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# **Forest Statistics for North Georgia, 1998**

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#### Foreword

This report highlights the principal findings of the seventh forest survey of North Georgia. Field work began in October 1997 and was completed in April 1998. Six previous surveys, completed in 1936, 1953, 1961, 1972, 1983, and 1989 provide statistics for measuring changes and trends over the past 61 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:

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#### Acknowledgment

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<sup>*a*</sup> 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.

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Figure 1-Forest survey regions in Georgia.

# Forest Statistics for North Georgia, 1998

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#### Highlights

This report summarizes results from a 1998 inventory of the forest resources of North Georgia (fig. 1). Current estimates of forest area, timberland area, related classifications such as ownership and forest type, and timber volumes are presented and compared with previous values. Average annual rates of net growth, removals, and mortality are summarized since the previous inventory in 1989. Resource data are presented in 51 tables and 9 graphs. A summary of major findings follows.

**Timberland area**—The area classified as timberland in the 21-county area has decreased by 3 percent since 1989, and now totals 2.9 million acres. One hundred and fifty-four thousand acres were diverted from timberland to other uses, while 56,000 acres were added to the timberland base. Fifty-nine thousand acres of timberland were reclassified to reserved timberland. The remaining diverted area was cleared for agricultural and urbanrelated land uses. Tree planting and natural seeding on agricultural lands accounted for almost all of the additions. Forests cover 72 percent of the land area in North Georgia. Reserved forest land accounts for 169,000 acres.

**Ownership**—The area of timberland remained stable on nonindustrial private forest (NIPF) land and totals 2.0 million acres. Timberland controlled by the NIPF sector accounts for 68 percent of the total timberland in this area. Public agencies control 680,000 acres, or 24 percent of total timberland, a decrease of 6 percent. Timberland under forest industry control dropped 18 percent to 222,000 acres.

**Forest type**—Forest stands classified as a hardwood forest type occupy 1.6 million acres, or 55 percent of timberland in the region. Hardwood stands have increased 6 percent since 1989, and stands classified as a pine or oak-pine forest type decreased 12 percent to 1.3 million acres. Oak-hickory remains the predominant forest type in the region with 1.5 million acres.

**Stand treatment**—Harvesting and regeneration have been the predominant treatment and management activities in the timberland of North Georgia since 1989. Final harvests occurred on 26,000 acres annually; 68 percent of the harvesting activity was in pine stands, 16 percent in hardwood stands, and 16 percent in oak-pine stands. The area of new stands established exceeded the area harvested by 46 percent. Reforestation and afforestation combined averaged 37,000 acres annually. Twenty-eight percent (11,000 acres) of this total involved planting activities.

**Softwood volume**—Volume of softwood growing stock decreased 7 percent to 1.8 billion cubic feet between 1989 and 1998. Softwood volume decreased 14 percent to 1.1 billion cubic feet on NIPF land and remained stable of forest industry and public land. At 593 million cubic feet, loblolly pine is now the predominant softwood species. Volume of loblolly pine has increased 12 percent since 1989. Volume of Virginia pine dropped 17 percent to 532 million cubic feet and volume of shortleaf pine declined 26 percent to 319 million cubic feet. White pine volume increased 20 percent to 305 million cubic feet. The inventory of softwood sawtimber totals 6.8 billion board feet.

Hardwood volume—Volume of hardwood growing stock increased 14 percent to 3.3 billion cubic feet. Hardwood volume increased 22 percent to 2.3 billion cubic feet on NIPF land and remained stable on public land at 1.0 billion cubic feet. Hardwood volume declined 4 percent to 109 million cubic feet on forest industry land. Oak species collectively account for 2.0 billion cubic feet, or 60 percent of hardwood volume; volume in oaks has increased 15 percent since 1989. Volume in yellow-poplar has increased 25 percent to 557 million cubic feet and maple volume was up 16 percent to 169 million cubic feet. Volume of hardwood sawtimber increased 27 percent to 10.7 billion board feet.

**Growth**—Net annual growth of softwood growing stock averaged 64 million cubic feet. Net annual growth of softwoods has decreased 2 percent since the previous survey period. Softwood growth increased 13 percent on public land, increased 68 percent on forest industry land, and declined 23 percent on NIPF land.

Net annual growth of hardwood growing stock averaged 85 million cubic feet. Net annual growth of hardwoods increased 11 percent since the previous survey period. The increase in hardwood growth represents a turnaround from that recorded in the previous survey period when hardwood growth declined 4 percent.

**Removals**—Annual removals of softwood growing stock averaged 79 million cubic feet. Softwood removals have decreased 9 percent since the previous survey period. Seventy-five percent of softwood removals occurred on NIPF land, 13 percent on forest industry land, and 12 percent on public land. Across all ownerships, softwood removals exceeded growth by 23 percent, compared to the growth-to-removal relationship recorded in 1989 when softwood removals exceeded growth by 32 percent.

Annual removals of hardwood growing stock averaged 39 million cubic feet. Hardwood removals have decreased 13 percent since the previous survey period. Forty-three percent of hardwood removals occurred on NIPF land, 49 percent on public land, and 8 percent on forest industry land. Across all ownerships, hardwood growth exceeded removals by a margin of 2.2 to 1.

**Mortality**—Mortality of growing stock has increased to 59 million cubic feet since 1989, up 63 percent. Softwood mortality increased 83 percent to 34 million cubic feet; hardwood mortality increased 41 percent to 25 million cubic feet.

#### **Inventory Methods**

The Southern Research Station, Forest Inventory and Analysis (FIA) unit uses a two-phase sample of aerialphoto points and permanent ground plots. The area of forest land in each county was determined by photo interpretation of aerial-photo point clusters. Initial estimates of forest and nonforest land were based on the classification of 16,405 sample clusters systematically spaced on the latest aerial photographs available. A subsample of the photo clusters was ground checked so initial area estimates could be adjusted for change in land use since date of photography and for photo misclassification.

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 category. All trees tallied were assigned to their respective condition class.

The cluster of four fixed plots sampled timberland at 648 ground sample locations in this survey unit. Estimates of timber volume and forest classification were derived from tree measurements and classifications made at these locations. Volumes for individual tally trees were computed using equations for each of the major species in the survey unit. The equations were developed from detailed measurements collected on standing trees in this survey unit and throughout the region.

Estimates of growth, removals, and mortality were determined from the remeasurement of 604 permanent sample plots established in the previous inventory. The plot design for the previous inventory was based on a cluster of 10 points. Variable plots were systematically spaced within a single forest condition at three to five 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 e an confidence	Sampling error		
				Percent
Timberland (1,000 acres	) 2,855.6	±	20.3	0.71
All live $(M ft^3)$				
Inventory	5,498.8	±	151.8	2.76
Net annual growth	153.7	±	7.2	4.69
Annual removals	124.5	±	13.4	10.78
Annual mortality	67.2	±	5.4	7.99
Growing stock $(M ft^3)$				
Inventory	5,157.7	±	147.5	2.86
Net annual growth	149.2	±	7.1	4.73
Annual removals	118.2	±	13.0	11.01
Annual mortality	58.9	±	1.7	8.77
Sawtimber (M fbm)				
Inventory	17,466.6	±	710.9	4.07
Net annual growth	656.6	±	33.0	5.03
Annual removals	401.5	±	48.6	12.10
Annual mortality	190.4	±	21.0	11.02

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 softwood growing-stock volume on forest industry (including leased) timberland is computed as:

$$SE_s = 2.86 \frac{\sqrt{5,157.7}}{\sqrt{234.0}} = 13.4$$

Thus, the sampling error is 13.4 percent, and the resulting confidence interval (two times out of three) for growing-stock inventory on forest industry (including leased) timberland is  $234.0 \pm 31.4$  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.

Counties and	Timberland		Live tree	s	Growing stock			Sawtimber		
survey unit	area	Volume	Growth	Removals	Volume	Growth	Removals	Volume	Growth	Removals
					Perce	nt				
Bartow	2.61	15.62	17.85	31.12	15.98	18.41	31.65	22.42	23.56	34.86
Catoosa	7.42	22.24	33.34	47.84	22.51	29.78	47.84	34.68	44.53	72.92
Chattooga	2.84	14.08	16.96	56.54	14.08	17.59	62.12	21.33	23.04	65.05
Cherokee	4.43	11.70	23.05	33.72	11.72	23.37	33.94	17.11	20.84	40.99
Dade	2.78	12.95	23.64	_	13.11	27.21	_	17.49	23.01	_
Dawson	2.62	11.98	25.08	68.85	12.38	25.87	69.90	15.12	16.43	67.51
Fannin	1.36	8.44	13.07	52.97	8.91	12.66	53.23	12.04	15.17	52.94
Floyd	2.13	13.24	39.17	38.07	13.94	37.22	38.50	21.17	42.55	46.76
Gilmer	0.81	7.04	10.88	45.24	7.87	10.84	46.37	11.97	13.74	43.97
Gordon	2.81	16.32	21.43	47.16	16.66	20.26	46.70	30.19	22.39	52.14
Habersham	2.41	9.42	15.29	43.05	9.90	15.89	42.76	11.92	18.70	42.35
Lumpkin	4.61	12.25	18.13	49.41	12.97	17.95	51.99	19.09	23.70	53.90
Murray	2.56	10.16	13.48	55.99	10.65	13.04	57.26	15.94	15.77	65.28
Pickens	3.29	13.70	27.87	44.25	13.94	29.95	44.70	20.16	29.16	48.44
Rabun	2.09	8.13	15.75	78.90	8.70	15.88	78.90	12.58	17.97	90.20
Stephens	2.10	17.82	36.43	49.73	18.44	36.39	49.99	24.82	33.10	56.36
Towns	2.82	12.92	45.19	71.65	15.63	42.55	76.76	19.20	40.68	74.66
Union	6.82	14.91	36.48	34.20	15.36	39.32	34.41	19.63	28.38	36.28
Walker	2.03	10.62	12.05	53.36	11.04	12.31	53.36	15.23	19.97	59.57
White	5.09	11.33	23.90	32.46	12.12	23.59	33.57	15.32	21.88	39.23
Whitfield	3.54	14.86	19.72	52.43	15.07	18.84	52.43	20.35	18.33	55.90
Survey unit	0.71	2.76	4.69	10.78	2.86	4.73	11.01	4.07	5.03	12.10

Sampling errors<sup>*a*</sup> by counties and survey unit for timberland, live trees, growing stock, and sawtimber, North Georgia, 1998

<sup>*a*</sup> 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.

<u>Corporate</u>. Owned by corporations, including incorporated farm ownerships.

<u>Individual</u>. All lands owned by individuals, including farm operators.

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

<u>Miscellaneous Federal land</u>. Federal land other than national forests.

<u>State, county, and municipal land</u>. 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 non-contiguous 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 sawlog 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, whitecedar, 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 with-drawn from timber utilization.

Timber products. Roundwood products and byproducts.

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

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

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

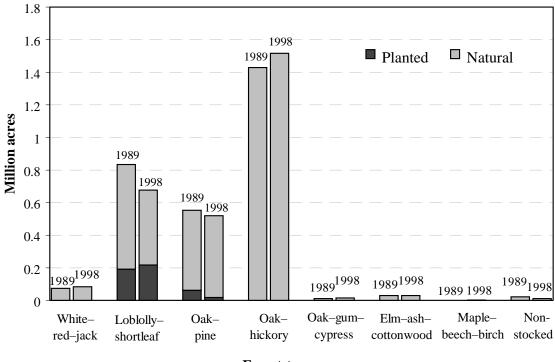
**Volume of live trees.** The cubic-foot volume of sound wood in live trees at least 5.0 inches d.b.h. from a 1-foot stump to a minimum 4.0-inch top d.o.b. of the central stem.

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

### **Metric Equivalents**

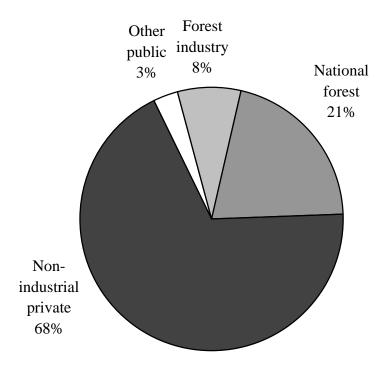
1 acre = 4,046.86 square meters or 0.404686 hectare
1 cubic foot = 0.028317 cubic meter
1 inch = 2.54 centimeters or 0.0254 meter
Breast height = 1.4 meters aboveground level
1 square foot = 929.03 square centimeters or 0.0929 square meter
1 square foot per acre basal area = 0.229568 square meter per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

### Graphs



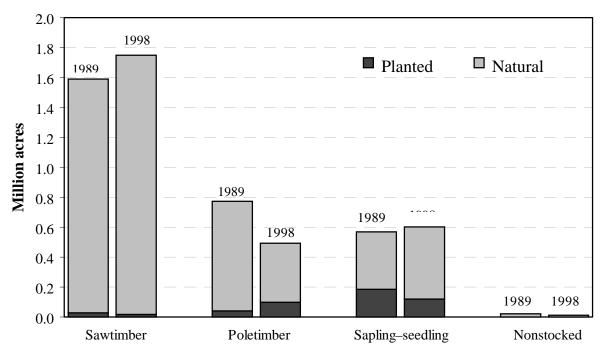
**Forest-type group** 

Figure 2—Area of timberland by forest-type group and stand origin, North Georgia, 1989 and 1998.



### 2.9 Million acres

Figure 3—Distribution of timberland by ownership class, North Georgia, 1998.



Stand-size class

Figure 4—Area of timberland by stand-size class and stand origin, North Georgia, 1989 and 1998.

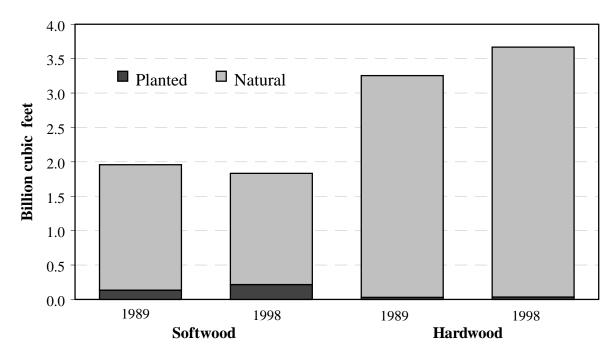
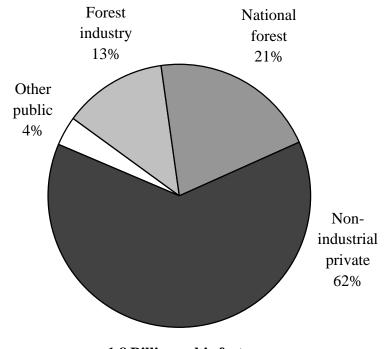
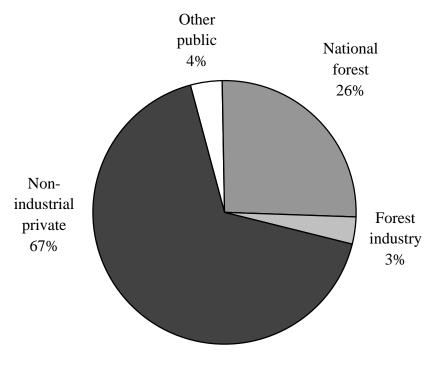


Figure 5—Volume of live trees on timberland by species group and stand origin, North Georgia, 1989 and 1998.



