West Central Tennessee, 1997

County	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
	Million board feet						
Benton	812.0	22.4	22.4	—	789.6	174.9	614.7
Decatur	751.2	113.9	107.9	6.0	637.3	183.5	453.8
Hardin	877.0	223.1	208.9	14.2	653.8	250.0	403.8
Hickman	1,501.8	49.0	49.0	—	1,452.8	250.5	1,202.3
Houston	467.3	3.4	—	3.4	463.8	122.8	341.0
Humphreys	833.5	11.1	8.4	2.7	822.4	205.2	617.2
Lawrence	652.5	—	—	—	652.5	247.1	405.4
Lewis	535.8	23.5	23.5	—	512.3	73.6	438.8
Perry	708.8	21.9	10.1	11.7	687.0	97.6	589.4
Stewart	1,028.4	49.2	13.1	36.1	979.2	248.2	731.1
Wayne	1,398.0	164.6	160.1	4.5	1,233.5	210.7	1,022.7
Total	9,566.2	682.0	603.4	78.7	8,884.2	2,064.0	6,820.2

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 27—Volume of timber on timberland by class of timber and species group, West Central Tennessee, 1997

Class of timber	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
	Million cubic feet						
Sawtimber trees							
Saw-log portion	1,861.2	133.5	118.7	14.8	1,727.6	374.0	1,353.7
Upper-stem portion[a]	370.5	20.6	18.6	2.1	349.8	68.1	281.7
Total	2,231.6	154.2	137.3	16.9	2,077.5	442.1	1,635.4
Poletimber trees	1,196.1	119.8	101.5	18.2	1,076.3	233.7	842.6
All growing-stock trees	3,427.7	273.9	238.8	35.1	3,153.8	675.8	2,478.0
Rough trees							
Sawtimber size	226.8	11.9	6.5	5.4	214.8	45.1	169.8
Poletimber size	177.3	8.4	5.4	3.0	168.9	51.4	117.5
Total	404.1	20.3	11.9	8.4	383.7	96.5	287.3
Rotten trees							
Sawtimber size	33.6	—	—	—	33.6	7.9	25.7
Poletimber size	2.7	—	—	—	2.7	1.1	1.5
Total	36.3	—	—	—	36.3	9.0	27.2
Salvable dead trees							
Sawtimber size	12.5	2.5	2.5	—	10.0	—	10.0
Poletimber size	9.2	5.9	4.8	1.1	3.3	1.0	2.3
Total	21.8	8.4	7.3	1.1	13.3	1.0	12.4
All classes	3,889.8	302.7	258.0	44.7	3,587.1	782.3	2,804.8

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

[a] Includes cull sections in the saw-log portion.

Table 28—Volume of live and growing-stock trees on timberland by ownership class and species group, West Central Tennessee, 1997

Ownership class	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
			Live trees *(million cubic feet)*				
National forest	—	—	—	—	—	—	—
Other public	293.1	13.6	3.2	10.4	279.5	62.0	217.5
Forest industry	775.2	96.0	89.9	6.2	679.1	114.0	565.1
Nonindustrial private	2,799.8	184.7	157.6	27.0	2,615.1	605.3	2,009.8
All classes	3,868.0	294.3	250.7	43.5	3,573.8	781.3	2,792.5
			Growing-stock trees *(million cubic feet)*				
National forest	—	—	—	—	—	—	—
Other public	261.7	12.3	3.2	9.1	249.4	48.8	200.5
Forest industry	711.2	91.6	85.8	5.8	619.6	103.5	516.1
Nonindustrial private	2,454.8	170.0	149.9	20.2	2,284.8	523.5	1,761.3
All classes	3,427.7	273.9	238.8	35.1	3,153.8	675.8	2,478.0

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 29—Volume of sawtimber on timberland by ownership class, species group, and size class, West Central Tennessee, 1997

Ownership class	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
			All size classes *(million board feet)*				
National forest	—	—	—	—	—	—	—
Other public	931.8	39.0	7.3	31.8	892.8	164.9	727.9
Forest industry	1,808.5	154.2	147.1	7.1	1,654.3	310.8	1,343.5
Nonindustrial private	6,825.9	488.8	449.0	39.8	6,337.2	1,588.3	4,748.8
All classes	9,566.2	682.0	603.4	78.7	8,884.2	2,064.0	6,820.2
			Trees ∫ 15.0 inches d.b.h. *(million board feet)*				
National forest	—	—	—	—	—	—	—
Other public	665.1	14.8	—	14.8	650.3	140.2	510.1
Forest industry	899.0	36.6	36.6	—	862.5	174.1	688.4
Nonindustrial private	3,474.5	74.5	74.5	—	3,400.0	1,005.0	2,395.1
All classes	5,038.7	125.9	111.0	14.8	4,912.8	1,319.3	3,593.5

