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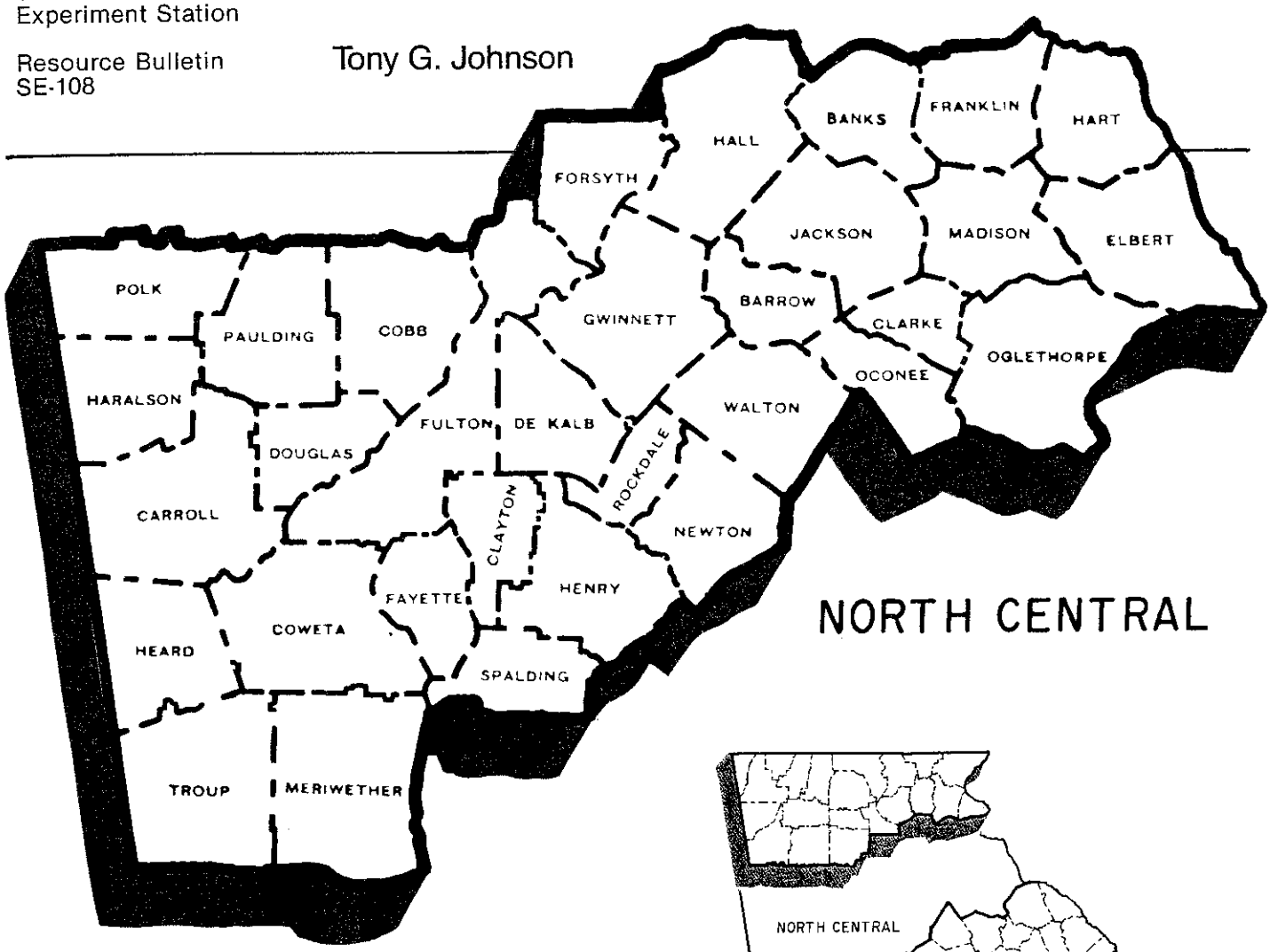
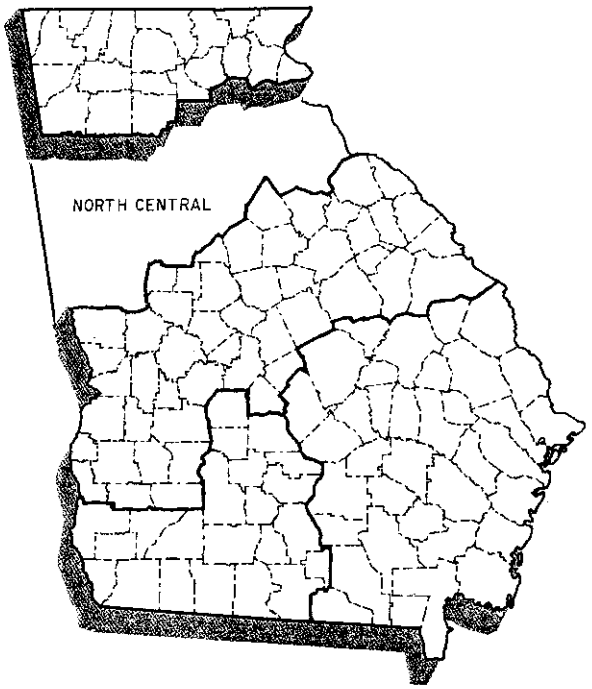
Forest Statistics for North Central Georgia, 1989

Tony G. Johnson





October 1989

Southeastern Forest Experiment Station
P.O. Box 2680
Asheville, North Carolina 28802

Forest Statistics for North Central Georgia, 1989

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Forest Inventory and Analysis
Asheville, North Carolina

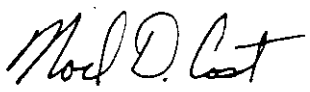
Foreword

This report highlights the principal findings of the sixth forest survey in North Central Georgia. Field work began in February 1989 and was completed in April 1989. Five previous surveys, completed in 1936, 1953, 1961, 1972, and 1983, provide statistics for measuring changes and trends over the past 53 years. The primary emphasis in this report is on the changes and trends since 1983. Previously reported figures have been adjusted to provide the best estimate of change.

Periodic surveys of the forest resource 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 USDA Forest Service. In Florida, Georgia, North Carolina, South Carolina, and Virginia, these surveys are administered by the Forest Inventory and Analysis (Forest Survey) Research Unit at the Southeastern Forest Experiment Station, with headquarters in Asheville, NC. The primary objective of the survey 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 deals only with the extent and condition of forest land, associated timber volumes, and rates of timber growth and removals.

The 32-county area covered by this report is one of five Survey Units in Georgia. Similar reports, USDA Forest Service Resource Bulletins SE-102, SE-104, SE-105, and SE-107, have been issued for the Southwest, Southeast, Central, and North Georgia. Another report containing many of the State totals is being released with this report. An indepth, analytical report on the timber resource should be available in late 1990.

The Southeastern Station gratefully acknowledges the cooperation and assistance provided by the Georgia Forestry Commission in collecting field data. Appreciation is also expressed for the excellent cooperation of other public agencies, forest industry, and other private landowners in providing information and access to the sample locations.



Noel D. Cost
Project Leader

Contents

*Tables 1-12, 27, 29-33, 35-38, 41, 42, and 44 are common to all Forest Inventory and Analysis forest resource statistical reports of the Eastern United States.

Since 1983 in North Central Georgia--

• area of timberland decreased by 162,000 acres, or more than 4 percent. This is the third recorded decrease in timberland acreage since 1961. Timberland now covers 3.7 million acres, or 59 percent of the total land area in this 32-county region. Within the 6-year remeasurement period, land use changes occurred on more than 344,000 acres. Although nearly 91,000 acres were added to the timberland base, more than 253,000 acres were diverted to other land uses. Forest clearing for urban development accounted for 67 percent of the timberland diversions, with clearing for agriculture and water accounting for 29 and 4 percent, respectively. Of the additions, 94 percent came from natural seeding and tree planting on former agricultural land. The remaining 6 percent came from the reclassification of State-owned reserved forest land to timberland status.

• area of timberland controlled by nonindustrial private forest (NIPF) landowners has declined by 180,000 acres, or almost 6 percent. NIPF owners currently control 3.0 million acres, more than 82 percent of the timberland in this region. Within the NIPF category, farmer-owned timberland decreased by 28 percent to 0.5 million acres, whereas that of other individuals remained stable at 2.1 million acres. In contrast, timberland held by other corporate owners increased by 8 percent to 430,000 acres. Forest industry fee-simple holdings and land under long-term lease increased by 2 percent, or nearly 11,000 acres. Altogether, forest industry controls more than 0.5 million acres, or about 15 percent of the timberland. Public agencies hold 107,000 acres, less than 3 percent of the timberland in this area.