1.8 Billion cubic feet

Figure 6—Distribution of softwood live tree volume by ownership class, North Georgia, 1998.



#### 3.7 Billion cubic feet

Figure 7—Distribution of hardwood live tree volume by ownership class, North Georgia, 1998.

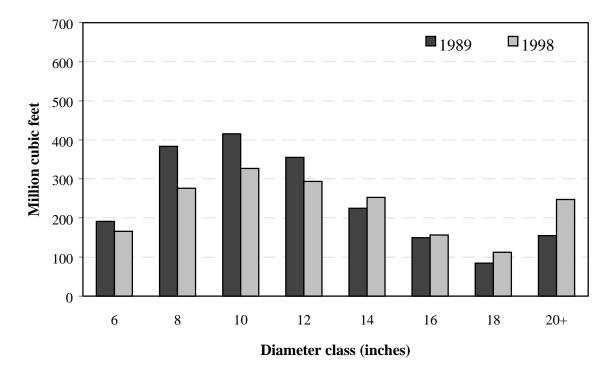


Figure 8—Volume of softwood live trees on timberland by diameter class, North Georgia, 1989 and 1998.

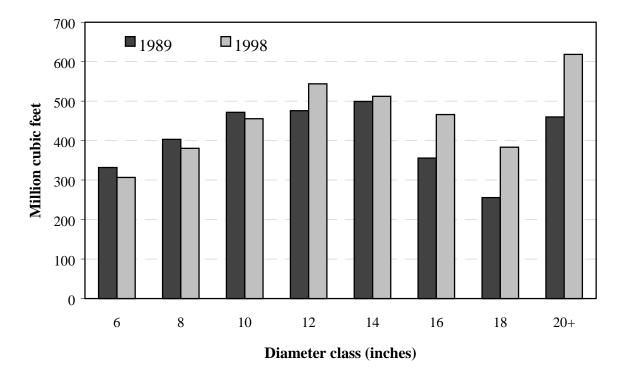


Figure 9—Volume of hardwood live trees on timberland by diameter class, North Georgia, 1989 and 1998.

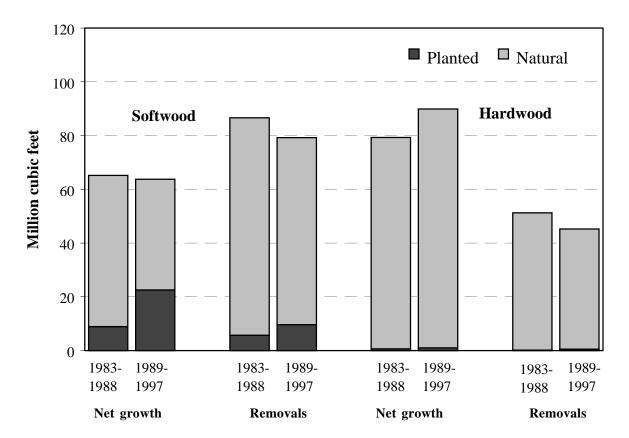


Figure 10—Average net annual growth and removals of live trees on timberland by species group and stand origin, North Georgia, 1983-1988 and 1989-1997.

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

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	Total land	Total		Productive		Other
County	area <sup>a</sup>	forest	Timberland	reserved	Other	land <sup>b</sup>
			Thou	sand acres		
Bartow	294.3	188.1	186.1	2.0	_	106.3
Catoosa	103.8	50.2	46.5	3.8	_	53.6
Chattooga	200.8	155.2	155.0	0.2	_	45.6
Cherokee	271.2	176.4	176.4	_	_	94.8
Dade	111.3	75.2	72.7	2.5	_	36.1
Dawson	135.1	107.6	101.1	6.5	_	27.4
Fannin	246.9	206.2	165.0	41.2	_	40.7
Floyd	328.5	217.5	217.5		_	111.0
Gilmer	273.1	238.4	225.3	13.2	_	34.7
Gordon	227.3	121.4	121.4		_	105.9
Habersham	178.0	124.9	121.7	3.2	_	53.1
Lumpkin	182.1	150.6	139.5	11.1	_	31.5
Murray	220.4	157.6	149.9	7.7	_	62.9
Pickens	148.6	115.1	115.1		_	33.4
Rabun	237.5	207.3	190.4	16.9	_	30.2
Stephens	114.7	80.1	80.1	_	_	34.7
Towns	106.6	84.0	64.8	19.2	_	22.6
Union	206.5	160.1	135.6	24.6	_	46.4
Walker	285.6	192.4	190.5	1.9	_	93.2
White	154.6	113.5	98.1	15.4	_	41.1
Whitfield	185.6	102.8	102.8			82.8
Total	4,212.7	3,024.8	2,855.6	169.2		1,187.8

Table 1—Land area by county and land class, North Georgia, 1998

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

<sup>*a*</sup> From the U.S. Bureau of the Census, 1990.

<sup>b</sup> Includes 12.2 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, North Georgia, 1998

Forest-type group	All classes	National forest	Miscellaneous Federal	State	County and municipal	Forest industry <sup>a</sup>	Nonindustrial private
			2	Thousand ac	res	•	•
White-red-jack pine	115.9	80.2	_	5.6	_	_	30.1
Loblolly-shortleaf pine	679.7	67.6	8.2	7.7	4.4	150.0	441.9
Oak-pine	537.0	140.2	18.0	5.2	5.0	28.1	340.4
Oak-hickory	1,631.5	455.1	7.3	22.1	18.9	40.0	1,088.1
Oak-gum-cypress	15.2	_	_	_	_	_	15.2
Elm-ash-cottonwood	29.3	_	_	_	_	3.6	25.7
Maple-beech-birch	1.3	_	_	_	_	_	1.3
Nonstocked	14.8	3.3	_	_	0.1		11.4
Total	3,024.8	746.4	33.5	40.6	28.4	221.7	1,954.2

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.

<sup>a</sup> Includes 9.1 thousand acres of nonindustrial private land under long-term lease.

		Ownership class									
	All	National	Miscellaneous		County and	Forest	Nonindust	rial private			
County	classes	forest	Federal	State	municipal	industry <sup>a</sup>	Corporate	Individual			
				Th	ousand acres						
Bartow	186.1	_	5.9	0.2	0.4	26.6	54.7	98.3			
Catoosa	46.5	0.0	1.5	0.0	0.5	3.3	_	41.1			
Chattooga	155.0	19.4	0.0	1.0	0.7	19.1	16.3	98.4			
Cherokee	176.4	_	9.5	_	1.5	19.1	36.9	109.4			
Dade	72.7	_	_	_	0.1	_	17.0	55.6			
Dawson	101.1	1.3	1.2	7.2	10.1	5.0	27.9	48.5			
Fannin	165.0	64.6	0.0	0.0	0.1	0.6	12.9	86.9			
Floyd	217.5	6.6	_	1.6	1.6	30.8	28.1	148.8			
Gilmer	225.3	41.1	3.8	_	0.1	12.8	11.3	156.2			
Gordon	121.4	8.1	0.0	0.2	0.9	29.4	12.9	70.0			
Habersham	121.7	36.4	_	0.3	0.6	2.5	16.9	65.0			
Lumpkin	139.5	46.0	0.3	0.3	0.2	7.6	15.0	70.0			
Murray	149.9	46.0	1.2	_	7.8	21.8	_	73.2			
Pickens	115.1	_	_	0.1	0.2	20.0	24.8	70.0			
Rabun	190.4	132.5	_	0.2	0.1	_	15.0	42.7			
Stephens	80.1	23.2	1.1	0.0	0.9	1.7	8.0	45.1			
Towns	64.8	38.4	0.3	_	0.1	0.1	_	25.9			
Union	135.6	73.3	0.8	0.2	0.2	0.5	4.7	55.8			
Walker	190.5	18.7	_	14.6	0.9	5.2	17.6	133.5			
White	98.1	26.8	_	5.6	0.1	0.1	_	65.5			
Whitfield	102.8	11.7	0.0	0.0	1.5	15.4	12.2	62.0			
Total	2,855.6	594.1	25.7	31.5	28.4	221.7	332.3	1,621.9			

Table 3—Area of timberland by county and ownership class, North Georgia, 1998

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

<sup>a</sup> Includes 9.1 thousand acres of nonindustrial private land under long-term lease.

					Forest-	type group			
	All	White-red-	Loblolly-	Oak-	Oak-	Oak-gum-	Elm-ash-	Maple-beech-	
County	groups	jack pine	shortleaf	pine	hickory	cypress	cottonwood	birch	Nonstocked
					Thousand ac	cres			
Bartow	186.1	_	61.1	62.6	57.0	_		_	5.3
Catoosa	46.5	_	_	10.8	31.9	1.9		_	1.9
Chattooga	155.0	_	48.2	12.8	83.2	5.4	5.4	_	_
Cherokee	176.4	_	50.5	32.2	88.4	5.4		_	_
Dade	72.7	_	8.6	0.4	61.1	2.6		_	_
Dawson	101.1	_	32.3	22.1	45.4	_		_	1.2
Fannin	165.0	6.3	28.9	35.1	94.7	_		_	0.1
Floyd	217.5	_	48.9	54.5	100.1	_	14.1	_	_
Gilmer	225.3	14.8	32.0	50.7	123.6	_	4.2	_	_
Gordon	121.4	_	56.3	26.3	38.9	_		_	_
Habersham	121.7	_	30.4	13.3	75.1	_	1.4	_	1.4
Lumpkin	139.5	8.6	24.1	26.6	80.3	_		_	_
Murray	149.9	6.4	57.1	21.7	61.5	_	1.6	_	1.6
Pickens	115.1	_	29.3	16.1	69.7	_		_	_
Rabun	190.4	26.1	25.2	33.7	105.4	_		_	_
Stephens	80.1	_	14.6	21.0	44.5	_		_	_
Towns	64.8	_	6.7	13.2	44.9	_		_	_
Union	135.6	8.7	20.6	23.5	81.6	_	1.2	_	_
Walker	190.5		40.7	16.1	132.4	_	_	1.3	_
White	98.1	13.7	17.5	19.7	47.2	_	_	_	_
Whitfield	102.8	_	44.0	7.2	50.2	_	1.4		_
Total	2,855.6	84.5	677.0	519.6	1,517.1	15.2	29.3	1.3	11.5

Table 4—Area of timberland by county and forest-type group, North Georgia, 1998

			Stand-siz	ze class	
	All			Sapling-	
County	classes	Sawtimber	Poletimber	seedling	Nonstocked
			Thousand acres		
Bartow	186.1	71.2	46.3	63.2	5.3
Catoosa	46.5	31.6	0.0	13.0	1.9
Chattooga	155.0	63.4	31.4	60.3	_
Cherokee	176.4	125.4	21.6	29.3	
Dade	72.7	51.0	15.6	6.1	
Dawson	101.1	84.2	1.2	14.5	1.2
Fannin	165.0	121.3	23.8	19.8	0.1
Floyd	217.5	94.2	60.8	62.5	
Gilmer	225.3	174.5	31.3	19.4	
Gordon	121.4	20.6	41.3	59.6	
Habersham	121.7	90.0	6.9	23.4	1.4
Lumpkin	139.5	107.8	7.7	24.0	
Murray	149.9	97.1	23.3	27.9	1.6
Pickens	115.1	70.5	12.7	32.0	
Rabun	190.4	160.5	23.3	6.7	
Stephens	80.1	35.9	10.3	33.9	
Towns	64.8	47.8	13.8	3.3	
Union	135.6	88.3	18.2	29.1	_
Walker	190.5	102.1	56.7	31.7	
White	98.1	63.0	19.9	15.1	_
Whitfield	102.8	48.4	27.1	27.3	
Total	2,855.6	1,748.8	493.1	602.2	11.5

Table 5—Area of timberland by county and stand-size class, North Georgia, 1998

	All		Site clas	ss (cubic feet/ac	re/year)	
County	classes	20-49	50-84	85-119	120-164	>165
			Thousar	nd acres		
Bartow	186.1	5.3	129.7	41.9	9.2	
Catoosa	46.5	0.0	33.8	11.1	1.5	
Chattooga	155.0	_	142.6	12.4	0.0	
Cherokee	176.4	12.6	67.9	87.2	8.8	
Dade	72.7	19.6	28.8	24.3		
Dawson	101.1	_	57.2	36.5	3.7	3.7
Fannin	165.0	5.0	119.8	19.3	5.8	15.1
Floyd	217.5	16.5	156.4	44.6	_	
Gilmer	225.3	10.0	128.0	58.9	1.0	27.4
Gordon	121.4	22.2	80.3	19.0		
Habersham	121.7	_	88.3	27.8		5.6
Lumpkin	139.5	10.4	57.0	53.1	4.0	15.0
Murray	149.9	11.5	101.9	20.9	12.2	3.4
Pickens	115.1	_	86.6	28.6	_	
Rabun	190.4	20.5	105.2	23.1	16.7	24.9
Stephens	80.1	5.3	35.9	29.5	9.3	
Towns	64.8	15.5	33.3	13.3	2.7	
Union	135.6	7.6	60.4	48.1	10.6	9.0
Walker	190.5	45.0	105.1	30.6	5.9	3.9
White	98.1	9.2	50.5	16.7	15.9	5.7
Whitfield	102.8	12.5	71.5	10.9	8.0	
Total	2,855.6	228.9	1,740.1	657.7	115.2	113.7

Table 6—Area of timberland by county and site class, North Georgia, 1998

	All		Sto	cking class (perc	cent)	
County	classes	<16.7	16.7-59	60-99	100-130	>130
			Thousan	d acres		
Bartow	186.1	5.3	117.5	61.6	1.6	_
Catoosa	46.5	1.9	17.2	27.4	_	_
Chattooga	155.0	2.7	82.0	69.0	1.4	_
Cherokee	176.4	1.3	64.4	94.2	16.5	_
Dade	72.7	_	26.1	40.9	5.8	_
Dawson	101.1	1.2	50.8	42.9	6.2	_
Fannin	165.0	0.1	82.3	82.1	0.6	_
Floyd	217.5	5.1	99.9	105.8	6.8	_
Gilmer	225.3	_	134.7	89.6		1.0
Gordon	121.4	_	44.7	68.3	8.3	_
Habersham	121.7	1.4	39.6	67.5	13.2	_
Lumpkin	139.5	_	52.3	77.9	9.3	_
Murray	149.9	1.6	26.3	105.0	17.0	_
Pickens	115.1	_	37.4	74.1	3.7	_
Rabun	190.4	1.1	75.7	111.5	2.0	_
Stephens	80.1	_	56.7	20.6	2.8	_
Towns	64.8	1.7	43.4	14.1	5.6	_
Union	135.6	2.4	73.1	54.9	5.2	_
Walker	190.5	_	69.5	98.5	22.5	_
White	98.1	1.2	42.1	49.8	5.0	
Whitfield	102.8	2.6	47.6	52.6	_	
Total	2,855.6	29.8	1,283.4	1,408.2	133.2	1.0