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 30—Volume of growing stock on timberland by forest-type group, stand origin, and species group, West Central Tennessee, 1997

Forest-type group and stand origin	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
	Million cubic feet						
Softwood types							
Loblolly–shortleaf pine							
Planted	152.1	137.5	137.0	0.5	14.6	10.2	4.4
Natural	58.3	42.9	31.2	11.7	15.4	1.1	14.3
Total	210.4	180.4	168.2	12.2	30.0	11.4	18.7
Total softwoods	210.4	180.4	168.2	12.2	30.0	11.4	18.7
Hardwood types							
Oak–pine							
Planted	27.8	16.6	16.6	—	11.2	7.9	3.3
Natural	72.8	31.8	23.8	8.0	41.0	10.5	30.5
Total	100.6	48.4	40.3	8.0	52.2	18.4	33.8
Oak–hickory	2,976.0	41.7	30.2	11.5	2,934.3	558.7	2,375.6
Oak–gum–cypress	104.5	3.4	—	3.4	101.2	59.3	41.8
Elm–ash–cottonwood	36.2	0.1	—	0.1	36.1	28.0	8.1
Total hardwoods	3,217.3	93.5	70.6	22.9	3,123.8	664.5	2,459.3
Nonstocked	—	—	—	—	—	—	—
All groups	3,427.7	273.9	238.8	35.1	3,153.8	675.8	2,478.0

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 31—Average basal area of live trees per acre on timberland by ownership class, species group, and d.b.h., West Central Tennessee, 1997

Ownership class and species group	All tree sizes	D.b.h. (inches) 1.0-4.9	5.0-10.9	11.0-14.9	∫ 15.0
		Square feet/acre			
National forest					
Softwood	—	—	—	—	—
Hardwood	—	—	—	—	—
Total	—	—	—	—	—
Other public					
Softwood	6.7	1.9	3.4	0.6	0.7
Hardwood	100.7	10.6	29.3	18.4	42.3
Total	107.3	12.5	32.7	19.1	43.1
Forest industry					
Softwood	16.0	2.5	9.9	1.7	1.9
Hardwood	67.8	13.9	25.3	15.9	12.6
Total	83.8	16.4	35.2	17.6	14.5
Nonindustrial private					
Softwood	7.4	1.4	4.2	1.4	0.4
Hardwood	80.1	13.3	27.8	20.3	18.7
Total	87.4	14.7	32.0	21.6	19.1
All classes					
Softwood	9.1	1.7	5.3	1.4	0.7
Hardwood	78.8	13.2	27.4	19.3	19.0
Total	87.9	14.9	32.7	20.6	19.7

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 32—Average net annual growth of growing stock on timberland by county and species group, West Central Tennessee, 1989–1996

County	All species	Softwoods: All softwood	Yellow pine	Other softwood	Hardwoods: All hardwood	Soft hardwood	Hard hardwood
				Million cubic feet			
Benton	11.0	2.4	2.4	—	8.6	3.1	5.5
Decatur	7.5	-0.4	-0.5	0.1	7.9	2.0	5.9
Hardin	20.0	8.6	8.1	0.5	11.4	4.6	6.8
Hickman	22.2	0.6	0.5	0.1	21.6	5.0	16.6
Houston	6.5	—	—	—	6.5	1.9	4.6
Humphreys	11.4	0.2	0.2	-0.1	11.3	2.9	8.4
Lawrence	8.3	—	—	—	8.3	2.4	5.8
Lewis	8.2	1.1	1.1	—	7.1	1.8	5.4
Perry	9.3	0.3	0.3	0.1	9.0	1.2	7.8
Stewart	12.8	0.2	0.0	0.1	12.7	4.3	8.4
Wayne	20.9	5.2	5.0	0.1	15.7	2.7	13.1
Total	138.1	18.1	17.2	0.9	120.0	31.8	88.2

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 33—Average net annual growth of live trees on timberland by county and species group, West Central Tennessee, 1989–1996