• area of timberland classified as a pine forest type declined by more than 251,000 acres, or 14 percent, and now totals 1.5 million acres. Natural pine acreage dropped 23 percent to 1.2 million acres. Area in pine plantations increased by 40 percent to 351,000 acres and currently accounts for 23 percent of all pine stands in the region. All pine forest types have lost acreage since 1983. Area of loblolly pine type--the predominant forest type in the region--declined by 103,000 acres to 1.3 million acres. The shortleaf pine type declined by 43 percent to 177,000 acres, while Virginia pine declined 11 percent to 55,000 acres. In contrast, oak-pine and hardwood forest types increased during the 6-year remeasurement period. Oak-pine type increased 13 percent to 579,000 acres; hardwood types increased 2 percent to 1.5 million acres. Oak-hickory--the predominant hardwood type in the region--increased by 1 percent to 1.3 million acres.

• almost 59,000 acres annually were harvested and retained in timberland. Of the harvested acreage, about 78 percent was on NIPF controlled timberland and 21 percent was on forest industry land. Pine stands accounted for 66 percent, or 39,000 acres, of the total annual harvest. Hardwood stands made up 27 percent of the annual harvested acreage, and oak-pine stands made up the remaining 6 percent. An additional 51,000 acres yearly experienced some form of partial harvest or intermediate cutting. Natural disturbances such as insects, fire, disease, and weather damaged nearly 50,000 acres each year.

• an average of 70,000 acres have been regenerated annually. New pine stands, both planted and natural, were established on nearly 34,000 acres each year--an area equivalent to 86 percent of the pine stands harvested. Of the area regenerated annually, almost 25,000 acres, or 35 percent, were planted pine--an increase of 70 percent since the previous survey period. Forest industry accounted for nearly 58 percent of the artificially regenerated area, while NIPF land made up 40 percent and public land made up the remaining 2 percent. Almost three-fourths of the total regeneration occurred on NIPF land. Artificial regeneration on NIPF land increased from 1,500 to almost 10,000 acres annually and included 2,800 acres of new pine stands established yearly on nonforest land. Artificial regeneration on forest industry land

increased 9 percent to 14,000 acres annually. Currently, planted pine stands account for 43 percent of all forest industry timberland.

• average basal area of live trees 5.0 inches d.b.h. and larger decreased from 70 to 69 square feet per acre. Declines in basal area occurred in the pine, oak-pine, and lowland hardwood types. Basal area in upland hardwood stands increased from 66 to 70 square feet per acre. Current merchantable volume of softwoods and hardwoods averages 1,575 cubic feet per acre. Acreage in stands classed as fully stocked increased 4 percent to 1.6 million acres. Area of medium-stocked stands declined 8 percent to 1.6 million acres. Together, fully-stocked and medium-stocked stands make up 88 percent of the total timberland area. Poorly stocked stands dropped 16 percent to 426,000 acres and currently make up 12 percent of the total timberland area.

• number of live softwood trees in the 4- through the 14-inch diameter classes has declined. The largest declines in softwood numbers occurred in the 6-, 8-, and 10-inch categories, down 20, 22, and 17 percent, respectively. Consistent with this finding, acreage in softwood poletimber stands dropped more than 128,000 acres, or 21 percent. Exceptions to this trend included a 3-percent increase in number of 16-inch softwoods and a 13-percent increase in trees 20 inches and larger in diameter. Overall, the number of 2-inch softwoods remained stable. Decreases on public and forest industry land were offset by a 9-percent increase on NIPF land. Number of hardwood trees in the 4- through the 12-inch diameter classes declined, with the largest decline of 8 percent recorded in the 4-inch class. Number of hardwood trees 13 inches and larger increased by more than 8 percent.

• volume of softwood growing stock dropped by 12 percent to 2.5 billion cubic feet. Volume of loblolly pine--the species accounting for nearly three-fourths of the softwood volume--declined by 11 percent to 1.9 billion cubic feet. Volume of shortleaf pine dropped by 20 percent to 505 million cubic feet, while that of Virginia pine increased by 2 percent to 103 million cubic feet. Volume of softwood growing stock declined in all diameter classes below 20 inches. Collectively, the 6- and 8-inch diameter classes declined 16 percent, while both the 14- and 18-inch classes dropped 17 percent. Softwood volume on NIPF land declined by almost 15 percent to 2.1 billion cubic feet. In contrast, softwood volume was up 6 percent to 337 million cubic feet on forest industry land and remained stable at 88 million cubic feet on public land. Volume of softwood sawtimber declined by 6 percent to 8.5 billion board feet.

• volume of hardwood growing stock increased by almost 9 percent to 3.0 billion cubic feet and currently makes up 54 percent of the growing-stock volume in this region. Collectively the oaks, which account for 43 percent of the hardwood volume, increased 8 percent to 1.3 billion cubic feet. Yellow-poplar volume increased 22 percent to 543 million cubic feet, while sweetgum increased by 5 percent to 534 million cubic feet. With the exception of the 6-inch diameter class, hardwood growing-stock volume increased across all diameter classes. Volume in trees 15 inches and larger increased almost 20 percent to 1.1 billion cubic feet. Hardwood volume increased across all ownership categories. NIPF land, which controls 90 percent of the hardwood volume, increased by 9 percent. Public and forest industry land increased by 13 and 4 percent, respectively. Volume of hardwood sawtimber rose more than 15 percent to 8.7 billion board feet.

• net annual growth of softwood growing stock decreased by 35 percent to 101 million cubic feet. Softwood net growth on NIPF land dropped by 41 percent to 77 million cubic feet and accounted for almost all of the overall reduction. Softwood net growth increased by 5 percent on forest industry land but decreased 36 percent on public land. This large reduction in softwood net annual growth can be largely attributed to the 14-percent decline in acreage of softwood forest types and the drop in number of trees in the 6- through

14-inch diameter classes. Net growth per acre for softwood growing stock averaged 28 cubic feet compared with 41 cubic feet in the previous survey. Net annual growth of hardwood growing stock declined by 19 percent to 90 million cubic feet. This reduction in hardwood growth occurred across all ownership categories. Net growth per acre of hardwood growing stock declined from 29 to 25 cubic feet. Net annual growth for all species included 813 million board feet of sawtimber.

• annual removals of softwood growing stock increased by almost 9 percent to 153 million cubic feet. Softwoods accounted for nearly three-fourths of the total growing-stock removals and included 552 million board feet of sawtimber. By ownership, 84 percent of the softwood removals came from NIPF timberland, 14 percent from forest industry land, and the remaining 2 percent from public land. Softwood removals were up 10 and 8 percent, respectively, on NIPF and forest industry land. Softwood removals on public land were down by 22 percent. Softwood removals on NIPF land exceeded growth by 67 percent. On forest industry land, removals exceeded growth by 3 percent; on public land, growth exceeded removals by almost 25 percent. All ownerships combined, removals of softwoods exceeded growth by 51 percent. Hardwood removals were up 16 percent to 54 million cubic feet. A 37-percent increase in hardwood removals on NIPF timberland more than offset declines on forest industry and public land. Including all ownerships, hardwood growth exceeded removals by 67 percent. In comparison, growth more than doubled removals from the previous survey.

• annual mortality of softwood growing stock declined by almost 7 percent to 40 million cubic feet. Softwood mortality on NIPF timberland was down almost 8 percent, but still accounted for more than 87 percent of the entire softwood mortality. Softwood mortality reduced gross growth by 28 percent and included 111 million board feet of sawtimber. Annual mortality of hardwood growing stock increased by 39 percent to 21 million cubic feet. Hardwood mortality on NIPF timberland increased by 56 percent and more than offset decreases of hardwood mortality on forest industry and public land. Hardwood mortality reduced gross growth by 19 percent and included 59 million board feet of sawtimber.

Recently, the FIA Unit reviewed its data processing procedures. During this process, a computer error was discovered that led to inflated estimates of annual removals, net annual growth, and annual mortality for the 1972-1982 remeasurement period in Georgia. Therefore, the preceding discussion of trends for these components of change is based on revised data for this period. If you desire further information about these changes, please contact the FIA staff at:

Forest Inventory and Analysis
Southeastern Forest Experiment Station
P.O. Box 2680
Asheville, NC 28802

Phone: 704-257-4350

How the Inventory is Made

The method of the inventory is a sampling procedure designed to provide reliable statistics primarily at the State and Survey Unit levels. Individual county statistics are presented so that any combination of counties may be added together until a total is large enough to meet the desired degree of reliability. Procedures were as follows:

1. Initial estimates of forest and nonforest areas were based on the classification of 33,665 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 1,699 of the 16-point clusters was ground checked, and a linear regression was fitted to the data to develop the relationship between the photo and ground classification of the subsample. This procedure provides a means for adjusting the initial estimates of area for change in land use since date of photography and for photo misclassification.

2. Estimates of timber volume and forest classification were based on measurements recorded at 995 ground sample locations systematically distributed on timberland. The plot design at each location was based on a cluster of 10 points. In most cases, variable plots, established by using a basal-area factor of 37.5 square feet per acre, were systematically spaced within a single forest condition at 5 of the 10 cluster points. Trees less than 5 inches d.b.h. were tallied on a fixed-radius plot around each point center.