Table 7—Area of timberland by county and stocking class of growing-stock trees,North Georgia, 1998

Table 8—Area of timberland by forest-type group, stand origin, and ownership class,
North Georgia, 1998

				Ownership cla	ass	
					Forest	
Forest-type group	All	National	Other	Forest	industry-	Nonindustrial
and stand origin	classes	forest	public	industry	leased	private
			Thous	and acres		
Softwood types						
White-red-jack pine						
Planted			_		_	
Natural	84.5	48.8	5.6		_	30.1
Total	84.5	48.8	5.6	—	—	30.1
Loblolly-shortleaf pine						
Planted	217.1	18.4	2.7	120.3	7.3	68.4
Natural	459.9	49.2	14.9	20.6	1.9	373.5
Total	677.0	67.6	17.5	140.9	9.1	441.9
Total softwoods	761.5	116.4	23.1	140.9	9.1	472.0
Hardwood types						
Oak-pine						
Planted	17.9	1.3	_	4.1	_	12.5
Natural	501.7	128.9	20.9	23.9	_	327.9
Total	519.6	130.2	20.9	28.1	—	340.4
Oak-hickory	1,517.1	347.5	41.5	40.0	_	1,088.1
Oak-gum-cypress	15.2	_	_	_	_	15.2
Elm-ash-cottonwood	29.3	_	_	3.6	_	25.7
Maple-beech-birch	1.3	—	—	—	—	1.3
Total hardwoods	2,082.6	477.7	62.4	71.7	_	1,470.8
Nonstocked	11.5		0.1			11.4
All groups	2,855.6	594.1	85.6	212.6	9.1	1,954.2

				Ownership	class	
E	4 11	NT	01	<b>F</b> .	Forest	NT_ 1 1
Forest-type group and detailed forest type	All classes	National forest	Other public	Forest industry	industry- leased	Nonindustrial private
and detailed forest type	enusses	Torest		isand acres	Teuseu	private
Softwood types			11101	isuna acres		
White pine-hemlock						
White pine	74.3	45.1	5.6			23.7
White pine–hemlock	10.1	3.7	5.0		_	6.4
			5.0			
Total Loblolly–shortleaf	84.5	48.8	5.6	_	_	30.1
Loblolly pine	391.6	14.8	14.8	137.4	9.1	215.4
Shortleaf pine	72.9	14.8	0.9	157.4	9.1	53.7
Virginia pine	191.6	29.0	1.8	3.4		157.3
Eastern redcedar	7.0				_	7.0
Pitch pine	10.2	5.6	_	_	_	4.6
Table Mountain pine	3.7	_		_	_	3.7
Total	677.0	67.6	17.5	140.9	9.1	441.9
Total softwoods	761.5	116.4	23.1	140.9	9.1	472.0
Hardwood types						
Oak-pine						
White pine–n. red oak–white ash	70.3	55.1	0.2	_	_	15.0
Shortleaf pine–oak	93.2	16.0	8.5	6.0	_	62.7
Virginia pine–s. red oak	169.7	36.9	_	5.2	_	127.6
Loblolly pine-hardwood	178.2	14.0	12.2	16.9	_	135.1
Other oak–pine	8.3	8.3		_		
Total	519.6	130.2	20.9	28.1	_	340.4
Oak–hickory						
Post oak-black oak	67.5	5.8	_	0.2	_	61.4
Chestnut oak	336.4	116.9	12.5	6.7	_	200.4
White oak-red oak-hickory	549.0	107.8	18.1	20.3	—	402.9
White oak	31.2	—	_	—	—	31.2
Yellow-poplar-white oak-n. red oak	221.3	77.6	—	1.0	—	142.7
Southern scrub oak	3.7	—	—	—	—	3.7
Sweetgum-yellow-poplar	114.8	5.5	1.0	2.7		105.6
Mixed hardwood	193.3	33.8	10.0	9.2		140.4
Total	1,517.1	347.5	41.5	40.0	—	1,088.1
Oak-gum-cypress						
Sweetgum-water oak-willow oak	5.4	—	—	—	_	5.4
Sugarberry-elm-green ash	9.8	—				9.8
Total	15.2	—	—	—	_	15.2
Elm-ash-cottonwood						
River birch-sycamore	13.4	—	—	0.7	—	12.7
Willow	5.1	—	_	_	_	5.1
Sycamore-pecan-elm	10.8	_	_	3.0		7.9
Total	29.3	—	—	3.6	_	25.7
Maple-beech-birch						
Sugar maple-beech-yellow birch	1.3	—				1.3
Total	1.3	—	—	—	—	1.3
Total hardwoods	2,082.6	477.7	62.4	71.7	_	1,470.8
Nonstocked	11.5		0.1		_	11.4
All groups	2,855.6	594.1	85.6	212.6	9.1	1,954.2

## Table 9—Area of timberland by forest-type group, detailed forest type, and ownership class, North Georgia, 1998

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

	All	Stocking class (percent)						
Ownership class	classes	<16.7	16.7-59	60-99	100-130	>130		
		Thousand acres						
National forest	594.1	2.8	288.8	284.6	17.9			
Other public	85.6	0.1	40.2	35.0	10.3	_		
Forest industry	212.6	1.9	81.0	106.5	23.2			
Forest industry-leased	9.1	_	—	7.3	1.9			
Nonindustrial private	1,954.2	24.9	873.4	975.0	80.0	1.0		
All ownerships	2,855.6	29.8	1,283.4	1,408.2	133.2	1.0		

# Table 10—Area of timberland by ownership and stocking class of growing-stock trees, North Georgia, 1998

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

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

# Table 11—Area of timberland by forest-type group, stand origin, and stand-size class, North Georgia, 1998

			Stand-siz	e class	
Forest-type group	All			Sapling-	
and stand origin	classes	Sawtimber	Poletimber	seedling	Nonstocked
			Thousand acres		
Softwood types					
White-red-jack pine					
Planted	_	_	—	_	_
Natural	84.5	83.2	1.2		
Total	84.5	83.2	1.2	—	_
Loblolly-shortleaf pine					
Planted	217.1	15.5	92.9	108.7	
Natural	459.9	299.4	52.7	107.8	_
Total	677.0	314.9	145.6	216.5	_
Total softwoods	761.5	398.1	146.8	216.5	
Hardwood types					
Oak-pine					
Planted	17.9	1.3	5.3	11.3	_
Natural	501.7	275.4	97.3	129.0	_
Total	519.6	276.7	102.6	140.3	—
Oak-hickory	1,517.1	1,036.2	239.5	241.4	_
Oak-gum-cypress	15.2	15.2	_		
Elm-ash-cottonwood	29.3	22.6	4.1	2.6	—
Maple-beech-birch	1.3	—	—	1.3	—
Total hardwoods	2,082.6	1,350.7	346.3	385.6	
Nonstocked	11.5				11.5
All groups	2,855.6	1,748.8	493.1	602.2	11.5

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

		Forest management type							
Stand-age class	All types	Pine plantation	Natural pine	Oak– pine	Upland hardwood	Lowland hardwood	Nonstocked		
Years			7	housand acre	?S				
0-10	373.5	99.3	45.4	70.3	149.5	1.8	7.2		
11-20	331.3	74.3	96.4	72.7	80.0	8.0	_		
21-30	203.3	31.2	43.8	47.8	77.9	2.6	_		
31-40	233.7	2.4	52.9	41.8	121.6	15.1	_		
41-50	415.8	9.9	106.7	90.9	196.6	10.3	1.4		
51-60	429.0		84.3	68.7	274.5		1.6		
61-70	355.9	_	62.8	54.0	232.4	6.8	_		
71-80	232.9	_	24.3	37.2	170.0	_	1.3		
81+	280.1	—	27.8	36.3	216.0	_	—		
All classes	2,855.6	217.1	544.4	519.6	1,518.4	44.6	11.5		

Table 12—Area of timberland by stand-age class and forest management type, all ownerships, North Georgia, 1998

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

			Forest management type						
Stand-age class	All types	Pine plantation	Natural pine	Oak– pine	Upland hardwood	Lowland hardwood	Nonstocked		
Years				Thousand ac	res				
0-10	35.0	6.1	0.3	10.6	18.0	_	_		
11-20	82.2	15.0	14.0	30.8	22.4	_	_		
21-30	26.0		14.0	2.7	9.3				
31-40	25.0		3.2	8.9	12.8				
41-50	39.0		7.2	12.2	19.6				
51-60	98.9		25.5	16.0	57.3				
61-70	117.4		12.5	18.5	86.4				
71-80	109.5		17.9	25.3	66.2		0.1		
81+	146.8		23.8	26.0	96.9				
All classes	679.7	21.1	118.4	151.1	389.0	_	0.1		

Table 13—Area of timberland by stand-age class and forest management type, public ownerships,North Georgia, 1998

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

			Forest management type							
Stand-age	All	Pine	Natural	Oak–	Upland	Lowland				
class	types <sup>a</sup>	plantation	pine	pine	hardwood	hardwood	Nonstocked			
Years				Thousand ac	res					
0-10	72.7	52.1	9.7	4.1	6.1	0.7	—			
11-20	60.4	41.9	6.0	9.9	2.6					
21-30	35.0	28.7	3.4	2.8	_		—			
31-40	8.3	1.0	3.3	_	1.0	3.0	—			
41-50	10.6	3.9		6.2	0.5		_			
51-60	9.2			_	9.2		_			
61-70	10.5	_		5.0	5.5		_			
71-80		_		—			_			
81+	15.1				15.1	_				
All classes	221.7	127.6	22.4	28.1	40.0	3.6				

 Table 14—Area of timberland by stand-age class and forest management type, forest industry ownerships, North Georgia, 1998

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

<sup>a</sup> Includes 9.1 thousand acres of nonindustrial private land under long-term lease.

		Forest management type							
Stand-age class	All	Pine	Natural	Oak-	Upland	Lowland			
	types <sup>a</sup>	plantation	pine	pine	hardwood	hardwood	Nonstocked		
Years				Thousand ac	res				
0-10	265.9	41.2	35.4	55.5	125.5	1.2	7.2		
11-20	188.7	17.4	76.4	31.9	55.0	8.0			
21-30	142.3	2.5	26.4	42.2	68.6	2.6			
31-40	200.4	1.3	46.4	32.8	107.7	12.1			
41-50	366.2	6.0	99.6	72.5	176.4	10.3	1.4		
51-60	321.0	_	58.7	52.7	208.0	_	1.6		
61-70	228.1	_	50.3	30.5	140.5	6.8			
71-80	123.5		6.4	11.9	103.9	_	1.2		

4.0

403.6

10.3

340.4

104.0

1,089.4

\_\_\_\_

41.0

\_\_\_\_

11.4

Table 15—Area of timberland by stand-age class and forest management type, nonindustrial private ownerships, North Georgia, 1998

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

118.2

1,954.2

81 +

All classes

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

68.4

\_\_\_\_

<sup>a</sup> Excludes 9.1 thousand acres of nonindustrial private land under long-term lease to forest industry.

				Forest ma	inagement type		
Ownership and forested	All	Pine	Natural	Oak-	Upland	Lowland	
tract-size class	types	plantation	pine	pine	hardwood	hardwood	Nonstocked
Acres			T	housand acro	25		
Individual							
<sup>≤</sup> 10	304.0	_	70.3	55.1	164.3	12.4	1.9
11-50	469.0	5.7	118.6	91.0	229.1	15.0	9.6
51-100	321.8	5.1	75.4	55.9	183.6	1.9	_
101-200	214.2	12.7	41.7	43.4	116.5	_	_
201-500	226.3	15.4	30.5	22.2	152.7	5.4	_
≥ 501	86.6	_	18.8	3.9	63.9		
Total	1,621.9	38.9	355.3	271.5	910.1	34.7	11.4
Corporate							
$\leq 10$	12.3	_	4.7	_	7.6	_	_
11-50	52.6	5.4	11.8	4.8	25.6	4.9	_
51-100	26.0	1.3	_	15.7	9.0	_	_
101-200	52.6	3.7	5.0	6.1	37.8	_	—
201-500	59.0	5.3	_	5.0	47.4	1.4	—
≥ 501	129.8	13.7	26.8	37.4	52.0		
Total	332.3	29.5	48.3	68.9	179.3	6.2	_
All nonindustrial private							
≤ 10 <sup>–</sup>	316.2		75.0	55.1	171.9	12.4	1.9
11-50	521.5	11.1	130.5	95.7	254.8	19.9	9.6
51-100	347.9	6.4	75.4	71.7	192.5	1.9	_
101-200	266.8	16.4	46.7	49.5	154.3	_	_
201-500	285.3	20.8	30.5	27.2	200.1	6.8	
≥ 501	216.4	13.7	45.6	41.2	115.9	_	
Total	1,954.2	68.4	403.6	340.4	1,089.4	41.0	11.4

# Table 16—Area of nonindustrial private timberland by ownership, forested tract-size class, and forest management type, North Georgia, 1998