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
	Million cubic feet						
Benton	12.1	2.7	2.6	0.1	9.4	3.4	6.1
Decatur	8.2	-0.4	-0.5	0.1	8.6	2.2	6.4
Hardin	22.1	8.7	8.2	0.5	13.5	5.2	8.2
Hickman	24.6	0.8	0.5	0.3	23.7	5.7	18.0
Houston	7.1	—	—	—	7.1	2.1	4.9
Humphreys	12.9	0.3	0.3	-0.0	12.6	3.4	9.2
Lawrence	9.2	—	—	—	9.2	2.8	6.4
Lewis	9.2	1.1	1.1	—	8.0	2.1	5.9
Perry	10.5	0.4	0.3	0.1	10.1	1.1	9.0
Stewart	13.4	0.2	0.0	0.1	13.3	4.7	8.5
Wayne	23.3	5.6	5.4	0.1	17.7	3.1	14.6
Total	152.5	19.3	18.0	1.3	133.2	35.9	97.2

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 34—Average net annual growth of sawtimber on timberland by county and species group, West Central Tennessee, 1989–1996

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
	Million board feet						
Benton	39.7	7.0	7.0	—	32.8	6.7	26.0
Decatur	34.6	2.2	2.0	0.2	32.3	5.4	26.9
Hardin	65.7	24.2	22.8	1.4	41.5	17.2	24.3
Hickman	88.3	2.6	1.6	1.0	85.7	20.3	65.4
Houston	28.1	—	—	—	28.1	9.9	18.2
Humphreys	50.0	1.5	1.4	0.1	48.5	16.7	31.8
Lawrence	31.2	—	—	—	31.2	6.5	24.8
Lewis	25.4	—	—	—	25.4	6.2	19.2
Perry	41.0	0.2	0.1	0.1	40.8	6.1	34.7
Stewart	59.2	0.8	0.1	0.7	58.4	19.9	38.5
Wayne	75.7	16.3	16.3	—	59.4	7.4	52.0
Total	538.9	54.7	51.3	3.4	484.2	122.4	361.8

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 35—Average annual removals of growing stock on timberland by county and species group, West Central Tennessee, 1989–1996

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
	Million cubic feet						
Benton	2.3	1.3	1.3	—	1.1	0.2	0.8
Decatur	7.0	—	—	—	7.0	1.8	5.2
Hardin	11.5	4.9	4.7	0.2	6.6	2.0	4.6
Hickman	8.8	0.8	0.8	—	8.0	1.8	6.2
Houston	5.0	—	—	—	5.0	1.1	3.9
Humphreys	9.2	—	—	—	9.2	1.0	8.2
Lawrence	9.5	—	—	—	9.5	2.4	7.1
Lewis	1.1	—	—	—	1.1	—	1.1
Perry	7.7	0.5	0.4	0.1	7.2	1.0	6.2
Stewart	10.8	—	—	—	10.8	2.4	8.4
Wayne	10.5	—	—	—	10.5	1.5	9.0
Total	83.5	7.5	7.2	0.3	76.0	15.2	60.8

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 36—Average annual removals of live trees on timberland by county and species group, West Central Tennessee, 1989–1996

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
	Million cubic feet						
Benton	2.3	1.3	1.3	—	1.1	0.2	0.8
Decatur	7.0	—	—	—	7.0	1.8	5.2
Hardin	12.2	5.0	4.8	0.2	7.2	2.2	4.9
Hickman	9.0	0.8	0.8	—	8.2	1.8	6.5
Houston	5.1	—	—	—	5.1	1.1	4.0
Humphreys	9.9	—	—	—	9.9	1.0	8.9
Lawrence	9.8	—	—	—	9.8	2.6	7.2
Lewis	1.4	—	—	—	1.4	—	1.4
Perry	8.2	0.6	0.4	0.2	7.6	1.0	6.6
Stewart	11.9	—	—	—	11.9	2.6	9.2
Wayne	10.5	—	—	—	10.5	1.5	9.0
Total	87.3	7.6	7.3	0.4	79.6	15.8	63.8

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 37—Average annual removals of sawtimber on timberland by county and species group, West Central Tennessee, 1989–1996

