

United States
Department of
Agriculture

Forest Service



**Southern
Research Station**

Resource Bulletin
SRS-51

Forest Statistics for East Tennessee, 1999

Callie Jo Schweitzer



The Author:

Callie Jo Schweitzer is a Research Forester with the Forest Inventory and Analysis Research Work Unit, Southern Research Station, U.S. Department of Agriculture, Forest Service, Asheville, NC 28802.

May 2000

Southern Research Station
P.O. Box 2680
Asheville, NC 28802

Foreword

This report highlights the principal findings of the sixth forest survey of East Tennessee. Field work began in July 1998 and was completed in May 1999. Five previous surveys, completed in 1950, 1961, 1971, 1980, and 1989 provide the statistics for measuring changes and trends over the past 49 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 Analysis (FIA) Research Work Unit at the Southern Research Station, Asheville, NC. The FIA 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:

Forest Inventory and Analysis
Southern Research Station
P.O. Box 2680
Asheville, NC 28802-2680
Telephone: 828-257-4350

Acknowledgment

The Southern Research Station gratefully acknowledges the cooperation and assistance provided by the Tennessee Department of Agriculture, Forestry Division. The research was made possible through collaboration within USDA Forest Service, FIA personnel (including those persons in Data Collection, Data Compilation, Analysis, and Publications Management). Appreciation is also expressed for the cooperation of other public agencies and private landowners in providing access to measurement plots.

Contents

	<i>Page</i>
Highlights	1
Inventory Methods	2
Statistical Reliability	3
Definitions	5
Metric Equivalents	9
Graphs	10
Cross Reference of Eastern Core Tables	15
Index of Tables	15
Tables 1-51 ^a	17

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

The use of trade or firm names in this publication is for reader information and does not imply endorsement by the U.S. Department of Agriculture of any product or service.



Figure 1—Forest survey regions in Tennessee.

Forest Statistics for East Tennessee, 1999

Callie Jo Schweitzer

Highlights

This report summarizes results from a 1999 inventory of the forest resources of East 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.

Forest area—Total forest land area in East Tennessee was 3.9 million acres, and included 245,500 acres of reserved forest land in the Great Smoky Mountains National Park. This area of Tennessee also contained the only national forest land in Tennessee, which was the 623,200 acres of the Cherokee National Forest. The area classified as timberland in the 27-county area has increased 3 percent since 1989, from 3.44 million acres to 3.56 million acres. The acreage diverted from timberland to other uses was 36,600 acres, while 154,300 acres were added from previous nonforest use, resulting in a 117,700-acre net gain. Most of the diverted area either was moved into urban and other uses or cleared for agriculture. Forests cover 60 percent of the land area in East Tennessee.

Ownership—Nonindustrial private forest (NIPF) land ownership increased 1 percent from 1989 values and totaled 2.59 million acres. NIPF land owners control 73 percent of the timberland in East Tennessee. The area of timberland owned by forest industry increased 71 percent, from 146,100 acres in 1989 to 250,100 acres in 1999. Public agencies control 720,100 acres, a 1-percent decrease since 1989.

Forest type—Forest stands classified as hardwood forest type occupy 2.94 million acres, or 83 percent of timberland in the region. Hardwood stands have increased 2 percent, and softwood stands have increased 9 percent since 1989. Stands classified as oak-pine forest type decreased 18 percent to 540,200 acres. Stands

classified as oak-hickory have increased 13 percent since 1989, and the oak-hickory forest type remained the predominant forest type in the region with 2.37 million acres.

Stand treatment—Harvesting and regeneration have been the predominant treatment and management activities in the timberland of East Tennessee since 1989. Partial harvests occurred on 20,300 acres annually. Seventy-two percent of partial harvests was in hardwood stands, 20 percent in oak-pine stands, and 8 percent in pine stands. A combination of reforestation and afforestation averaged 33,700 acres annually. Natural reversion of former nonforest land accounted for 49 percent of this total.

Hardwood volume—Volume of hardwood growing stock increased 48 percent to 5.2 billion cubic feet. Hardwood volume increased 126 percent to 216.0 million cubic feet on forest industry land, 48 percent to 3.8 billion cubic feet on NIPF land, and 40 percent to 1.2 billion cubic feet on public lands. Oak species collectively accounted for 2.5 billion cubic feet, or 47 percent of hardwood volume; volume in yellow-poplar increased 64 percent to 929.2 million cubic feet, and hickory volume was up 36 percent to 505.5 million cubic feet. Volume of hardwood sawtimber increased 45 percent to 17.2 billion board feet.

Softwood volume—Volume of softwood growing stock increased 15 percent to 1.6 billion cubic feet between 1989 and 1999. Softwood volume increased 106 percent to 134.9 million cubic feet on forest industry land, 13 percent to 404.9 million cubic feet on public land, and 9 percent to 1.1 billion cubic feet on NIPF land. Virginia pine accounted for 592.5 million cubic feet of the total softwood volume in East Tennessee. Loblolly pine growing-stock volume increased 57 percent to 195.3 million cubic feet. The majority of the remaining softwood volume was shortleaf pine at 282.8 million cubic feet, Eastern white pine at 272.6 million cubic feet, and eastern hemlock at 147.1 million cubic feet. The inventory of softwood sawtimber totals 6.3 billion board feet, a 27-percent increase from the previous survey period.

Growth—Net annual growth of hardwood growing stock averaged 143.5 million cubic feet. Net annual growth of hardwoods increased 16 percent since the previous survey period. Hardwood growth increased 75 percent on forest industry land, 27 percent on public land, and 11 percent on NIPF lands.

Net annual growth of softwood growing stock averaged 46.5 million cubic feet. Net annual growth of softwoods has increased 16 percent since the previous survey period. Softwood growth increased 77 percent on forest industry land and 67 percent on public land, and has decreased 4 percent on NIPF land.

Removals—Annual removals of hardwood growing stock averaged 29.6 million cubic feet. Hardwood removals have increased 3 percent since the previous survey period. Seventy-nine percent of hardwood removals occurred on NIPF lands, 10 percent on public land, and 11 percent on forest industry land. Across all ownerships, hardwood growth exceeded removals by 384 percent (or by a margin of 4.84 to 1).

Annual removals of softwood growing stock averaged 46.9 million cubic feet. Softwood removals have increased 64 percent since the previous survey period. Forty-nine percent of softwood growing-stock removals occurred on NIPF lands, 26 percent on forest industry land, and 25 percent on public land. Softwood growth and removals were in balance with a growth to removal ratio of 1 to 1.

Mortality—Mortality of growing stock has increased 12 percent to 48.5 million cubic feet since 1989. Hardwood mortality decreased 1 percent to 24.4 million cubic feet; mortality increased 160 percent on forest industry timberlands and 39 percent on public lands, and decreased 19 percent on NIPF lands. Softwood mortality increased 28 percent to 24.2 million cubic feet. Softwood mortality increased 20 percent on NIPF lands and 66 percent on public land, and decreased 32 percent on forest industry lands. Fifty-nine percent of the total hardwood mortality and 72 percent of the total softwood mortality were accounted for on NIPF lands.

Inventory Methods

The Southern Research Station, Forest Inventory and Analysis (FIA) 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 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 740 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 and felled trees throughout the region.

Estimates of growth, removals, and mortality were determined from the remeasurement of 658 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

FIA 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
			<i>Percent</i>
Timberland (<i>1,000 acres</i>)	3,560.1	± 23.5	0.66
All live (<i>M ft³</i>)			
Inventory	7,867.6	± 189.6	2.41
Net annual growth	210.1	± 7.6	3.61
Annual removals	81.3	± 10.1	12.38
Annual mortality	61.8	± 3.9	6.30
Growing stock (<i>M ft³</i>)			
Inventory	6,862.9	± 182.6	2.66
Net annual growth	190.0	± 7.1	3.73
Annual removals	76.5	± 9.6	12.61
Annual mortality	48.5	± 3.5	7.31
Sawtimber (<i>M fbm</i>)			
Inventory	23,547.4	± 861.8	3.66
Net annual growth	835.2	± 31.2	3.74
Annual removals	254.2	± 33.7	13.26
Annual mortality	140.3	± 12.6	8.97

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:

$$SE_s = 2.66 \frac{\sqrt{6,862.9}}{\sqrt{3,798.3}} = 3.58.$$

Thus, the sampling error is 3.58 percent, and the resulting confidence interval (two times out of three) for hardwood growing-stock inventory on NIPF land is $3,798.3 \pm 136.0$ 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, East Tennessee, 1999

Counties and survey unit	Timberland area	Live trees			Growing stock			Sawtimber		
		Volume	Growth	Removals	Volume	Growth	Removals	Volume	Growth	Removals
<i>Percent</i>										
Anderson	4.4	12.3	19.0	—	13.9	17.6	—	17.7	19.7	—
Blount	2.6	8.3	17.1	49.6	9.3	19.0	49.6	13.6	21.8	50.3
Bradley	4.7	20.5	39.6	100.1	20.5	40.9	100.1	28.9	47.2	100.1
Carter	2.7	8.6	20.9	46.8	10.9	16.2	46.6	14.7	15.0	51.7
Claiborne	3.1	10.4	19.1	45.7	13.3	20.6	46.7	19.1	20.7	52.2
Cocke	2.7	11.0	14.3	50.9	11.7	15.5	50.2	15.6	16.7	55.0
Grainger	3.4	13.0	14.3	65.4	13.8	13.5	75.6	19.1	17.4	76.1
Greene	2.7	14.3	21.2	57.5	16.9	23.2	58.9	23.1	25.3	63.5
Hamblen	3.3	32.3	61.7	—	30.2	55.1	—	34.0	51.6	—
Hamilton	3.5	12.3	17.7	46.9	12.5	18.0	48.0	15.9	17.5	52.4
Hancock	3.5	13.9	24.2	77.7	15.5	23.7	77.7	20.3	29.6	73.9
Hawkins	2.3	9.2	15.6	64.5	11.5	16.3	64.5	17.6	13.9	100.0
Jefferson	3.5	16.0	41.0	43.6	19.2	47.1	45.5	24.1	49.3	42.8
Johnson	2.5	11.1	15.2	73.9	11.6	15.6	75.0	17.2	16.0	79.7
Knox	4.1	13.6	14.8	90.9	16.1	15.0	89.9	22.8	16.2	100.1
Loudon	5.0	21.5	11.8	86.5	24.4	16.8	90.4	26.8	20.3	90.7
McMinn	4.3	16.0	18.6	33.3	17.3	18.5	33.7	22.8	18.7	33.3
Meigs	3.2	22.2	15.3	59.4	22.9	17.1	59.4	29.3	18.6	61.3
Monroe	2.4	8.5	11.6	38.6	8.8	11.8	38.7	11.9	11.9	39.0
Polk	2.9	9.6	32.2	40.2	10.4	33.8	40.7	14.0	22.3	42.6
Rhea	3.2	12.1	14.0	72.1	13.0	15.3	72.7	17.9	20.7	89.3
Roane	3.5	9.5	10.6	55.3	9.7	10.5	56.2	14.6	11.0	55.3
Sevier	2.7	10.1	14.4	51.3	11.8	15.3	52.7	17.0	15.0	54.3
Sullivan	3.2	9.8	12.4	75.6	11.3	13.8	76.5	15.2	14.0	74.5
Unicoi	1.4	11.7	18.0	—	13.3	16.9	—	19.2	17.3	—
Union	3.1	14.2	19.8	74.4	15.5	22.7	74.4	21.8	20.9	75.5
Washington	3.3	22.4	14.9	53.6	25.3	18.8	54.5	31.3	21.9	60.1
Survey unit	0.7	2.4	3.6	12.4	2.7	3.7	12.6	3.7	3.7	13.3

^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 Analysis, 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 Analysis 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 poletimber 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 withdrawn 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 deductions 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

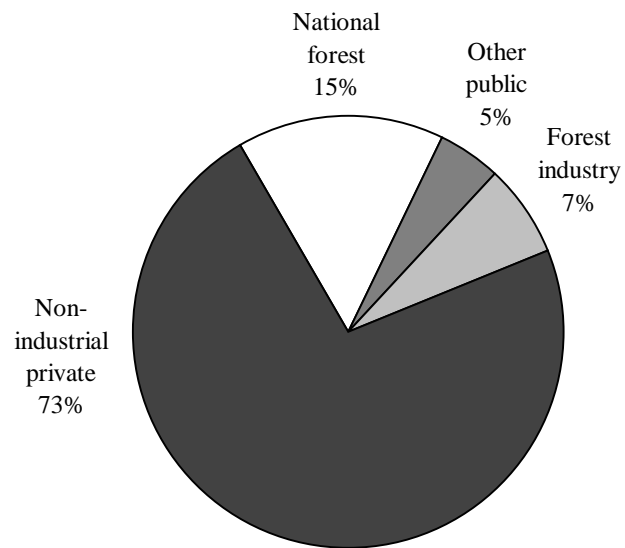
1 square foot = 929.03 square centimeters or 0.0929 square meter

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



3.6 Million acres

Figure 2—Distribution of timberland by ownership class, East Tennessee, 1999.

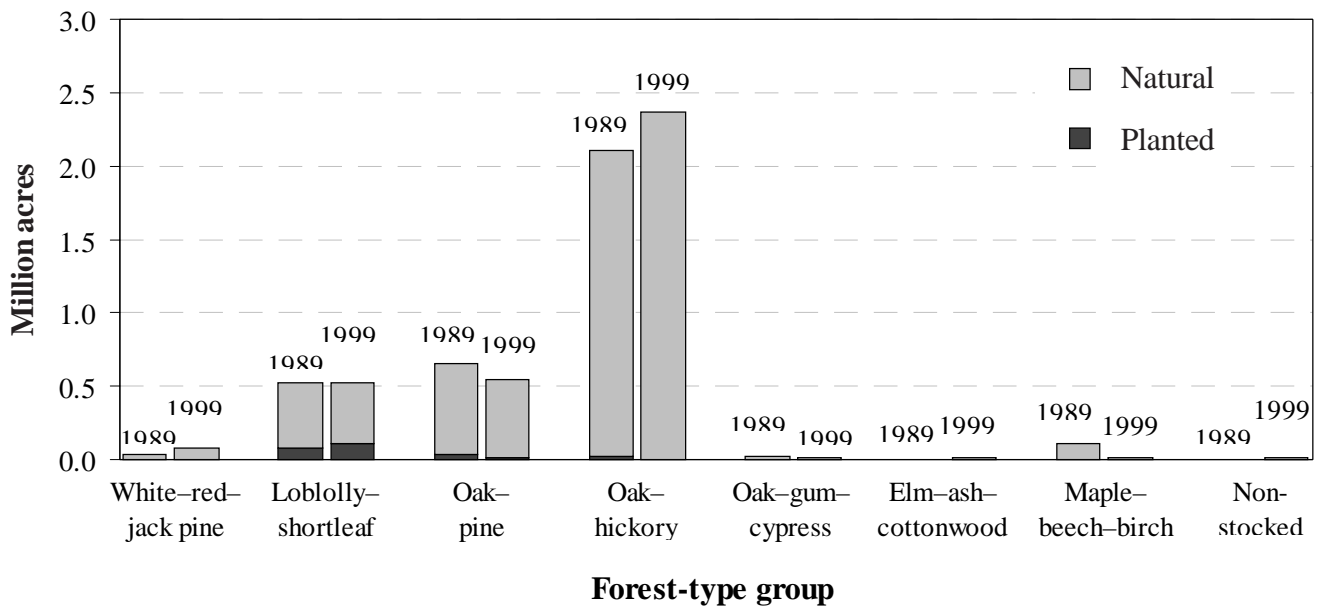


Figure 3—Area of timberland by forest-type group and stand origin, East Tennessee, 1989 and 1999.

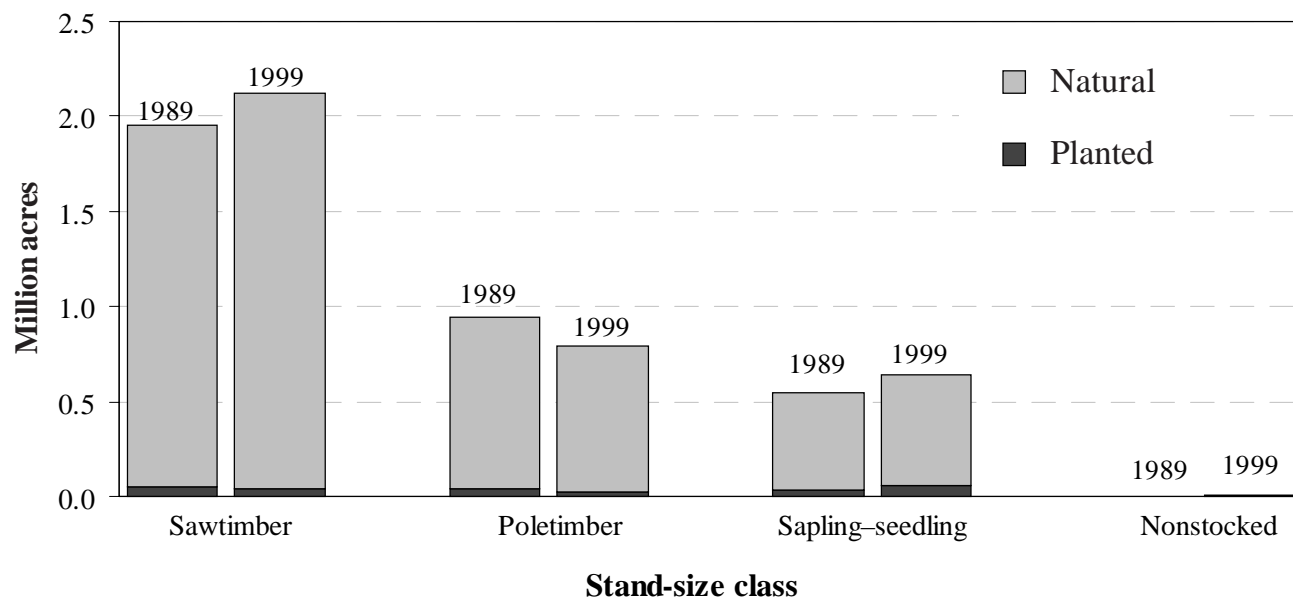


Figure 4—Area of timberland by stand-size class and stand origin, East Tennessee, 1989 and 1999.