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

		Diameter class (inches at breast height)											
	All	1.0-	3.0-	5.0-	7.0-	9.0-	11.0-	13.0-	15.0-	17.0-	19.0-	21.0-	29.0 and
Species	classes	2.9	4.9	6.9	8.9	10.9	12.9	14.9	16.9	18.9	20.9	28.9	larger
	Thousand trees												
Softwood													
Longleaf pine	162	_	_	135	27	_	_		_	_	_	_	_
Shortleaf pine	35,071	7,634	3,626	5,682	6,234	6,221	3,055	1,526	646	387	31	29	
Loblolly pine	182,888	71,506	41,005	34,213	19,066	7,089	4,579	2,763	1,239	630	293	476	29
Virginia pine	129,366	55,147	27,111	16,085	12,694	9,402	4,887	2,747	904	332	27	30	_
Pitch pine	2,875	381	381	440	497	412	179	321	145	89		30	_
Table Mountain pine	832		381		116	111	56	168		_	_		_
Eastern white pine	53,510	31,124	9,231	4.487	2,302	1,765	1,176	677	666	584	593	787	118
Eastern hemlock	10,845	5,732	2,710	1,199	503	352	230	56	63				
Redcedars	8,828	4,226	2,532	1,220	444	218	30	60	98			_	
										2.022	044	1.252	1.47
Total softwoods	424,377	175,750	86,977	63,461	41,883	25,570	14,192	8,318	3,761	2,022	944	1,352	147
<b>H</b>													
Hardwood													
Select white oaks	79,554	32,866	17,200	8,523	5,935	3,952	3,777	2,754	1,974	1,132	767	642	32
Select red oaks	15,189	6,057	2,546	1,805	1,016	1,038	903	352	468	416	174	354	60
Other white oaks	109,496	32,867	26,102	15,780	11,307	8,062	5,797	3,855	2,330	1,708	732	802	154
Other red oaks	116,224	53,343	22,110	10,646	8,551	6,170	5,978	3,989	2,442	1,574	674	713	34
Hickory	112,730	67,179	20,040	9,414	5,360	4,389	3,089	1,524	1,019	534	87	95	_
Yellow birch	406	376	—	30	_	_	_	_	—	_	_	—	_
Hard maple	8,018	6,031	1,607	218	99		30		33		—	—	—
Soft maple	219,211	167,399	27,934	12,124	5,112	3,386	1,426	1,043	452	126	88	89	32
Beech	8,023	5,883	1,136	415	151	172	57	59	59	64	_	27	—
Sweetgum	74,474	49,451	13,974	4,970	2,783	1,439	891	414	292	175	59	26	_
Tupelo and blackgum	99,702	78,259	12,315	4,112	2,409	955	807	543	212	_	60	30	_
Ash	12,899	6,960	2,687	1,305	615	465	340	152	283	29	34	29	_
Cottonwood	30		—	_	_		30		—			_	_
Basswood	1,329	745	_	126	181	94	62	91	30	_	_	_	_
Yellow-poplar	129,470	77,310	20,745	10,113	6,008	4,385	3,625	2,711	2,048	1,370	715	354	86
Bay and magnolia	2,376	2,196	_	60	30	30	60	_	_	_	_	_	_
Black cherry	58,783	41,266	12,544	2,942	1,266	386	291	31	31	26	_	_	_
Black walnut	1,737	809	431	233	104	126	_	34	_	_	_	_	_
Sycamore	727	_	_	165	141	94	151	116	_	_	60	_	_
Black locust	5,265	2,615	877	898	410	324	58	_	29	54	_	_	_
Elm	21,701	16,302	3,251	1,125	570	179	156	89	_	29	_	_	_
Other Eastern													
hardwoods	480,179	328,558	103,840	31,713	10,268	3,803	1,182	534	101	125	55		
Total hardwoods	1,557,523	976,472	289,339	116,717	62,316	39,449	28,710	18,291	11,803	7,362	3,505	3,161	398
All species	1,981,900	1,152,222	376,316	180,178	104,199	65,019	42,902	26,609	15,564	9,384	4,449	4,513	545

 Table 17—Number of live trees on timberland by species and diameter class, North Georgia, 1998

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

		Diameter class (inches at breast height)											
	All	1.0-	3.0-	5.0-	7.0-	9.0-	11.0-	13.0-	15.0-	17.0-	19.0-	21.0-	29.0 and
Species	classes	2.9	4.9	6.9	8.9	10.9	12.9	14.9	16.9	18.9	20.9	28.9	larger
	Thousand trees												
Softwood													
Longleaf pine	162	_	_	135	27	_	_	_	_	_	_	_	_
Shortleaf pine	33,652	6,864	3,243	5,535	6,174	6,192	3,025	1,526	646	387	31	29	_
Loblolly pine	177,286	67,702	39,893	33,901	18,832	7,008	4,579	2,763	1,209	630	264	476	29
Virginia pine	124,552	51,465	26,838	15,727	12,573	9,049	4,860	2,747	904	332	27	30	
Pitch pine	2,756	381	381	440	497	382	149	321	116	89		_	
Table Mountain pine	832	_	381	_	116	111	56	168	_		_	_	
Eastern white pine	48,949	26,709	9,231	4,370	2,273	1,765	1,176	677	666	584	593	787	118
Eastern hemlock	10,061	5,004	2,710	1,172	503	323	230	56	63	_		_	
Redcedars	7,511	3,136	2,532	1,095	376	184	30	60	98		_	_	
Total softwoods	405,761	161,261	85,209	62,375	41,371	25,014	14,105	8,318	3,702	2,022	915	1,322	147
Total Softwoods	105,701	101,201	05,207	02,575	11,371	23,011	11,105	0,510	5,762	2,022	715	1,522	117
Hardwood													
Select white oaks	69,853	26,162	15,375	7,963	5,764	3,893	3,602	2,694	1,884	1,075	767	642	32
Select red oaks	13,031	4,633	2,165	1,746	984	949	877	352	412	383	145	325	60
Other white oaks	90,832	23,733	20,635	14,073	10,743	7,528	5,360	3,559	2,068	1,592	704	744	93
Other red oaks	102,153	42,517	21,010	9,965	8,106	5,849	5,714	3,846	2,353	1,458	646	655	34
Hickory	79,519	39,220	16,200	8,660	5,097	4,136	3,032	1,494	991	507	87	95	_
Yellow birch	406	376		30					_	_	_	_	_
Hard maple	3,697	2,946	431	158	99		30	_	33	_		_	_
Soft maple	137,963	95,796	22,245	10,154	4,269	3,055	1,027	845	325	126	30	59	32
Beech	4,978	2,985	1,136	325	151	142	30	59	59	64	_	27	_
Sweetgum	59,741	38,257	10,974	4,737	2,668	1,278	861	414	292	175	59	26	_
Tupelo and blackgum	50,782	35,334	7,912	3,350	1,965	894	601	514	182	_	_	30	_
Ash	9,117	4,417	1,862	1,037	585	379	340	122	283	29	34	29	_
Basswood	951	367		126	181	94	62	91	30	_	_	_	_
Yellow-poplar	120,765	71,079	19,195	9,632	5,921	4,236	3,566	2,681	1,988	1,342	715	354	56
Bay and magnolia	1,252	1,102	_	30	30	30	60		_		_	_	_
Black cherry	31,313	22,892	4,945	1,966	976	269	234	31	_	_		_	_
Black walnut	467	_	_	233	104	96		34	_	_		_	_
Sycamore	640	_	_	136	112	94	151	87	_	_	60	_	_
Black locust	4,076	1,835	877	659	296	295	58	_	29	27	_	_	_
Elm	9,409	6,095	1,503	971	450	179	122	89	_	_	_	_	_
Other Eastern													
hardwoods	14,765	6,527	4,062	1,559	1,231	668	440	149	71	30	28		
Total hardwoods	805,710	426,273	150,527	77,510	49,732	34,064	26,167	17,061	11,000	6,808	3,275	2,986	307
A 11	1.011.474	597 59 5				50.070	10.272	05.056	14 702	0.020		4 200	4.5.5
All species Numbers in rows and colun	1,211,471	587,534	235,736	139,885	91,103	59,078	40,272	25,379	14,702	8,830	4,190	4,308	454

Table 18—Number of growing-stock trees on	timberland by species and	diameter class North Geor	aia 1008
Table 10-Number of growing-stock frees on	unibertand by species and	i ulameter class, North Geor	gia, 1990

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

	_				Diamete	r class (inch	es at breast	height)			
	All	5.0-	7.0-	9.0-	11.0-	13.0-	15.0-	17.0-	19.0-	21.0-	29.0 and
Species	classes	6.9	8.9	10.9	12.9	14.9	16.9	18.9	20.9	28.9	larger
					Mill	lion cubic fe	et				
Softwood											
Longleaf pine	0.5	0.3	0.2	_		_	_	_	_	_	_
Shortleaf pine	320.1	17.4	47.5	82.9	65.1	48.3	30.0	23.5	2.8	2.6	_
Loblolly pine	598.0	74.2	102.0	78.4	95.6	86.7	52.3	34.2	23.0	46.4	5.4
Virginia pine	538.9	55.1	103.3	134.0	104.0	82.1	37.6	18.9	1.5	2.4	_
Pitch pine	35.6	1.1	3.5	5.3	3.9	9.9	5.5	3.9	_	2.6	_
Table Mountain pine	7.4	_	0.9	1.2	0.8	4.5	_	_	_	_	_
Eastern white pine	305.2	12.5	14.1	19.9	20.4	18.8	27.0	31.7	41.2	90.6	29.0
Eastern hemlock	16.0	2.7	2.4	3.3	3.9	1.4	2.3	_	_	_	_
Redcedars	10.4	2.7	2.3	2.0	0.3	1.1	2.0	_	_	_	_
Total softwoods	1,832.1	166.1	276.2	326.9	294.0	252.7	156.7	112.1	68.5	144.6	34.4
-											
Hardwood											
Select white oaks	539.6	24.7	38.6	49.1	74.9	80.1	80.5	62.8	56.4	65.8	6.7
Select red oaks	166.3	6.2	7.3	12.7	17.8	10.5	17.8	22.3	11.7	41.5	18.5
Other white oaks	715.8	44.6	70.9	93.2	102.8	103.7	82.2	79.5	44.9	73.2	20.7
Other red oaks	664.2	28.6	54.0	70.3	111.2	109.1	95.0	78.3	42.7	69.2	5.6
Hickory	296.8	21.6	31.3	50.8	60.9	43.8	42.3	30.7	6.2	9.1	_
Yellow birch	0.1	0.1	—		_	_	—	—	_	—	
Hard maple	2.9	0.6	0.5		0.4	—	1.4	—	—	—	
Soft maple	194.7	36.0	32.0	37.3	25.1	26.6	16.3	6.9	3.3	5.8	5.5
Beech	15.3	1.4	0.8	1.8	1.0	1.4	2.5	3.3	—	3.1	_
Sweetgum	108.8	12.7	17.3	17.1	18.5	11.4	13.6	11.2	4.4	2.5	
Tupelo and blackgum	71.4	9.9	13.6	10.3	14.3	13.8	5.8	—	1.7	2.0	
Ash	44.5	3.4	4.0	5.5	6.7	4.8	12.7	1.9	3.3	2.2	_
Cottonwood	0.6	—	—		0.6	—	—	—	—	—	_
Basswood	8.3	0.5	1.3	1.2	1.2	2.6	1.4	—	_	—	_
Yellow-poplar	568.2	31.6	41.2	57.7	77.5	86.2	89.0	78.6	52.4	40.7	13.5
Bay and magnolia	2.1	0.2	0.2	0.4	1.2	—	—	—	—	—	_
Black cherry	26.8	7.8	7.7	4.0	4.7	1.2	0.7	0.7	—	—	_
Black walnut	4.1	0.7	0.8	1.5	—	1.1	—	—	—	—	
Sycamore	10.9	0.6	1.0	1.1	2.7	2.6	—	—	2.9	—	_
Black locust	11.5	2.1	2.0	3.5	1.3	—	1.0	1.6	—	—	
Elm	14.6	2.3	3.3	2.3	2.9	2.3	—	1.4	_	—	
Other Eastern											
hardwoods	199.6	71.2	52.7	35.6	18.2	10.8	3.8	4.3	3.1	_	_
Total hardwoods	3,666.8	306.7	380.5	455.4	544.0	512.1	466.0	383.5	233.1	315.1	70.4
All species	5,498.9	472.8	656.7	782.3	838.0	764.8	622.7	495.6	301.5	459.6	104.8

#### Table 19—Volume of live trees on timberland by species and diameter class, North Georgia, 1998

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

	_				Diamete	er class (incl	nes at breast	height)			
	All	5.0-	7.0-	9.0-	11.0-	13.0-	15.0-	17.0-	19.0-	21.0-	29.0 and
Species	classes	6.9	8.9	10.9	12.9	14.9	16.9	18.9	20.9	28.9	larger
					Mil	lion cubic fe	eet				
Softwood											
Longleaf pine	0.5	0.3	0.2		_	_	_	_	_	_	_
Shortleaf pine	318.6	17.0	47.3	82.5	64.5	48.3	30.0	23.5	2.8	2.6	_
Loblolly pine	593.1	73.6	101.0	77.8	95.6	86.7	51.0	34.2	21.5	46.4	5.4
Virginia pine	532.1	54.1	102.5	129.5	103.5	82.1	37.6	18.9	1.5	2.4	_
Pitch pine	30.8	1.1	3.5	5.1	3.1	9.9	4.3	3.9	_	_	_
Table Mountain pine	7.4	_	0.9	1.2	0.8	4.5	_	_	_	_	_
Eastern white pine	304.8	12.2	14.0	19.9	20.4	18.8	27.0	31.7	41.2	90.6	29.0
Eastern hemlock	15.7	2.6	2.4	3.1	3.9	1.4	2.3		—	—	_
Redcedars	9.6	2.5	2.1	1.7	0.3	1.1	2.0	_	_		_
Total softwoods	1,812.6	163.5	273.8	320.8	292.1	252.7	154.1	112.1	67.0	142.0	34.4
Hardwood											
Select white oaks	527.0	23.3	37.3	48.5	72.4	79.1	77.2	60.2	56.4	65.8	6.7
Select red oaks	158.6	6.0	7.2	11.8	17.2	10.5	16.8	21.1	10.4	39.1	18.5
Other white oaks	672.4	40.6	68.1	88.0	97.6	97.1	74.2	76.1	43.8	71.8	15.1
Other red oaks	642.1	27.0	51.8	67.7	107.5	106.4	92.5	75.6	41.4	66.6	5.6
Hickory	288.9	20.2	30.4	48.7	59.8	43.3	41.3	30.1	6.2	9.1	
Yellow birch	0.1	0.1	_		_			_		_	_
Hard maple	2.7	0.5	0.5	_	0.4	_	1.4	_	_	_	_
Soft maple	166.7	30.8	27.5	34.1	19.6	22.3	12.9	6.9	2.0	5.2	5.5
Beech	14.3	1.2	0.8	1.5	0.6	1.4	2.5	3.3		3.1	_
Sweetgum	106.3	12.4	16.7	16.2	17.9	11.4	13.6	11.2	4.4	2.5	
Tupelo and blackgum	60.6	8.2	11.7	9.7	10.9	13.1	5.0	_	_	2.0	_
Ash	42.3	2.7	3.8	4.9	6.7	4.0	12.7	1.9	3.3	2.2	_
Basswood	8.3	0.5	1.3	1.2	1.2	2.6	1.4	_	_	_	_
Yellow-poplar	557.4	30.2	40.6	56.3	76.9	85.5	87.4	78.1	52.4	40.7	9.5
Bay and magnolia	2.0	0.1	0.2	0.4	1.2	_	_	_	_	_	_
Black cherry	19.6	5.4	6.1	3.1	3.8	1.2	_	_	_	_	_
Black walnut	3.5	0.7	0.8	1.0	_	1.1	_	_	_	_	_
Sycamore	10.5	0.5	0.8	1.1	2.7	2.5	_	_	2.9	_	_
Black locust	10.3	1.7	1.8	3.2	1.3	—	1.0	1.3	—	—	_
Elm	11.9	2.0	2.9	2.3	2.4	2.3	—	—	—	—	—
Other Eastern											
hardwoods	39.5	4.9	8.5	8.0	8.3	3.8	2.7	1.6	1.7		
Total hardwoods	3,345.2	218.9	318.6	407.8	508.5	487.5	442.6	367.5	224.9	308.1	60.9
All species	5,157.7	382.3	592.4	728.6	800.6	740.2	596.8	479.6	291.9	450.0	95.2