		Softwoods			Hardwoods		
County	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
				Million board feet			
Benton	4.9	1.5	1.5	—	3.4	1.1	2.3
Decatur	26.1	—	—	—	26.1	8.6	17.5
Hardin	37.4	14.0	13.5	0.5	23.4	9.4	14.0
Hickman	28.7	3.2	3.2	—	25.5	7.3	18.2
Houston	19.9	—	—	—	19.9	3.8	16.2
Humphreys	35.3	—	—	—	35.3	4.1	31.2
Lawrence	28.1	—	—	—	28.1	8.9	19.2
Lewis	3.8	—	—	—	3.8	—	3.8
Perry	28.0	0.6	0.6	—	27.4	4.6	22.8
Stewart	39.7	—	—	—	39.7	6.9	32.8
Wayne	29.5	—	—	—	29.5	4.9	24.6
Total	281.4	19.3	18.8	0.5	262.1	59.7	202.4

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 38—Average net annual growth and average annual removals of live trees, growing stock, and sawtimber on timberland by species, West Central Tennessee, 1989–1996

Species	Live trees		Growing stock		Sawtimber	
	Net annual growth	Annual removals	Net annual growth	Annual removals	Net annual growth	Annual removals
	Million cubic feet				*Million board feet*	
Softwood						
Shortleaf pine	1.5	1.5	1.4	1.4	5.3	5.7
Loblolly pine	14.2	4.6	13.7	4.6	43.0	9.3
Virginia pine	2.3	1.2	2.1	1.2	3.0	3.8
Baldcypress	0.1	—	0.1	—	0.2	—
Redcedars	1.3	0.4	0.8	0.3	3.2	0.5
Total softwoods	19.3	7.6	18.1	7.5	54.7	19.3
Hardwood						
Select white oaks	37.3	25.9	36.0	25.5	159.1	91.7
Select red oaks	6.7	4.9	6.6	4.9	29.9	18.3
Other white oaks	14.7	9.8	12.5	8.9	47.3	25.7
Other red oaks	15.0	10.8	14.2	10.5	60.9	33.9
Hickory	9.0	8.0	8.2	7.3	35.1	21.8
Hard maple	4.1	1.5	3.5	1.3	9.7	3.9
Soft maple	2.8	1.2	1.5	0.8	4.0	1.4
Beech	3.2	1.9	2.4	1.8	7.8	5.9
Sweetgum	11.2	3.9	9.8	3.9	27.9	15.5
Tupelo and blackgum	2.0	1.1	1.9	1.1	2.8	1.4
Ash	2.2	—	2.1	—	8.1	—
Yellow-poplar	15.5	6.6	15.7	6.6	78.4	31.0
Black cherry	2.6	0.5	1.6	0.5	3.5	—
Black walnut	0.2	0.5	0.4	0.3	2.0	1.2
Sycamore	0.6	1.3	0.5	1.3	2.9	5.9
Black locust	0.0	—	—	—	—	—
Elm	0.8	0.6	0.6	0.6	3.1	2.7
Other Eastern hardwoods	5.0	1.1	2.3	0.7	1.5	1.7
Total hardwoods	133.2	79.6	120.0	76.0	484.2	262.1
All species	152.5	87.3	138.1	83.5	538.9	281.4

Numbers in columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 39—Average annual removals of growing stock on timberland by species and diameter class, West Central Tennessee, 1989-1996

Species	All classes	Diameter class (inches at breast height) 5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
		Million cubic feet									
Softwood											
Shortleaf pine	1.4	—	0.3	0.1	0.3	0.3	0.2	0.3	—	—	—
Loblolly pine	4.6	0.9	1.2	2.1	0.2	0.2	—	—	—	—	—
Virginia pine	1.2	0.3	0.2	—	—	0.5	0.3	—	—	—	—
Redcedars	0.3	0.1	0.1	—	0.1	—	—	—	—	—	—
Total softwoods	7.5	1.2	1.7	2.3	0.6	0.9	0.5	0.3	—	—	—
Hardwood											
Select white oaks	25.5	0.8	1.3	2.3	2.5	6.7	5.3	3.0	2.7	1.0	—
Select red oaks	4.9	0.1	0.2	0.4	0.4	0.7	0.9	0.9	0.8	0.6	—
Other white oaks	8.9	0.5	0.8	1.4	1.7	1.2	1.2	1.7	0.2	0.3	—
Other red oaks	10.5	—	1.2	1.4	1.1	3.1	1.8	1.1	0.6	0.3	—
Hickory	7.3	0.4	0.6	1.1	1.3	2.1	0.9	0.3	0.3	0.3	—
Hard maple	1.3	—	0.2	0.2	0.2	—	0.2	0.5	—	—	—
Soft maple	0.8	0.1	0.1	0.2	0.1	—	0.2	—	—	—	—
Beech	1.8	—	0.1	0.2	0.2	—	0.6	—	0.6	—	0.2
Sweetgum	3.9	0.1	—	0.4	0.9	0.9	0.9	0.5	—	0.3	—
Tupelo and blackgum	1.1	0.3	0.1	0.3	0.2	—	0.2	—	—	—	—
Yellow-poplar	6.6	—	0.3	0.3	0.4	0.9	1.3	2.0	0.8	0.6	—
Black cherry	0.5	—	0.1	0.3	—	—	—	—	—	—	—
Black walnut	0.3	—	—	—	—	—	0.1	0.2	—	—	—
Sycamore	1.3	—	—	0.1	—	—	—	0.4	0.1	0.6	—
Elm	0.6	—	—	—	—	0.1	—	0.4	0.1	—	—
Other Eastern hardwoods	0.7	0.2	0.1	—	0.1	0.1	—	0.1	—	—	—
Total hardwoods	76.0	2.4	5.2	8.6	9.1	15.7	13.7	11.0	6.1	3.9	0.2
All species	83.5	3.7	6.9	10.9	9.7	16.7	14.1	11.3	6.1	3.9	0.2