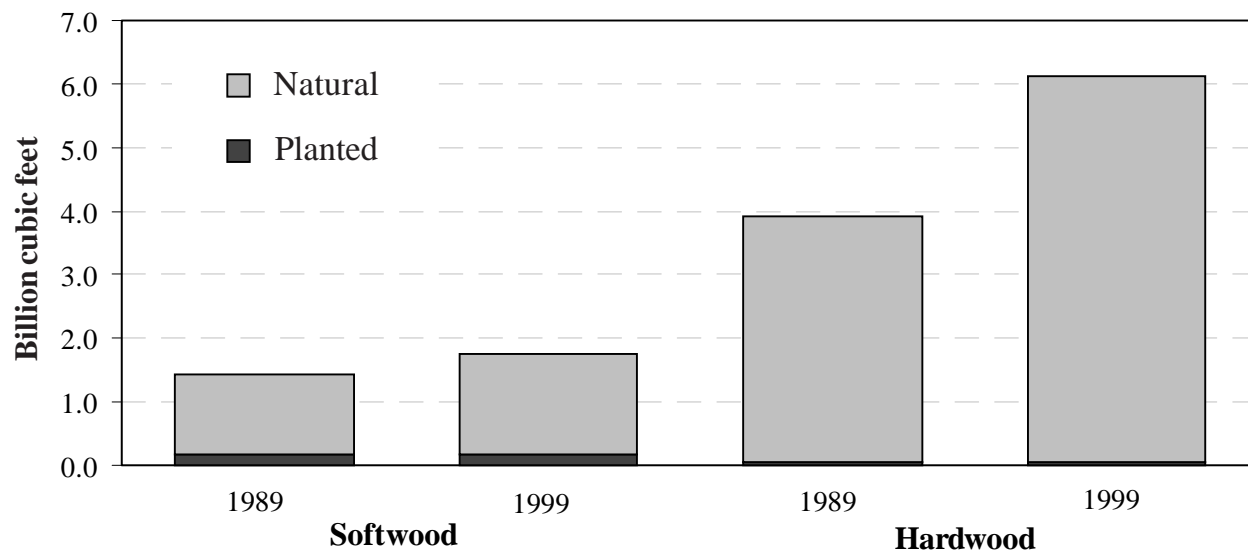
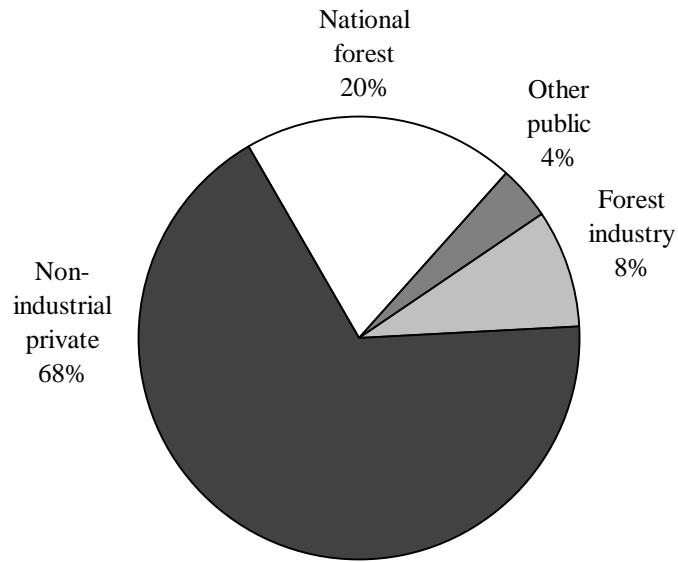
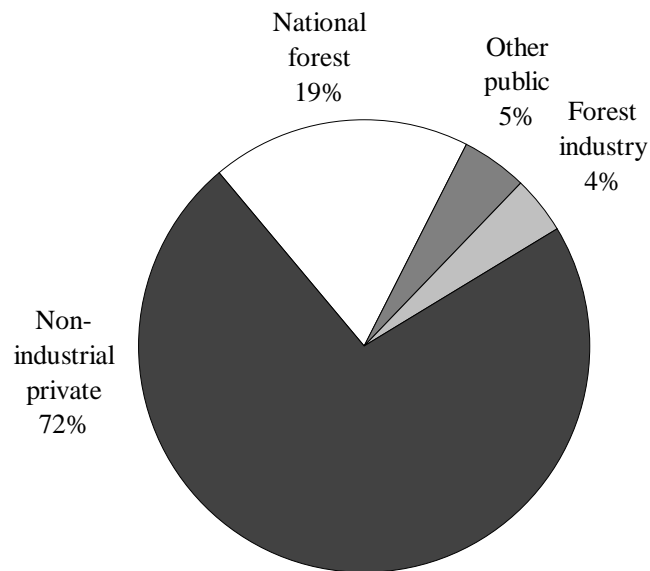


Figure 5—Volume of live trees on timberland by species group and stand origin, East Tennessee, 1989 and 1999.



1.7 Billion cubic feet

Figure 6—Distribution of softwood live tree volume by ownership class, East Tennessee, 1999.



6.1 Billion cubic feet

Figure 7—Distribution of hardwood live tree volume by ownership class, East Tennessee, 1999.

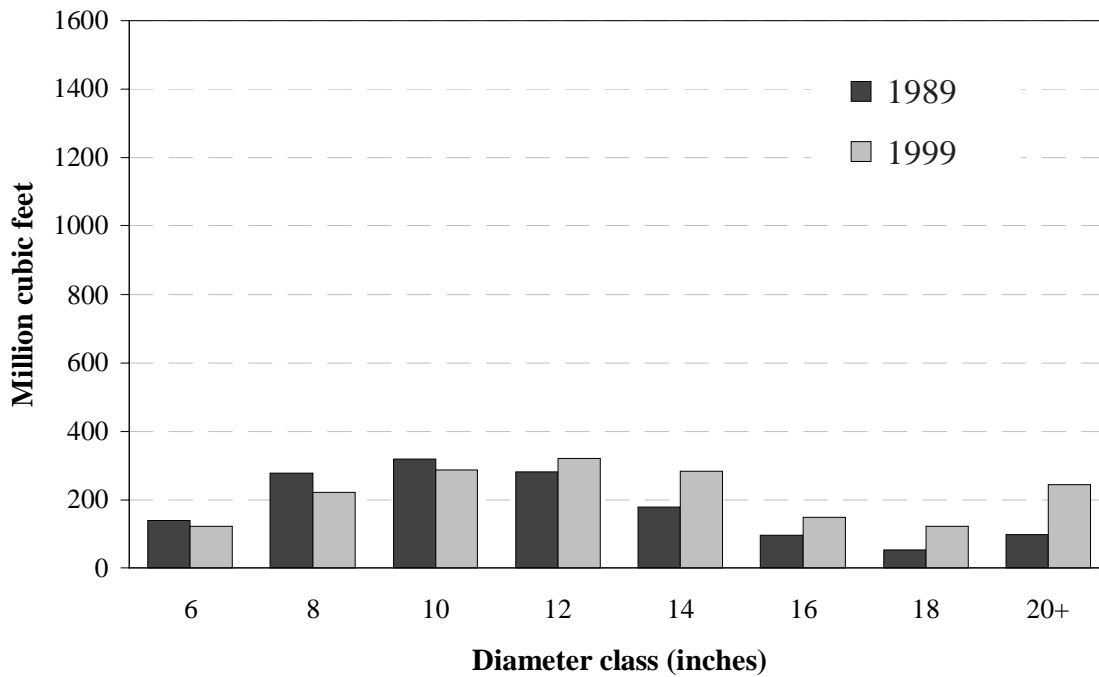


Figure 8—Volume of softwood live trees on timberland by diameter class, East Tennessee, 1989 and 1999.

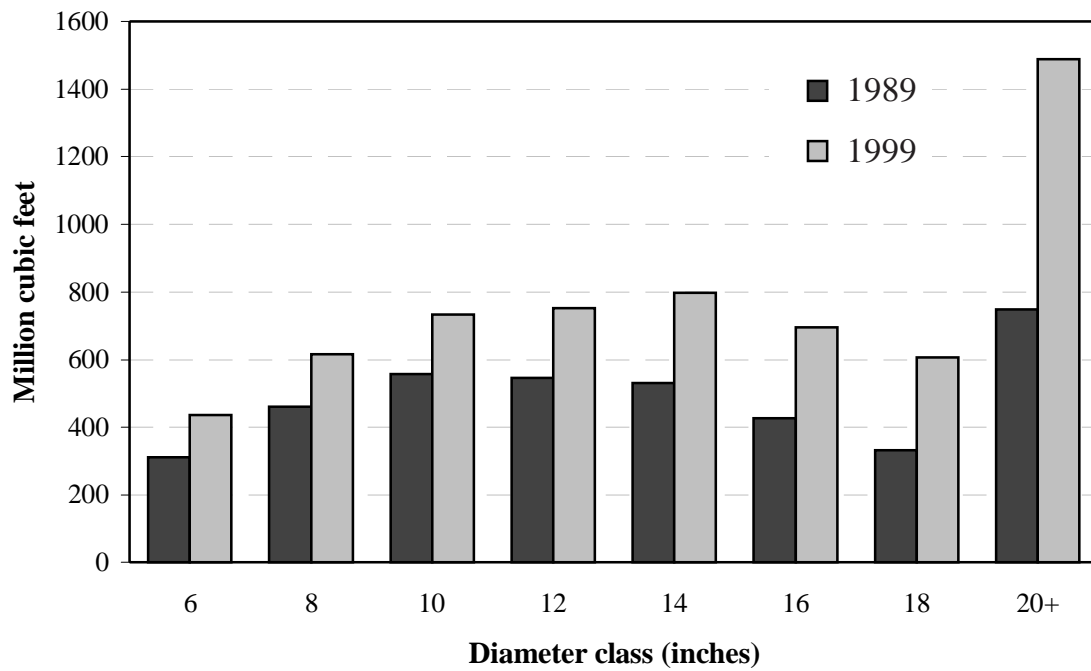


Figure 9—Volume of hardwood live trees on timberland by diameter class, East Tennessee, 1989 and 1999.

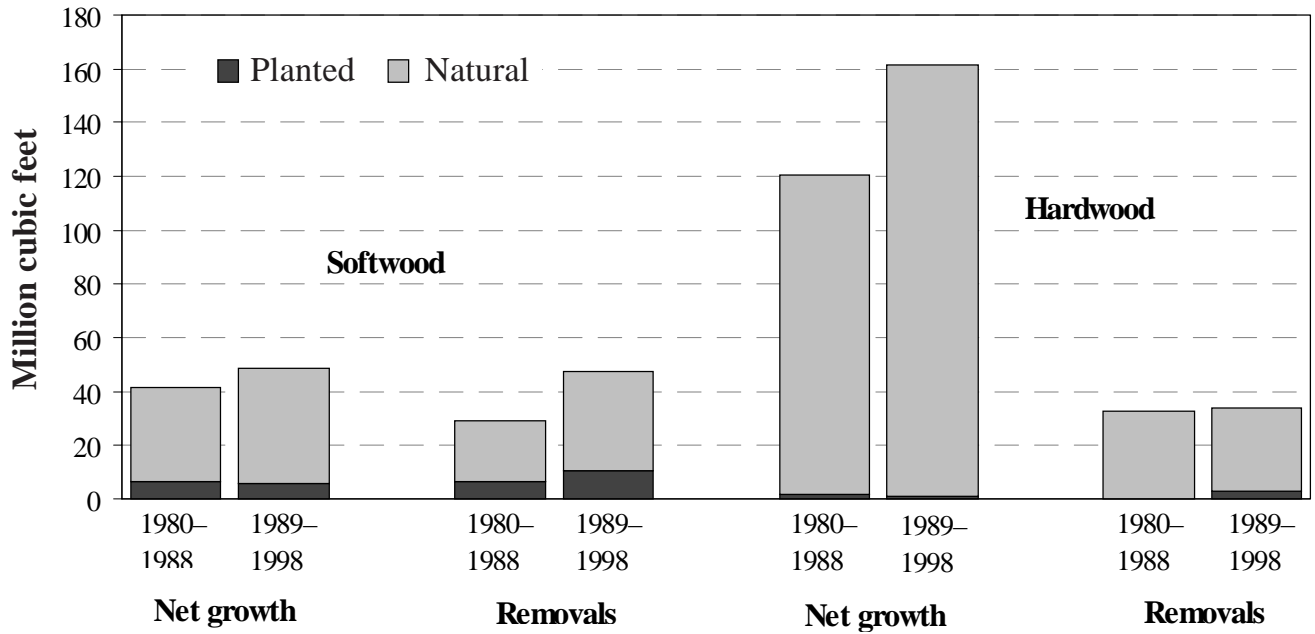


Figure 10—Average net annual growth and removals of live trees on timberland by species group and stand origin, East Tennessee, 1980–1988 and 1989–1998.

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		

Index of Tables

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. Land area by county and land class</p> <p>2. Area of forest land by forest-type group and ownership class</p> <p>3. Area of timberland by county and ownership class</p> <p>4. Area of timberland by county and forest-type group</p> <p>5. Area of timberland by county and stand-size class</p> <p>6. Area of timberland by county and site class</p> <p>7. Area of timberland by county and stocking class of growing-stock trees</p> <p>8. Area of timberland by forest-type group, stand origin, and ownership class</p> <p>9. Area of timberland by forest-type group, detailed forest type, and ownership class</p> <p>10. Area of timberland by ownership and stocking class of growing-stock trees</p> <p>11. Area of timberland by forest-type group, stand origin, and stand-size class</p> <p>12. Area of timberland by stand-age class and forest management type, all ownerships</p> | <p>13. Area of timberland by stand-age class and forest management type, public ownerships</p> <p>14. Area of timberland by stand-age class and forest management type, forest industry ownerships</p> <p>15. Area of timberland by stand-age class and forest management type, nonindustrial private ownerships</p> <p>16. Area of nonindustrial private timberland by ownership, forested tract-size class, and forest management type</p> <p>17. Number of live trees on timberland by species and diameter class</p> <p>18. Number of growing-stock trees on timberland by species and diameter class</p> <p>19. Volume of live trees on timberland by species and diameter class</p> <p>20. Volume of growing-stock trees on timberland by species and diameter class</p> <p>21. Volume in the saw-log portion of sawtimber trees on timberland by species and diameter class</p> <p>22. Volume of sawtimber on timberland by species and diameter class</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

23. Volume of sawtimber on timberland by species, size class, and tree grade
24. Volume of growing stock on timberland by county and species group
25. Volume of live trees on timberland by county and species group
26. Volume of sawtimber on timberland by county and species group
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
30. Volume of growing stock on timberland by forest-type group, stand origin, and species group
31. Average basal area of live trees per acre on timberland by ownership class, species group, and d.b.h.
32. Average net annual growth of growing stock on timberland by county and species group
33. Average net annual growth of live trees on timberland by county and species group
34. Average net annual growth of sawtimber on timberland by county and species group
35. Average annual removals of growing stock on timberland by county and species group
36. Average annual removals of live trees on timberland by county and species group
37. Average annual removals of sawtimber on timberland by county and species group
38. Average net annual growth and average annual removals of live trees, growing stock, and sawtimber on timberland by species
39. Average annual removals of growing stock on timberland by species and diameter class
40. Average annual mortality of live trees, growing stock, and sawtimber on timberland by species
41. Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group
42. Average net annual growth and average annual removals of live trees on timberland by ownership class and species group
43. Average net annual growth and average annual removals of sawtimber on timberland by ownership class and species group
44. Average net annual growth of growing stock on timberland by forest-type group, stand origin, and species group
45. Average annual removals of growing stock on timberland by forest-type group, stand origin, and species group
46. Fresh weight of live trees on timberland by ownership class, species group, and tree component
47. Area of timberland treated or disturbed annually and retained in timberland by treatment or disturbance and ownership class
48. Area of timberland treated or disturbed annually and retained in timberland by treatment or disturbance and forest management type
49. Area of timberland regenerated annually by type of regeneration and forest management type
50. Land area by land-use class, major forest type, and survey completion date
51. Volume of sawtimber, growing stock, and live trees on timberland by species group, survey completion date, and diameter class

Table 1—Land area by county and land class, East Tennessee, 1999

County	Total land area ^a	Forest land				Other land ^b
		Total forest	Timberland	Productive reserved	Other	
<i>Thousand acres</i>						
Anderson	216.0	125.0	125.0	—	—	91.0
Blount	357.5	228.2	133.2	95.0	—	129.2
Bradley	210.4	107.6	107.6	—	—	102.8
Carter	218.3	165.9	152.3	13.6	—	52.4
Claiborne	278.0	185.6	183.6	2.0	—	92.3
Cocke	278.0	198.4	179.7	18.7	—	79.6
Grainger	179.4	108.5	108.5	—	—	70.9
Greene	398.0	149.4	145.5	3.9	—	248.6
Hamblen	103.1	34.4	34.4	—	—	68.7
Hamilton	347.2	180.4	177.9	2.5	—	166.8
Hancock	142.3	105.0	105.0	—	—	37.3
Hawkins	311.5	185.3	183.6	1.7	—	126.2
Jefferson	175.3	54.0	54.0	—	—	121.3
Johnson	191.0	136.5	136.3	0.2	—	54.6
Knox	325.4	109.3	108.4	0.8	—	216.2
Loudon	146.3	48.9	48.9	—	—	97.4
McMinn	275.4	136.4	136.4	—	—	139.0
Meigs	124.7	76.0	76.0	—	—	48.7
Monroe	406.6	305.5	281.7	23.8	—	101.0
Polk	278.5	231.2	214.2	17.0	—	47.3
Rhea	202.2	136.6	135.4	1.2	—	65.7
Roane	231.0	168.8	168.8	—	—	62.2
Sevier	379.1	290.8	163.4	127.4	—	88.3
Sullivan	264.4	143.4	142.2	1.3	—	120.9
Unicoi	119.1	102.0	95.3	6.7	—	17.2
Union	143.1	99.1	99.1	—	—	44.0
Washington	208.8	65.6	63.7	1.9	—	143.2
Total	6,510.4	3,877.9	3,560.1	317.8	—	2,632.5

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.