3. Equations prepared from detailed measurements collected on standing trees in this Survey Unit, and similar measurements taken throughout the Southeast, were used to compute the volume of individual tally trees. A mirror caliper and sectional aluminum poles were used to obtain the additional measurements on these standing trees required to construct volume equations.

4. Felled trees were measured at 7 active cutting operations. These data will supplement the standing-tree volume data and be used to generate utilization factors for product and species groups. Forest biomass estimates were made from equations developed by the Utilization of Southern Timber Research Work Unit of the Southeastern Forest Experiment Station in Athens, GA.

5. Estimates of growth, removals, and mortality were determined from the remeasurement of 1,071 permanent sample plots established in the fifth survey.

6. Ownership information was collected from correspondence, public records, and local contacts. In those counties where the sample missed a particular ownership class, temporary sample plots were added.

7. All field data were sent to Asheville for editing and were entered into disk and magnetic-tape storage for processing. Final estimates were based on statistical summaries of the data.

Reliability of the Data

Statistical analysis of these data indicates the following sampling errors in terms of one standard error (two times out of three):

	Percent
Per million acres of timberland	0.88
Per billion cubic feet of growing stock	5.77
Per billion cubic feet of net annual growth	1.00
Per billion cubic feet of annual removals	3.14

Sampling errors for county and unit totals,[a] in terms of one standard error, North Central Georgia, 1989

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
		Sampling error[b]		
Banks	1.59	12.80	11.46	51.93
Barrow	5.03	17.35	13.65	62.62
Carroll	2.46	11.15	9.76	36.80
Clarke	4.48	20.64	25.16	100.10
Clayton	4.77	21.91	20.13	43.35
Cobb	3.53	16.11	14.15	19.62
Coweta	1.17	11.12	9.62	26.36
De Kalb	6.42	13.47	13.20	33.86
Douglas	1.37	10.87	9.02	39.58
Elbert	2.00	14.01	12.31	41.15
Fayette	3.47	16.20	15.14	.00
Forsyth	2.43	14.71	15.45	46.80
Franklin	5.16	15.04	15.17	48.60
Fulton	2.98	7.54	7.13	29.86
Gwinnett	2.87	12.23	10.65	33.61
Hall	1.92	14.30	12.88	42.73
Haralson	1.48	13.91	15.34	40.86
Hart	5.12	18.03	16.25	100.13
Heard	1.14	15.46	12.75	41.68
Henry	2.50	10.50	10.52	35.64
Jackson	2.06	13.96	13.62	27.20
Madison	1.85	13.73	13.09	49.97
Meriwether	2.01	12.16	11.96	33.02
Newton	3.09	13.81	11.74	42.60
Oconee	2.58	9.55	12.11	52.63
Oglethorpe	1.13	10.32	9.94	32.37
Paulding	1.28	11.04	10.26	38.58
Polk	1.41	13.95	17.36	33.41
Rockdale	4.79	23.34	15.00	54.90
Spalding	3.18	18.51	16.87	41.22
Troup	1.37	10.22	8.60	26.85
Walton	3.87	14.39	13.68	31.09
Total	.44	2.45	2.28	6.91

[a]Sampling error of breakdowns of county and unit totals may be computed with the following formula:

$$E = \frac{(SE)\ \sqrt{(\text{Specified volume or area})}}{\sqrt{(\text{Volume or area total in question})}}$$

Where: E = Sampling error of the volume or area total in question

SE = Specified sampling error in table.

[b]By random-sampling formula (in percent).

Definitions of Terms

Allowable cut. The volume of timber that could be cut on timberland during a given period under specified management plans aimed at sustained production of timber products.

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 as square feet of basal area per acre.

Biomass. The aboveground green 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 diameter outside bark (d.o.b.) in trees 5.0 inches d.b.h. and larger.

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

Pine plantation. Stands that have been artificially regenerated by planting or direct seeding and with a southern yellow pine, white pine-hemlock, or other softwood forest type.

Natural pine. Stands that have not been artificially regenerated and with a southern yellow pine, white pine-hemlock, or other softwood forest type.

Oak-pine. Stands with a forest type of oak-pine.

Upland hardwood. Stands with a forest type of oak-hickory, chestnut oak, southern scrub oak, or maple-beech-birch.

Lowland hardwood. Stands with a forest type of oak-gum-cypress, elm-ash-cottonwood, palm, or other tropical.

Bureau of Land Management lands. Federal lands administered by the Bureau of Land Management.

Census water. Streams, sloughs, estuaries, canals, and other moving bodies of water one-eighth of a statute mile in width and greater, and lakes, reservoirs, ponds, and other permanent bodies of water 40 acres in area and greater.

Commercial forest land. (see: Timberland).

Commercial species. Tree species conventionally regarded as being able to develop into trees suitable for the manufacture of industrial timber products. Species that typically exhibit small size, poor form, or inferior quality are excluded.

Cropland. Land under cultivation within the past 24 months, including orchards and land in soil-improving crops but excluding land cultivated in developing improved pasture. Also includes idle farmland.

D.b.h. Tree diameter (outside bark) at breast height (4.5 feet above the ground).

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.

Farm. Land on which agricultural operations are being conducted and sale of agricultural products totaled $1,000 or more during the year.

Farm operator. A person who operates a farm, either doing the work or directly supervising the work.

Farmer-owned land. (see: Other private land).

Forest industry land. Land owned by companies or individuals operating 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.

Forest land. Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use.

Forest type. A classification of forest land based on the species forming a plurality of live-tree stocking.

White pine-hemlock. 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.)

Palm, other tropical. Forests in which palms and other tropicals constitute a plurality of the stocking.

Gross growth. Annual increase in merchantable volume of trees in the absence of cutting and mortality. (Gross growth includes survivor growth, ingrowth, growth on ingrowth, growth on removals prior to removal, and growth on mortality prior to death.)

Growing-stock trees. Live sawtimber-size trees of commercial species containing at least a 12-foot log, or two noncontiguous saw logs each 8 feet or longer, meeting minimum grade requirements (hardwoods must qualify as a log grade of either 3 or 4; softwoods must qualify as a log grade 3) with at least one-third of the gross board-foot volume (International 1/4-inch rule) between a 1-foot stump and the minimum saw-log top being sound, or a live tree below sawtimber size that will prospectively qualify under the above standards.

Desirable tree. A tree that qualifies as growing stock and has no serious defects in quality limiting present or prospective use; is of relatively high vigor (30 percent or more live crown ratio); is compatible with the site and

physiographic class; has a total board-foot loss not to exceed 15 percent in softwoods or 25 percent in hardwoods as a result of severe sweep, crook, or lean; and has a relatively clear bole.

Acceptable tree. A tree that qualifies as growing stock but does not meet the minimum requirements to qualify as a desirable tree. Included are sawtimber-size trees that do not contain a 12-foot saw log because of excessive, natural taper in the butt log but have the potential to produce a 12-foot saw log as diameter increases.

Growing-stock volume. Volume (cubic feet) of solid wood in growing-stock trees 5.0 inches d.b.h. and larger, from a 1-foot stump to a minimum 4.0-inch top diameter, outside bark, on the central stem. Volume of solid wood in primary forks from the point of occurrence to a minimum 4.0-inch top diameter outside bark is included.

Hardwoods. Angiosperms; dicotyledonous trees (including all palm species which are monocotyledonous), usually broadleaf and deciduous.

Soft hardwoods. Soft-textured hardwoods such as boxelder, red and silver maples, hackberry, loblolly-bay, sweetgum, yellow-poplar, magnolia, sweetbay, water tupelo, blackgum, sycamore, cottonwood, black cherry, willow, basswood, and elm.

Hard hardwoods. Hard-textured hardwoods such as sugar maple, birch, hickory, dogwood, persimmon (forest grown), black locust, beech, ash, honeylocust, holly, black walnut, mulberry, and all commercial oaks.

Idle farmland. Land including former cropland, orchard, improved pasture, and farm sites not tended within the past 2 years, and currently less than 16.7 percent stocked with live trees.

Improved pasture. Land currently improved for grazing by cultivation, seeding, irrigation, or clearing of trees or brush.

Indian land. All lands held in trust by the United States for individual Indians or tribes, or all lands, titles to which are held by individual Indians or tribes, subject to Federal restrictions against alienation.

Industrial wood. All roundwood products except fuelwood.

Ingrowth. The number or net volume of trees that grow large enough during a specified year to qualify as saplings, poletimber, or sawtimber.

Inhibiting vegetation. Cover sufficiently dense to prevent the establishment of tree seedlings.

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 one-eighth of a statute mile in width, and lakes, reservoirs, and ponds less than 40 acres in area.

Live trees. All trees 1.0 inch d.b.h. and larger which are not dead at the time of inventory.

Live-tree volume. Volume (cubic feet) of wood above the ground line in live trees 1.0 inch d.b.h. and larger. The volume in twigs and lateral limbs smaller than 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.

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

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

Logging slash. The unmerchantable portion of growing-stock trees (including saplings) plus all cull trees 1.0 inch d.b.h. and larger cut or destroyed during logging operations and not used.