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 40—Average annual mortality of live trees, growing stock, and sawtimber on timberland by species, West Central Tennessee, 1989–1996

Species	Live trees	Growing stock	Sawtimber
	Million cubic feet		*Million board feet*
Softwood			
Shortleaf pine	0.7	0.7	0.5
Loblolly pine	3.2	3.1	8.5
Redcedars	0.5	0.3	—
Total softwoods	4.4	4.1	9.1
Hardwood			
Select white oaks	2.2	2.1	2.9
Select red oaks	1.2	1.1	3.9
Other white oaks	2.1	1.9	4.0
Other red oaks	5.0	4.6	14.7
Hickory	4.8	4.5	6.9
Soft maple	1.1	0.6	2.2
Beech	0.8	—	—
Sweetgum	0.9	0.9	0.8
Ash	0.6	0.4	0.8
Yellow-poplar	1.6	1.2	3.5
Black cherry	0.4	0.2	—
Black walnut	0.3	—	—
Sycamore	0.9	0.9	3.5
Elm	0.4	0.4	—
Other Eastern hardwoods	1.4	0.3	1.2
Total hardwoods	23.6	19.2	44.4
All species	28.0	23.4	53.4

Numbers in columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 41—Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group, West Central Tennessee, 1989–1996

Ownership class	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
			Average net annual growth *(million cubic feet)*				
National forest	—	—	—	—	—	—	—
Other public	7.5	0.3	0.1	0.2	7.3	1.8	5.5
Forest industry	29.3	6.6	6.3	0.2	22.7	6.3	16.4
Nonindustrial private	101.3	11.2	10.8	0.5	90.0	23.7	66.3
All classes	138.1	18.1	17.2	0.9	120.0	31.8	88.2
			Average annual removals *(million cubic feet)*				
National forest	—	—	—	—	—	—	—
Other public	1.3	—	—	—	1.3	0.3	1.0
Forest industry	14.1	—	—	—	14.1	3.5	10.5
Nonindustrial private	68.1	7.5	7.2	0.3	60.7	11.4	49.2
All classes	83.5	7.5	7.2	0.3	76.0	15.2	60.8

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 42—Average net annual growth and average annual removals of live trees on timberland by ownership class and species group, West Central Tennessee, 1989–1996

Ownership class	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
			Average net annual growth *(million cubic feet)*				
National forest	—	—	—	—	—	—	—
Other public	8.0	0.3	0.1	0.2	7.8	2.4	5.4
Forest industry	32.1	7.0	6.8	0.3	25.1	6.7	18.4
Nonindustrial private	112.3	12.0	11.2	0.9	100.3	26.9	73.4
All classes	152.5	19.3	18.0	1.3	133.2	35.9	97.2
			Average annual removals *(million cubic feet)*				
National forest	—	—	—	—	—	—	—
Other public	1.3	—	—	—	1.3	0.3	1.0
Forest industry	15.0	—	—	—	15.0	3.6	11.5
Nonindustrial private	70.9	7.6	7.3	0.4	63.3	12.0	51.4
All classes	87.3	7.6	7.3	0.4	79.6	15.8	63.8

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 43—Average net annual growth and average annual removals of sawtimber on timberland by ownership class and species group, West Central Tennessee, 1989–1996