^a From the U.S. Bureau of the Census, 1990.

^b Includes 27.4 thousand acres of water according to Forest Inventory and Analysis 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, East Tennessee, 1999

Forest-type group	All classes	Ownership class					
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry	Nonindustrial private
<i>Thousand acres</i>							
White-red-jack pine	109.7	34.5	29.4	—	—	8.3	37.5
Spruce-fir	18.9	—	18.9	—	—	—	—
Loblolly-shortleaf pine	554.8	67.8	29.6	6.1	1.5	90.9	358.9
Oak-pine	576.2	97.7	36.0	9.5	—	19.1	414.0
Oak-hickory	2,524.1	408.5	173.2	46.1	12.9	131.8	1,751.7
Oak-gum-cypress	10.8	—	—	—	—	—	10.8
Elm-ash-cottonwood	5.9	—	—	—	2.6	—	3.3
Maple-beech-birch	63.5	14.9	47.4	—	—	—	1.2
Nonstocked	14.1	—	1.6	—	—	—	12.5
Total	3,877.9	623.2	336.1	61.7	17.0	250.1	2,589.9

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.

Table 3—Area of timberland by county and ownership class, East Tennessee, 1999

County	All classes	Ownership class						
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry	Nonindustrial private Corporate Individual	
<i>Thousand acres</i>								
Anderson	125.0	—	6.1	—	—	21.4	48.8	48.6
Blount	133.2	—	—	—	—	5.8	5.8	121.7
Bradley	107.6	—	—	—	—	14.8	—	92.8
Carter	152.3	70.6	—	—	—	—	—	81.7
Claiborne	183.6	—	1.2	—	—	68.1	—	114.2
Cocke	179.7	48.5	—	—	—	5.8	5.8	119.5
Grainger	108.5	—	—	—	—	—	—	108.5
Greene	145.5	33.8	—	3.8	—	—	5.0	103.0
Hamblen	34.4	—	—	—	—	—	7.6	26.8
Hamilton	177.9	—	6.2	6.2	3.1	12.1	12.3	138.1
Hancock	105.0	—	—	—	—	—	—	105.0
Hawkins	183.6	—	4.1	—	5.8	—	16.1	157.6
Jefferson	54.0	—	—	—	—	—	9.5	44.5
Johnson	136.3	50.3	—	—	—	—	22.8	63.1
Knox	108.4	—	—	—	—	—	10.6	97.8
Loudon	48.9	—	7.7	—	—	5.1	3.9	32.2
McMinn	136.4	3.5	—	0.2	—	35.5	6.7	90.5
Meigs	76.0	—	6.0	—	—	17.5	—	52.5
Monroe	281.7	118.6	12.5	12.5	—	7.1	14.3	116.6
Polk	214.2	131.5	—	—	—	7.8	5.8	69.1
Rhea	135.4	—	—	4.1	—	43.8	7.6	79.9
Roane	168.8	—	25.4	6.3	—	5.2	5.2	126.8
Sevier	163.4	—	—	—	—	—	9.5	153.9
Sullivan	142.2	36.7	11.2	1.4	5.6	—	5.6	81.8
Unicoi	95.3	49.0	—	2.6	2.6	—	—	41.1
Union	99.1	—	10.1	18.8	—	—	—	70.3
Washington	63.7	14.3	—	—	—	—	—	49.5
Total	3,560.1	556.8	90.5	55.8	17.0	250.1	203.0	2,386.9

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.

Table 4—Area of timberland by county and forest-type group, East Tennessee, 1999

County	Forest-type group								
	All groups	White-red-jack pine	Loblolly-shortleaf	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch	Nonstocked
<i>Thousand acres</i>									
Anderson	125.0	4.6	14.0	13.7	89.7	—	—	—	3.1
Blount	133.2	5.8	22.4	30.2	73.4	—	—	—	1.4
Bradley	107.6	—	45.2	21.8	40.7	—	—	—	—
Carter	152.3	3.1	—	20.4	125.0	—	—	3.8	—
Claiborne	183.6	—	22.2	3.4	158.0	—	—	—	—
Cocke	179.7	—	11.2	11.9	153.7	—	—	—	2.9
Grainger	108.5	—	7.3	13.7	87.5	—	—	—	—
Greene	145.5	—	11.9	28.4	103.9	—	—	—	1.3
Hamblen	34.4	—	12.5	4.7	17.2	—	—	—	—
Hamilton	177.9	—	46.3	20.1	111.5	—	—	—	—
Hancock	105.0	—	—	19.9	85.1	—	—	—	—
Hawkins	183.6	—	10.3	24.6	148.7	—	—	—	—
Jefferson	54.0	—	9.5	5.6	38.9	—	—	—	—
Johnson	136.3	3.2	—	25.7	107.4	—	—	—	—
Knox	108.4	—	9.2	35.0	57.4	5.7	—	—	1.1
Loudon	48.9	—	14.1	7.7	25.9	1.2	—	—	—
McMinn	136.4	—	47.0	27.7	59.9	—	1.8	—	—
Meigs	76.0	—	20.9	21.1	34.0	—	—	—	—
Monroe	281.7	21.8	65.1	42.6	141.1	—	—	11.1	—
Polk	214.2	21.5	85.6	27.4	79.7	—	—	—	—
Rhea	135.4	7.1	24.0	7.6	95.1	—	1.5	—	—
Roane	168.8	—	21.7	19.6	123.6	3.9	—	—	—
Sevier	163.4	1.4	14.8	33.2	114.1	—	—	—	—
Sullivan	142.2	3.7	3.0	17.4	115.3	—	—	—	2.8
Unicoi	95.3	7.4	2.3	20.8	61.0	—	2.6	1.2	—
Union	99.1	—	6.3	30.8	62.0	—	—	—	—
Washington	63.7	0.7	—	5.1	57.9	—	—	—	—
Total	3,560.1	80.3	526.7	540.2	2,367.7	10.8	5.9	16.1	12.5

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 5—Area of timberland by county and stand-size class, East Tennessee, 1999

County	All classes	Stand-size class			
		Sawtimber	Poletimber	Sapling-seedling	Nonstocked
<i>Thousand acres</i>					
Anderson	125.0	96.7	10.0	15.3	3.1
Blount	133.2	97.3	27.3	7.2	1.4
Bradley	107.6	57.5	8.7	41.4	—
Carter	152.3	98.8	26.2	27.4	—
Claiborne	183.6	127.2	37.6	18.8	—
Cocke	179.7	110.5	38.8	27.5	2.9
Grainger	108.5	70.8	17.8	19.9	—
Greene	145.5	88.9	44.1	11.3	1.3
Hamblen	34.4	22.9	4.7	6.8	—
Hamilton	177.9	94.3	53.4	30.2	—
Hancock	105.0	46.2	39.9	18.9	—
Hawkins	183.6	112.2	42.8	28.6	—
Jefferson	54.0	33.9	2.7	17.4	—
Johnson	136.3	77.2	53.7	5.4	—
Knox	108.4	65.7	32.6	9.0	1.1
Loudon	48.9	28.8	6.4	13.7	—
McMinn	136.4	56.4	27.8	52.1	—
Meigs	76.0	47.9	12.0	16.1	—
Monroe	281.7	151.7	55.3	74.7	—
Polk	214.2	118.7	39.0	56.5	—
Rhea	135.4	89.9	24.1	21.4	—
Roane	168.8	83.0	48.9	36.8	—
Sevier	163.4	71.9	46.7	44.7	—
Sullivan	142.2	96.7	30.2	12.4	2.8
Unicoi	95.3	69.8	25.5	—	—
Union	99.1	60.4	29.4	9.4	—
Washington	63.7	44.4	4.9	14.4	—
Total	3,560.1	2,119.7	790.6	637.3	12.5

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 6—Area of timberland by county and site class, East Tennessee, 1999

County	All classes	Site class (cubic feet/acre/year)				
		20-49	50-84	85-119	120-164	>165
<i>Thousand acres</i>						
Anderson	125.0	12.2	52.8	32.2	15.6	12.2
Blount	133.2	2.9	46.3	54.5	26.0	3.6
Bradley	107.6	15.2	48.4	19.7	12.2	12.2
Carter	152.3	29.6	35.3	68.6	18.8	—
Claiborne	183.6	34.7	65.2	48.3	35.4	—
Cocke	179.7	28.8	43.9	52.8	27.5	26.8
Grainger	108.5	16.5	42.7	32.4	9.6	7.3
Greene	145.5	36.9	55.0	28.0	15.5	10.2
Hamblen	34.4	7.6	—	11.5	15.3	—
Hamilton	177.9	6.2	89.6	50.6	22.0	9.6
Hancock	105.0	18.9	54.3	25.2	6.6	—
Hawkins	183.6	25.5	103.4	37.2	13.7	3.7
Jefferson	54.0	5.9	33.0	10.4	—	4.7
Johnson	136.3	10.2	63.4	48.9	13.7	—
Knox	108.4	14.8	51.7	24.8	15.2	1.9
Loudon	48.9	—	18.0	16.7	5.1	9.0
McMinn	136.4	—	59.8	34.9	17.8	23.9
Meigs	76.0	5.5	13.6	41.5	7.5	7.9
Monroe	281.7	12.2	111.1	67.4	58.6	32.5
Polk	214.2	36.9	54.9	42.3	49.9	30.2
Rhea	135.4	14.9	45.3	51.2	19.4	4.6
Roane	168.8	—	59.8	78.3	25.5	5.3
Sevier	163.4	2.5	55.5	68.1	22.1	15.2
Sullivan	142.2	20.9	86.0	16.7	14.8	3.7
Unicoi	95.3	7.4	25.7	31.6	30.6	—
Union	99.1	3.8	19.7	43.6	28.3	3.8
Washington	63.7	22.9	11.6	15.7	13.6	—
Total	3,560.1	393.0	1,345.8	1,053.0	540.2	228.1

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 7—Area of timberland by county and stocking class of growing-stock trees, East Tennessee, 1999

County	All classes	Stocking class (percent)				
		<16.7	16.7-59	60-99	100-130	>130
<i>Thousand acres</i>						
Anderson	125.0	10.7	14.6	50.4	27.5	21.8
Blount	133.2	1.4	31.3	58.7	34.3	7.5
Bradley	107.6	—	11.0	17.9	54.8	23.9
Carter	152.3	11.5	20.1	65.4	49.3	6.0
Claiborne	183.6	12.9	54.2	80.8	32.2	3.4
Cocke	179.7	3.4	38.2	82.2	48.0	7.9
Grainger	108.5	—	11.6	68.6	18.0	10.3
Greene	145.5	5.6	50.6	54.5	24.4	10.5
Hamblen	34.4	3.8	—	20.0	8.7	1.9
Hamilton	177.9	2.6	29.2	94.0	42.4	9.7
Hancock	105.0	1.7	30.9	59.2	13.2	—
Hawkins	183.6	4.7	34.6	85.5	43.3	15.5
Jefferson	54.0	8.2	7.1	12.2	22.9	3.6
Johnson	136.3	0.1	15.5	41.5	60.5	18.7
Knox	108.4	4.5	39.4	48.4	16.1	—
Loudon	48.9	5.1	3.5	22.3	6.4	11.6
McMinn	136.4	2.2	11.1	61.7	31.8	29.6
Meigs	76.0	—	15.5	32.2	11.9	16.5
Monroe	281.7	3.6	41.4	114.4	84.7	37.6
Polk	214.2	5.9	27.1	44.3	100.3	36.6
Rhea	135.4	2.7	22.2	70.8	29.0	10.7
Roane	168.8	—	6.5	80.2	59.0	23.1
Sevier	163.4	10.5	24.9	93.2	34.7	—
Sullivan	142.2	5.7	25.8	62.7	35.4	12.6
Unicoi	95.3	2.4	9.8	30.6	29.3	23.2
Union	99.1	0.3	28.2	39.4	23.7	7.5
Washington	63.7	6.0	12.0	23.6	19.7	2.5
Total	3,560.1	115.6	616.1	1,514.7	961.6	352.0

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 8—Area of timberland by forest-type group, stand origin, and ownership class, East Tennessee, 1999

Forest-type group and stand origin	All classes	Ownership class			
		National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand acres</i>					
Softwood types					
White-red-jack pine					
Planted	—	—	—	—	—
Natural	80.3	34.5	—	8.3	37.5
Total	80.3	34.5	—	8.3	37.5
Loblolly-shortleaf pine					
Planted	111.8	5.7	6.7	62.8	36.7
Natural	414.9	53.1	11.5	28.1	322.2
Total	526.7	58.8	18.1	90.9	358.9
Total softwoods	607.0	93.3	18.1	99.2	396.4
Hardwood types					
Oak-pine					
Planted	5.9	—	—	5.9	—
Natural	534.2	83.9	23.1	13.1	414.0
Total	540.2	83.9	23.1	19.1	414.0
Oak-hickory	2,367.7	364.7	119.5	131.8	1,751.7
Oak-gum-cypress	10.8	—	—	—	10.8
Elm-ash-cottonwood	5.9	—	2.6	—	3.3
Maple-beech-birch	16.1	14.9	—	—	1.2
Total hardwoods	2,940.5	463.5	145.2	150.9	2,181.0
Nonstocked	12.5	—	—	—	12.5
All groups	3,560.1	556.8	163.3	250.1	2,589.9

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.

Table 9—Area of timberland by forest-type group, detailed forest type, and ownership class, East Tennessee, 1999

Forest-type group and detailed forest type	All classes	Ownership class			
		National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand acres</i>					
Softwood types					
White-red-jack pine					
White pine	45.6	26.7	—	2.5	16.4
White pine-hemlock	25.0	6.0	—	5.8	13.1
Hemlock	9.7	1.7	—	—	8.0
Total	80.3	34.5	—	8.3	37.5
Loblolly-shortleaf					
Loblolly pine	124.6	4.5	13.0	55.9	51.2
Shortleaf pine	74.5	6.8	3.3	—	64.4
Virginia pine	278.0	38.4	1.8	32.1	205.7
Eastern redcedar	31.3	—	—	—	31.3
Pitch pine	11.5	5.7	—	2.9	2.9
Table Mountain pine	6.7	3.4	—	—	3.3
Total	526.7	58.8	18.1	90.9	358.9
Total softwoods	607.0	93.3	18.1	99.2	396.4
Hardwood types					
Oak-pine					
White pine-n. red oak-white ash	67.1	33.4	—	—	33.7
Eastern redcedar-hardwood	75.5	—	—	—	75.5
Shortleaf pine-oak	82.2	4.5	13.7	—	64.0
Virginia pine-s. red oak	197.7	9.9	5.0	4.7	178.0
Loblolly pine-hardwood	42.3	4.5	4.4	11.5	21.9
Other oak-pine	75.4	31.6	—	2.9	40.9
Total	540.2	83.9	23.1	19.1	414.0
Oak-hickory					
Post oak-black oak	22.2	—	—	—	22.2
Chestnut oak	389.2	86.1	8.7	13.7	280.8
White oak-red oak-hickory	374.0	8.8	26.8	1.5	336.9
White oak	15.8	0.9	—	—	15.0
N. red oak	5.8	—	—	—	5.8
Yellow-poplar-white oak-n. red oak	367.1	61.2	16.7	15.3	273.8
Sweetgum-yellow-poplar	62.8	—	3.9	10.0	48.9
Mixed hardwood	1,130.7	207.8	63.4	91.2	768.3
Total	2,367.7	364.7	119.5	131.8	1,751.7
Oak-gum-cypress					
Sugarberry-elm-green ash	10.8	—	—	—	10.8
Total	10.8	—	—	—	10.8
Elm-ash-cottonwood					
Willow	3.3	—	—	—	3.3
Sycamore-pecan-elm	2.6	—	2.6	—	—
Total	5.9	—	2.6	—	3.3
Maple-beech-birch					
Sugar maple-beech-yellow birch	16.1	14.9	—	—	1.2
Total	16.1	14.9	—	—	1.2
Total hardwoods	2,940.5	463.5	145.2	150.9	2,181.0
Nonstocked	12.5	—	—	—	12.5
All groups	3,560.1	556.8	163.3	250.1	2,589.9

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.