Manageable stand. Timberland at least 60 percent stocked with growing-stock trees that can be featured together under a management scheme.

Merchantable portion. That portion of live trees 5.0 inches d.b.h. and larger between a 1-foot stump and a minimum 4.0-inch top diameter outside bark on the central stem. That portion of primary forks from the point of occurrence to a minimum 4.0-inch top diameter outside bark is included.

Merchantable volume. Solid-wood volume in merchantable portion of live trees.

Miscellaneous Federal land. Federal land other than national forests, land administered by the Bureau of Land Management, and land administered by the Bureau of Indian Affairs.

Miscellaneous private land. (see: Other private land).

Mortality. The merchantable volume in trees that have died from natural causes during a specified period.

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.

Net annual growth. The net change in merchantable volume for a specific year in the absence of cutting (gross growth minus mortality for that specified year).

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

Noncommercial species. Tree species of typically small size, poor form, or inferior quality which 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.

Nonindustrial private forest (NIPF) land. (see: Other private land).

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

Other private land. Privately owned land excluding forest industry land or forest industry-leased land. Also referred to as nonindustrial private forest (NIPF) land.

Farmer-owned land. Owned by farm operators, excluding incorporated farm ownerships.

Other individual land. Owned by individuals other than farm operators.

Other corporate land. Owned by corporations, including incorporated farm ownerships.

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 that result in the removal of the trees from the timberland.

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, which is suitable for chipping.

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

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

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

Poletimber-size trees. Live trees at least 5.0 inches d.b.h. but smaller than sawtimber size.

Productive-reserved forest land. (see: Reserved timberland).

Quality class. A classification of sawtimber volume by log or tree grades.

Rangeland. Land on which the natural vegetation is predominantly native grasses, grasslike plants, forbs, or shrubs valuable for forage, not qualifying as timberland and not developed for another land use. Rangeland includes natural grassland and savannah.

Reserved timberland. Forest land sufficiently productive to qualify as timberland, but withdrawn from timber utilization through statute or administrative designation.

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

Rough trees. Live trees of commercial species that do not contain 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 which is produced from roundwood.

Salvable dead trees. Standing or down dead trees considered utilizable by Forest Inventory and Analysis standards.

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, and with a minimum diameter inside bark for softwoods of 6 inches (8 inches for hardwoods).

Saw-log portion. That part of the bole of sawtimber trees between a 1-foot stump and the saw-log top, including the portion of forks large enough to contain a saw log.

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 in diameter outside bark (d.o.b.) for softwoods and 9.0 inches (d.o.b.) for hardwoods.

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

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

Seedlings. Live trees of commercial species less than 1.0 inch d.b.h. that are expected to survive and develop.

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

Class 1. 165 or more cubic feet per acre.

Class 2. 120 to 164 cubic feet per acre.

Class 3. 85 to 119 cubic feet per acre.

Class 4. 50 to 84 cubic feet per acre.

Class 5. 20 to 49 cubic feet per acre.

Softwoods. Gymnosperms; in the order Coniferales, usually evergreen (includes

the genus Taxodium which is deciduous), having needles or scalelike leaves.

Pines. Yellow pine species which include loblolly, longleaf, slash, pond, shortleaf, pitch, Virginia, sand, spruce, and Table Mountain pines.

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

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

Sawtimber stands. Stands at least 16.7 percent stocked with growing-stock 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 16.7 percent stocked with growing-stock 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 16.7 percent stocked with growing-stock trees of which more than half of total stocking is saplings and seedlings.

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

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.

Fully stocked. 100 percent or more stocking.

Medium stocked. 60 to 99 percent stocking.

Poorly stocked. Less than 60 percent stocking.

Survivor growth. The merchantable volume increment on trees 5.0 inches d.b.h. and larger in the inventory at the beginning of the year and surviving to its end.

Timberland. Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, not currently developed for nonforest use, capable of producing 20 cubic feet of industrial wood per acre per year and not withdrawn from timber utilization by legislative action.

Timber products. Roundwood products and byproducts.

Timber removals. The merchantable volume of trees removed from the inventory by harvesting, cultural operations such as stand improvement, land clearing, or changes in land use.

Top. The portion of the main stem and forks from a 4.0-inch diameter outside bark to the tips of the main stem and forks, plus all other limbs above the 4.0-inch top at least 0.5 inch in diameter at their point of occurrence.

Treatment opportunity. A classification of the management or treatment that would most improve for timber production the existing condition of the stand being sampled.

Tree grade. A classification of sawtimber trees based on the log grade of the butt log in the tree.

Unproductive forest land. (see: Woodland).

Upper-stem portion. That 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.

Urban and other areas. Areas developed for residential, industrial, or recreational purposes, school yards, cemeteries, roads, railroads, airports, beaches, powerlines and other rights-of-way, or other nonforest land not included in any other specified land use class.

Woodland. Forest land incapable of producing 20 cubic feet per acre per year of industrial wood under natural conditions, because of adverse site conditions.

Stocking Standard

D.b.h. class	Minimum number of trees per acre for full stocking	Minimum basal area per acre for full stocking
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

Conversion factors

Cubic feet of wood per average cord (excluding bark)

D.b.h. class	All species	Pine	Other softwood	Hardwood
6	60.5	61.0	68.2	60.0
8	68.3	68.1	76.0	68.4
10	73.2	73.1	81.4	73.4
12	76.5	76.7	85.2	76.4
14	78.8	79.4	88.2	78.4
16	80.4	81.6	90.4	79.8
18	81.5	83.3	92.3	80.8
20	82.3	84.8	93.8	81.5
22	83.0	86.0	95.1	82.1
24+	83.5	87.5	96.2	83.1
Average	74.1	73.6	76.8	74.6

Metric equivalents of units used in this report

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 (4.5 feet) = 1.4 meters above ground 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

County Tables

The county tables are intended for use in compiling forest resource estimates for groups of counties. Because the sampling procedure used by the Forest Survey was intended primarily to furnish inventory data for the survey unit as a whole, individual county estimates have limited and variable accuracy. As county totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase can be computed with the formula on page 5.

Table 1.--Area, by county and land class, North Central Georgia, 1989

County	All land[a]	Forest land				Nonforest land[b]
		Total	Timberland	Woodland	Reserved timberland	
			Acres			
Banks	149,613	103,575	103,575	--	--	46,038
Barrow	104,089	48,792	48,792	--	--	55,297
Carroll	320,857	186,445	186,445	--	--	134,412
Clarke	78,042	35,726	35,726	--	--	42,316
Clayton	94,650	39,420	39,420	--	--	55,230
Cobb	219,706	87,419	83,342	--	4,077	132,287
Coweta	284,448	202,563	202,563	--	--	81,885
De Kalb	172,775	62,293	60,488	--	1,805	110,482
Douglas	129,734	86,074	86,074	--	--	43,660
Elbert	220,048	152,467	152,467	--	--	67,581
Fayette	127,386	67,159	67,159	--	--	60,227
Forsyth	144,794	73,808	73,715	--	93	70,986
Franklin	168,832	85,251	85,251	--	--	83,581
Fulton	341,722	138,904	136,974	--	1,930	202,818
Gwinnett	278,458	131,229	130,799	--	430	147,229
Hall	242,688	136,306	136,306	--	--	106,382
Haralson	180,857	138,257	138,257	--	--	42,600
Hart	146,648	54,239	54,239	--	--	92,409
Heard	186,771	155,236	155,236	--	--	31,535
Henry	205,209	119,870	119,870	--	--	85,339
Jackson	218,957	125,985	125,985	--	--	92,972
Madison	182,509	101,191	101,191	--	--	81,318
Meriwether	323,674	231,503	231,503	--	--	92,171
Newton	177,498	104,317	104,317	--	--	73,181
Oconee	119,283	66,561	66,561	--	--	52,722
Oglethorpe	282,643	214,837	214,837	--	--	67,806
Paulding	199,891	155,973	155,973	--	--	43,918
Polk	199,315	134,046	134,046	--	--	65,269
Rockdale	84,448	42,380	41,978	--	402	42,068
Spalding	127,501	67,964	67,964	--	--	59,537
Troup	265,267	196,758	196,758	--	--	68,509
Walton	211,328	114,990	114,990	--	--	96,338
Total	6,189,641	3,661,538	3,652,801	--	8,737	2,528,103

[a] From U.S. Bureau of the Census, 1980.

[b] Includes 9,501 acres of water according to Forest Survey standards of area classification, but defined by the Bureau of Census as land.