Table 20—Volume of growing-stock trees on timberland by species and diameter class, North Georgia, 1998

	-			Diamete	r class (inch	es at breast	height)		
	All	9.0-	11.0-	13.0-	15.0-	17.0-	19.0-	21.0-	29.0 and
Species	classes	10.9	12.9	14.9	16.9	18.9	20.9	28.9	larger
				Mill	ion cubic fe	et			
Softwood									
Shortleaf pine	228.5	66.2	58.6	45.9	29.2	23.2	2.8	2.6	
Loblolly pine	383.4	59.6	86.1	82.1	49.4	33.6	21.3	45.9	5.3
Virginia pine	331.7	104.7	92.8	76.5	35.8	18.2	1.5	2.3	_
Pitch pine	24.0	4.1	2.8	9.2	4.1	3.7	_		
Table Mountain pine	6.0	1.0	0.7	4.3			_		
Eastern white pine	263.6	15.7	18.2	17.5	25.5	30.4	39.8	88.2	28.4
Eastern hemlock	9.2	2.3	3.5	1.3	2.1		_		
Redcedars	4.5	1.4	0.2	1.0	1.9	_	_	_	_
Total softwoods	1,250.9	255.0	262.8	237.9	148.2	109.0	65.3	139.0	33.8
-									
Hardwood									
Select white oaks	359.9	—	51.9	64.9	67.6	54.6	52.3	62.3	6.5
Select red oaks	114.3	—	12.3	8.4	14.1	18.2	9.1	35.3	16.9
Other white oaks	405.4	_	70.9	79.8	64.5	68.4	40.1	67.3	14.3
Other red oaks	420.7	_	76.6	87.4	81.1	68.6	38.4	63.2	5.4
Hickory	156.2	—	43.2	35.7	36.0	27.2	5.7	8.5	
Hard maple	1.5	—	0.3	—	1.2	—	—	—	
Soft maple	60.0	—	13.5	17.7	11.0	6.1	1.8	4.7	5.1
Beech	9.4	—	0.4	1.2	2.1	2.9	—	2.8	—
Sweetgum	50.8		12.5	9.3	12.1	10.3	4.1	2.4	_
Tupelo and blackgum	23.9	_	7.4	10.4	4.3	_	_	1.8	_
Ash	25.9		4.6	3.4	11.1	1.7	3.1	2.1	_
Basswood	4.3	—	0.8	2.2	1.3	—	—	—	—
Yellow-poplar	371.9		53.6	70.2	77.4	72.2	49.6	39.5	9.4
Bay and magnolia	0.9	_	0.9	_	_	_	_	_	_
Black cherry	3.7	_	2.7	1.0	_	_	_	_	_
Black walnut	0.8	_	_	0.8	_	_	_	_	_
Sycamore	6.2		1.6	2.0	_		2.6	_	
Black locust	2.9		0.9	_	0.8	1.2	_		
Elm	3.5		1.6	1.9	_	_	_	_	_
Other Eastern									
hardwoods	13.9		5.8	3.1	2.1	1.5	1.4		
Total hardwoods	2,036.3		361.5	399.3	386.8	333.0	208.2	289.8	57.7
- All species	3,287.2	255.0	624.3	637.2	535.0	442.0	273.5	428.7	91.4

# Table 21—Volume in the saw-log portion of sawtimber trees on timberland by species and diameter class, North Georgia, 1998

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

				Diamet	er class (inc	hes at breas	t height)		
	All	9.0-	11.0-	13.0-	15.0-	17.0-	19.0-	21.0-	29.0 and
Species	classes	10.9	12.9	14.9	16.9	18.9	20.9	28.9	larger
				Milli	on board fe	et			
Softwood									
Shortleaf pine	1,187.2	307.1	292.3	246.8	167.7	139.0	17.4	16.9	_
Loblolly pine	2,148.1	277.7	439.0	451.6	288.3	206.3	138.2	307.8	39.1
Virginia pine	1,612.7	472.6	441.3	386.4	190.1	100.6	8.4	13.3	
Pitch pine	125.1	17.4	13.4	48.5	23.6	22.2	_		_
Table Mountain pine	30.9	4.3	3.6	22.9			_	_	_
Eastern white pine	1,599.9	70.8	89.6	93.0	144.5	180.1	245.4	575.8	200.7
Eastern hemlock	45.1	10.3	16.6	6.5	11.7				
Redcedars	25.0	7.0	1.2	5.6	11.2	_	_	_	_
Total softwoods	6,773.9	1,167.2	1,297.0	1,261.3	837.1	648.3	409.4	913.9	239.8
Handara ad									
Hardwood	1.0.00 4		247.2	212.0	240.2	205.6	202.2	252.0	20.2
Select white oaks	1,863.4	_	247.2	313.9	340.2	285.6	283.2	353.9	39.3
Select red oaks	616.3	_	57.8	40.4	70.7	94.4	48.7	200.7	103.7
Other white oaks	2,040.2	_	327.8	377.7	315.9	349.2	210.6	375.2	83.7
Other red oaks	2,204.2	_	376.0	432.1	416.7	366.1	212.2	367.4	33.8
Hickory	796.1	_	206.2	176.3	185.5	147.6	31.4	49.1	_
Hard maple	7.4	_	1.6	_	5.8	_			
Soft maple	302.7	—	64.5	85.3	55.2	31.8	9.7	25.5	30.7
Beech	43.1	_	2.1	5.5	9.6	13.2		12.7	
Sweetgum	274.8	—	63.9	47.8	65.6	58.6	24.3	14.6	—
Tupelo and blackgum	115.0	—	34.4	49.4	21.1			10.0	_
Ash	129.4	—	21.5	16.1	55.3	8.7	16.4	11.4	—
Basswood	20.6	—	3.9	10.3	6.4		_	—	
Yellow-poplar	2,117.0	—	276.7	370.7	428.5	419.6	299.4	253.2	68.8
Bay and magnolia	4.2	_	4.2	—	—	—	—	—	
Black cherry	18.0	—	13.0	5.1	—	—	—	—	
Black walnut	3.8		—	3.8	—	—	—	—	—
Sycamore	32.1	—	8.0	9.8	—	—	14.3	—	—
Black locust	13.4	_	4.5	—	3.8	5.2	—	—	
Elm	17.2	_	8.0	9.2	—	—	—	—	—
Other Eastern									
hardwoods	73.7		29.2	14.5	12.7	8.1	9.2		
Total hardwoods	10,692.7		1,750.4	1,967.8	1,993.0	1,788.1	1,159.4	1,673.9	360.0
All species	17,466.6	1,167.2	3,047.4	3,229.1	2,830.0	2,436.4	1,568.8	2,587.8	599.8

Table 22—Volume of sawtimber on timberland by species and diameter class, North Georgia, 1998

		Al	l size classe	8			Trees ≥1	5.0 inches	d.b.h.	
-	All		Tree g	grade		All		Tree g	rade	
Species	grades	1	2	3	4	grades	1	2	3	4
					Million bo	oard feet				
Softwood						-				
Shortleaf pine	1,187.2	436.8	306.4	444.1	_	341.1	161.7	62.4	116.9	
Loblolly pine	2,148.1	736.4	548.1	863.6	_	979.7	318.3	268.1	393.3	_
Virginia pine	1,612.7	33.5	166.3	1,412.9	_	312.4	14.8	67.6	230.0	_
Pitch pine	125.1	12.8	46.4	65.9	_	45.8	11.3	29.0	5.5	
Table Mountain pine	30.9		4.2	26.7	_		_		_	
Eastern white pine	1,599.9	260.7	407.9	907.8	23.4	1,346.5	259.3	371.4	703.7	12.1
Eastern hemlock	45.1		_	42.5	2.6	11.7		_	11.7	_
Redcedars	25.0			20.1	4.9	11.2			7.6	3.6
Total softwoods	6,773.9	1,480.2	1,479.2	3,783.6	31.0	3,048.4	765.6	798.4	1,468.7	15.8
Hardwood										
Select white oaks	1,863.4	307.6	514.6	770.3	270.9	1,302.3	307.6	426.4	392.4	175.8
Select red oaks	616.3	201.1	226.6	159.1	29.5	518.1	201.1	211.3	96.6	9.2
Other white oaks	2,040.2	289.5	628.3	919.0	203.3	1,334.6	289.5	530.6	430.2	84.3
Other red oaks	2,204.2	289.5	477.6	1,109.6	327.5	1,396.1	289.5	370.4	588.1	148.1
Hickory	796.1	174.4	208.6	344.2	68.9	413.6	174.4	145.2	75.8	18.2
Hard maple	7.4	_	_	1.6	5.8	5.8	_	_	_	5.8
Soft maple	302.7	13.2	86.5	119.7	83.3	153.0	13.2	71.3	32.6	35.9
Beech	43.1	—	5.6	24.8	12.7	35.5	—	5.6	17.3	12.7
Sweetgum	274.8	30.8	96.1	129.4	18.6	163.1	30.8	72.5	52.1	7.7
Tupelo and blackgum	115.0	—	34.3	61.9	18.8	31.1	—	13.7	10.6	6.9
Ash	129.4	47.2	42.5	37.2	2.6	91.9	47.2	34.2	10.5	—
Basswood	20.6	—	4.0	10.2	6.4	6.4	—	—	—	6.4
Yellow-poplar	2,117.0	576.0	661.4	657.6	222.0	1,469.6	576.0	437.7	275.3	180.6
Bay and magnolia	4.2	_	_	4.2	_		_	_	_	_
Black cherry	18.0	_	5.1	12.1	0.9	_	—	—	—	_
Black walnut	3.8	_	3.8	_	_		_	_	_	_
Sycamore	32.1	_	3.3	25.2	3.6	14.3	_	_	14.3	_
Black locust	13.4	—	3.8	9.7	—	8.9	—	3.8	5.2	—
Elm	17.2	—	_	12.3	4.9	—	—	—	—	—
Other Eastern										
hardwoods	73.7	_	26.2	43.3	4.2	30.0	_	23.3	6.7	
Total hardwoods	10,692.7	1,929.4	3,028.3	4,451.3	1,283.7	6,974.5	1,929.4	2,346.1	2,007.5	691.4
All species	17,466.6	3,409.6	4,507.6	8,234.8	1,314.6	10,022.9	2,695.0	3,144.6	3,476.2	707.1

Table 23—Volume of sawtimber on timberland by species, size class, and tree grade, North Georgia, 1998

			Softwoods			Hardwoods	
	All	All	Yellow	Other	All	Soft	Hard
County	species	softwood	pine	softwood	hardwood	hardwood	hardwood
				Million cubic	feet		
Bartow	201.9	119.2	119.2	_	82.7	16.0	66.7
Catoosa	88.6	20.6	20.6	_	68.0	18.9	49.1
Chattooga	172.2	56.5	56.5	_	115.7	39.1	76.6
Cherokee	347.6	119.6	118.2	1.4	228.0	87.1	141.0
Dade	159.4	27.0	21.8	5.1	132.5	27.6	104.9
Dawson	212.6	78.4	76.7	1.7	134.2	28.6	105.5
Fannin	346.7	116.2	73.8	42.4	230.5	55.6	174.8
Floyd	306.2	138.2	138.2	0.0	168.0	37.1	130.9
Gilmer	480.7	150.5	80.8	69.7	330.2	94.8	235.4
Gordon	127.8	66.4	66.3	0.1	61.4	24.2	37.2
Habersham	263.7	73.6	72.3	1.3	190.1	54.0	136.1
Lumpkin	305.9	105.4	74.4	31.0	200.5	47.9	152.5
Murray	297.1	139.8	120.3	19.6	157.3	31.8	125.5
Pickens	208.0	65.7	65.6	0.2	142.2	66.4	75.9
Rabun	470.8	186.8	74.1	112.7	284.0	96.2	187.8
Stephens	118.7	51.5	51.1	0.4	67.2	25.8	41.4
Towns	131.8	27.9	27.8	0.1	103.9	41.3	62.6
Union	250.5	59.1	40.8	18.3	191.4	61.4	130.0
Walker	293.4	74.2	69.0	5.2	219.2	31.3	187.8
White	200.6	77.5	56.7	20.8	123.1	31.7	91.4
Whitfield	173.4	58.3	58.3	_	115.2	38.4	76.8
Total	5,157.7	1,812.6	1,482.4	330.1	3,345.2	955.3	2,389.9

Table 24—Volume of growing stock on timberland by county and species group, North Georgia, 1998

			Softwoods			Hardwoods	
	All	All	Yellow	Other	All	Soft	Hard
County	species	softwood	pine	softwood	hardwood	hardwood	hardwood
				Million cubic fee	et		
Bartow	209.8	120.4	120.4	0.0	89.3	16.6	72.7
Catoosa	92.7	20.6	20.6		72.1	21.4	50.7
Chattooga	179.4	56.9	56.9	_	122.5	41.4	81.1
Cherokee	357.8	120.9	119.5	1.4	236.9	88.1	148.8
Dade	166.1	27.6	21.8	5.8	138.5	30.3	108.2
Dawson	223.5	78.7	77.0	1.7	144.8	29.4	115.4
Fannin	371.9	116.9	74.5	42.4	254.9	63.6	191.3
Floyd	323.6	140.3	140.3	0.0	183.2	42.5	140.8
Gilmer	519.2	151.6	81.7	69.9	367.6	103.9	263.6
Gordon	134.7	66.9	66.8	0.1	67.8	25.2	42.6
Habersham	279.1	73.8	72.5	1.3	205.3	54.9	150.4
Lumpkin	326.1	106.3	75.2	31.1	219.8	50.1	169.7
Murray	306.8	139.9	120.3	19.6	166.9	32.8	134.0
Pickens	221.9	67.3	67.1	0.2	154.6	68.4	86.3
Rabun	513.8	189.3	76.3	112.9	324.5	102.2	222.3
Stephens	125.7	51.5	51.1	0.4	74.2	26.9	47.3
Towns	158.5	32.1	31.9	0.1	126.4	47.1	79.3
Union	269.8	59.3	40.9	18.5	210.5	64.1	146.4
Walker	311.3	74.6	69.3	5.3	236.7	36.0	200.8
White	228.1	78.4	57.5	20.8	149.7	36.4	113.3
Whitfield	179.1	58.6	58.6		120.5	40.4	80.1
Total	5,498.9	1,832.1	1,500.5	331.6	3,666.8	1,021.7	2,645.1