Table 10—Area of timberland by ownership and stocking class of growing-stock trees, East Tennessee, 1999

Ownership class	All classes	Stocking class (percent)				
		<16.7	16.7-59	60-99	100-130	>130
<i>Thousand acres</i>						
National forest	556.8	5.1	71.1	177.5	219.4	83.7
Other public	163.3	3.9	62.7	43.3	30.6	22.9
Forest industry	250.1	6.6	25.1	115.6	51.9	50.8
Nonindustrial private	2,589.9	100.0	457.2	1,178.4	659.6	194.6
All ownerships	3,560.1	115.6	616.1	1,514.7	961.6	352.0

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

Table 11—Area of timberland by forest-type group, stand origin, and stand-size class, East Tennessee, 1999

Forest-type group and stand origin	All classes	Stand-size class			
		Sawtimber	Poletimber	Sapling-seedling	Nonstocked
<i>Thousand acres</i>					
Softwood types					
White-red-jack pine					
Planted	—	—	—	—	—
Natural	80.3	74.3	3.7	2.3	—
Total	80.3	74.3	3.7	2.3	—
Loblolly-shortleaf pine					
Planted	111.8	41.5	22.4	47.9	—
Natural	414.9	214.5	102.4	98.1	—
Total	526.7	256.0	124.7	146.0	—
Total softwoods	607.0	330.3	128.5	148.2	—
Hardwood types					
Oak-pine					
Planted	5.9	—	—	5.9	—
Natural	534.2	284.1	115.1	135.1	—
Total	540.2	284.1	115.1	141.0	—
Oak-hickory	2,367.7	1,487.8	540.1	339.7	—
Oak-gum-cypress	10.8	—	5.7	5.1	—
Elm-ash-cottonwood	5.9	2.6	—	3.3	—
Maple-beech-birch	16.1	14.9	1.2	—	—
Total hardwoods	2,940.5	1,789.4	662.1	489.1	—
Nonstocked	12.5	—	—	—	12.5
All groups	3,560.1	2,119.7	790.6	637.3	12.5

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 12—Area of timberland by stand-age class and forest management type, all ownerships, East Tennessee, 1999

Stand-age class	All types	Forest management type					
		Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
<i>Years</i>		<i>Thousand acres</i>					
0-10	293.6	48.9	53.6	55.3	124.7	—	11.1
11-20	174.6	8.6	36.7	54.4	58.6	14.9	1.5
21-30	177.3	10.5	49.6	31.8	83.6	1.8	—
31-40	306.5	8.3	61.8	58.6	177.8	—	—
41-50	668.5	5.2	113.4	83.1	466.9	—	—
51-60	710.7	28.8	86.3	94.2	501.4	—	—
61-70	579.0	1.5	34.9	70.8	471.8	—	—
71-80	361.3	—	30.9	58.0	272.4	—	—
81+	288.5	—	28.1	34.0	226.4	—	—
All classes	3,560.1	111.8	495.2	540.2	2,383.7	16.6	12.5

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 13—Area of timberland by stand-age class and forest management type, public ownerships, East Tennessee, 1999

Stand-age class	All types	Forest management type					
		Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
<i>Years</i>		<i>Thousand acres</i>					
0-10	52.5	3.4	11.9	3.4	33.8	—	—
11-20	16.3	—	4.9	1.6	7.3	2.6	—
21-30	38.9	—	12.8	13.3	12.8	—	—
31-40	47.8	2.3	12.4	10.2	22.9	—	—
41-50	95.3	5.2	11.8	5.4	72.9	—	—
51-60	122.7	1.5	11.4	17.6	92.2	—	—
61-70	122.0	—	11.7	19.5	90.7	—	—
71-80	127.4	—	8.2	24.3	95.0	—	—
81+	97.2	—	14.0	11.8	71.4	—	—
All classes	720.1	12.4	99.1	107.1	499.0	2.6	—

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 14—Area of timberland by stand-age class and forest management type, forest industry ownerships, East Tennessee, 1999

Stand-age class	All types	Forest management type					Nonstocked
		Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	
<i>Years</i>		<i>Thousand acres</i>					
0-10	58.7	41.1	—	11.5	6.2	—	—
11-20	12.1	7.2	5.0	—	—	—	—
21-30	18.8	8.5	10.3	—	—	—	—
31-40	38.8	6.0	5.4	2.9	24.5	—	—
41-50	40.0	—	1.5	4.7	33.8	—	—
51-60	36.2	—	3.9	—	32.3	—	—
61-70	19.6	—	—	—	19.6	—	—
71-80	19.1	—	10.4	—	8.7	—	—
81+	6.8	—	—	—	6.8	—	—
All classes	250.1	62.8	36.4	19.1	131.8	—	—

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 15—Area of timberland by stand-age class and forest management type, nonindustrial private ownerships, East Tennessee, 1999

Stand-age class	All types	Forest management type					Nonstocked
		Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	
<i>Years</i>		<i>Thousand acres</i>					
0-10	182.3	4.4	41.6	40.5	84.7	—	11.1
11-20	146.1	1.5	26.8	52.8	51.3	12.3	1.5
21-30	119.6	2.0	26.5	18.5	70.9	1.8	—
31-40	220.0	—	44.0	45.6	130.4	—	—
41-50	533.2	—	100.1	73.0	360.2	—	—
51-60	551.9	27.3	71.0	76.6	376.9	—	—
61-70	437.5	1.5	23.1	51.3	361.5	—	—
71-80	214.8	—	12.3	33.7	168.8	—	—
81+	184.5	—	14.1	22.2	148.1	—	—
All classes	2,589.9	36.7	359.7	414.0	1,752.9	14.1	12.5

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 16—Area of nonindustrial private timberland by ownership, forested tract-size class, and forest management type, East Tennessee, 1999

Ownership and forested tract-size class	All types	Forest management type					Nonstocked
		Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	
<i>Acres</i>		<i>Thousand acres</i>					
Individual							
≤ 10	313.3	19.6	59.1	34.7	198.4	—	1.5
11-50	791.8	3.5	143.7	133.7	503.8	1.8	5.3
51-100	588.8	7.6	45.9	118.2	411.9	5.1	—
101-200	381.8	4.4	31.4	60.8	283.8	—	1.4
201-500	229.6	1.5	36.6	24.4	165.8	—	1.3
≥ 501	81.5	—	12.8	17.3	51.4	—	—
Total	2,386.9	36.7	329.6	389.1	1,615.1	6.9	9.5
Corporate							
≤ 10	15.8	—	—	3.1	7.0	5.7	—
11-50	12.6	—	1.1	4.7	6.9	—	—
51-100	16.7	—	—	—	16.7	—	—
101-200	11.8	—	—	—	11.8	—	—
201-500	39.5	—	11.9	—	27.6	—	—
≥ 501	106.7	—	17.1	17.2	67.8	1.5	3.1
Total	203.0	—	30.1	25.0	137.7	7.2	3.1
All nonindustrial private							
≤ 10	329.1	19.6	59.1	37.8	205.4	5.7	1.5
11-50	804.5	3.5	144.8	138.4	510.7	1.8	5.3
51-100	605.4	7.6	45.9	118.2	428.6	5.1	—
101-200	393.6	4.4	31.4	60.8	295.5	—	1.4
201-500	269.1	1.5	48.5	24.4	193.4	—	1.3
≥ 501	188.2	—	29.9	34.5	119.2	1.5	3.1
Total	2,589.9	36.7	359.7	414.0	1,752.9	14.1	12.5

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 17—Number of live trees on timberland by species and diameter class, East Tennessee, 1999

Species	Diameter class (inches at breast height)												
	All classes	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
<i>Thousand trees</i>													
Softwood													
Shortleaf pine	19,962	2,051	256	3,521	4,600	3,577	3,191	1,796	589	301	80	—	—
Loblolly pine	47,634	19,328	11,109	6,522	5,040	2,081	1,530	1,091	301	401	141	90	—
Virginia pine	132,606	59,504	20,365	15,699	12,920	10,540	7,438	3,961	1,358	624	197	—	—
Pitch pine	8,208	1,295	1,598	1,746	1,352	967	361	449	264	92	84	—	—
Table Mountain pine	4,498	792	1,435	1,151	505	238	211	133	—	33	—	—	—
Eastern white pine	58,839	39,937	7,063	3,821	1,929	1,507	883	1,006	745	479	586	786	97
Eastern hemlock	58,573	34,059	13,152	4,428	2,313	1,498	1,034	752	414	320	153	394	56
Redcedars	73,911	47,577	11,836	7,284	3,822	2,008	944	306	66	33	35	—	—
Other softwoods	33	—	—	—	—	33	—	—	—	—	—	—	—
Total softwoods	404,264	204,543	66,814	44,172	32,481	22,449	15,592	9,494	3,737	2,283	1,276	1,270	153
Hardwood													
Select white oaks	70,810	25,028	16,578	9,046	6,581	4,339	2,705	2,256	1,752	847	658	984	36
Select red oaks	27,370	5,726	6,753	2,728	2,417	2,609	2,001	1,646	956	1,094	565	752	123
Other white oaks	97,760	17,203	14,517	15,375	13,326	11,398	8,056	6,074	3,856	2,738	2,130	2,577	510
Other red oaks	70,260	20,062	11,030	7,704	7,961	6,863	5,094	4,251	3,011	1,977	1,304	973	30
Hickory	115,097	49,632	19,687	16,456	11,494	7,301	4,001	3,362	1,634	760	343	361	66
Yellow birch	3,562	1,241	1,506	514	—	65	83	48	21	42	—	21	21
Hard maple	81,351	55,253	14,234	5,307	2,692	1,714	955	432	399	97	128	119	21
Soft maple	288,983	187,802	50,255	24,488	11,682	6,646	3,337	2,159	1,042	494	548	452	78
Beech	31,508	20,087	4,558	1,678	1,619	858	926	551	400	214	225	363	29
Sweetgum	34,948	18,178	7,433	3,798	2,667	1,442	613	482	137	103	—	95	—
Tupelo and blackgum	141,423	113,131	15,073	6,655	2,887	1,323	912	813	295	80	120	93	41
Ash	40,284	21,801	6,962	3,563	2,890	1,581	995	836	786	354	208	308	—
Basswood	4,398	1,980	1,485	198	154	59	177	160	23	75	23	64	—
Yellow-poplar	108,280	54,151	14,352	9,484	7,439	5,846	4,791	3,775	2,869	2,391	1,688	1,404	90
Bay and magnolia	18,369	13,802	1,683	1,086	788	328	395	90	120	41	36	—	—
Black cherry	37,885	22,294	7,588	4,057	2,108	1,066	288	216	133	46	89	—	—
Black walnut	4,209	1,133	—	647	860	677	437	191	264	—	—	—	—
Sycamore	3,125	1,078	537	551	251	35	317	—	110	68	41	31	106
Black locust	15,216	7,338	2,189	1,783	1,592	661	774	448	184	165	46	36	—
Elm	47,627	32,847	6,828	4,204	1,843	1,145	260	145	132	111	35	77	—
Other Eastern hardwoods	537,032	373,986	101,683	35,999	15,083	5,754	2,491	1,130	429	259	54	92	72
Total hardwoods	1,779,497	1,043,753	304,931	155,321	96,334	61,710	39,608	29,065	18,553	11,956	8,241	8,802	1,223
All species	2,183,761	1,248,296	371,745	199,493	128,815	84,159	55,200	38,559	22,290	14,239	9,517	10,072	1,376

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, East Tennessee, 1999

Species	Diameter class (inches at breast height)												
	All classes	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
<i>Thousand trees</i>													
Softwood													
Shortleaf pine	18,833	1,311	256	3,275	4,531	3,577	3,154	1,759	589	301	80	—	—
Loblolly pine	43,669	17,209	9,845	6,229	4,967	2,009	1,460	1,017	301	401	141	90	—
Virginia pine	102,741	39,499	16,241	13,936	11,519	9,534	6,967	3,563	994	321	167	—	—
Pitch pine	6,840	624	1,598	1,358	1,199	902	361	428	194	92	84	—	—
Table Mountain pine	3,975	792	1,179	983	505	238	178	100	—	—	—	—	—
Eastern white pine	49,800	32,204	6,216	3,600	1,899	1,474	861	984	708	406	586	765	97
Eastern hemlock	41,727	18,768	12,474	3,982	2,170	1,407	998	686	414	320	153	299	56
Redcedars	45,658	28,860	6,522	5,343	2,859	1,118	660	225	36	—	35	—	—
Other softwoods	33	—	—	—	—	33	—	—	—	—	—	—	—
Total softwoods	313,276	139,267	54,331	38,706	29,649	20,292	14,639	8,762	3,236	1,841	1,246	1,154	153
Hardwood													
Select white oaks	48,213	9,790	12,245	8,043	5,892	3,956	2,467	2,012	1,570	775	584	843	36
Select red oaks	18,740	1,661	3,461	2,256	2,353	2,253	1,960	1,463	923	1,028	565	752	65
Other white oaks	65,158	2,785	9,304	11,840	10,863	9,739	6,594	5,192	3,285	2,100	1,619	1,495	342
Other red oaks	45,011	6,069	4,367	6,478	6,877	6,268	4,551	3,845	2,656	1,833	1,094	943	30
Hickory	72,459	15,875	15,991	14,398	10,279	6,692	3,494	3,024	1,445	652	308	235	66
Yellow birch	2,600	458	1,506	425	—	65	83	21	—	42	—	—	—
Hard maple	27,857	11,731	7,411	3,716	2,169	1,246	700	373	207	63	128	92	21
Soft maple	115,285	50,873	26,996	17,804	8,746	5,224	2,275	1,591	856	359	292	269	—
Beech	8,819	2,537	1,220	923	1,348	678	752	421	320	180	189	222	29
Sweetgum	20,214	8,669	3,303	3,274	2,283	1,335	570	445	137	103	—	95	—
Tupelo and blackgum	48,734	30,972	7,703	4,993	2,311	1,070	769	496	167	43	76	93	41
Ash	13,705	1,997	3,395	2,248	2,056	1,158	798	713	565	354	150	271	—
Basswood	1,213	—	495	99	154	—	154	126	23	75	23	64	—
Yellow-poplar	90,440	41,308	11,934	8,354	7,051	5,469	4,514	3,576	2,832	2,335	1,606	1,371	90
Bay and magnolia	13,009	9,396	1,376	859	628	271	213	90	99	41	36	—	—
Black cherry	11,917	5,440	2,263	1,819	1,439	577	66	175	92	46	—	—	—
Black walnut	1,895	—	—	392	529	324	327	93	230	—	—	—	—
Sycamore	2,243	444	537	551	251	35	212	—	110	31	41	31	—
Black locust	3,163	568	—	435	788	343	575	201	93	124	—	36	—
Elm	11,436	2,523	3,876	2,307	1,269	879	231	100	65	74	35	77	—
Other Eastern hardwoods	103,717	47,729	25,624	16,103	8,024	3,392	1,623	561	349	157	54	29	72
Total hardwoods	725,828	250,825	143,007	107,317	75,310	50,974	32,928	24,518	16,024	10,415	6,800	6,918	792
All species	1,039,104	390,092	197,338	146,023	104,959	71,266	47,567	33,280	19,260	12,256	8,046	8,072	945