Table 2.--Area of timberland, by county and ownership class, North Central Georgia, 1989

County	All ownerships	Ownership class							
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry[a]	Other private		
							Farmer	Corporate	Individual
					Acres				
Banks	103,575	1,022	--	413	103	13,077	33,890	--	55,070
Barrow	48,792	--	--	1,345	140	57	14,766	5,906	26,578
Carroll	186,445	--	--	288	774	31,468	30,783	10,261	112,871
Clarke	35,726	--	--	1,650	758	335	--	--	32,983
Clayton	39,420	--	419	30	3,359	--	--	14,245	21,367
Cobb	83,342	--	2,473	75	693	167	7,267	29,067	43,600
Coweta	202,563	--	4	--	1,531	24,605	28,804	21,603	126,016
De Kalb	60,488	--	45	222	1,110	--	--	32,839	26,272
Douglas	86,074	--	--	1,720	1,730	1,690	--	21,790	59,144
Elbert	152,467	--	12,866	699	332	48,334	15,558	9,335	65,343
Fayette	67,159	--	--	--	20	600	8,872	13,308	44,359
Forsyth	73,715	--	5,566	14	214	6	7,990	11,985	47,940
Franklin	85,251	--	964	751	50	5,649	21,228	3,538	53,071
Fulton	136,974	--	--	345	2,010	2,454	2,812	25,308	104,045
Gwinnett	130,799	--	845	100	1,255	--	3,476	24,330	100,793
Hall	136,306	--	7,934	203	2,870	5,914	27,550	18,367	73,468
Haralson	138,257	--	--	--	380	44,730	37,259	6,210	49,678
Hart	54,239	--	6,104	1,093	85	2,522	25,920	--	18,515
Heard	155,236	--	5,381	--	350	57,117	14,214	7,107	71,067
Henry	119,870	--	--	80	231	4,969	24,776	15,485	74,329
Jackson	125,985	--	--	549	359	6,429	36,822	16,365	65,461
Madison	101,191	--	--	41	101	19,616	23,267	7,756	50,410
Meriwether	231,503	--	--	2,900	1,814	69,818	28,174	24,149	104,648
Newton	104,317	--	50	245	890	8,323	3,950	19,752	71,107
Oconee	66,561	160	15	176	101	2,979	12,626	4,209	46,295
Oglethorpe	214,837	3,732	--	440	70	90,582	24,003	24,003	72,007
Paulding	155,973	--	5	732	10,277	34,489	10,043	13,390	87,037
Polk	134,046	--	--	--	266	33,053	22,384	3,731	74,612
Rockdale	41,978	--	--	371	25	135	--	15,543	25,904
Spalding	67,964	--	--	270	248	1,522	--	4,120	61,804
Troup	196,758	--	11,928	19	429	20,799	20,448	16,358	126,777
Walton	114,990	--	--	175	271	5,117	26,528	9,948	72,951
Total	3,652,801	4,914	54,599	14,946	32,846	536,556	513,410	430,008	2,065,522

[a]Includes 55,677 acres of other private land under long-term lease.

Table 3.--Area of timberland, by county and forest-type group, North Central Georgia, 1989

County	All type groups	Forest-type group								
		White pine-hemlock	Spruce-fir	Longleaf-slash	Loblolly-shortleaf	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch
					Acres					
Banks	103,575	--	--	--	33,889	17,190	44,023	--	8,473	--
Barrow	48,792	--	--	--	25,027	5,906	14,906	--	2,953	--
Carroll	186,445	--	--	--	62,615	26,867	83,072	6,841	7,050	--
Clarke	35,726	--	--	--	14,994	10,995	9,737	--	--	--
Clayton	39,420	--	--	--	12,781	12,394	10,684	3,561	--	--
Cobb	83,342	--	--	--	49,874	15,301	14,534	--	3,633	--
Coweta	202,563	--	--	--	78,149	38,004	68,408	--	18,002	--
De Kalb	60,488	--	--	--	27,427	13,357	16,420	--	3,284	--
Douglas	86,074	--	--	--	26,220	11,432	45,310	3,112	--	--
Elbert	152,467	--	--	--	73,315	20,335	54,145	4,672	--	--
Fayette	67,159	--	--	--	22,179	17,744	22,800	--	4,436	--
Forsyth	73,715	--	--	--	25,761	11,999	35,955	--	--	--
Franklin	85,251	--	--	--	30,130	10,614	37,431	--	7,076	--
Fulton	136,974	--	--	--	57,893	20,029	50,616	2,812	5,624	--
Gwinnett	130,799	--	--	--	39,077	20,954	63,817	--	6,951	--
Hall	136,306	--	--	--	45,846	23,307	67,153	--	--	--
Haralson	138,257	--	--	--	56,756	29,980	37,257	4,949	9,315	--
Hart	54,239	--	--	--	18,474	3,703	32,062	--	--	--
Heard	155,236	--	--	--	64,197	43,229	38,980	8,830	--	--
Henry	119,870	--	--	--	48,558	30,971	34,147	3,097	3,097	--
Jackson	125,985	--	--	--	28,832	43,056	50,005	--	4,092	--
Madison	101,191	--	--	--	42,692	19,388	35,233	3,878	--	--
Meriwether	231,503	--	--	--	123,933	9,500	67,160	27,911	2,999	--
Newton	104,317	--	--	--	45,994	18,576	31,846	--	7,901	--
Oconee	66,561	--	--	--	28,245	8,418	25,529	4,209	160	--
Oglethorpe	214,837	--	--	--	115,253	3,417	54,766	20,001	21,400	--
Paulding	155,973	--	--	--	82,876	22,630	47,119	3,348	--	--
Polk	134,046	--	--	--	64,465	11,193	58,388	--	--	--
Rockdale	41,978	--	--	--	20,884	5,552	15,542	--	--	--
Spalding	67,964	--	--	--	38,563	12,630	8,489	8,282	--	--
Troup	196,758	--	--	--	91,792	23,933	68,704	12,329	--	--
Walton	114,990	--	--	--	45,179	16,580	39,967	13,264	--	--
Total	3,652,801	--	--	--	1,541,870	579,184	1,284,205	131,096	116,446	--

Table 4.--Area of timberland, by county and stand-size class, North Central Georgia, 1989

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
			Acres		
Banks	103,575	52,392	25,521	25,662	--
Barrow	48,792	31,017	8,859	5,963	2,953
Carroll	186,445	59,783	65,826	57,416	3,420
Clarke	35,726	24,731	7,330	3,665	--
Clayton	39,420	21,614	10,684	7,122	--
Cobb	83,342	42,514	21,801	19,027	--
Coweta	202,563	56,037	73,016	69,910	3,600
De Kalb	60,488	37,501	19,704	3,283	--
Douglas	86,074	53,627	18,678	13,769	--
Elbert	152,467	47,933	62,410	42,124	--
Fayette	67,159	35,507	17,744	13,908	--
Forsyth	73,715	45,530	16,200	11,985	--
Franklin	85,251	40,683	28,416	16,152	--
Fulton	136,974	107,202	24,148	5,624	--
Gwinnett	130,799	85,614	13,904	31,281	--
Hall	136,306	79,621	24,194	27,899	4,592
Haralson	138,257	61,216	39,686	32,406	4,949
Hart	54,239	29,499	17,334	7,406	--
Heard	155,236	25,735	40,296	89,205	--
Henry	119,870	58,541	30,970	30,359	--
Jackson	125,985	55,879	31,140	34,875	4,091
Madison	101,191	41,454	29,197	30,540	--
Meriwether	231,503	79,129	52,513	92,837	7,024
Newton	104,317	58,089	18,575	27,653	--
Oconee	66,561	42,539	16,835	7,187	--
Oglethorpe	214,837	119,506	52,818	42,513	--
Paulding	155,973	68,197	38,635	49,141	--
Polk	134,046	40,256	57,596	32,464	3,730
Rockdale	41,978	31,481	10,497	--	--
Spalding	67,964	37,124	10,239	20,601	--
Troup	196,758	60,778	88,774	47,206	--
Walton	114,990	53,230	34,961	23,483	3,316
Total	3,652,801	1,683,959	1,008,501	922,666	37,675

Table 5.--Area of timberland, by county and site class, North Central Georgia, 1989

County	All classes	Site class (cubic feet per acre per year)				
		>164	120-164	85-119	50-84	20-49
				Acres		
Banks	103,575	--	4,236	21,181	78,158	--
Barrow	48,792	--	--	6,047	42,745	--
Carroll	186,445	--	7,825	52,221	119,348	7,051
Clarke	35,726	--	--	1,093	34,633	--
Clayton	39,420	--	--	19,934	15,925	3,561
Cobb	83,342	--	6,106	54,577	22,659	--
Coweta	202,563	--	3,600	95,618	99,745	3,600
De Kalb	60,488	--	--	24,365	36,123	--
Douglas	86,074	--	1,730	20,396	63,948	--
Elbert	152,467	--	--	25,235	117,792	9,440
Fayette	67,159	--	--	31,051	35,508	600
Forsyth	73,715	--	5,566	15,994	44,159	7,996
Franklin	85,251	--	964	29,105	55,182	--
Fulton	136,974	--	5,624	70,646	55,438	5,266
Gwinnett	130,799	--	4,320	56,967	69,512	--
Hall	136,306	9,184	4,592	48,365	74,165	--
Haralson	138,257	3,105	3,105	44,636	84,307	3,104
Hart	54,239	--	6,104	7,490	36,942	3,703
Heard	155,236	--	7,107	31,874	110,978	5,277
Henry	119,870	--	3,097	46,154	67,522	3,097
Jackson	125,985	--	--	53,187	68,706	4,092
Madison	101,191	3,878	--	21,350	75,099	864
Meriwether	231,503	--	14,047	96,866	105,251	15,339
Newton	104,317	--	50	39,465	64,802	--
Oconee	66,561	--	15	21,304	45,242	--
Oglethorpe	214,837	--	3,417	103,059	104,944	3,417
Paulding	155,973	--	--	20,822	119,950	15,201
Polk	134,046	--	--	14,922	104,724	14,400
Rockdale	41,978	--	--	21,120	20,723	135
Spalding	67,964	--	--	32,963	34,483	518
Troup	196,758	--	4,090	50,214	133,826	8,628
Walton	114,990	--	3,316	76,442	35,232	--
Total	3,652,801	16,167	88,911	1,254,663	2,177,771	115,289