		Softwoods			Hardwoods		
Ownership class	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
			Average net annual growth *(million board feet)*				
National forest	—	—	—	—	—	—	—
Other public	31.2	0.7	—	0.7	30.5	7.7	22.9
Forest industry	108.4	17.6	17.4	0.2	90.8	19.0	71.8
Nonindustrial private	399.3	36.5	33.9	2.5	362.8	95.8	267.1
All classes	538.9	54.7	51.3	3.4	484.2	122.4	361.8
			Average annual removals *(million board feet)*				
National forest	—	—	—	—	—	—	—
Other public	4.0	—	—	—	4.0	0.6	3.3
Forest industry	43.3	—	—	—	43.3	13.4	30.0
Nonindustrial private	234.1	19.3	18.8	0.5	214.8	45.6	169.1
All classes	281.4	19.3	18.8	0.5	262.1	59.7	202.4

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 44—Average net annual growth of growing stock on timberland by forest-type group, stand origin, and species group, West Central Tennessee, 1989–1996

Forest-type group and stand origin[a]	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
	Million cubic feet						
Softwood types							
White–red–jack pine							
Planted	—	—	—	—	—	—	—
Natural	0.3	—	—	—	0.3	0.0	0.3
Total	0.3	—	—	—	0.3	0.0	0.3
Loblolly–shortleaf pine							
Planted	11.0	9.9	9.8	0.1	1.0	0.8	0.3
Natural	1.7	0.8	0.7	0.2	0.8	0.4	0.5
Total	12.6	10.8	10.5	0.3	1.9	1.1	0.7
Total softwoods	12.9	10.8	10.5	0.3	2.1	1.2	1.0
Hardwood types							
Oak–pine							
Planted	2.5	2.4	2.4	0.0	0.1	0.1	—
Natural	5.3	2.2	2.1	0.1	3.1	0.3	2.8
Total	7.8	4.6	4.4	0.2	3.2	0.3	2.8
Oak–hickory	112.9	2.7	2.3	0.4	110.2	27.1	83.1
Oak–gum–cypress	3.7	—	—	—	3.7	2.7	1.0
Elm–ash–cottonwood	0.9	—	—	—	0.9	0.6	0.3
Total hardwoods	125.2	7.3	6.7	0.6	117.9	30.7	87.2
Nonstocked	—	—	—	—	—	—	—
All groups	138.1	18.1	17.2	0.9	120.0	31.8	88.2

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

[a] Classifications at the beginning of the remeasurement period.

Table 45—Average annual removals of growing stock on timberland by forest-type group, stand origin, and species group, West Central Tennessee, 1989–1996

Forest-type group and stand origin[a]	All species	Softwoods: All softwood	Softwoods: Yellow pine	Softwoods: Other softwood	Hardwoods: All hardwood	Hardwoods: Soft hardwood	Hardwoods: Hard hardwood
	Million cubic feet						
Softwood types							
White–red–jack pine							
Planted	—	—	—	—	—	—	—
Natural	1.6	—	—	—	1.6	0.2	1.3
Total	1.6	—	—	—	1.6	0.2	1.3
Loblolly–shortleaf pine							
Planted	5.3	5.0	5.0	—	0.3	—	0.3
Natural	0.3	—	—	—	0.3	—	0.3
Total	5.6	5.0	5.0	—	0.6	—	0.6
Total softwoods	7.1	5.0	5.0	—	2.2	0.2	1.9
Hardwood types							
Oak–pine							
Planted	—	—	—	—	—	—	—
Natural	5.8	1.8	1.8	—	4.0	1.2	2.7
Total	5.8	1.8	1.8	—	4.0	1.2	2.7
Oak–hickory	70.4	0.7	0.4	0.3	69.7	13.6	56.1
Oak–gum–cypress	0.2	—	—	—	0.2	0.2	—
Total hardwoods	76.3	2.5	2.2	0.3	73.8	15.0	58.8
Nonstocked	—	—	—	—	—	—	—
All groups	83.5	7.5	7.2	0.3	76.0	15.2	60.8

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

[a] Classifications at the beginning of the remeasurement period.