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, East Tennessee, 1999

Species	Diameter class (inches at breast height)										
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Million cubic feet</i>											
Softwood											
Shortleaf pine	284.9	11.9	37.1	54.0	72.7	59.1	25.7	18.7	5.7	—	—
Loblolly pine	199.5	13.6	30.0	24.2	34.1	35.2	15.4	23.4	13.0	10.6	—
Virginia pine	663.3	50.7	99.6	145.3	155.8	119.1	51.4	29.9	11.6	—	—
Pitch pine	61.7	4.8	8.1	10.5	5.9	11.7	9.7	4.7	6.2	—	—
Table Mountain pine	17.6	3.7	3.6	2.6	3.5	3.0	—	1.2	—	—	—
Eastern white pine	279.4	10.6	12.0	16.4	16.4	29.6	29.8	25.9	42.1	75.6	21.0
Eastern hemlock	160.0	9.9	12.0	15.5	17.1	18.3	14.8	16.9	8.8	37.8	9.1
Redcedars	79.8	17.3	19.3	17.5	14.0	6.2	2.4	1.2	1.9	—	—
Other softwoods	0.3	—	—	0.3	—	—	—	—	—	—	—
Total softwoods	1,746.5	122.5	221.7	286.2	319.5	282.3	149.2	121.7	89.3	124.0	30.1
Hardwood											
Select white oaks	508.9	26.2	41.8	55.8	54.5	66.8	65.7	45.4	44.4	101.9	6.4
Select red oaks	371.3	8.5	17.2	32.5	40.1	46.5	38.3	54.8	38.0	72.5	22.8
Other white oaks	1,207.2	42.7	81.8	131.7	144.2	160.0	136.9	125.0	123.7	191.2	70.1
Other red oaks	725.4	22.5	50.3	80.3	92.3	110.2	107.1	94.8	76.0	86.2	5.8
Hickory	559.4	43.8	75.6	86.0	80.3	100.1	63.8	42.5	23.0	31.9	12.5
Yellow birch	11.1	2.4	—	0.8	1.8	1.1	0.5	1.7	—	2.2	0.6
Hard maple	128.4	17.6	19.7	20.2	18.4	11.9	13.0	4.9	8.3	9.0	5.4
Soft maple	476.0	76.2	77.2	81.3	61.4	56.1	35.4	21.5	27.8	33.7	5.4
Beech	129.6	5.2	10.9	11.1	17.2	14.5	15.4	10.3	15.2	25.6	4.1
Sweetgum	94.1	9.6	17.4	18.1	13.5	14.7	5.5	5.3	—	10.1	—
Tupelo and blackgum	111.4	17.3	16.7	13.5	16.6	17.7	8.6	1.8	6.7	8.0	4.6
Ash	182.2	10.4	20.7	19.6	20.3	22.6	28.9	18.7	10.0	30.9	—
Basswood	26.9	0.7	1.2	0.7	4.5	5.0	1.0	4.8	1.9	7.0	—
Yellow-poplar	960.5	29.4	56.2	80.9	106.8	120.9	129.0	144.2	129.7	147.7	15.7
Bay and magnolia	29.7	3.4	5.4	3.7	6.2	2.7	4.0	2.8	1.5	—	—
Black cherry	59.9	10.5	13.1	12.5	4.2	6.7	5.6	2.4	5.0	—	—
Black walnut	33.0	2.1	4.5	6.6	7.3	3.9	8.6	—	—	—	—
Sycamore	46.9	2.0	1.6	0.4	5.6	—	4.0	3.3	2.9	2.5	24.5
Black locust	56.3	3.9	8.8	6.4	11.4	9.1	5.1	7.0	1.6	2.9	—
Elm	60.1	11.4	10.6	12.2	4.5	3.7	3.8	4.8	2.6	6.4	—
Other Eastern hardwoods	342.7	89.7	83.9	59.2	39.5	23.2	13.9	10.1	3.4	5.3	14.3
Total hardwoods	6,121.1	435.5	614.6	733.5	750.9	797.5	694.2	606.1	521.8	774.8	192.3
All species	7,867.6	558.0	836.3	1,019.7	1,070.3	1,079.8	843.3	727.8	611.1	898.8	222.4

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 20—Volume of growing-stock trees on timberland by species and diameter class, East Tennessee, 1999

Species	Diameter class (inches at breast height)										
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Million cubic feet</i>											
Softwood											
Shortleaf pine	282.8	11.3	36.7	54.0	72.0	58.7	25.7	18.7	5.7	—	—
Loblolly pine	195.3	13.0	29.8	23.4	32.9	33.9	15.4	23.4	13.0	10.6	—
Virginia pine	592.5	46.2	90.5	134.2	145.8	109.2	39.8	16.7	10.2	—	—
Pitch pine	56.1	4.0	7.2	9.8	5.9	11.2	7.1	4.7	6.2	—	—
Table Mountain pine	14.8	3.3	3.6	2.6	3.0	2.3	—	—	—	—	—
Eastern white pine	272.6	10.0	11.9	16.0	16.1	29.1	28.8	23.5	42.1	74.1	21.0
Eastern hemlock	147.1	8.8	11.3	14.7	16.5	16.9	14.8	16.9	8.8	29.4	9.1
Redcedars	56.8	13.2	15.5	10.2	10.1	4.4	1.5	—	1.9	—	—
Other softwoods	0.3	—	—	0.3	—	—	—	—	—	—	—
Total softwoods	1,618.3	109.9	206.5	265.1	302.3	265.6	133.0	103.8	87.9	114.2	30.1
Hardwood											
Select white oaks	467.3	23.8	38.6	52.0	51.7	60.5	61.2	42.5	40.8	89.7	6.4
Select red oaks	348.4	7.2	17.0	28.6	39.5	42.3	37.6	53.2	38.0	72.5	12.5
Other white oaks	992.3	34.6	70.0	117.1	123.5	141.5	121.6	101.2	99.6	128.6	54.7
Other red oaks	666.0	19.6	44.2	74.8	84.6	101.9	97.5	89.7	64.8	83.2	5.8
Hickory	505.5	38.9	69.3	80.4	71.6	93.1	58.2	37.4	21.1	23.1	12.5
Yellow birch	6.9	2.0	—	0.8	1.8	0.5	—	1.7	—	—	—
Hard maple	102.6	12.8	16.6	15.5	14.2	10.6	7.8	3.5	8.3	7.9	5.4
Soft maple	362.9	58.1	60.8	65.9	44.3	45.5	30.2	16.9	16.4	24.8	—
Beech	104.5	3.1	9.3	9.0	14.7	11.8	13.2	9.1	12.8	17.4	4.1
Sweetgum	89.8	8.7	16.0	17.2	12.8	14.2	5.5	5.3	—	10.1	—
Tupelo and blackgum	89.8	13.1	13.8	11.5	14.4	12.4	5.8	1.6	4.4	8.0	4.6
Ash	150.0	7.1	15.2	15.1	17.3	19.6	22.7	18.7	7.9	26.5	—
Basswood	24.8	0.4	1.2	—	4.2	4.3	1.0	4.8	1.9	7.0	—
Yellow-poplar	929.2	26.7	53.7	76.7	102.5	116.1	128.6	141.0	125.1	143.2	15.7
Bay and magnolia	24.9	2.8	4.6	3.1	4.0	2.7	3.5	2.8	1.5	—	—
Black cherry	35.3	5.3	9.1	7.2	1.3	5.9	4.1	2.4	—	—	—
Black walnut	23.0	1.4	3.1	3.3	5.7	2.1	7.6	—	—	—	—
Sycamore	19.1	2.0	1.6	0.4	4.2	—	4.0	1.5	2.9	2.5	—
Black locust	35.5	1.1	4.9	3.9	9.5	4.8	2.8	5.6	—	2.9	—
Elm	45.6	6.8	7.6	10.1	4.3	2.6	2.1	3.1	2.6	6.4	—
Other Eastern hardwoods	221.1	47.6	51.7	38.5	28.6	14.2	12.2	6.9	3.4	3.5	14.3
Total hardwoods	5,244.6	323.1	508.4	631.2	654.7	706.6	627.0	548.8	451.4	657.2	136.2
All species	6,862.9	433.0	714.9	896.3	957.0	972.2	760.0	652.6	539.3	771.4	166.3

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 21—Volume in the saw-log portion of sawtimber trees on timberland by species and diameter class, East Tennessee, 1999

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
<i>Million cubic feet</i>									
Softwood									
Shortleaf pine	214.4	43.8	65.6	55.9	25.0	18.4	5.7	—	—
Loblolly pine	140.7	17.9	29.5	32.1	14.9	23.0	12.8	10.5	—
Virginia pine	404.7	108.5	130.6	101.8	37.9	16.0	9.9	—	—
Pitch pine	40.8	7.8	5.3	10.4	6.7	4.5	6.0	—	—
Table Mountain pine	7.2	2.2	2.8	2.2	—	—	—	—	—
Eastern white pine	237.2	12.7	14.3	27.1	27.3	22.5	40.7	72.1	20.6
Eastern hemlock	116.7	11.3	14.4	15.4	13.9	16.0	8.4	28.4	8.8
Redcedars	24.7	8.2	9.1	4.1	1.4	—	1.8	—	—
Other softwoods	0.2	0.2	—	—	—	—	—	—	—
Total softwoods	1,186.6	212.6	271.6	249.1	127.2	100.5	85.3	111.0	29.4
Hardwood									
Select white oaks	308.5	—	37.7	49.7	53.6	38.5	37.8	85.1	6.1
Select red oaks	249.8	—	28.4	33.6	31.7	45.9	33.5	65.2	11.4
Other white oaks	665.8	—	89.7	116.0	105.9	90.9	91.3	120.0	52.1
Other red oaks	452.4	—	59.6	83.1	84.9	81.2	59.8	78.3	5.5
Hickory	266.3	—	52.1	76.7	50.7	33.8	19.4	21.7	12.0
Yellow birch	3.2	—	1.3	0.4	—	1.5	—	—	—
Hard maple	49.0	—	10.1	8.7	6.9	3.1	7.7	7.4	5.2
Soft maple	145.0	—	30.7	36.1	25.6	14.9	14.7	22.9	—
Beech	70.3	—	10.6	9.6	11.2	7.9	11.4	15.7	3.9
Sweetgum	40.1	—	8.8	11.7	4.8	4.9	—	9.8	—
Tupelo and blackgum	42.3	—	10.2	9.9	4.9	1.4	4.0	7.4	4.4
Ash	97.3	—	12.3	15.7	19.9	17.0	7.3	25.1	—
Basswood	20.4	—	3.2	3.6	0.9	4.4	1.8	6.5	—
Yellow-poplar	684.9	—	71.9	95.8	113.9	130.3	118.5	138.9	15.5
Bay and magnolia	12.1	—	2.7	2.2	3.1	2.7	1.4	—	—
Black cherry	11.7	—	1.0	5.0	3.6	2.1	—	—	—
Black walnut	12.2	—	4.1	1.7	6.4	—	—	—	—
Sycamore	12.4	—	2.8	—	3.4	1.3	2.6	2.4	—
Black locust	20.4	—	6.8	3.8	2.3	4.8	—	2.6	—
Elm	17.8	—	3.1	2.1	1.8	2.7	2.3	5.8	—
Other Eastern hardwoods	64.9	—	18.5	10.6	10.0	5.4	3.1	3.4	14.0
Total hardwoods	3,246.9	—	465.7	575.9	545.5	494.8	416.6	618.3	130.1
All species	4,433.6	212.6	737.3	825.0	672.7	595.4	501.8	729.3	159.5

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 22—Volume of sawtimber on timberland by species and diameter class, East Tennessee, 1999

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
<i>Million board feet</i>									
Softwood									
Shortleaf pine	1,124.2	203.9	328.9	301.6	143.2	111.2	35.5	—	—
Loblolly pine	790.0	82.6	148.5	175.4	88.1	140.4	83.6	71.5	—
Virginia pine	1,970.9	489.8	620.8	514.4	201.1	88.7	56.0	—	—
Pitch pine	215.9	32.3	25.2	55.1	38.2	26.7	38.3	—	—
Table Mountain pine	35.7	10.0	13.9	11.8	—	—	—	—	—
Eastern white pine	1,421.5	57.5	70.3	144.7	155.1	133.7	251.0	466.5	142.8
Eastern hemlock	647.8	50.4	68.4	78.9	75.5	90.9	49.1	176.2	58.3
Redcedars	132.5	41.5	48.3	22.9	8.5	—	11.2	—	—
Other softwoods	0.9	0.9	—	—	—	—	—	—	—
Total softwoods	6,339.4	968.9	1,324.3	1,304.9	709.7	591.6	524.7	714.2	201.1
Hardwood									
Select white oaks	1,622.1	—	179.3	240.7	270.5	201.4	204.6	488.2	37.3
Select red oaks	1,309.7	—	133.6	161.3	158.9	237.6	180.6	368.8	68.8
Other white oaks	3,382.2	—	411.5	544.1	518.8	459.9	480.2	660.1	307.7
Other red oaks	2,359.6	—	288.0	407.5	430.6	429.6	326.1	444.2	33.5
Hickory	1,384.2	—	248.6	378.5	261.2	183.3	109.3	127.9	75.4
Yellow birch	16.1	—	6.1	2.1	—	7.9	—	—	—
Hard maple	251.0	—	52.9	43.0	34.0	15.8	38.9	37.9	28.5
Soft maple	732.8	—	146.6	173.7	127.0	76.6	78.7	130.3	—
Beech	327.0	—	53.6	44.8	51.5	36.1	51.7	71.4	17.9
Sweetgum	221.4	—	45.1	60.8	26.1	28.1	—	61.2	—
Tupelo and blackgum	215.6	—	47.2	46.6	24.5	7.4	21.4	42.2	26.4
Ash	500.0	—	57.2	74.2	99.2	88.8	39.3	141.4	—
Basswood	104.7	—	14.9	17.4	4.3	22.5	9.5	36.0	—
Yellow-poplar	3,974.1	—	370.9	506.6	630.3	756.9	715.0	888.1	106.3
Bay and magnolia	60.2	—	13.0	10.5	15.2	13.9	7.6	—	—
Black cherry	61.2	—	5.0	25.3	19.3	11.7	—	—	—
Black walnut	56.0	—	19.5	7.5	29.0	—	—	—	—
Sycamore	65.7	—	13.7	—	17.4	6.8	14.2	13.6	—
Black locust	95.3	—	33.7	17.7	10.5	21.6	—	11.7	—
Elm	93.1	—	15.2	10.4	9.0	14.0	12.3	32.2	—
Other Eastern hardwoods	375.8	—	98.4	56.8	55.3	33.9	18.5	21.1	91.8
Total hardwoods	17,208.0	—	2,253.9	2,829.6	2,792.6	2,653.8	2,307.9	3,576.4	793.7
All species	23,547.4	968.9	3,578.2	4,134.6	3,502.3	3,245.4	2,832.6	4,290.6	994.8

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 23—Volume of sawtimber on timberland by species, size class, and tree grade, East Tennessee, 1999

Species	All size classes						Trees ≥15.0 inches d.b.h.					
	All grades	Tree grade					All grades	Tree grade				
		1	2	3	4	5		1	2	3	4	5
<i>Million board feet</i>												
Softwood												
Shortleaf pine	1,124.2	334.2	259.1	522.8	—	8.1	289.8	108.2	58.9	114.5	—	8.1
Loblolly pine	790.0	223.6	137.5	429.0	—	—	383.5	171.6	72.2	139.8	—	—
Virginia pine	1,970.9	25.7	124.6	1,768.3	—	52.3	345.8	12.3	24.1	286.4	—	23.0
Pitch pine	215.9	15.5	34.2	144.1	—	22.0	103.3	4.0	9.1	71.5	—	18.8
Table Mountain pine	35.7	—	—	35.7	—	—	—	—	—	—	—	—
Eastern white pine	1,421.5	538.9	387.2	467.9	20.8	6.8	1,149.0	522.5	309.5	296.4	14.4	6.2
Eastern hemlock	647.8	89.6	182.3	346.4	3.9	25.6	450.1	88.7	141.7	194.1	—	25.6
Redcedars	132.5	—	—	129.2	—	3.3	19.7	—	—	19.7	—	—
Other softwoods	0.9	—	—	0.9	—	—	—	—	—	—	—	—
Total softwoods	6,339.4	1,227.5	1,124.8	3,844.2	24.7	118.2	2,741.3	907.2	615.5	1,122.5	14.4	81.7
Hardwood												
Select white oaks	1,622.1	404.2	424.0	538.6	142.4	112.9	1,202.1	404.2	369.5	252.3	73.3	102.7
Select red oaks	1,309.7	447.7	346.4	348.4	121.1	46.1	1,014.8	447.7	281.0	184.4	65.0	36.7
Other white oaks	3,382.2	724.7	1,114.4	1,162.4	178.7	202.1	2,426.7	724.7	836.8	607.3	82.3	175.6
Other red oaks	2,359.6	390.2	700.6	830.7	366.4	71.6	1,664.0	390.2	590.8	467.9	151.6	63.5
Hickory	1,384.2	181.4	386.1	485.1	243.0	88.5	757.1	181.4	205.2	157.0	145.0	68.6
Yellow birch	16.1	—	—	14.0	2.1	—	7.9	—	—	7.9	—	—
Hard maple	251.0	9.0	62.5	107.7	62.7	9.2	155.1	9.0	58.6	52.0	35.5	—
Soft maple	732.8	23.5	98.1	355.1	152.7	103.5	412.6	23.5	66.4	153.0	77.3	92.4
Beech	327.0	20.4	4.8	112.7	165.9	23.2	228.6	20.4	—	75.0	117.8	15.4
Sweetgum	221.4	—	74.5	126.6	20.3	—	115.5	—	64.9	36.7	13.9	—
Tupelo and blackgum	215.6	32.5	47.8	94.2	27.7	13.5	121.9	32.5	36.5	28.6	16.7	7.6
Ash	500.0	144.9	160.8	135.6	17.6	41.1	368.7	144.9	134.0	50.8	11.3	27.6
Basswood	104.7	39.9	13.3	21.7	29.8	—	72.4	39.9	4.3	6.3	21.8	—
Yellow-poplar	3,974.1	1,103.9	859.4	1,313.8	521.8	175.2	3,096.6	1,103.9	658.3	900.7	303.5	130.2
Bay and magnolia	60.2	13.9	6.9	15.1	22.4	1.9	36.7	13.9	2.8	7.6	12.5	—
Black cherry	61.2	12.9	22.4	4.9	9.1	11.8	30.9	12.9	6.2	—	—	11.8
Black walnut	56.0	—	24.7	25.8	—	5.6	29.0	—	21.6	7.4	—	—
Sycamore	65.7	14.2	5.7	43.0	—	2.8	52.1	14.2	5.7	32.1	—	—
Black locust	95.3	14.5	16.4	30.0	30.5	3.9	43.8	14.5	7.2	—	18.3	3.9
Elm	93.1	12.3	3.8	34.5	18.2	24.3	67.5	12.3	—	20.2	10.7	24.3
Other Eastern hardwoods	375.8	54.7	28.5	176.2	85.4	31.0	220.7	54.7	10.0	81.7	54.4	19.9
Total hardwoods	17,208.0	3,644.7	4,400.9	5,976.3	2,217.9	968.1	12,124.4	3,644.7	3,359.7	3,128.8	1,211.0	780.2
All species	23,547.4	4,872.3	5,525.7	9,820.4	2,242.6	1,086.3	14,865.8	4,552.0	3,975.2	4,251.3	1,225.4	861.9

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.