Table 25—Volume of live trees on timberland by county and species group, North Georgia, 1998

	_		Softwoods			Hardwoods	
	All	All	Yellow	Other	All	Soft	Hard
County	species	softwood	pine	softwood	hardwood	hardwood	hardwood
				Million board	feet		
Bartow	604.3	389.4	389.4	_	214.9	32.2	182.7
Catoosa	326.2	112.8	112.8	—	213.4	50.4	163.0
Chattooga	467.5	128.7	128.7	—	338.8	148.1	190.7
Cherokee	1,223.0	486.7	479.5	7.3	736.3	273.9	462.4
Dade	490.8	94.6	79.1	15.5	396.2	69.6	326.6
Dawson	735.5	280.3	270.9	9.4	455.2	92.9	362.3
Fannin	1,195.6	423.5	233.0	190.5	772.0	167.9	604.1
Floyd	1,036.8	609.6	609.6	_	427.2	93.9	333.2
Gilmer	1,796.7	667.5	302.0	365.6	1,129.1	296.1	833.1
Gordon	274.5	134.6	134.6	_	139.9	54.8	85.1
Habersham	976.5	265.7	261.5	4.2	710.8	201.7	509.1
Lumpkin	1,075.6	393.4	224.4	168.9	682.2	131.9	550.3
Murray	886.1	430.4	329.8	100.6	455.7	45.9	409.9
Pickens	719.0	237.1	237.1		481.8	231.2	250.6
Rabun	1,801.8	936.0	314.8	621.2	865.7	283.8	582.0
Stephens	418.0	163.1	162.1	1.0	254.9	104.4	150.5
Towns	430.9	87.2	87.2	_	343.7	136.1	207.5
Union	854.1	192.0	127.4	64.7	662.0	210.7	451.4
Walker	871.6	230.2	214.9	15.3	641.3	74.0	567.3
White	697.0	318.7	212.7	105.9	378.3	97.8	280.5
Whitfield	585.4	192.2	192.2		393.2	139.8	253.4
Total	17,466.6	6,773.9	5,103.9	1,670.0	10,692.7	2,937.1	7,755.6

Table 26—Volume of sawtimber on timberland by county and species group, North Georgia, 1998

			Softwoods			Hardwoods	
	All	All	Yellow	Other	All	Soft	Hard
Class of timber	species	softwood	pine	softwood	hardwood	hardwood	hardwood
				Million cubic f	feet		
Sawtimber trees							
Saw-log portion	3,287.2	1,250.9	973.6	277.4	2,036.3	531.4	1,504.9
Upper-stem portion <sup>a</sup>	488.0	124.3	107.3	17.0	363.6	97.1	266.5
Total	3,775.2	1,375.3	1,080.9	294.4	2,399.9	628.5	1,771.4
Poletimber trees	1,382.5	437.3	401.5	35.8	945.2	326.7	618.5
All growing-stock trees	5,157.7	1,812.6	1,482.4	330.1	3,345.2	955.3	2,389.9
Rough trees							
Sawtimber size	104.6	12.8	12.3	0.4	91.9	23.5	68.4
Poletimber size	199.3	5.0	3.9	1.1	194.3	28.2	166.1
Total	303.9	17.7	16.2	1.5	286.2	51.7	234.5
Rotten trees							
Sawtimber size	34.2	1.8	1.8		32.4	13.3	19.1
Poletimber size	3.1		_		3.1	1.5	1.6
Total	37.3	1.8	1.8		35.5	14.8	20.7
Salvable dead trees							
Sawtimber size	14.7	2.6	1.2	1.5	12.1	1.3	10.7
Poletimber size	4.0	2.9	2.9		1.1		1.1
Total	18.7	5.6	4.1	1.5	13.2	1.3	11.8
All classes	5,517.6	1,837.7	1,504.5	333.1	3,680.0	1,023.1	2,656.9

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.

			Softwoods			Hardwoods						
Ownership class	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood					
	Live trees (million cubic feet)											
National forest	1,322.7	376.2	174.2	202.0	946.4	232.7	713.8					
Other public	207.4	64.6	59.2	5.4	142.9	24.8	118.0					
Forest industry	350.7	232.2	229.9	2.2	118.5	42.0	76.6					
Forest industry-leased	3.0	3.0	3.0	_		_	_					
Nonindustrial private	3,615.1	1,156.1	1,034.2	121.9	2,459.0	722.3	1,736.7					
All classes	5,498.9	1,832.1	1,500.5	331.6	3,666.8	1,021.7	2,645.1					
			Growing-st	ock trees (millio	on cubic feet)							
National forest	1,211.2	372.1	170.7	201.4	839.1	213.9	625.2					
Other public	197.5	64.4	58.9	5.4	133.1	22.0	111.1					
Forest industry	339.6	231.0	228.8	2.2	108.6	38.9	69.6					
Forest industry-leased	3.0	3.0	3.0	_		_	_					
Nonindustrial private	3,406.4	1,142.1	1,021.0	121.1	2,264.4	680.4	1,584.0					
All classes	5,157.7	1,812.6	1,482.4	330.1	3,345.2	955.3	2,389.9					

Table 28—Volume of live and growing-stock trees on timberland by ownership class and species group, North Georgia, 1998

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

Table 29-Volume of sawtimber on timberland by ownership class, species group, and size class,	
North Georgia, 1998	

			Softwoods			Hardwoods	
Ownership class	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
			All size c	lasses (million l	ooard feet)		
National forest	4,410.6	1,637.6	574.0	1,063.7	2,773.0	654.7	2,118.3
Other public	718.8	258.4	229.9	28.6	460.3	66.0	394.3
Forest industry	816.2	539.9	527.8	12.1	276.4	74.4	201.9
Forest industry-leased			_	_			_
Nonindustrial private	11,521.0	4,338.0	3,772.3	565.7	7,183.0	2,141.9	5,041.1
All classes	17,466.6	6,773.9	5,103.9	1,670.0	10,692.7	2,937.1	7,755.6
		Т	'rees <sup>≥</sup> 15.0 in	ches d.b.h. (mi	llion board feet,	)	
National forest	3,143.4	1,147.9	240.8	907.1	1,995.5	458.9	1,536.6
Other public	484.6	136.6	115.1	21.4	348.0	41.5	306.5
Forest industry	307.3	124.2	112.1	12.1	183.1	41.0	142.0
Forest industry-leased	_	_	_	—			_
Nonindustrial private	6,087.6	1,639.8	1,211.0	428.8	4,447.9	1,326.1	3,121.7
All classes	10,022.9	3,048.4	1,679.0	1,369.4	6,974.5	1,867.6	5,106.9

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

			Softwoods		Hardwoods				
Forest-type group	All	All	Yellow	Other	All	Soft	Hard		
and stand origin	species	softwood	pine	softwood	hardwood	hardwood	hardwood		
				Million cubi	c feet				
Softwood types									
White-red-jack pine									
Planted	_				_	—	_		
Natural	287.2	226.8	45.0	181.8	60.5	20.2	40.3		
Total	287.2	226.8	45.0	181.8	60.5	20.2	40.3		
Loblolly-shortleaf pine									
Planted	240.0	212.1	212.1		27.8	17.8	10.1		
Natural	954.6	765.4	742.6	22.8	189.2	89.2	99.9		
Total	1,194.5	977.5	954.7	22.8	217.0	107.0	110.0		
Total softwoods	1,481.8	1,204.3	999.7	204.6	277.5	127.2	150.3		
Hardwood types									
Oak-pine									
Planted	6.8	3.9	3.9	_	2.9	2.9	0.1		
Natural	838.1	396.2	306.0	90.2	441.9	127.9	314.0		
Total	844.9	400.1	309.9	90.2	444.9	130.8	314.1		
Oak-hickory	2,762.3	199.9	165.9	34.0	2,562.4	664.3	1,898.2		
Oak-gum-cypress	35.5	1.8	1.1	0.7	33.8	21.9	11.8		
Elm-ash-cottonwood	32.7	6.5	5.9	0.6	26.2	10.7	15.5		
Maple-beech-birch	0.3	_			0.3	0.3	—		
Total hardwoods	3,675.8	608.3	482.7	125.5	3,067.6	828.0	2,239.6		
Nonstocked	0.1		_	_	0.1	0.1			
All groups	5,157.7	1,812.6	1,482.4	330.1	3,345.2	955.3	2,389.9		

# Table 30—Volume of growing stock on timberland by forest-type group, stand origin, and species group, North Georgia, 1998

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

Ownership class	All tree		D.b.h. (	inches)	
and species group	sizes	1.0-4.9	5.0-10.9	11.0-14.9	≥15.0
			Square feet/acre		
National forest					
Softwood	32.7	3.8	15.1	5.1	8.7
Hardwood	75.2	14.7	24.8	13.7	21.9
Total	107.9	18.5	39.9	18.8	30.6
Other public					
Softwood	28.2	2.4	14.2	8.2	3.4
Hardwood	51.0	8.2	15.2	9.0	18.6
Total	79.3	10.6	29.4	17.2	22.0
Forest industry					
Softwood	48.5	7.2	31.9	7.6	1.8
Hardwood	31.2	12.1	10.2	3.8	5.1
Total	79.6	19.2	42.1	11.4	6.9
Forest industry-leased					
Softwood	36.4	6.3	30.1	_	
Hardwood	0.3	0.3			
Total	36.7	6.6	30.1	_	
Nonindustrial private					
Softwood	29.2	3.1	12.8	8.0	5.3
Hardwood	64.4	13.0	22.4	14.3	14.6
Total	93.5	16.1	35.2	22.3	19.9
All classes					
Softwood	31.6	3.6	15.0	7.4	5.5
Hardwood	62.7	13.1	21.4	13.0	15.2
Total	94.3	16.6	36.5	20.4	20.8

Table 31—Average basal area of live trees per acre on timberland by ownership class, species group, and d.b.h., North Georgia, 1998

			Softwoods			Hardwoods	
	All	All	Yellow	Other	All	Soft	Hard
County	species	softwood	pine	softwood	hardwood	hardwood	hardwood
				Million cubic fe	eet		
Bartow	13.1	9.3	9.2	0.1	3.9	1.1	2.8
Catoosa	2.1	0.2	0.2	_	1.9	0.6	1.3
Chattooga	8.9	5.2	5.2		3.8	1.3	2.5
Cherokee	10.7	4.1	4.1	_	6.6	3.2	3.4
Dade	3.6	0.7	0.5	0.2	2.9	1.0	1.9
Dawson	5.7	1.9	1.7	0.1	3.8	1.4	2.4
Fannin	8.9	3.9	2.1	1.8	5.1	1.8	3.3
Floyd	6.3	2.1	2.1		4.3	1.4	2.8
Gilmer	11.5	4.0	1.7	2.3	7.5	3.7	3.8
Gordon	6.8	4.4	4.4	—	2.4	0.4	2.1
Habersham	7.7	2.0	1.9	0.2	5.6	2.4	3.2
Lumpkin	6.5	2.6	2.2	0.4	3.9	1.0	2.8
Murray	11.5	7.0	5.7	1.3	4.5	1.0	3.5
Pickens	5.4	2.2	2.2	—	3.2	0.9	2.4
Rabun	9.0	2.5	-0.1	2.6	6.5	3.2	3.3
Stephens	4.2	3.1	3.1	—	1.1	0.5	0.6
Towns	2.2	0.9	0.7	0.2	1.4	1.0	0.4
Union	5.0	1.2	-0.6	1.7	3.9	1.7	2.2
Walker	9.2	3.3	3.2	0.1	6.0	1.6	4.4
White	5.2	1.6	1.3	0.3	3.6	1.6	2.0
Whitfield	5.7	2.3	2.3	_	3.4	1.4	2.0
Total	149.2	64.1	52.8	11.3	85.1	32.1	53.0

Table 32—Average net annual growth of growing stock on timberland by county andspecies group, North Georgia, 1989-1997

		_	Softwoods			Hardwoods	
County	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
				Million cubic fe	eet		
Bartow	13.5	9.5	9.4	0.1	4.0	1.2	2.9
Catoosa	2.3	0.2	0.2	_	2.1	0.6	1.5
Chattooga	9.1	5.2	5.2	_	4.0	1.3	2.6
Cherokee	10.8	3.8	3.8	_	7.0	3.4	3.6
Dade	3.8	0.7	0.5	0.2	3.1	1.1	2.0
Dawson	5.9	1.9	1.7	0.1	4.0	1.5	2.5
Fannin	9.1	3.9	2.1	1.8	5.2	1.8	3.4
Floyd	6.3	1.8	1.8	_	4.5	1.5	2.9
Gilmer	11.5	4.0	1.7	2.3	7.5	3.7	3.8
Gordon	6.7	4.2	4.2	_	2.5	0.4	2.1
Habersham	8.2	2.0	1.9	0.2	6.2	2.6	3.6
Lumpkin	6.8	2.8	2.2	0.7	4.0	1.1	2.9
Murray	11.5	6.8	5.5	1.3	4.7	1.0	3.6
Pickens	5.7	2.2	2.2	_	3.6	0.9	2.7
Rabun	9.5	2.4	-0.1	2.6	7.0	3.4	3.7
Stephens	4.2	3.1	3.1	_	1.2	0.5	0.7
Towns	2.3	0.9	0.7	0.2	1.4	0.9	0.5
Union	5.4	1.2	-0.6	1.7	4.3	1.8	2.5
Walker	9.7	3.4	3.3	0.1	6.2	1.6	4.7
White	5.6	1.6	1.3	0.3	4.0	1.7	2.3
Whitfield	5.7	2.3	2.3	_	3.4	1.4	1.9
Total	153.7	63.8	52.3	11.5	89.9	33.2	56.7

 Table 33—Average net annual growth of live trees on timberland by county and species group,

 North Georgia, 1989-1997

			Softwoods			Hardwoods	
County	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
			Λ	Iillion board fee	t		
Bartow	40.5	24.4	24.4	_	16.1	3.4	12.7
Catoosa	9.3	1.5	1.5	_	7.9	3.2	4.7
Chattooga	19.9	6.8	6.8	_	13.1	3.8	9.2
Cherokee	52.6	21.2	21.2	_	31.4	17.2	14.2
Dade	20.0	5.1	3.7	1.4	14.9	4.9	10.1
Dawson	29.0	13.0	12.5	0.5	16.0	6.8	9.3
Fannin	42.6	22.8	10.9	11.9	19.7	4.4	15.3
Floyd	24.6	11.3	11.3	_	13.3	1.8	11.5
Gilmer	58.0	21.4	10.4	11.0	36.6	18.0	18.5
Gordon	17.3	9.2	9.2	_	8.1	1.1	7.0
Habersham	38.5	10.8	9.2	1.6	27.7	11.2	16.4
Lumpkin	30.7	13.4	10.0	3.4	17.3	3.1	14.2
Murray	48.5	27.4	19.9	7.5	21.1	4.0	17.0
Pickens	24.3	12.1	12.1		12.2	4.3	7.8
Rabun	49.3	22.1	7.2	14.9	27.3	11.8	15.4
Stephens	20.7	14.5	14.5	_	6.2	4.0	2.2
Towns	9.5	3.9	3.6	0.3	5.5	3.3	2.3
Union	29.5	8.8	1.0	7.8	20.7	8.2	12.5
Walker	34.8	12.0	12.0		22.8	3.7	19.2
White	28.7	12.0	11.3	0.7	16.7	9.8	6.9
Whitfield	28.3	12.4	12.4	—	15.9	4.2	11.7
Total	656.6	286.4	225.3	61.0	370.2	132.3	237.9