Table 46—Fresh weight of live trees on timberland by ownership class, species group, and tree component, West Central Tennessee, 1997

Ownership class and species group	All components	Component: All live saplings	Growing-stock trees: Total	Growing-stock trees: Boles	Growing-stock trees: Stumps, tops, and limbs	Cull trees: Total	Cull trees: Boles	Cull trees: Stumps, tops, and limbs
	Thousand tons							
National forest								
Softwood	—	—	—	—	—	—	—	—
Hardwood	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—
Other public								
Softwood	685.2	64.1	562.5	451.0	111.5	58.6	46.5	12.1
Hardwood	15,769.2	961.7	13,202.5	10,716.8	2,485.7	1,605.0	1,235.0	370.1
Total	16,454.3	1,025.8	13,764.9	11,167.7	2,597.2	1,663.6	1,281.5	382.2
Forest industry								
Softwood	4,777.0	382.3	4,187.1	3,418.7	768.4	207.7	170.7	37.0
Hardwood	39,128.0	4,060.7	31,896.1	25,638.3	6,257.8	3,171.3	2,391.0	780.4
Total	43,905.0	4,442.9	36,083.2	29,057.0	7,026.2	3,379.0	2,561.6	817.4
Nonindustrial private								
Softwood	8,841.6	739.3	7,423.7	6,192.6	1,231.1	678.7	549.0	129.7
Hardwood	148,065.3	13,323.0	117,097.2	94,409.0	22,688.2	17,645.1	13,603.0	4,042.1
Total	156,906.9	14,062.3	124,520.9	100,601.6	23,919.3	18,323.8	14,152.0	4,171.8
All ownerships								
Softwood	14,303.8	1,185.7	12,173.2	10,062.2	2,111.0	944.9	766.2	178.8
Hardwood	202,962.5	18,345.4	162,195.7	130,764.0	31,431.7	22,421.4	17,228.9	5,192.5
Total	217,266.2	19,531.0	174,368.9	140,826.2	33,542.7	23,366.3	17,995.1	5,371.3

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

Table 47—Area of timberland treated or disturbed annually and retained in timberland by treatment or disturbance and ownership class, West Central Tennessee, 1989 to 1997

Treatment or disturbance	All classes	Ownership class		
		Public	Forest industry	Nonindustrial private
		Thousand acres		
Final harvest	17.4	—	5.9	11.5
Partial harvest[a]	39.1	0.8	2.8	35.5
Seed tree/shelterwood	—	—	—	—
Commercial thinning	0.8	—	—	0.8
Other stand improvement	2.9	—	2.3	0.6
Site preparation	5.9	—	2.9	3.0
Artificial regeneration[b]	5.7	0.2	3.0	2.5
Natural regeneration[b]	32.7	0.4	3.9	28.5
Other treatment	13.3	—	2.0	11.3
Natural disturbance				
Disease	4.3	—	1.9	2.4
Insects	0.4	—	—	0.4
Fire	—	—	—	—
Weather	2.0	0.3	—	1.7
Animals	0.8	—	—	0.8
Other disturbances				
Grazing	4.6	—	—	4.6
Other man-caused disturbance	2.8	—	—	2.8

Since some acres experience more than one treatment or disturbance, there are no column totals. Numbers in rows may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

[a] Includes high-grading and some selective cutting.

[b] Includes establishment of trees for timber production on forest and nonforest land.

Table 48—Area of timberland treated or disturbed annually and retained in timberland by treatment or disturbance and forest management type, West Central Tennessee, 1989 to 1997

Treatment or disturbance	All types	Forest management type[a]					
		Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
		Thousand acres					
Final harvest	17.4	2.8	—	0.9	13.7	—	—
Partial harvest[b]	39.1	0.2	0.8	5.5	31.7	0.9	—
Seed tree/shelterwood	—	—	—	—	—	—	—
Commercial thinning	0.8	—	—	—	0.8	—	—
Other stand improvement	2.9	1.2	—	0.1	1.6	—	—
Site preparation	5.9	1.9	—	0.8	3.2	—	—
Other treatment	13.3	—	—	0.3	13.0	—	—
Natural disturbance							
Disease	4.3	—	—	1.3	3.0	—	—
Insects	0.4	—	—	0.4	—	—	—
Fire	—	—	—	—	—	—	—
Weather	2.0	—	—	0.8	—	1.2	—
Animals	0.8	—	—	—	—	0.8	—
Other disturbance							
Grazing	4.6	—	—	—	4.4	0.1	—
Other man-caused disturbance	2.8	—	—	—	2.6	0.2	—

Since some acres experience more than one treatment or disturbance, there are no column totals. Numbers in rows may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

[a] Classification before treatment or disturbance.

[b] Includes high-grading and some selective cutting.