Table 24—Volume of growing stock on timberland by county and species group, East Tennessee, 1999

County	Softwoods				Hardwoods		
	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Anderson	299.7	52.6	32.0	20.6	247.1	85.5	161.6
Blount	273.0	92.4	74.2	18.2	180.6	35.4	145.2
Bradley	222.6	98.7	96.3	2.4	123.9	36.4	87.5
Carter	298.0	43.8	9.9	33.8	254.2	97.3	156.9
Claiborne	311.4	39.3	35.3	4.0	272.1	92.5	179.7
Cocke	363.3	70.9	36.5	34.4	292.4	114.4	178.1
Grainger	212.0	26.8	24.8	2.0	185.2	76.9	108.4
Greene	247.4	48.2	33.2	15.0	199.3	85.8	113.5
Hamblen	78.4	24.5	17.5	7.0	53.9	1.1	52.8
Hamilton	299.7	88.4	86.5	1.9	211.2	49.2	162.0
Hancock	133.3	6.1	3.7	2.5	127.2	32.9	94.3
Hawkins	336.5	31.1	29.4	1.8	305.4	75.7	229.6
Jefferson	102.9	17.5	15.0	2.5	85.4	13.3	72.2
Johnson	334.7	48.6	6.6	42.1	286.0	91.0	195.0
Knox	179.6	24.8	22.6	2.2	154.9	48.9	106.0
Loudon	85.2	26.8	24.2	2.6	58.5	9.5	48.9
McMinn	192.4	66.5	65.3	1.2	125.9	45.9	79.9
Meigs	148.6	61.4	57.5	3.9	87.2	31.0	56.2
Monroe	528.3	194.2	118.9	75.3	334.1	122.7	211.5
Polk	426.4	238.2	145.3	92.9	188.2	62.0	126.1
Rhea	246.1	46.2	26.6	19.6	199.9	63.0	136.9
Roane	355.5	77.2	75.3	2.0	278.3	87.7	190.6
Sevier	256.4	44.6	35.8	8.8	211.7	48.3	163.5
Sullivan	298.8	33.8	19.6	14.2	265.0	71.5	193.5
Unicoi	281.4	51.0	5.2	45.7	230.4	129.2	101.2
Union	211.1	46.1	39.4	6.7	165.0	50.2	114.8
Washington	140.2	18.5	5.1	13.4	121.7	29.0	92.7
Total	6,862.9	1,618.3	1,141.8	476.5	5,244.6	1,686.3	3,558.3

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

Table 25—Volume of live trees on timberland by county and species group, East Tennessee, 1999

County	Softwoods			Hardwoods			
	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Anderson	338.7	58.3	35.4	22.8	280.4	98.7	181.7
Blount	316.8	100.1	81.6	18.5	216.7	43.2	173.5
Bradley	238.0	105.1	102.2	3.0	132.8	38.9	93.9
Carter	385.1	49.0	10.5	38.5	336.0	144.3	191.7
Claiborne	378.0	47.2	41.9	5.3	330.9	113.6	217.3
Cocke	413.2	72.2	37.5	34.7	341.0	127.4	213.6
Grainger	237.8	31.0	28.6	2.4	206.7	80.0	126.7
Greene	300.6	53.5	35.4	18.1	247.1	94.4	152.7
Hamblen	88.6	24.8	17.5	7.3	63.8	2.9	60.8
Hamilton	357.5	93.9	91.1	2.8	263.7	58.3	205.3
Hancock	155.9	7.6	4.7	2.9	148.3	41.3	107.0
Hawkins	401.6	39.9	37.3	2.6	361.8	85.7	276.1
Jefferson	113.9	18.8	15.3	3.5	95.0	17.4	77.7
Johnson	364.1	50.3	6.6	43.7	313.9	97.7	216.2
Knox	213.1	33.6	28.9	4.6	179.5	54.4	125.2
Loudon	98.1	28.8	25.5	3.3	69.4	14.4	55.0
McMinn	223.4	71.8	70.3	1.5	151.6	51.3	100.3
Meigs	163.1	62.9	58.0	4.9	100.2	35.5	64.6
Monroe	604.5	202.4	121.0	81.4	402.1	150.4	251.7
Polk	465.4	241.5	148.1	93.4	223.9	70.2	153.6
Rhea	277.2	51.5	28.6	22.9	225.7	70.9	154.8
Roane	375.6	77.8	75.8	2.0	297.8	99.6	198.2
Sevier	318.4	67.2	52.0	15.2	251.2	58.0	193.2
Sullivan	338.9	37.8	22.4	15.4	301.1	75.5	225.6
Unicoi	315.9	51.4	5.5	45.9	264.4	138.3	126.1
Union	232.9	49.4	40.5	8.9	183.5	53.0	130.5
Washington	151.3	18.5	5.1	13.4	132.8	30.0	102.7
Total	7,867.6	1,746.5	1,227.2	519.3	6,121.1	1,945.4	4,175.7

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

Table 26—Volume of sawtimber on timberland by county and species group, East Tennessee, 1999

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million board feet</i>							
Anderson	1,107.1	226.1	136.6	89.5	881.0	308.8	572.3
Blount	957.6	358.3	267.0	91.3	599.3	102.0	497.3
Bradley	844.3	418.1	406.5	11.6	426.1	117.8	308.3
Carter	1,050.8	205.0	43.5	161.5	845.8	354.1	491.7
Claiborne	1,010.5	141.7	131.7	10.0	868.8	299.7	569.1
Cocke	1,278.4	326.6	132.2	194.4	951.8	383.5	568.3
Grainger	749.7	81.1	76.1	5.0	668.6	345.2	323.4
Greene	888.3	192.5	128.1	64.4	695.8	372.9	322.9
Hamblen	304.1	79.5	66.9	12.6	224.6	—	224.6
Hamilton	978.3	344.0	341.5	2.4	634.3	121.8	512.6
Hancock	381.4	14.3	12.9	1.4	367.1	81.2	285.9
Hawkins	1,036.4	78.8	75.3	3.5	957.6	288.1	669.6
Jefferson	384.6	49.5	44.2	5.2	335.2	48.3	286.9
Johnson	1,057.5	222.4	30.2	192.2	835.1	253.1	582.0
Knox	581.9	89.8	86.1	3.7	492.1	162.9	329.3
Loudon	315.5	99.4	88.2	11.1	216.1	29.4	186.7
McMinn	528.8	134.5	131.4	3.1	394.3	156.5	237.8
Meigs	507.2	265.3	247.1	18.2	241.9	71.1	170.8
Monroe	1,802.7	751.6	403.1	348.6	1,051.1	405.3	645.8
Polk	1,539.3	975.8	512.2	463.6	563.6	170.2	393.4
Rhea	841.2	191.8	74.5	117.3	649.4	198.4	451.1
Roane	1,134.2	321.4	317.0	4.5	812.7	256.6	556.1
Sevier	824.2	147.6	114.4	33.2	676.6	146.6	530.0
Sullivan	1,024.5	134.4	66.2	68.2	890.1	253.7	636.4
Unicoi	1,103.8	230.1	17.9	212.1	873.7	559.6	314.1
Union	786.2	183.0	170.8	12.2	603.3	189.0	414.2
Washington	528.7	77.0	16.1	60.9	451.7	106.0	345.7
Total	23,547.4	6,339.4	4,137.6	2,201.8	17,208.0	5,781.6	11,426.4

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 27—Volume of timber on timberland by class of timber and species group, East Tennessee, 1999

Class of timber	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Sawtimber trees							
Saw-log portion	4,433.6	1,186.6	808.1	378.6	3,246.9	1,029.7	2,217.3
Upper-stem portion ^a	650.4	115.3	88.1	27.3	535.0	157.2	377.8
Total	5,083.9	1,302.0	896.2	405.8	3,781.9	1,186.8	2,595.1
Poletimber trees							
All growing-stock trees	1,779.0	316.3	245.6	70.7	1,462.7	499.5	963.2
	6,862.9	1,618.3	1,141.8	476.5	5,244.6	1,686.3	3,558.3
Rough trees							
Sawtimber size	621.2	100.0	67.8	32.2	521.2	142.5	378.7
Poletimber size	345.4	27.7	17.6	10.2	317.7	106.7	211.0
Total	966.6	127.7	85.4	42.3	838.9	249.2	589.7
Rotten trees							
Sawtimber size	34.7	0.3	—	0.3	34.4	8.7	25.6
Poletimber size	3.4	0.2	—	0.2	3.2	1.1	2.1
Total	38.0	0.4	—	0.4	37.6	9.9	27.7
Salvable dead trees							
Sawtimber size	97.3	48.3	35.6	12.7	49.0	5.8	43.2
Poletimber size	26.7	5.0	2.9	2.1	21.7	9.8	11.9
Total	124.0	53.3	38.5	14.8	70.7	15.6	55.1
All classes	7,991.5	1,799.7	1,265.7	534.0	6,191.8	1,961.0	4,230.8

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, East Tennessee, 1999

Ownership class	Softwoods				Hardwoods		
	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
Live trees (million cubic feet)							
National forest	1,494.0	347.4	136.3	211.1	1,146.6	445.5	701.1
Other public	348.0	71.4	67.2	4.2	276.6	63.8	212.8
Forest industry	409.3	147.8	124.1	23.7	261.5	104.5	157.0
Nonindustrial private	5,616.3	1,179.9	899.7	280.2	4,436.4	1,331.5	3,105.0
All classes	7,867.6	1,746.5	1,227.2	519.3	6,121.1	1,945.4	4,175.7
Growing-stock trees (million cubic feet)							
National forest	1,321.8	337.0	133.3	203.7	984.8	400.7	584.2
Other public	313.4	67.9	65.6	2.3	245.4	55.9	189.5
Forest industry	350.9	134.9	113.8	21.1	216.0	81.7	134.3
Nonindustrial private	4,876.8	1,078.5	829.0	249.5	3,798.3	1,148.0	2,650.3
All classes	6,862.9	1,618.3	1,141.8	476.5	5,244.6	1,686.3	3,558.3

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

Table 29—Volume of sawtimber on timberland by ownership class, species group, and size class, East Tennessee, 1999

Ownership class	Softwoods				Hardwoods		
	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
All size classes (million board feet)							
National forest	4,770.8	1,499.0	493.4	1,005.7	3,271.7	1,444.7	1,827.1
Other public	1,144.4	318.0	313.6	4.4	826.5	160.7	665.8
Forest industry	1,037.1	392.0	297.3	94.7	645.0	229.4	415.6
Nonindustrial private	16,595.1	4,130.3	3,033.3	1,097.0	12,464.7	3,946.8	8,517.9
All classes	23,547.4	6,339.4	4,137.6	2,201.8	17,208.0	5,781.6	11,426.4
Trees ≥ 15.0 inches d.b.h. (million board feet)							
National forest	3,370.7	992.8	190.3	802.5	2,377.9	1,096.0	1,281.9
Other public	732.8	118.0	118.0	—	614.8	120.0	494.8
Forest industry	513.6	114.6	53.9	60.7	399.0	126.8	272.2
Nonindustrial private	10,248.7	1,515.9	760.3	755.7	8,732.7	2,861.6	5,871.1
All classes	14,865.8	2,741.3	1,122.5	1,618.9	12,124.4	4,204.5	7,920.0

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 30—Volume of growing stock on timberland by forest-type group, stand origin, and species group, East Tennessee, 1999

Forest-type group and stand origin	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Softwood types							
White–red–jack pine							
Planted	—	—	—	—	—	—	—
Natural	275.1	198.3	20.0	178.2	76.8	26.3	50.5
Total	275.1	198.3	20.0	178.2	76.8	26.3	50.5
Loblolly–shortleaf pine							
Planted	195.3	166.0	165.4	0.6	29.3	18.5	10.8
Natural	725.1	577.2	540.0	37.2	147.8	69.5	78.3
Total	920.4	743.2	705.4	37.9	177.2	88.0	89.1
Total softwoods	1,195.5	941.5	725.4	216.1	254.0	114.3	139.6
Hardwood types							
Oak–pine							
Planted	0.7	0.7	0.5	0.1	0.1	—	0.1
Natural	924.1	392.1	243.4	148.7	532.1	145.3	386.8
Total	924.8	392.7	243.9	148.8	532.1	145.3	386.8
Oak–hickory	4,706.2	282.3	172.5	109.8	4,423.9	1,414.1	3,009.8
Oak–gum–cypress	3.6	0.1	—	0.1	3.6	0.7	2.8
Elm–ash–cottonwood	2.2	—	—	—	2.2	1.4	0.8
Maple–beech–birch	30.6	1.7	—	1.7	28.9	10.5	18.3
Total hardwoods	5,667.5	676.8	416.4	260.4	4,990.7	1,572.0	3,418.6
Nonstocked	—	—	—	—	—	—	—
All groups	6,862.9	1,618.3	1,141.8	476.5	5,244.6	1,686.3	3,558.3

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 31—Average basal area of live trees per acre on timberland by ownership class, species group, and d.b.h., East Tennessee, 1999

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
<i>Square feet/acre</i>					
National forest					
Softwood	30.8	3.9	9.7	5.4	11.9
Hardwood	94.9	13.6	29.6	18.7	33.0
Total	125.7	17.4	39.3	24.1	44.9
Other public					
Softwood	20.3	0.7	6.6	9.1	4.0
Hardwood	77.5	11.8	27.8	13.3	24.5
Total	97.8	12.4	34.5	22.4	28.5
Forest industry					
Softwood	43.8	9.6	21.0	7.5	5.6
Hardwood	56.6	10.7	18.5	11.6	15.9
Total	100.4	20.3	39.5	19.1	21.4
Nonindustrial private					
Softwood	23.1	2.9	9.7	6.7	3.8
Hardwood	80.9	12.0	26.6	17.2	25.1
Total	104.0	14.9	36.3	23.9	28.9
All classes					
Softwood	25.6	3.4	10.2	6.6	5.5
Hardwood	82.3	12.3	26.8	17.0	26.2
Total	108.0	15.6	37.0	23.6	31.8