Table 6.--Area of timberland, by county and stocking class of growing-stock trees, North Central Georgia, 1989

County	All classes	Stocking class (percent)[a]				
		>130	100-130	60-99	16.7-59	<16.7
			Acres			
Banks	103,575	--	33,992	56,629	12,954	--
Barrow	48,792	--	19,122	20,811	5,906	2,953
Carroll	186,445	10,470	59,276	99,232	14,047	3,420
Clarke	35,726	335	18,325	9,737	7,329	--
Clayton	39,420	3,561	21,816	--	14,043	--
Cobb	83,342	10,900	26,368	38,806	7,268	--
Coweta	202,563	--	87,414	97,147	14,402	3,600
De Kalb	60,488	13,136	19,971	20,813	6,568	--
Douglas	86,074	3,112	40,392	35,972	6,598	--
Elbert	152,467	4,948	65,148	76,147	6,224	--
Fayette	67,159	8,872	22,180	31,671	4,436	--
Forsyth	73,715	3,995	16,214	37,526	15,980	--
Franklin	85,251	111	21,228	53,298	10,614	--
Fulton	136,974	2,812	69,486	50,616	14,060	--
Gwinnett	130,799	3,476	52,236	57,708	17,379	--
Hall	136,306	4,592	48,249	65,097	13,776	4,592
Haralson	138,257	9,898	34,736	70,047	18,627	4,949
Hart	54,239	--	3,703	41,869	8,667	--
Heard	155,236	--	59,785	81,238	14,213	--
Henry	119,870	6,194	42,133	62,252	9,291	--
Jackson	125,985	4,091	53,544	47,893	16,366	4,091
Madison	101,191	5,932	49,737	38,439	7,083	--
Meriwether	231,503	10,024	113,485	83,421	17,549	7,024
Newton	104,317	--	34,379	50,187	19,751	--
Oconee	66,561	--	28,390	33,962	4,209	--
Oglethorpe	214,837	3,417	110,722	70,445	30,253	--
Paulding	155,973	--	74,892	69,227	11,854	--
Polk	134,046	14,399	28,208	61,594	26,115	3,730
Rockdale	41,978	--	16,049	25,929	--	--
Spalding	67,964	4,120	24,722	34,732	4,390	--
Troup	196,758	--	103,439	78,646	14,673	--
Walton	114,990	13,264	38,276	46,870	13,264	3,316
Total	3,652,801	141,659	1,437,617	1,647,961	387,889	37,675

[a]See stocking standards on page 12.

Table 8.--Average net annual growth of growing stock and sawtimber on timberland, by county and species group, North Central Georgia, 1983-1988

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet					Thousand board feet				
Banks	4,603	1,559	10	1,234	1,800	22,206	6,884	--	3,987	11,335
Barrow	2,181	903	--	549	729	11,879	4,961	--	3,930	2,988
Carroll	8,892	4,085	--	1,800	3,007	34,620	17,395	--	7,568	9,657
Clarke	1,971	1,231	--	480	260	10,180	7,207	--	1,802	1,171
Clayton	2,079	926	--	485	668	8,981	6,255	--	1,057	1,669
Cobb	4,670	2,722	--	1,112	836	23,919	18,825	--	3,382	1,712
Coweta	9,167	4,689	--	2,043	2,435	33,645	18,884	--	6,569	8,192
De Kalb	4,362	2,423	--	784	1,155	21,570	14,615	--	2,314	4,641
Douglas	5,110	1,996	--	1,465	1,649	22,979	10,922	--	5,331	6,726
Elbert	7,799	5,208	289	747	1,555	24,783	15,148	375	2,265	6,995
Fayette	4,226	1,570	--	1,709	947	18,394	6,542	--	7,104	4,748
Forsyth	3,684	1,368	--	902	1,414	15,907	8,662	--	3,085	4,160
Franklin	3,976	1,570	27	734	1,645	15,240	7,127	98	2,638	5,377
Fulton	9,300	4,579	--	2,502	2,219	45,662	25,985	--	11,418	8,259
Gwinnett	6,868	2,836	--	2,371	1,661	29,535	15,583	--	8,302	5,650
Hall	5,854	2,541	26	1,208	2,079	25,394	12,769	--	4,090	8,535
Haralson	7,617	3,916	--	1,778	1,923	35,580	17,419	--	10,253	7,908
Hart	2,359	562	24	356	1,417	13,387	3,634	--	1,107	8,646
Heard	7,061	4,575	--	1,215	1,271	25,806	14,177	--	8,113	3,516
Henry	6,160	3,598	--	1,062	1,500	27,330	17,836	--	4,182	5,312
Jackson	5,711	2,244	21	2,042	1,404	25,979	12,600	--	5,820	7,559
Madison	5,453	2,982	30	1,568	873	17,137	11,477	--	4,197	1,463
Meriwether	11,461	7,875	10	1,735	1,841	44,428	26,993	83	8,693	8,659
Newton	4,963	2,939	38	617	1,369	23,416	15,714	--	1,951	5,751
Oconee	3,854	1,861	--	757	1,236	21,704	12,971	--	3,049	5,684
Oglethorpe	13,081	7,831	53	3,130	2,067	52,348	33,012	327	11,478	7,531
Paulding	9,682	5,259	--	2,254	2,169	38,021	25,095	--	5,122	7,804
Polk	6,268	3,917	--	277	2,074	20,687	15,167	--	525	4,995
Rockdale	2,854	1,649	--	591	614	14,993	11,817	--	1,763	1,413
Spalding	4,148	2,729	--	1,172	247	19,716	15,430	--	3,269	1,017
Troup	9,529	5,415	6	2,127	1,981	35,877	19,756	--	8,159	7,962
Walton	6,716	3,345	--	1,943	1,428	31,800	19,487	--	7,139	5,174
Total	191,659	100,903	534	42,749	47,473	813,103	470,349	883	159,662	182,209

Table 9.--Average annual removals of growing stock and sawtimber on timberland, by county and species group, North Central Georgia, 1983-1988

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet					Thousand board feet				
Banks	4,074	3,759	--	123	192	9,118	7,917	--	524	677
Barrow	1,475	1,349	--	126	--	3,953	3,640	--	313	--
Carroll	8,042	5,683	--	631	1,728	23,559	15,582	--	3,275	4,702
Clarke	445	--	--	152	293	1,973	--	--	709	1,264
Clayton	4,062	2,174	--	427	1,461	15,948	9,938	--	766	5,244
Cobb	19,839	16,430	--	1,513	1,896	75,490	64,554	--	5,853	5,083
Coweta	10,705	5,943	--	1,777	2,985	41,631	23,975	--	7,097	10,559
De Kalb	5,546	3,782	--	322	1,442	22,257	16,043	--	1,228	4,986
Douglas	1,630	414	--	317	899	4,299	1,333	--	1,430	1,536
Elbert	6,237	3,104	87	762	2,284	15,041	10,029	--	3,532	1,480
Fayette	--	--	--	--	--	--	--	--	--	--
Forsyth	4,219	3,319	--	337	563	9,563	7,666	--	--	1,897
Franklin	3,336	643	114	876	1,703	9,871	1,141	--	3,141	5,589
Fulton	12,561	9,628	--	963	1,970	47,885	37,370	--	2,725	7,790
Gwinnett	9,027	6,943	--	784	1,300	30,910	24,485	--	1,831	4,594
Hall	5,020	3,946	--	528	546	9,713	7,966	--	549	1,198
Haralson	7,548	5,847	--	752	949	28,383	24,493	--	1,961	1,929
Hart	372	--	--	--	372	--	--	--	--	--
Heard	6,543	6,043	--	261	239	22,269	20,308	--	983	978
Henry	7,152	6,186	--	427	539	25,167	23,109	--	1,062	996
Jackson	11,253	9,115	--	744	1,394	42,153	33,068	--	2,884	6,201
Madison	2,772	1,847	--	219	706	9,673	6,310	--	517	2,846
Meriwether	11,285	6,213	--	2,524	2,548	31,631	16,405	--	7,770	7,456
Newton	7,011	6,818	--	96	97	33,578	33,578	--	--	--
Oconee	2,032	1,509	--	366	157	7,272	6,743	--	--	529
Oglethorpe	10,525	7,432	66	1,454	1,573	40,045	32,345	288	2,651	4,761
Paulding	4,464	4,077	--	387	--	8,752	7,422	--	1,330	--
Polk	5,595	3,703	228	312	1,352	15,608	9,570	--	1,376	4,662
Rockdale	4,007	3,731	55	153	68	14,235	14,235	--	--	--
Spalding	8,084	5,765	--	2,140	179	35,800	26,220	--	8,682	898
Troup	13,803	10,742	--	1,804	1,257	46,526	37,016	--	7,216	2,294
Walton	8,302	6,351	--	1,417	534	34,483	29,210	--	4,759	514
Total	206,966	152,496	550	22,694	31,226	716,786	551,671	288	74,164	90,663