Table 34—Average net annual growth of sawtimber on timberland by county and species group,North Georgia, 1989-1997

			Softwoods			Hardwoods	5
County	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
				Million cubic fe	et		
Bartow	17.4	14.2	14.2		3.2	1.1	2.1
Catoosa	0.7	0.3	0.3	_	0.4	_	0.4
Chattooga	2.4	1.6	1.6		0.7	0.0	0.7
Cherokee	9.8	7.9	7.9		1.9	1.6	0.3
Dawson	4.9	4.5	4.5	_	0.4	0.1	0.3
Fannin	6.1	0.6	0.6	0.1	5.5	1.3	4.2
Floyd	5.8	5.1	5.1		0.7	0.2	0.5
Gilmer	4.3	2.5	1.8	0.7	1.8	0.6	1.2
Gordon	5.9	4.4	4.4	—	1.5	0.6	0.9
Habersham	5.3	3.0	3.0	_	2.3	0.7	1.6
Lumpkin	4.2	2.2	2.1	0.1	2.0	0.1	1.9
Murray	7.3	6.0	6.0	_	1.3	0.1	1.2
Pickens	5.0	2.9	2.9		2.1	1.5	0.7
Rabun	1.1	—	_	—	1.1	0.2	0.9
Stephens	5.7	4.6	4.6	—	1.1	0.3	0.8
Towns	3.4	2.5	2.5		0.9	0.9	0.1
Union	8.5	4.1	3.0	1.1	4.5	0.7	3.8
Walker	7.1	5.6	5.6		1.5	1.1	0.4
White	7.8	2.9	2.9		4.9	1.1	3.8
Whitfield	5.5	3.9	3.9	—	1.6	0.7	1.0
Total	118.2	78.8	76.9	1.9	39.4	12.7	26.6

Table 35—Average annual removals of growing stock on timberland by county and species group, North Georgia, 1989-1997

			Softwoods			Hardwoods	
County	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
			1	Million cubic fee	et		
Bartow	17.8	14.3	14.3		3.5	1.2	2.3
Catoosa	0.7	0.3	0.3		0.4		0.4
Chattooga	2.8	1.6	1.6		1.1	0.2	1.0
Cherokee	10.0	7.9	7.9		2.1	1.6	0.5
Dawson	5.2	4.5	4.5		0.7	0.1	0.5
Fannin	6.7	0.6	0.6	0.1	6.1	1.4	4.7
Floyd	5.9	5.1	5.1	_	0.8	0.2	0.6
Gilmer	4.9	2.5	1.8	0.7	2.4	0.8	1.6
Gordon	6.0	4.4	4.4	_	1.6	0.6	1.1
Habersham	5.5	3.0	3.0	_	2.5	0.7	1.9
Lumpkin	4.6	2.2	2.1	0.1	2.4	0.3	2.1
Murray	7.5	6.0	6.0	_	1.5	0.2	1.3
Pickens	5.8	3.1	3.1	_	2.7	1.6	1.1
Rabun	1.1	_		_	1.1	0.2	0.9
Stephens	5.8	4.6	4.6	_	1.2	0.3	0.9
Towns	3.7	2.5	2.5	_	1.2	0.9	0.3
Union	8.7	4.1	3.0	1.1	4.7	0.9	3.8
Walker	7.1	5.6	5.6		1.5	1.1	0.4
White	9.1	2.9	2.9		6.2	1.3	4.9
Whitfield	5.5	3.9	3.9	_	1.6	0.7	1.0
Total	124.5	79.2	77.3	1.9	45.2	14.1	31.1

Table 36—Average annual removals of live trees on timberland by county and species group,North Georgia, 1989-1997

			Softwoods		Hardwoods			
County	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood	
				Million board fee	et			
Bartow	56.7	47.1	47.1	_	9.6	2.7	6.9	
Catoosa	1.8	0.5	0.5		1.2	_	1.2	
Chattooga	5.6	4.0	4.0		1.6	_	1.6	
Cherokee	37.2	31.7	31.7	_	5.5	4.5	0.9	
Dawson	16.2	15.7	15.7		0.5	_	0.5	
Fannin	18.3	3.0	2.5	0.4	15.4	3.4	12.0	
Floyd	20.1	19.6	19.6	_	0.5		0.5	
Gilmer	14.4	8.6	4.9	3.8	5.8	0.8	5.0	
Gordon	17.4	13.9	13.9	_	3.5	1.3	2.2	
Habersham	18.8	12.8	12.8	_	6.1	1.6	4.4	
Lumpkin	14.1	8.2	8.2	_	5.9	_	5.9	
Murray	25.3	23.7	23.7	_	1.6		1.6	
Pickens	18.7	11.3	11.3		7.4	4.8	2.6	
Rabun	4.6	_	_	_	4.6	0.8	3.9	
Stephens	18.6	16.3	16.3		2.3	1.1	1.2	
Towns	11.1	7.5	7.5		3.6	3.6		
Union	32.2	15.9	10.7	5.2	16.3	0.6	15.7	
Walker	30.7	24.1	24.1	_	6.5	5.1	1.4	
White	22.9	5.8	5.8	_	17.1	3.6	13.5	
Whitfield	16.7	14.1	14.1	_	2.7		2.7	
Total	401.5	283.7	274.3	9.4	117.7	33.9	83.8	

 Table 37—Average annual removals of sawtimber on timberland by county and species group,

 North Georgia, 1989-1997

	Live	e trees	Growin	ng stock	Saw	timber
	Net		Net		Net	
	annual	Annual	annual	Annual	annual	Annual
Species	growth	removals	growth	removals	growth	removals
		Million c	ubic feet		Million l	board feet
Softwood						
Longleaf pine	0.2	0.1	0.2	0.1	0.1	_
Shortleaf pine	5.6	17.1	5.9	17.1	42.0	58.1
Loblolly pine	35.6	35.6	36.0	35.4	116.6	144.5
Virginia pine	11.5	24.5	11.5	24.2	66.7	71.0
Pitch pine	-0.2	0.1	-0.2	0.1	0.8	0.8
Table Mountain pine	-0.4	_	-0.4		-0.8	_
Eastern white pine	9.1	1.6	9.1	1.6	50.7	7.9
Eastern hemlock	2.3	0.3	2.0	0.3	10.2	1.5
Redcedars	0.1		0.1		0.1	_
Total softwoods	63.8	79.2	64.1	78.8	286.4	283.7
Hardwood						
	12.9	2.0	12.6	2.0	<i>55</i> 1	11.2
Select white oaks	12.8	3.0	12.6	2.9	55.1	11.3
Select red oaks Other white oaks	3.5	2.6	3.6	2.4	15.1	8.8
	15.8	7.2	15.4	6.2	66.2 68.2	19.0
Other red oaks	13.5	9.5	13.5	8.8		29.4
Hickory	5.7	4.8	5.8	4.5	25.4	11.3
Hard maple	-0.0	_	0.0		0.6	
Soft maple	7.2	2.4	6.9	1.7	11.3	1.3
Beech	0.7	_	0.6	_	1.5	_
Sweetgum	3.5	2.4	3.5	2.4	11.0	2.5
Tupelo and blackgum	0.9	1.1	0.9	0.9	1.3	1.8
Ash	0.8	0.2	0.8	0.2	4.2	0.5
Basswood	-0.1		0.1		0.9	
Yellow-poplar	19.7	7.7	19.2	7.5	101.9	28.4
Bay and magnolia	0.0	_	0.0	_	—	_
Black cherry	1.4	0.3	1.2	0.1	1.5	_
Sycamore	-0.3	—	-0.3		0.9	—
Black locust	-0.2	0.3	0.2	0.2	-0.2	—
Elm	0.4	0.3	0.3	0.2	1.5	—
Other Eastern						
hardwoods	4.6	3.6	0.8	1.5	3.7	3.5
Total hardwoods	89.9	45.2	85.1	39.4	370.2	117.7
All species	153.7	124.5	149.2	118.2	656.6	401.5

Table 38—Average net annual growth and average annual removals of live trees, growing stock, and sawtimber on timberland by species, North Georgia, 1989-1997

					Diameter	class (incl	hes at brea	st height)			
	All	5.0-	7.0-	9.0-	11.0-	13.0-	15.0-	17.0-	19.0-	21.0-	29.0 and
Species	classes	6.9	8.9	10.9	12.9	14.9	16.9	18.9	20.9	28.9	larger
					Millie	on cubic fe	eet				
Softwood											
Longleaf pine	0.1	0.1					_				_
Shortleaf pine	17.1	0.9	4.1	3.5	4.1	2.7	1.4	0.4		_	_
Loblolly pine	35.4	2.2	4.9	7.1	6.4	6.3	4.6	2.8	0.9	0.3	_
Virginia pine	24.2	2.4	5.1	8.4	4.0	2.9	1.2	0.1	0.1		_
Pitch pine	0.1	_					0.1			_	_
Eastern white pine	1.6	_	0.2	0.2	0.4	0.3	_			0.4	0.2
Eastern hemlock	0.3	_	_	_	0.1	_	0.2	_	_		
Total softwoods	78.8	5.6	14.3	19.1	14.9	12.1	7.5	3.3	1.1	0.7	0.2
Hardwood											
	2.0	0.1		0.4	0.6	0.1	0.4	0.6		0.0	
Select white oaks	2.9	0.1		0.4	0.6	0.1	0.4	0.6		0.8	_
Select red oaks	2.4	0.3	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.9	
Other white oaks	6.2	0.6	0.6	0.8	0.5	0.5	0.6	0.5	1.4	0.6	0.1
Other red oaks	8.8	0.5	0.7	1.0	1.1	1.4	1.3	1.1	0.6	1.0	_
Hickory	4.5	0.3	0.6	0.8	0.8	1.0	0.5	0.2	0.2	0.1	_
Soft maple	1.7	0.2	0.8	0.3	0.3	0.1	—	—	—	_	_
Sweetgum	2.4	0.5	0.2	1.0	0.6	0.1		_			—
Tupelo and blackgum	0.9	0.2	0.3	—	—	—	0.1	_	0.1	0.1	—
Ash	0.2	0.1			_			_		0.1	—
Yellow-poplar	7.5	0.7	0.4	0.6	1.2	0.8	1.7	1.3	0.1	0.7	—
Black cherry	0.1	0.1	—		—	—	—	—	—	—	—
Black locust	0.2	0.1	—	0.1	—	—	—	—	—	—	—
Elm	0.2	0.0	—	0.2	—	—	—	—	—	—	—
Other Eastern											
hardwoods	1.5	0.3	0.2	0.1	0.3	0.1	0.3	_	0.2		
Total hardwoods	39.4	3.9	4.0	5.4	5.4	4.4	5.2	3.9	2.7	4.5	0.1
All species	118.2	9.5	18.3	24.5	20.2	16.5	12.7	7.2	3.8	5.2	0.3

Table 39—Average annual removals of growing stock on timberland by species and diameter class, North Georgia, 1989-199

Species	Live trees	Growing stock	Sawtimber
	Millio	n cubic feet	Million board fee
Softwood			
Shortleaf pine	6.2	5.8	14.0
Loblolly pine	9.5	8.4	28.1
Virginia pine	15.3	14.8	47.8
Pitch pine	1.4	1.4	6.0
Table Mountain pine	0.6	0.6	1.7
Eastern white pine	2.9	2.9	14.0
Redcedars	0.1	0.1	_
Total softwoods	36.0	34.0	111.6
Hardwood			
Select white oaks	2.2	1.9	6.3
Select red oaks	2.3	2.1	9.3
Other white oaks	2.4	1.8	4.5
Other red oaks	12.0	11.1	36.8
Hickory	2.7	2.5	9.2
Hard maple	0.2	0.2	—
Soft maple	1.3	0.5	1.0
Sweetgum	0.7	0.7	0.9
Tupelo and blackgum	0.3	0.3	0.7
Ash	0.1	0.1	_
Basswood	0.3	0.1	0.4
Yellow-poplar	2.4	2.4	8.3
Sycamore	0.8	0.8	1.0
Black locust	0.7	0.2	0.5
Elm	0.1	0.1	_
Other Eastern			
hardwoods	2.6	0.1	_
Total hardwoods	31.2	24.9	78.8
All species	67.2	58.9	190.4

# Table 40—Average annual mortality of live trees, growing stock, and sawtimber on timberland by species, North Georgia, 1989-1997

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

			Softwoods		Hardwoods			
Ownership class	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood	
			Average net a	annual growth	(million cubic fe	et)		
National forest	26.4	9.8	4.3	5.5	16.6	6.0	10.6	
Other public	4.7	2.4	2.1	0.3	2.4	-0.1	2.5	
Forest industry	21.6	18.1	18.1	0.0	3.5	1.6	1.8	
Forest industry-leased	0.4	0.4	0.4		_			
Nonindustrial private	96.0	33.4	28.0	5.4	62.6	24.6	38.0	
All classes	149.2	64.1	52.8	11.3	85.1	32.1	53.0	
			Average and	ual removals (	million cubic fee	<i>t</i> )		
National forest	21.5	4.9	3.6	1.3	16.6	2.7	13.9	
Other public	7.2	4.5	4.5	_	2.7	0.7	2.0	
Forest industry	12.9	9.8	9.5	0.4	3.0	0.7	2.3	
Forest industry-leased	0.8	0.8	0.8	_	_	_		
Nonindustrial private	75.9	58.8	58.6	0.3	17.0	8.6	8.4	
All classes	118.2	78.8	76.9	1.9	39.4	12.7	26.6	

Table 41—Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group, North Georgia, 1989-1997

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

			Softwoods			Hardwoods			
Ownership class	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood		
			Average net	annual growth (	million cubic fee	t)			
National forest	26.6	9.8	4.1	5.8	16.7	6.1	10.7		
Other public	5.2	2.5	2.2	0.3	2.7	-0.1	2.8		
Forest industry	21.6	18.2	18.2	0.0	3.4	1.6	1.7		
Forest industry-leased	0.5	0.5	0.5	_	_				
Nonindustrial private	99.8	32.7	27.3	5.4	67.1	25.5	41.6		
All classes	153.7	63.8	52.3	11.5	89.9	33.2	56.7		
			Average an	nual removals (1	nillion cubic feet	)			
National forest	24.0	4.9	3.6	1.3	19.1	3.2	16.0		
Other public	7.8	4.5	4.5	_	3.2	0.8	2.5		
Forest industry	13.4	9.8	9.5	0.4	3.5	0.8	2.7		
Forest industry-leased	0.9	0.9	0.9	_	_				
Nonindustrial private	78.4	59.1	58.8	0.3	19.3	9.4	9.9		
All classes	124.5	79.2	77.3	1.9	45.2	14.1	31.1		