Table 49—Area of timberland regenerated annually by type of regeneration and forest management type, West Central Tennessee, 1989 to 1997

Type of regeneration	All types	Forest management type[a]					
		Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
		Thousand acres					
Artificial regeneration following harvest	2.4	0.6	—	1.7	0.2	—	—
Natural regeneration following harvest	6.2	—	—	—	5.8	—	0.4
Other artificial regeneration on forest land	2.3	1.3	—	0.8	—	—	0.2
Other natural regeneration on forest land	19.9	—	—	1.8	17.9	0.2	—
Artificial regeneration on former nonforest land	1.0	0.7	—	0.3	—	—	—
Natural reversion of former nonforest land	6.6	—	0.2	0.4	5.5	0.4	0.1
Total	38.4	2.6	0.2	5.0	29.3	0.6	0.8

Numbers in rows and columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

[a] Classification after regeneration.

Table 50—Land area by land-use class, major forest type, and survey completion date, West Central Tennessee

Land-use class	Survey completion date			Change
	1980	1989	1997	1989-1997
	Thousand acres			
Forest land				
Timberland				
Pine types	107.2	133.1	144.9	11.8
Oak–pine types	57.5	93.8	133.7	39.9
Hardwood types	2,018.9	2,106.8	2,078.0	-28.8
Total	2,183.6	2,333.8	2,356.6	22.8
Productive reserved	15.9	—	5.5	5.5
Other	—	—	—	—
Total forest land	2,199.5	2,333.8	2,362.0	33.7
Other land[a]	1,222.6	1,061.8	938.9	-122.9
All land[b]	3,422.1	3,395.6	3,301.0	-94.6

Numbers in columns may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

[a] Includes 26.4 thousand acres of water according to Forest Inventory and Monitoring standards of area classification, but defined by the Bureau of Census as land.

[b] From the U.S. Bureau of the Census, 1990.

Table 51—Volume of sawtimber, growing stock, and live trees on timberland by species group, survey completion date, and diameter class, West Central Tennessee

Species group and year	All classes	Diameter class (inches at breast height) 5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0 and larger
					Sawtimber *(million board feet)*					
Softwood										
1980	423.9	—	—	173.2	141.3	46.2	39.6	14.5	9.0	—
1989	415.3	—	—	131.0	145.5	98.2	29.0	9.3	2.2	—
1997	682.0	—	—	235.7	177.4	143.0	85.8	10.4	—	29.7
Hardwood										
1980	4,975.7	—	—	—	1,556.4	1,400.4	912.6	564.0	295.3	246.9
1989	6,546.6	—	—	—	1,749.6	1,918.5	1,259.2	748.1	401.3	469.9
1997	8,884.2	—	—	—	1,830.0	2,141.4	1,844.9	1,317.0	775.8	975.1
					Growing stock *(million cubic feet)*					
Softwood										
1980	156.2	20.4	45.5	41.8	28.8	8.8	6.9	2.8	1.3	—
1989	161.1	34.4	40.9	31.5	28.2	18.3	5.4	1.9	0.5	—
1997	273.9	41.3	78.4	65.1	39.3	28.1	15.3	1.7	—	4.6
Hardwood										
1980	1,937.8	212.7	304.3	396.8	360.3	287.1	177.7	103.3	52.3	43.3
1989	2,365.6	186.3	345.3	426.4	436.9	408.4	254.0	144.8	75.8	87.7
1997	3,153.8	204.3	364.3	507.7	530.9	533.7	413.1	274.1	149.4	176.3
					Live trees *(million cubic feet)*					
Softwood										
1980	161.2	21.5	45.7	42.9	29.4	9.4	7.0	4.0	1.3	—
1989	167.0	35.4	42.2	32.6	29.1	18.6	6.1	2.5	0.5	—
1997	294.3	44.2	84.0	68.9	44.2	28.1	18.5	1.7	—	4.636
Hardwood										
1980	2,231.5	249.6	342.9	428.9	406.0	327.1	208.4	126.5	65.7	76.4
1989	2,562.7	230.0	371.1	448.5	470.3	426.8	265.2	154.8	84.3	111.7
1997	3,573.8	263.4	418.6	565.8	599.4	583.3	445.4	304.4	178.8	214.6

Numbers in rows may not sum to totals due to rounding.

A dash (—) indicates no sample for the cell; 0.0 indicates a value of >0.0 but <0.05 for the cell.

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This report summarizes a 1997 inventory of the forest resources of an 11-county area of Tennessee. Major findings are highlighted in text and graphs; detailed data are presented in 51 tables.

Keywords: Forest ownership, timberland, timber growth, timber removals, timber volume.

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