Table 14.--Area of timberland, by stand-age and broad management classes, public ownerships, North Central Georgia, 1989

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
0-10	4,181	3,488	--	693	--	--
11-20	2,574	--	2,574	--	--	--
21-30	13,370	--	13,370	--	--	--
31-40	35,412	--	22,000	--	8,640	4,772
41-50	23,323	--	7,884	3,216	12,223	--
51-60	6,460	--	1,345	1,680	3,435	--
61-70	8,367	--	--	1,984	2,491	3,892
71-80	3,897	--	--	3,897	--	--
81+	--	--	--	--	--	--
No manageable stand	9,721	3,129	1,983	1,739	2,870	--
All classes	107,305	6,617	49,156	13,209	29,659	8,664

Table 15.--Area of timberland, by stand-age and broad management classes, forest industry,[a] North Central Georgia, 1989

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
0-10	162,721	102,120	11,176	32,751	16,674	--
11-20	112,734	65,488	10,932	15,508	15,529	5,277
21-30	69,297	44,986	9,011	6,815	8,485	--
31-40	77,244	16,373	43,470	4,101	6,671	6,629
41-50	53,267	--	19,680	5,277	16,458	11,852
51-60	25,623	--	3,205	2,774	4,671	14,973
61-70	6,624	--	--	--	3,207	3,417
71-80	--	--	--	--	--	--
81+	--	--	--	--	--	--
No manageable stand	29,046	--	3,205	8,856	8,619	8,366
All classes	536,556	228,967	100,679	76,082	80,314	50,514

[a]Includes 55,677 acres of other private land under long-term lease.

Table 16.--Area of timberland, by stand-age and broad management classes, other private ownerships,[a] North Central Georgia, 1989

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
0-10	409,426	56,652	114,142	112,849	117,783	8,000
11-20	286,647	19,603	124,317	68,646	60,588	13,493
21-30	296,286	17,515	158,291	35,024	74,971	10,485
31-40	479,878	17,980	278,599	62,339	106,145	14,815
41-50	553,768	3,538	237,123	72,784	193,748	46,575
51-60	315,931	--	48,721	61,545	190,962	14,703
61-70	167,829	--	17,179	10,817	118,131	21,702
71-80	44,233	--	--	3,731	40,502	--
81+	59,966	--	--	3,538	50,015	6,413
No manageable stand	394,976	--	62,791	58,620	221,387	52,178
All classes	3,008,940	115,288	1,041,163	489,893	1,174,232	188,364

[a]Excludes 55,677 acres of other private land under long-term lease to forest industry.

Table 17.--Area of timberland, by broad management and stand-volume classes, North Central Georgia, 1989

Broad management class	All classes	Stand-volume class (cubic feet of growing stock per acre)				
		0-499	500-999	1000-1499	1500-1999	2000+
			Acres			
Pine plantation	350,872	227,743	20,709	23,348	19,311	59,761
Natural pine	1,190,998	186,259	158,774	183,150	186,089	476,726
Oak-pine	579,184	177,807	108,233	95,798	76,562	120,784
Upland hardwood	1,284,205	245,493	215,112	226,122	178,105	419,373
Lowland hardwood	247,542	42,404	32,440	34,750	30,115	107,833
All classes	3,652,801	879,706	535,268	563,168	490,182	1,184,477

Table 19.--Average net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class, North Central Georgia, 1983-1988

Broad management class[a] and species group	All classes	No manageable stand	Stand-age class[a] (years)								
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
			Thousand cubic feet								
Pine plantation											
Softwood	19,835	275	2,186	6,881	7,329	2,918	246	--	--	--	--
Hardwood	483	54	14	159	194	62	--	--	--	--	--
Total	20,318	329	2,200	7,040	7,523	2,980	246	--	--	--	--
Natural pine											
Softwood	66,358	946	1,524	9,332	13,208	22,405	15,786	2,550	607	--	--
Hardwood	11,964	255	272	908	1,213	3,378	4,215	1,407	316	--	--
Total	78,322	1,201	1,796	10,240	14,421	25,783	20,001	3,957	923	--	--
Oak-pine											
Softwood	9,989	992	730	1,899	1,210	1,755	2,005	1,070	225	69	34
Hardwood	12,520	1,141	786	1,128	974	2,193	3,138	2,319	429	300	112
Total	22,509	2,133	1,516	3,027	2,184	3,948	5,143	3,389	654	369	146
Upland hardwood											
Softwood	5,006	605	724	680	342	625	931	446	289	299	65
Hardwood	52,087	4,315	1,726	1,808	3,948	6,928	12,403	11,185	5,960	1,534	2,280
Total	57,093	4,920	2,450	2,488	4,290	7,553	13,334	11,631	6,249	1,833	2,345
Lowland hardwood											
Softwood	249	53	26	--	3	42	95	19	--	--	11
Hardwood	13,168	1,075	--	783	702	2,162	3,500	1,928	2,466	--	552
Total	13,417	1,128	26	783	705	2,204	3,595	1,947	2,466	--	563
All types											
Softwood	101,437	2,871	5,190	18,792	22,092	27,745	19,063	4,085	1,121	368	110
Hardwood	90,222	6,840	2,798	4,786	7,031	14,723	23,256	16,839	9,171	1,834	2,944
Total	191,659	9,711	7,988	23,578	29,123	42,468	42,319	20,924	10,292	2,202	3,054

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

Table 20.--Average annual removals of growing stock on timberland, by broad management class, species group, and stand-age class, North Central Georgia, 1983-1988

Broad management class[a] and species group	All classes	No manageable stand	Stand-age class[a] (years)								
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
			Thousand cubic feet								
Pine plantation											
Softwood	10,291	--	--	1,797	7,579	915	--	--	--	--	--
Hardwood	213	--	--	100	113	--	--	--	--	--	--
Total	10,504	--	--	1,897	7,692	915	--	--	--	--	--
Natural pine											
Softwood	124,292	601	2,493	7,727	32,583	51,419	21,043	7,611	815	--	--
Hardwood	9,239	--	278	677	1,403	2,401	2,149	1,752	579	--	--
Total	133,531	601	2,771	8,404	33,986	53,820	23,192	9,363	1,394	--	--
Oak-pine											
Softwood	10,989	738	345	2,228	392	4,239	2,009	274	764	--	--
Hardwood	7,291	470	514	172	281	3,408	1,628	--	818	--	--
Total	18,280	1,208	859	2,400	673	7,647	3,637	274	1,582	--	--
Upland hardwood											
Softwood	6,107	407	186	93	183	1,326	2,154	1,224	534	--	--
Hardwood	31,022	3,288	2,257	839	1,460	5,656	8,942	5,146	2,531	288	615
Total	37,129	3,695	2,443	932	1,643	6,982	11,096	6,370	3,065	288	615
Lowland hardwood											
Softwood	1,367	--	--	--	--	274	891	--	202	--	--
Hardwood	6,155	123	--	--	928	1,177	1,381	670	1,876	--	--
Total	7,522	123	--	--	928	1,451	2,272	670	2,078	--	--
All types											
Softwood	153,046	1,746	3,024	11,845	40,737	58,173	26,097	9,109	2,315	--	--
Hardwood	53,920	3,881	3,049	1,788	4,185	12,642	14,100	7,568	5,804	288	615
Total	206,966	5,627	6,073	13,633	44,922	70,815	40,197	16,677	8,119	288	615

[a]Classifications before timber removals.