## Table 42—Average net annual growth and average annual removals of live trees on timberland by ownership class and species group, North Georgia, 1989-1997

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

			Softwoods			Hardwoods	
Ownership class	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
		Av	erage net anı	nual growth (n	villion board fee	et)	
National forest	117.9	47.3	19.4	27.9	70.7	23.9	46.8
Other public	27.6	12.7	11.6	1.1	14.9	2.4	12.5
Forest industry	44.6	33.8	33.4	0.4	10.8	2.9	8.0
Forest industry-leased	1.0	1.0	1.0	_		_	_
Nonindustrial private	465.4	191.6	159.9	31.7	273.8	103.1	170.7
All classes	656.6	286.4	225.3	61.0	370.2	132.3	237.9
		A	verage annua	l removals (m	illion board feet	)	
National forest	74.9	18.3	12.7	5.6	56.6	7.1	49.5
Other public	31.4	23.3	23.3		8.1	2.6	5.5
Forest industry	27.7	22.8	20.4	2.4	4.9	—	4.9
Forest industry-leased	3.4	3.4	3.4			_	_
Nonindustrial private	264.1	215.9	214.5	1.3	48.2	24.3	24.0
All classes	401.5	283.7	274.3	9.4	117.7	33.9	83.8

Table 43—Average net annual growth and average annual removals of sawtimber on timberland by ownership class and species group, North Georgia, 1989-1997

			Softwoods			Hardwoods	
Forest-type group	All	All	Yellow	Other	All	Soft	Hard
and stand origin <sup>a</sup>	species	softwood	pine	softwood	hardwood	hardwood	hardwood
				Million cubic j	feet		
Softwood types							
White-red-jack pine							
Planted	_		_				_
Natural	5.2	4.0	0.2	3.8	1.2	0.8	0.4
Total	5.2	4.0	0.2	3.8	1.2	0.8	0.4
Loblolly-shortleaf pine							
Planted	22.8	21.7	21.6	0.1	1.1	0.4	0.7
Natural	31.3	23.3	22.1	1.2	8.1	4.3	3.8
Total	54.1	45.0	43.7	1.2	9.2	4.7	4.5
Total softwoods	59.3	49.0	43.9	5.0	10.3	5.5	4.9
Hardwood types							
Oak–pine							
Planted	0.7	0.6	0.6	_	0.1	0.1	—
Natural	19.9	8.2	5.1	3.2	11.7	4.0	7.7
Total	20.6	8.8	5.7	3.2	11.8	4.1	7.7
Oak-hickory	67.6	6.1	3.0	3.1	61.6	21.7	39.9
Oak-gum-cypress	0.6	0.1	0.1		0.5	0.4	0.1
Elm-ash-cottonwood	1.1	0.1	0.1	—	0.9	0.5	0.4
Total hardwoods	89.9	15.1	8.9	6.2	74.7	26.6	48.1
Nonstocked		_	_	_	_	_	
All groups	149.2	64.1	52.8	11.3	85.1	32.1	53.0

## Table 44—Average net annual growth of growing stock on timberland by forest-type group, stand origin, and species group, North Georgia, 1989-1997

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.

<sup>a</sup> Classifications at the beginning of the remeasurement period.

			Softwoods			Hardwoods	
Forest-type group	All	All	Yellow	Other	All	Soft	Hard
and stand origin <sup>a</sup>	species	softwood	pine	softwood	hardwood	hardwood	hardwood
				Million cubic fe	eet		
Softwood types							
White-red-jack pine							
Planted	_	_	_		—	_	_
Natural	1.1	0.7	_	0.7	0.4	—	0.4
Total	1.1	0.7		0.7	0.4	_	0.4
Loblolly-shortleaf pine							
Planted	9.5	9.1	9.1		0.4	0.1	0.3
Natural	65.1	59.1	59.1		6.1	3.0	3.1
Total	74.7	68.2	68.2	_	6.5	3.1	3.3
Total softwoods	75.8	68.9	68.2	0.7	6.9	3.1	3.7
Hardwood types							
Oak-pine							
Planted	0.5	0.5	0.5		_	_	_
Natural	8.4	4.7	4.4	0.3	3.7	1.0	2.7
Total	8.8	5.1	4.8	0.3	3.7	1.0	2.7
Oak-hickory	33.5	4.8	3.8	0.9	28.8	8.6	20.2
Total hardwoods	42.4	9.9	8.7	1.2	32.5	9.6	22.9
Nonstocked					_	_	
All groups	118.2	78.8	76.9	1.9	39.4	12.7	26.6

## Table 45—Average annual removals of growing stock on timberland by forest-type group, stand origin, and species group, North Georgia, 1989-1997

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.

<sup>*a*</sup> Classifications at the beginning of the remeasurement period.

					Component					
			Gro	wing-stock tre	ees		Cull trees			
Ownership class and species group	All	All live saplings	Total	Boles	Stumps, tops, and limbs	Total	Boles	Stumps, tops, and limbs		
				Thousand	tons					
National forest										
Softwood	16,040.7	1,103.9	14,759.2	12,543.6	2,215.6	177.7	149.2	28.5		
Hardwood	52,093.4	5,283.2	41,439.1	33,721.9	7,717.2	5,371.2	4,041.7	1,329.5		
Total	68,134.1	6,387.1	56,198.2	46,265.5	9,932.8	5,548.8	4,190.9	1,358.0		
Other public										
Softwood	2,781.8	52.7	2,719.1	2,326.9	392.2	10.0	7.6	2.4		
Hardwood	7,797.1	570.6	6,727.8	5,423.6	1,304.2	498.8	365.2	133.6		
Total	10,578.9	623.3	9,446.9	7,750.5	1,696.4	508.8	372.8	136.0		
Forest industry										
Softwood	11,423.6	794.6	10,573.4	8,599.9	1,973.5	55.7	42.4	13.3		
Hardwood	7,785.4	2,003.4	5,259.0	4,237.4	1,021.6	523.0	382.5	140.6		
Total	19,209.0	2,798.0	15,832.3	12,837.3	2,995.1	578.7	424.8	153.9		
Forest industry-leased										
Softwood	174.0	19.7	154.3	111.5	42.8		_			
Hardwood	0.8	0.8	_		_	_				
Total	174.8	20.5	154.3	111.5	42.8					
Nonindustrial private										
Softwood	51,825.8	2,538.7	48,685.2	41,608.3	7,076.9	602.0	503.9	98.1		
Hardwood	137,891.5	16,340.9	111,768.2	90,789.5	20,978.7	9,782.4	7,252.4	2,530.0		
Total	189,717.3	18,879.6	160,453.3	132,397.8	28,055.6	10,384.4	7,756.3	2,628.1		
All ownerships										
Softwood	82,245.9	4,509.6	76,891.0	65,190.1	11,701.0	845.3	703.0	142.3		
Hardwood	205,568.1	24,198.8	165,194.0	134,172.4	31,021.6	16,175.3	12,041.7	4,133.7		
Total	287,813.9	28,708.4	242,085.0	199,362.5	42,722.5	17,020.6	12,744.7	4,275.9		

## Table 46—Fresh weight of live trees on timberland by ownership class, species group, and tree component, North Georgia, 1998

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

			Ownership class							
				Forest						
Treatment or	All		Forest	industry-	Nonindustrial					
disturbance	classes	Public	industry	leased	private					
			Thousand ac	res						
Final harvest	25.6	2.5	4.0	0.5	18.6					
Partial harvest <sup>a</sup>	7.4	0.9	0.4	_	6.2					
Commercial thinning	1.2	_	_	_	1.2					
Other stand improvement	2.4	2.4	_	_	_					
Site preparation	9.6	0.7	5.5	0.3	3.2					
Artificial regeneration <sup>b</sup>	10.6	0.7	4.5	0.3	5.2					
Natural regeneration <sup>b</sup>	26.6	3.3	1.6	0.2	21.5					
Other treatment	17.5	2.0	_	_	15.5					
Natural disturbance:										
Disease	2.9	0.6	0.4	_	1.9					
Insects	11.4	3.0	_	_	8.4					
Wildfire	0.2	_	_	_	0.2					
Weather	42.5	12.2	1.0	_	29.2					
Animals	2.5	_	0.3	—	2.2					

## Table 47—Area of timberland treated or disturbed annually and retained in timberland by treatment or disturbance and ownership class, North Georgia, 1989 to 1998

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.

<sup>a</sup> Includes high-grading and some selective cutting.

<sup>b</sup> Includes establishment of trees for timber production on forest and nonforest land.

				Forest man	agement type <sup>a</sup>		
Treatment or disturbance	All types	Pine plantation	Natural pine	Oak– pine	Upland hardwood	Lowland hardwood	Nonstocked
				Thousand ac	res		
Final harvest	25.6	3.2	14.2	4.0	4.2	_	_
Partial harvest <sup>b</sup>	7.4	_	2.2	1.9	3.4		_
Commercial thinning	1.2	_	0.7	_	0.5		_
Other stand improvement	2.4	_	_	0.6	1.7		_
Site preparation	9.6	1.8	3.3	_	4.5		_
Other treatment	17.5	_	3.8	5.5	7.7	0.5	_
Natural disturbance:							
Disease	2.9	0.4	2.1	_	0.4	_	
Insects	11.4	0.1	4.3	5.2	1.8		_
Wildfire	0.2	_	_	_	0.2		_
Weather	42.5	1.3	12.9	6.8	21.5	_	_
Animals	2.5	_	0.6	0.6	0.4	0.9	_

#### Table 48—Area of timberland treated or disturbed annually and retained in timberland by treatment or disturbance and forest management type, North Georgia, 1989 to 1998

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.

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.

<sup>a</sup> Classification before treatment or disturbance.

<sup>b</sup> Includes high-grading and some selective cutting.

				Forest man	nagement type <sup>a</sup>		
Type of regeneration	All types	Pine plantation	Natural pine	Oak– pine	Upland hardwood	Lowland hardwood	Nonstocked
				Thousand a	cres		
Artificial regeneration following harvest	5.8	5.2	_	0.6	_	_	_
Natural regeneration following harvest	18.6	_	3.2	3.2	12.2	_	_
Other artificial regeneration on forest land	2.5	2.1	_	0.5	_	_	_
Other natural regeneration on forest land	5.3		0.9	1.5	2.9		_
Artificial regeneration on former nonforest land	2.3	2.3	_	_	_	_	_
Natural reversion of former nonforest land	2.8	_	0.8	1.2	0.1	0.1	0.6
Total	37.2	9.6	4.9	6.9	15.2	0.1	0.6

#### Table 49—Area of timberland regenerated annually by type of regeneration and forest management type, North Georgia, 1989 to 1998

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.

<sup>*a*</sup> Classification after regeneration.

	Su	rvey completion da	ate	Change
Land-use class	1983	1989	1998	1989-1998
		Thouse	and acres	
Forest land				
Timberland				
Pine types	1,030.7	912.8	766.8	-146.0
Oak-pine types	505.8	553.3	521.2	-32.1
Hardwood types	1,560.1	1,486.8	1,567.6	80.8
Total	3,096.7	2,953.0	2,855.6	-97.4
Productive reserved	66.2	109.3	169.2	60.0
Other		_	_	
Total forest land	3,163.0	3,062.2	3,024.8	-37.4
Other land	1,036.3	1,149.0	1,187.8	38.9
All land <sup>a</sup>	4,199.3	4,211.2	4,212.7	1.4

Table 50—Land area by land-use class, major forest type, and survey completion date,	
North Georgia	

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.

<sup>*a*</sup> From the U.S. Bureau of the Census, 1990.

		Diameter class (inches at breast height)								
Species group	All	5.0-	7.0-	9.0-	11.0-	13.0-	15.0-	17.0-	19.0-	21.0 and
and year	classes	6.9	8.9	10.9	12.9	14.9	16.9	18.9	20.9	larger
				Saw	v <b>timber</b> (mil	lion board f	eet)			
Softwood										
1983	6,643.1	_	_	1,598.0	1,649.6	1,175.2	856.3	432.9	358.2	572.9
1989	6,751.2	_		1,562.1	1,638.6	1,173.5	851.7	515.1	322.7	687.5
1998	6,773.9	_	_	1,167.2	1,297.0	1,261.3	837.1	648.3	409.4	1,153.7
Hardwood										
1983	7,412.7		_	_	1,544.6	1,588.6	1,511.0	935.6	671.2	1,161.7
1989	8,442.3	_	_	_	1,534.7	1,927.4	1,540.4	1,163.4	836.5	1,439.8
1998	10,692.7	—			1,750.4	1,967.8	1,993.0	1,788.1	1,159.4	2,033.9
				Grow	ving stock (r	nillion cubic	feet)			
Softwood					0					
1983	2,078.9	229.3	444.3	436.1	367.3	229.7	153.4	72.7	58.3	87.9
1989	1,944.1	187.5	379.0	411.9	354.9	225.0	148.4	84.6	50.6	102.3
1998	1,812.6	163.5	273.8	320.8	292.1	252.7	154.1	112.1	67.0	176.4
Hardwood										
1983	2,739.5	245.4	312.4	427.6	460.3	401.3	343.7	197.9	134.9	216.1
1989	2,938.6	243.9	339.5	433.2	443.9	473.4	339.2	239.2	162.7	263.5
1998	3,345.2	218.9	318.6	407.8	508.5	487.5	442.6	367.5	224.9	368.9
				Lis	v <b>e trees</b> (mil	lion cuhic fe	et)			
Softwood					<i>c u ccs</i> ( <i>mu</i> )	non enore je				
1983	2,090.4	232.2	445.1	441.2	367.3	231.4	154.3	72.7	58.3	87.9
1989	1,958.7	191.0	383.4	415.4	354.9	225.0	149.5	84.6	50.6	104.4
1998	1,832.1	166.1	276.2	326.9	294.0	252.7	156.7	112.1	68.5	178.9
Hardwood										
1983	3,074.1	335.7	376.5	468.9	496.2	428.1	362.3	214.8	147.8	243.7
1989	3,252.8	332.0	403.1	471.7	475.4	499.1	355.7	255.9	174.3	285.6
1998	3,666.8	306.7	380.5	455.4	544.0	512.1	466.0	383.5	233.1	385.5

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

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



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This report summarizes a 1998 inventory of the forest resources of a 21-county area of Georgia. Major findings are highlighted in text and graphs; detailed data are presented in 51 tables.

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

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