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

Table 32—Average net annual growth of growing stock on timberland by county and species group, East Tennessee, 1989–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Anderson	9.8	1.2	0.9	0.3	8.6	3.5	5.1
Blount	3.5	0.3	0.2	0.1	3.1	0.5	2.6
Bradley	9.0	6.1	6.0	0.1	2.9	0.4	2.5
Carter	8.4	0.7	-0.0	0.7	7.8	3.9	3.9
Claiborne	10.3	1.1	0.8	0.3	9.3	4.5	4.8
Cocke	9.0	0.7	0.0	0.7	8.3	4.1	4.2
Grainger	5.9	0.5	0.5	0.0	5.4	1.7	3.7
Greene	5.9	0.5	0.2	0.4	5.4	1.4	3.9
Hamblen	2.0	0.2	0.2	-0.0	1.8	0.3	1.6
Hamilton	9.0	3.8	3.7	0.0	5.2	1.2	3.9
Hancock	2.2	0.3	0.2	0.1	2.0	0.6	1.4
Hawkins	7.2	1.0	0.9	0.1	6.3	1.7	4.6
Jefferson	2.4	-0.2	-0.1	-0.0	2.6	0.4	2.2
Johnson	8.9	1.8	-0.1	1.8	7.1	3.4	3.7
Knox	8.2	1.7	1.2	0.4	6.6	2.1	4.5
Loudon	4.0	1.6	1.2	0.4	2.4	0.1	2.3
McMinn	9.1	4.3	4.3	-0.0	4.8	1.3	3.4
Meigs	8.4	3.3	3.3	—	5.0	1.9	3.2
Monroe	15.6	7.8	4.5	3.3	7.8	2.5	5.3
Polk	5.8	2.6	2.0	0.6	3.2	1.2	2.0
Rhea	7.3	2.0	1.8	0.3	5.2	1.9	3.3
Roane	11.6	1.6	1.5	0.1	10.0	3.1	6.9
Sevier	5.6	0.4	0.1	0.3	5.2	1.4	3.8
Sullivan	6.4	0.8	0.2	0.6	5.6	1.6	4.0
Unicoi	5.7	1.1	0.0	1.0	4.6	2.2	2.4
Union	5.6	0.7	0.5	0.3	4.8	2.7	2.2
Washington	3.2	0.5	0.2	0.4	2.7	1.1	1.7
Total	190.0	46.5	34.3	12.2	143.5	50.5	93.0

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 33—Average net annual growth of live trees on timberland by county and species group, East Tennessee, 1989–1998

County	Softwoods			Hardwoods			
	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Anderson	10.1	1.2	0.7	0.4	8.9	3.4	5.5
Blount	4.1	0.4	0.3	0.1	3.8	0.6	3.2
Bradley	9.3	6.1	6.0	0.1	3.2	0.5	2.7
Carter	10.4	0.6	-0.0	0.6	9.8	5.6	4.2
Claiborne	11.8	1.1	0.8	0.3	10.7	4.8	5.9
Cocke	10.4	0.7	0.0	0.7	9.7	4.8	4.9
Grainger	6.3	0.5	0.5	0.0	5.8	1.6	4.2
Greene	6.6	0.6	0.1	0.4	6.0	1.7	4.3
Hamblen	2.1	0.2	0.2	-0.0	1.9	0.3	1.6
Hamilton	10.0	4.0	3.8	0.1	6.1	1.4	4.7
Hancock	2.8	0.4	0.3	0.1	2.5	0.6	1.8
Hawkins	8.3	1.1	1.1	0.0	7.3	1.9	5.4
Jefferson	2.7	-0.1	-0.1	-0.0	2.8	0.4	2.4
Johnson	9.5	1.8	-0.1	1.8	7.7	3.5	4.2
Knox	8.5	1.9	1.5	0.4	6.6	2.2	4.4
Loudon	4.9	2.0	1.4	0.6	2.9	0.5	2.5
McMinn	9.8	4.3	4.3	-0.0	5.5	1.4	4.0
Meigs	9.3	3.4	3.3	0.0	6.0	2.5	3.5
Monroe	16.9	7.8	4.4	3.4	9.1	3.0	6.1
Polk	6.3	2.7	1.9	0.7	3.6	1.2	2.4
Rhea	7.8	2.3	1.8	0.4	5.5	2.0	3.5
Roane	11.9	1.6	1.5	0.1	10.3	3.3	7.0
Sevier	7.0	0.7	0.3	0.4	6.3	1.7	4.6
Sullivan	7.0	0.8	0.1	0.7	6.2	1.9	4.3
Unicoi	6.0	1.2	0.0	1.2	4.7	2.4	2.3
Union	6.3	0.8	0.4	0.4	5.5	2.8	2.6
Washington	4.0	0.5	0.2	0.4	3.4	1.1	2.3
Total	210.1	48.4	35.0	13.4	161.6	57.0	104.6

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

Table 34—Average net annual growth of sawtimber on timberland by county and species group, East Tennessee, 1989–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million board feet</i>							
Anderson	44.4	6.2	4.7	1.5	38.2	19.2	19.0
Blount	14.4	3.1	2.4	0.8	11.3	2.2	9.1
Bradley	28.6	15.7	15.1	0.6	12.8	2.5	10.4
Carter	43.6	3.6	0.5	3.1	40.0	20.7	19.3
Claiborne	42.8	5.2	5.2	—	37.6	18.8	18.8
Cocke	38.5	5.6	2.1	3.5	32.9	15.4	17.6
Grainger	29.4	2.3	2.1	0.2	27.1	8.0	19.1
Greene	28.2	4.6	3.6	1.0	23.6	9.7	13.9
Hamblen	10.5	1.2	1.2	—	9.2	1.4	7.8
Hamilton	39.3	16.2	15.9	0.3	23.0	3.0	20.1
Hancock	10.0	0.3	0.3	—	9.7	3.4	6.3
Hawkins	35.2	3.1	3.1	—	32.2	6.8	25.4
Jefferson	12.6	-0.3	-0.3	0.1	12.9	1.1	11.8
Johnson	31.3	7.0	-0.2	7.2	24.3	7.8	16.5
Knox	38.3	6.5	5.4	1.1	31.8	9.6	22.2
Loudon	24.0	11.0	10.5	0.5	13.0	0.8	12.2
McMinn	28.8	11.1	11.1	—	17.7	5.4	12.3
Meigs	34.7	16.6	16.2	0.3	18.2	5.2	12.9
Monroe	71.2	36.2	22.4	13.8	34.9	8.8	26.1
Polk	32.1	20.7	17.3	3.4	11.4	2.8	8.6
Rhea	30.0	8.8	6.5	2.2	21.2	8.4	12.8
Roane	48.8	11.9	11.4	0.6	36.9	9.0	27.8
Sevier	22.6	5.2	3.5	1.6	17.4	5.4	12.0
Sullivan	30.2	4.4	1.9	2.5	25.8	8.7	17.1
Unicoi	24.8	7.7	0.4	7.3	17.1	8.7	8.4
Union	26.3	4.4	3.0	1.4	21.9	11.3	10.6
Washington	14.7	2.8	0.6	2.1	12.0	5.1	6.8
Total	835.2	221.1	165.9	55.1	614.2	209.4	404.8

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, East Tennessee, 1989–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Anderson	—	—	—	—	—	—	—
Blount	1.0	0.5	0.5	—	0.5	0.1	0.4
Bradley	2.7	2.7	2.7	—	—	—	—
Carter	6.3	1.6	—	1.6	4.8	2.6	2.2
Claiborne	2.1	0.1	—	0.1	2.0	—	2.0
Cocke	1.8	0.1	—	0.1	1.7	0.6	1.2
Grainger	0.8	0.1	0.1	—	0.7	0.5	0.2
Greene	2.5	0.5	0.4	0.1	2.0	0.9	1.1
Hamblen	—	—	—	—	—	—	—
Hamilton	4.5	2.1	2.1	—	2.4	0.3	2.1
Hancock	0.5	—	—	—	0.5	—	0.5
Hawkins	1.4	0.6	0.3	0.3	0.8	—	0.8
Jefferson	0.9	0.2	0.2	—	0.7	0.1	0.6
Johnson	1.0	0.1	—	0.1	0.9	0.3	0.6
Knox	1.9	0.2	—	0.2	1.7	0.4	1.3
Loudon	2.6	2.5	2.5	—	0.1	—	0.1
McMinn	9.5	6.6	6.6	—	2.9	0.8	2.1
Meigs	6.1	6.0	6.0	—	0.1	0.1	—
Monroe	7.3	6.2	6.0	0.3	1.1	0.2	0.8
Polk	8.7	7.1	6.9	0.2	1.6	0.7	0.9
Rhea	3.4	3.0	3.0	—	0.4	—	0.4
Roane	3.8	2.8	2.8	—	1.0	0.6	0.4
Sevier	2.9	2.3	2.3	—	0.5	0.5	0.1
Sullivan	1.2	0.7	0.7	—	0.5	0.3	0.2
Unicoi	—	—	—	—	—	—	—
Union	0.9	—	—	—	0.9	0.8	0.1
Washington	2.8	1.1	0.5	0.6	1.7	0.5	1.2
Total	76.5	46.9	43.4	3.4	29.6	10.1	19.6

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 36—Average annual removals of live trees on timberland by county and species group, East Tennessee, 1989–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Anderson	—	—	—	—	—	—	—
Blount	1.0	0.5	0.5	—	0.5	0.1	0.4
Bradley	2.7	2.7	2.7	—	—	—	—
Carter	6.8	1.6	—	1.6	5.2	2.7	2.6
Claiborne	2.1	0.1	—	0.1	2.0	—	2.0
Cocke	2.0	0.1	—	0.1	1.9	0.6	1.3
Grainger	1.2	0.1	0.1	—	1.1	0.6	0.4
Greene	2.5	0.5	0.4	0.1	2.1	0.9	1.2
Hamblen	—	—	—	—	—	—	—
Hamilton	5.0	2.1	2.1	—	2.9	0.4	2.5
Hancock	0.5	—	—	—	0.5	—	0.5
Hawkins	1.4	0.6	0.3	0.3	0.8	—	0.8
Jefferson	1.2	0.2	0.2	—	1.0	0.2	0.8
Johnson	1.4	0.1	—	0.1	1.3	0.4	0.9
Knox	2.2	0.2	—	0.2	2.0	0.4	1.5
Loudon	2.9	2.8	2.6	0.1	0.1	—	0.1
McMinn	10.2	6.6	6.6	—	3.7	0.9	2.8
Meigs	6.1	6.0	6.0	—	0.2	0.2	—
Monroe	7.6	6.5	6.2	0.3	1.2	0.2	0.9
Polk	8.9	7.2	7.0	0.2	1.7	0.7	1.0
Rhea	3.4	3.0	3.0	—	0.4	—	0.4
Roane	3.8	2.8	2.8	—	1.1	0.6	0.4
Sevier	3.2	2.5	2.5	—	0.7	0.5	0.2
Sullivan	1.2	0.7	0.7	—	0.5	0.3	0.2
Unicoi	—	—	—	—	—	—	—
Union	0.9	—	—	—	0.9	0.8	0.1
Washington	3.0	1.1	0.5	0.6	1.9	0.5	1.4
Total	81.3	47.7	44.1	3.6	33.7	10.9	22.7

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 37—Average annual removals of sawtimber on timberland by county and species group, East Tennessee, 1989–1998

County	Softwoods				Hardwoods		
	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million board feet</i>							
Anderson	—	—	—	—	—	—	—
Blount	4.8	2.3	2.3	—	2.5	0.4	2.1
Bradley	5.1	5.1	5.1	—	—	—	—
Carter	25.5	9.1	—	9.1	16.4	10.3	6.1
Claiborne	8.9	—	—	—	8.9	—	8.9
Cocke	6.6	—	—	—	6.6	1.7	4.9
Grainger	4.1	0.6	0.6	—	3.5	2.4	1.1
Greene	10.6	1.2	1.2	—	9.4	3.7	5.7
Hamblen	—	—	—	—	—	—	—
Hamilton	13.2	7.5	7.5	—	5.7	—	5.7
Hancock	2.1	—	—	—	2.1	—	2.1
Hawkins	0.4	0.4	0.4	—	—	—	—
Jefferson	3.1	1.0	1.0	—	2.1	—	2.1
Johnson	2.3	—	—	—	2.3	0.3	2.0
Knox	9.5	—	—	—	9.5	2.1	7.4
Loudon	9.8	9.6	9.6	—	0.3	—	0.3
McMinn	25.7	18.6	18.6	—	7.1	1.7	5.4
Meigs	18.2	18.2	18.2	—	—	—	—
Monroe	23.7	20.0	18.1	1.8	3.8	0.9	2.9
Polk	28.6	24.0	23.4	0.6	4.7	1.1	3.6
Rhea	3.4	3.0	3.0	—	0.4	—	0.4
Roane	16.4	12.5	12.5	—	3.9	1.9	2.0
Sevier	9.0	8.0	8.0	—	1.0	1.0	—
Sullivan	5.7	3.2	3.2	—	2.6	1.4	1.1
Unicoi	—	—	—	—	—	—	—
Union	4.8	—	—	—	4.8	4.2	0.6
Washington	12.5	4.5	1.2	3.4	7.9	2.3	5.6
Total	254.2	148.6	133.7	14.8	105.6	35.4	70.2

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 38—Average net annual growth and average annual removals of live trees, growing stock, and sawtimber on timberland by species, East Tennessee, 1989–1998

Species	Live trees		Growing stock		Sawtimber	
	Net annual growth	Annual removals	Net annual growth	Annual removals	Net annual growth	Annual removals
	<i>Million cubic feet</i>				<i>Million board feet</i>	
Softwood						
Shortleaf pine	5.8	6.9	5.8	6.8	35.4	22.5
Loblolly pine	12.1	11.9	12.0	11.7	37.6	38.2
Virginia pine	15.8	24.3	15.1	24.0	81.0	68.7
Pitch pine	1.0	0.8	1.0	0.8	8.9	4.0
Table Mountain pine	0.4	0.1	0.4	0.1	3.0	0.3
Eastern white pine	6.9	2.1	6.5	2.1	35.6	11.2
Eastern hemlock	3.9	0.7	3.7	0.7	14.5	3.7
Redcedars	2.6	0.9	2.1	0.7	5.0	—
Total softwoods	48.4	47.7	46.5	46.9	221.1	148.6
Hardwood						
Select white oaks	12.6	4.2	12.1	4.1	54.9	18.4
Select red oaks	10.9	2.4	10.3	2.3	53.9	9.4
Other white oaks	29.4	3.8	26.0	3.4	114.6	7.0
Other red oaks	19.3	7.2	18.2	6.5	98.0	27.6
Hickory	11.8	1.5	11.1	1.5	39.8	3.4
Yellow birch	0.1	—	-0.0	—	-0.2	—
Hard maple	5.5	0.1	4.4	—	14.9	—
Soft maple	17.4	2.3	14.3	1.9	30.5	4.7
Beech	2.1	0.2	1.7	0.2	7.6	0.8
Sweetgum	3.1	0.9	3.2	0.8	13.2	2.2
Tupelo and blackgum	2.6	0.6	2.2	0.5	6.4	1.4
Ash	4.3	1.4	3.6	1.0	12.8	2.6
Basswood	0.5	—	0.4	—	2.9	—
Yellow-poplar	25.6	5.8	25.0	5.7	135.1	24.2
Bay and magnolia	2.2	—	0.8	—	2.9	—
Black cherry	1.7	0.2	1.2	0.1	3.6	—
Black walnut	0.4	0.4	0.2	0.2	1.3	0.5
Sycamore	0.6	0.4	0.6	0.4	3.8	1.2
Black locust	1.0	0.1	0.6	0.1	2.6	—
Elm	1.3	0.5	1.2	0.5	2.3	1.2
Other Eastern hardwoods	9.3	1.6	6.4	0.4	13.4	1.1
Total hardwoods	161.6	33.7	143.5	29.6	614.2	105.6
All species	210.1	81.3	190.0	76.5	835.2	254.2

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, East Tennessee, 1989–1998

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
<i>Million cubic feet</i>											
Softwood											
Shortleaf pine	6.8	0.2	1.6	2.1	1.9	0.5	0.2	—	0.2	—	—
Loblolly pine	11.7	0.7	2.5	2.5	4.2	1.3	0.2	0.2	—	—	—
Virginia pine	24.0	2.6	5.0	6.4	5.3	3.4	0.8	0.3	—	0.1	—
Pitch pine	0.8	—	—	0.1	0.1	0.2	0.4	—	—	—	—
Table Mountain pine	0.1	—	0.1	0.1	—	—	—	—	—	—	—
Eastern white pine	2.1	0.1	0.1	—	—	0.2	0.2	0.4	0.2	0.8	0.1
Eastern hemlock	0.7	—	—	—	—	—	0.2	—	0.3	0.2	—
Redcedars	0.7	0.5	0.2	—	—	—	—	—	—	—	—
Total softwoods	46.9	4.1	9.4	11.2	11.6	5.6	2.0	1.0	0.7	1.1	0.1
Hardwood											
Select white oaks	4.1	0.1	0.2	0.3	0.2	—	0.6	0.2	0.4	1.7	0.5
Select red oaks	2.3	—	0.1	0.2	0.3	0.1	0.2	0.3	0.2	0.9	—
Other white oaks	3.4	0.4	0.4	1.0	0.3	0.2	0.1	0.1	—	0.8	—
Other red oaks	6.5	—	0.2	0.5	0.9	0.7	1.1	0.4	1.0	1.8	—
Hickory	1.5	0.1	0.2	0.4	0.2	0.2	0.2	0.2	—	—	—
Soft maple	1.9	0.1	0.6	0.1	0.5	0.1	—	—	0.2	0.4	—
Beech	0.2	—	—	—	—	0.1	0.1	—	0.1	—	—
Sweetgum	0.8	0.1	0.2	—	0.1	0.2	0.2	—	—	—	—
Tupelo and blackgum	0.5	0.1	—	0.2	0.1	—	—	—	0.1	0.1	—
Ash	1.0	0.1	0.1	0.2	0.1	0.1	0.1	—	0.2	—	—
Yellow-poplar	5.7	0.2	0.5	0.2	0.2	1.3	1.3	0.5	0.5	0.8	0.1
Black cherry	0.1	—	0.1	—	—	—	—	—	—	—	—
Black walnut	0.2	0.0	0.1	—	0.1	—	—	0.1	—	—	—
Sycamore	0.4	—	—	0.1	0.1	0.1	—	—	0.1	—	—
Black locust	0.1	—	0.1	—	—	—	—	—	—	—	—
Elm	0.5	0.1	0.1	0.1	—	—	—	—	0.1	0.1	—
Other Eastern hardwoods	0.4	—	0.1	—	0.1	0.1	0.1	—	—	—	—
Total hardwoods	29.6	1.2	2.9	3.2	3.1	3.3	3.9	1.9	2.9	6.6	0.7
All species	76.5	5.3	12.3	14.4	14.6	8.9	5.9	2.8	3.6	7.7	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.

Table 40—Average annual mortality of live trees, growing stock, and sawtimber on timberland by species, East Tennessee, 1989–1998

Species	Live trees	Growing stock	Sawtimber
	<i>Million cubic feet</i>		<i>Million board feet</i>
Softwood			
Shortleaf pine	4.4	4.2	14.2
Loblolly pine	0.7	0.6	2.4
Virginia pine	14.2	13.0	36.7
Pitch pine	1.5	1.4	3.4
Table Mountain pine	0.4	0.4	0.8
Eastern white pine	3.2	3.2	13.5
Eastern hemlock	0.7	0.6	1.9
Redcedars	1.3	0.9	1.2
Total softwoods	26.5	24.2	74.2
Hardwood			
Select white oaks	1.9	1.2	4.5
Select red oaks	3.0	2.9	11.2
Other white oaks	5.2	4.0	13.6
Other red oaks	6.8	5.6	19.3
Hickory	2.2	1.8	5.1
Yellow birch	0.1	0.1	0.6
Hard maple	0.1	—	—
Soft maple	2.3	1.1	2.1
Beech	0.7	0.3	0.4
Sweetgum	0.9	0.6	1.1
Tupelo and blackgum	0.4	0.2	—
Ash	1.0	0.7	1.7
Basswood	0.2	0.1	0.6
Yellow-poplar	2.3	1.7	2.1
Black cherry	0.9	0.5	0.4
Black walnut	0.5	0.3	0.8
Sycamore	0.1	—	—
Black locust	1.4	0.7	1.4
Elm	1.2	0.9	0.6
Other Eastern hardwoods	4.3	1.6	0.6
Total hardwoods	35.3	24.4	66.1
All species	61.8	48.5	140.3

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, East Tennessee, 1989–1998

Ownership class	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
Average net annual growth (million cubic feet)							
National forest	32.4	9.1	3.8	5.3	23.2	10.6	12.6
Other public	8.9	2.4	2.2	0.2	6.6	1.8	4.7
Forest industry	13.5	6.5	6.4	0.2	7.0	3.6	3.4
Nonindustrial private	135.2	28.5	22.0	6.5	106.7	34.4	72.3
All classes	190.0	46.5	34.3	12.2	143.5	50.5	93.0
Average annual removals (million cubic feet)							
National forest	11.0	8.3	7.9	0.4	2.7	0.5	2.2
Other public	3.4	3.1	3.1	—	0.2	0.2	—
Forest industry	15.5	12.3	12.3	—	3.2	0.7	2.4
Nonindustrial private	46.7	23.1	20.0	3.0	23.6	8.6	15.0
All classes	76.5	46.9	43.4	3.4	29.6	10.1	19.6

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 42—Average net annual growth and average annual removals of live trees on timberland by ownership class and species group, East Tennessee, 1989–1998

Ownership class	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
Average net annual growth (million cubic feet)							
National forest	34.7	9.4	3.7	5.7	25.3	11.4	13.9
Other public	9.5	2.5	2.3	0.2	7.0	2.1	4.9
Forest industry	14.2	6.9	6.5	0.4	7.3	4.1	3.2
Nonindustrial private	151.7	29.7	22.6	7.1	122.0	39.4	82.6
All classes	210.1	48.4	35.0	13.4	161.6	57.0	104.6
Average annual removals (million cubic feet)							
National forest	11.4	8.3	7.9	0.4	3.1	0.5	2.6
Other public	3.4	3.1	3.1	—	0.3	0.3	—
Forest industry	16.2	12.5	12.5	—	3.7	0.8	2.9
Nonindustrial private	50.3	23.7	20.5	3.2	26.6	9.3	17.3
All classes	81.3	47.7	44.1	3.6	33.7	10.9	22.7

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 43—Average net annual growth and average annual removals of sawtimber on timberland by ownership class and species group, East Tennessee, 1989–1998

Ownership class	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
Average net annual growth (million board feet)							
National forest	141.6	45.9	21.7	24.3	95.7	41.9	53.8
Other public	45.9	14.4	13.9	0.5	31.5	6.4	25.1
Forest industry	49.6	21.6	20.8	0.8	28.1	15.0	13.1
Nonindustrial private	598.2	139.2	109.6	29.6	458.9	146.1	312.8
All classes	835.2	221.1	165.9	55.1	614.2	209.4	404.8
Average annual removals (million board feet)							
National forest	39.3	31.0	28.6	2.4	8.3	0.7	7.6
Other public	12.7	12.7	12.7	—	—	—	—
Forest industry	42.4	34.6	34.6	—	7.8	1.7	6.1
Nonindustrial private	159.8	70.3	57.8	12.4	89.5	33.0	56.5
All classes	254.2	148.6	133.7	14.8	105.6	35.4	70.2

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 44—Average net annual growth of growing stock on timberland by forest-type group, stand origin, and species group, East Tennessee, 1989–1998

Forest-type group and stand origin ^a	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Softwood types							
White–red–jack pine							
Planted	0.2	0.0	—	0.0	0.1	0.1	0.0
Natural	5.7	3.4	1.1	2.4	2.3	1.0	1.2
Total	5.9	3.5	1.1	2.4	2.4	1.1	1.2
Loblolly–shortleaf pine							
Planted	8.0	7.0	7.0	—	0.9	0.7	0.2
Natural	20.6	15.2	13.4	1.7	5.4	1.9	3.5
Total	28.5	22.2	20.5	1.7	6.3	2.6	3.7
Total softwoods	34.4	25.7	21.6	4.1	8.7	3.8	4.9
Hardwood types							
Oak–pine							
Planted	—	—	—	—	—	—	—
Natural	30.5	12.2	9.0	3.1	18.3	5.6	12.7
Total	30.5	12.2	9.0	3.1	18.3	5.6	12.7
Oak–hickory	124.0	8.6	3.7	4.9	115.4	40.7	74.8
Oak–gum–cypress	0.2	0.0	0.0	—	0.1	—	0.1
Maple–beech–birch	0.9	0.1	—	0.1	0.9	0.4	0.5
Total hardwoods	155.6	20.9	12.7	8.1	134.8	46.7	88.1
Nonstocked							
	—	—	—	—	—	—	—
All groups	190.0	46.5	34.3	12.2	143.5	50.5	93.0

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.

^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, East Tennessee, 1989–1998

Forest-type group and stand origin ^a	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Softwood types							
White–red–jack pine							
Planted	0.3	0.1	—	0.1	0.2	0.1	0.1
Natural	2.6	1.9	1.9	—	0.7	0.1	0.6
Total	2.9	2.0	1.9	0.1	1.0	0.3	0.7
Loblolly–shortleaf pine							
Planted	12.5	12.1	12.1	—	0.4	0.2	0.2
Natural	15.4	13.2	13.0	0.2	2.3	1.1	1.2
Total	27.9	25.3	25.1	0.2	2.6	1.2	1.4
Total softwoods	30.8	27.3	27.0	0.3	3.6	1.5	2.1
Hardwood types							
Oak–pine							
Planted	—	—	—	—	—	—	—
Natural	11.8	6.8	4.9	1.9	5.0	2.0	3.1
Total	11.8	6.8	4.9	1.9	5.0	2.0	3.1
Oak–hickory	33.6	12.6	11.3	1.3	21.0	6.6	14.4
Oak–gum–cypress	0.2	0.2	0.2	—	—	—	—
Total hardwoods	45.7	19.6	16.5	3.2	26.1	8.6	17.5
Nonstocked							
	—	—	—	—	—	—	—
All groups	76.5	46.9	43.4	3.4	29.6	10.1	19.6

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.

^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, East Tennessee, 1999

Ownership class and species group	Component							
	All components	All live saplings	Growing-stock trees			Cull trees		
			Total	Boles	Stumps, tops, and limbs	Total	Boles	Stumps, tops, and limbs
<i>Thousand tons</i>								
National forest								
Softwood	14,976.1	898.6	13,640.7	11,651.0	1,989.7	436.8	370.5	66.4
Hardwood	62,288.5	4,671.0	48,981.1	40,166.7	8,814.4	8,636.4	6,653.1	1,983.4
Total	77,264.5	5,569.6	62,621.8	51,817.7	10,804.1	9,073.2	7,023.5	2,049.7
Other public								
Softwood	3,027.5	15.3	2,852.2	2,485.5	366.7	160.1	131.9	28.3
Hardwood	15,383.6	1,226.2	12,562.4	10,225.6	2,336.8	1,595.0	1,242.9	352.2
Total	18,411.1	1,241.5	15,414.6	12,711.1	2,703.5	1,755.1	1,374.7	380.4
Forest industry								
Softwood	7,259.5	751.4	5,946.4	5,000.0	946.5	561.7	474.4	87.3
Hardwood	14,838.8	1,743.4	10,777.2	8,757.9	2,019.4	2,318.2	1,809.8	508.4
Total	22,098.2	2,494.8	16,723.6	13,757.8	2,965.8	2,879.8	2,284.1	595.7
Nonindustrial private								
Softwood	53,146.0	2,510.4	46,080.0	39,285.7	6,794.3	4,555.6	3,808.9	746.8
Hardwood	242,689.6	18,698.3	190,979.4	155,940.2	35,039.2	33,011.9	25,998.6	7,013.3
Total	295,835.5	21,208.7	237,059.3	195,225.9	41,833.4	37,567.5	29,807.5	7,760.1
All ownerships								
Softwood	78,409.0	4,175.7	68,519.2	58,422.2	10,097.0	5,714.2	4,785.5	928.7
Hardwood	335,200.4	26,338.9	263,300.1	215,090.4	48,209.7	45,561.5	35,704.3	9,857.2
Total	413,609.3	30,514.5	331,819.2	273,512.5	58,306.7	51,275.6	40,489.8	10,785.9

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

Table 47—Area of timberland treated or disturbed annually and retained in timberland by treatment or disturbance and ownership class, East Tennessee, 1989 to 1999

Treatment or disturbance	All classes	Ownership class		
		Public	Forest industry	Nonindustrial private
<i>Thousand acres</i>				
Final harvest	15.5	3.9	4.9	6.7
Partial harvest ^a	20.3	0.5	0.8	18.9
Seed tree/shelterwood	—	—	—	—
Commercial thinning	0.1	0.1	—	—
Other stand improvement	1.6	0.6	0.5	0.4
Site preparation	4.4	0.7	3.3	0.4
Artificial regeneration ^b	5.2	0.3	4.4	0.4
Natural regeneration ^b	28.5	4.3	2.6	21.6
Other treatment	16.4	1.0	—	15.4
Natural disturbance				
Disease	6.1	1.5	1.8	2.9
Insects	2.6	0.6	—	2.0
Fire	—	—	—	—
Weather	19.3	7.0	1.7	10.7
Animals	0.6	—	0.6	—
Other disturbances				
Grazing	9.1	—	—	9.1
Other human-caused disturbance	8.8	—	0.3	8.5

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, East Tennessee, 1989 to 1999

Treatment or disturbance	All types	Forest management type ^a					Nonstocked
		Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	
<i>Thousand acres</i>							
Final harvest	15.5	2.4	4.4	1.4	6.7	0.5	—
Partial harvest ^b	20.3	0.5	1.2	4.0	14.5	—	—
Seed tree/shelterwood	—	—	—	—	—	—	—
Commercial thinning	0.1	—	—	0.1	—	—	—
Other stand improvement	1.6	—	0.4	0.4	0.8	—	—
Site preparation	4.4	1.6	1.6	0.6	—	0.5	—
Other treatment	16.4	0.1	3.0	2.8	10.6	—	—
Natural disturbance							
Disease	6.1	0.6	0.7	1.2	3.6	—	—
Insects	2.6	0.2	1.3	0.6	0.5	—	—
Fire	—	—	—	—	—	—	—
Weather	19.3	—	4.5	3.7	10.8	—	0.3
Animals	0.6	—	—	—	0.6	—	—
Other disturbance							
Grazing	9.1	0.9	0.7	1.5	5.9	0.1	—
Other human-caused disturbance	8.8	—	0.1	0.8	7.2	0.6	—

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, East Tennessee, 1989 to 1999

Type of regeneration	All types	Forest management type ^a					
		Pine plantation	Natural pine	Oak–pine	Upland hardwood	Lowland hardwood	Nonstocked
<i>Thousand acres</i>							
Artificial regeneration following harvest	4.6	4.1	—	0.5	—	—	—
Natural regeneration following harvest	8.6	—	2.4	1.5	4.7	—	—
Other artificial regeneration on forest land	0.6	0.6	—	—	—	—	—
Other natural regeneration on forest land	3.3	—	1.4	0.1	1.8	—	—
Artificial regeneration on former nonforest land	—	—	—	—	—	—	—
Natural reversion of former nonforest land	16.6	—	3.0	3.1	9.3	0.4	0.8
Total	33.7	4.6	6.8	5.2	15.9	0.4	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, East Tennessee

Land-use class	Survey completion date			Change 1989–1999
	1980	1989	1999	
<i>Thousand acres</i>				
Forest land				
Timberland				
Pine types	644.7	556.9	607.0	50.1
Oak–pine types	565.7	655.0	540.2	-114.8
Hardwood types	2,244.0	2,230.5	2,412.9	182.4
Total	3,454.4	3,442.4	3,560.1	117.7
Productive reserved	343.0	303.3	317.8	14.5
Other	5.2	—	—	—
Total forest land	3,802.6	3,745.7	3,877.9	132.2
Other land^a	2,976.3	2,740.7	2,632.5	-108.2
All land^b	6,778.9	6,486.4	6,510.4	24.0

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 27.4 thousand acres of water according to Forest Inventory and Analysis 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, East 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	4,111.1	—	—	1,393.7	1,074.8	719.2	442.5	200.0	76.8	204.2
1989	5,007.6	—	—	1,372.4	1,375.4	927.4	508.6	285.8	195.3	342.7
1999	6,339.4	—	—	968.9	1,324.3	1,304.9	709.7	591.6	524.7	915.3
Hardwood										
1980	8,301.0	—	—	—	1,574.5	1,697.7	1,544.0	1,397.9	844.1	1,242.7
1989	11,853.5	—	—	—	2,070.3	2,357.7	2,063.9	1,664.1	1,472.2	2,225.4
1999	17,208.0	—	—	—	2,253.9	2,829.6	2,792.6	2,653.8	2,307.9	4,370.1
Growing stock (million cubic feet)										
Softwood										
1980	1,302.2	180.8	293.2	312.5	212.9	134.1	81.7	36.6	14.0	36.2
1989	1,411.9	133.4	272.4	311.9	276.1	176.3	94.3	51.6	35.0	60.8
1999	1,618.3	109.9	206.5	265.1	302.3	265.6	133.0	103.8	87.9	144.3
Hardwood										
1980	2,713.1	273.7	359.9	461.2	370.2	348.0	289.8	254.4	146.4	209.5
1989	3,538.1	249.7	402.1	509.2	497.2	492.9	403.5	311.4	270.6	401.4
1999	5,244.6	323.1	508.4	631.2	654.7	706.6	627.0	548.8	451.4	793.4
Live trees (million cubic feet)										
Softwood										
1980	1,336.4	185.0	300.3	317.0	221.2	138.6	83.4	37.5	15.0	38.4
1989	1,439.5	140.5	278.1	317.4	280.4	178.3	95.7	52.7	35.0	61.4
1999	1,746.5	122.5	221.7	286.2	319.5	282.3	149.2	121.7	89.3	154.1
Hardwood										
1980	3,245.1	338.1	422.3	519.7	443.5	401.4	339.4	296.7	177.7	306.2
1989	3,909.2	310.6	459.3	556.6	546.2	530.3	426.5	332.6	291.6	455.4
1999	6,121.1	435.5	614.6	733.5	750.9	797.5	694.2	606.1	521.8	967.1

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.



The Forest Service, U.S. Department of Agriculture, is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives—as directed by Congress—to provide increasingly greater service to a growing Nation.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

Schweitzer, Callie Jo. 2000. Forest statistics for East Tennessee, 1999. Resour. Bull. SRS-51. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 60 p.

This report summarizes a 1999 inventory of the forest resources of a 27-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.

United States
Department of Agriculture

Forest Service

**Southern
Research Station**

P.O. Box 2680
200 Weaver Blvd.
Asheville, NC 28802

OFFICIAL BUSINESS
Penalty for Private Use, \$300