Table 21.--Merchantable volume of live trees and growing stock on timberland, by forest-type and species groups, North Central Georgia, 1989

Forest-type group	Live trees					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet									
White pine-hemlock	--	--	--	--	--	--	--	--	--	--
Spruce-fir	--	--	--	--	--	--	--	--	--	--
Longleaf-slash pine	--	--	--	--	--	--	--	--	--	--
Loblolly-shortleaf pine	2,400,709	2,035,022	3,877	232,782	129,028	2,361,959	2,026,096	3,568	222,544	109,751
Oak-pine	719,003	307,417	3,487	195,334	212,765	683,390	305,939	2,183	182,917	192,351
Oak-hickory	2,138,476	176,717	4,253	691,657	1,265,849	2,034,611	176,180	4,062	660,211	1,194,158
Oak-gum-cypress	234,704	7,482	--	170,120	57,102	217,103	7,482	--	160,188	49,433
Elm-ash-cottonwood	261,098	2,178	--	165,261	93,659	235,379	2,178	--	147,413	85,788
Maple-beech-birch	--	--	--	--	--	--	--	--	--	--
All types	5,753,990	2,528,816	11,617	1,455,154	1,758,403	5,532,442	2,517,875	9,813	1,373,273	1,631,481

Table 22.--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and ownership class, North Central Georgia, 1983 to 1989

Treatment or disturbance	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
			Acres[a]		
Final harvest	58,747	708	12,273	--	45,766
Partial harvest[b]	25,115	1,365	503	--	23,247
Commercial thinning	11,045	146	2,416	--	8,483
Other stand improvement	2,899	251	--	--	2,648
Site preparation	20,403	495	13,043	210	6,655
Artificial regeneration[c]	24,671	536	13,957	210	9,968
Natural regeneration[c]	45,099	107	2,311	1,744	40,937
Other treatment	11,786	251	788	1,744	9,003
Natural disturbance	49,901	3,805	4,137	--	41,959

[a]Since some acres experience more than one treatment or disturbance, there are no column totals.

[b]Includes high grading and some selective cutting.

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

Table 23.--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and broad management class, North Central Georgia, 1983 to 1989

Treatment or disturbance	All classes	Broad management class[a]				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres[b]			
Final harvest	58,747	4,816	34,229	3,669	14,437	1,596
Partial harvest[c]	25,115	--	13,214	3,641	7,221	1,039
Commercial thinning	11,045	3,080	6,625	--	748	592
Other stand improvement	2,899	--	1,216	953	730	--
Site preparation	20,403	3,553	7,541	1,557	7,752	--
Other treatment	11,786	--	1,869	2,290	6,571	1,056
Natural disturbance	49,901	3,364	27,360	5,677	8,252	5,248

[a]Classification before treatment or disturbance.

[b]Since some acres experience more than one treatment or disturbance, there are no column totals.

[c]Includes high grading and some selective cutting.

Table 24.--Area of timberland regenerated annually, by type of regeneration and broad management class, North Central Georgia, 1983 to 1989

Type of regeneration	All classes	Broad management class[a]				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
Artificial regeneration following harvest	14,587	9,362	--	4,386	839	--
Natural regeneration following harvest	19,956	--	4,223	7,037	7,565	1,131
Other artificial regeneration on forest land	6,703	6,703	--	--	--	--
Other natural regeneration on forest land	17,876	--	4,963	5,560	7,353	--
Artificial regeneration on nonforest land	3,381	3,381	--	--	--	--
Natural reversion of nonforest land	7,267	--	4,906	1,297	--	1,064
Total	69,770	19,446	14,092	18,280	15,757	2,195

[a]Classification after regeneration.

Table 25.--Area of timberland, by treatment opportunity and broad management classes, North Central Georgia, 1989

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
Salvage	11,795	--	11,795	--	--	--
Harvest	122,342	--	10,107	25,754	76,651	9,830
Commercial thinning	205,174	34,683	155,836	4,091	6,128	4,436
Other stand improvement	396,108	21,243	134,383	93,837	131,247	15,398
Stand conversion	25,001	--	--	4,089	17,359	3,553
Regeneration	405,728	3,129	67,979	63,316	229,146	42,158
Stands in relatively good condition	2,409,627	291,817	806,898	375,183	785,264	150,465
Adverse sites[a]	77,026	--	4,000	12,914	38,410	21,702
All classes	3,652,801	350,872	1,190,998	579,184	1,284,205	247,542

[a]Areas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 26.--Area of timberland, by treatment opportunity and ownership classes, North Central Georgia, 1989

Treatment opportunity class	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
			Acres		
Salvage	11,795	--	--	--	11,795
Harvest	122,342	3,897	3,417	--	115,028
Commercial thinning	205,174	2,385	35,407	12,945	154,437
Other stand improvement	396,108	693	60,278	1,249	333,888
Stand conversion	25,001	--	--	--	25,001
Regeneration	405,728	9,721	19,730	--	376,277
Stands in relatively good condition	2,409,627	90,609	355,423	35,584	1,928,011
Adverse sites[a]	77,026	--	6,624	5,899	64,503
All classes	3,652,801	107,305	480,879	55,677	3,008,940

[a]Areas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 27.--Merchantable volume of live trees and growing stock on timberland, by ownership class and species group, North Central Georgia, 1989

Ownership class	Live trees					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet									
National forest	15,406	--	--	8,641	6,765	14,860	--	--	8,095	6,765
Other public	181,967	88,026	433	43,404	50,104	172,622	87,116	433	39,945	45,128
Forest industry	511,578	313,047	729	116,610	81,192	487,115	311,577	420	104,110	71,008
Forest industry-leased	42,365	24,954	--	11,568	5,843	41,237	24,954	--	11,141	5,142
Other private	5,002,674	2,102,789	10,455	1,274,931	1,614,499	4,816,608	2,094,228	8,960	1,209,982	1,503,438
All ownerships	5,753,990	2,528,816	11,617	1,455,154	1,758,403	5,532,442	2,517,875	9,813	1,373,273	1,631,481

Table 28.--Volume of sawtimber on timberland, by ownership class and species group, North Central Georgia, 1989

Ownership class	Small sawtimber[a]					Large sawtimber[b]				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand board feet									
National forest	20,227	--	--	10,869	9,358	31,814	--	--	21,086	10,728
Other public	305,515	206,828	--	52,568	46,119	269,277	136,470	--	73,056	59,751
Forest industry	894,176	715,969	--	98,058	80,149	453,385	176,027	--	175,419	101,939
Forest industry-leased	71,389	41,500	--	25,344	4,545	18,281	10,409	--	--	7,872
Other private	8,016,712	4,971,940	8,813	1,354,888	1,681,071	7,196,841	2,260,580	7,794	2,104,014	2,824,453
All ownerships	9,308,019	5,936,237	8,813	1,541,727	1,821,242	7,969,598	2,583,486	7,794	2,373,575	3,004,743

[a]Volume of sawtimber trees less than 15.0 inches at d.b.h.

[b]Volume of sawtimber trees 15.0 inches and larger at d.b.h.

Table 29.--Average net annual growth and removals of growing stock on timberland, by ownership class and species group, North Central Georgia, 1983-1989

Ownership class	Net annual growth					Annual timber removals				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet									
National forest	329	--	--	219	110	--	--	--	--	--
Other public	5,994	3,016	26	1,471	1,481	4,167	2,443	--	785	939
Forest industry	25,448	19,366	6	3,239	2,837	30,271	21,934	153	3,005	5,179
Forest industry-leased	2,522	2,081	--	244	197	144	107	--	--	37
Other private	157,366	76,440	502	37,576	42,848	172,384	128,012	397	18,904	25,071
All ownerships	191,659	100,903	534	42,749	47,473	206,966	152,496	550	22,694	31,226

Table 30.--Average net annual growth and removals of sawtimber on timberland, by ownership class and species group, North Central Georgia, 1983-1988

Ownership class	Net annual growth					Annual timber removals				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand board feet									
National forest	2,185	--	--	965	1,220	--	--	--	--	--
Other public	24,992	12,206	--	6,319	6,467	14,668	9,828	--	3,094	1,746
Forest industry	85,417	66,774	--	11,602	7,041	89,987	67,966	288	11,809	9,924
Forest industry-leased	6,003	4,998	--	592	413	397	397	--	--	--
Other private	694,506	386,371	883	140,184	167,068	611,734	473,480	--	59,261	78,993
All ownerships	813,103	470,349	883	159,662	182,209	716,786	551,671	288	74,164	90,663

Table 31.--Volume of timber on timberland, by class of timber and species group, North Central Georgia, 1989

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
			Thousand cubic feet		
Sawtimber trees					
Saw-log portion	3,259,383	1,614,833	3,042	715,164	926,344
Upper-stem portion[a]	495,845	192,227	373	132,073	171,172
Total	3,755,228	1,807,060	3,415	847,237	1,097,516
Poletimber trees	1,777,214	710,815	6,398	526,036	533,965
All growing-stock trees	5,532,442	2,517,875	9,813	1,373,273	1,631,481
Rough trees					
Sawtimber size	66,457	4,473	1,049	23,397	37,538
Poletimber size	125,256	6,468	755	40,776	77,257
Total	191,713	10,941	1,804	64,173	114,795
Rotten trees					
Sawtimber size	26,182	--	--	14,952	11,230
Poletimber size	3,653	--	--	2,756	897
Total	29,835	--	--	17,708	12,127
Salvable dead trees					
Sawtimber size	22,659	17,121	--	1,938	3,600
Poletimber size	15,162	11,515	--	1,227	2,420
Total	37,821	28,636	--	3,165	6,020
Total, all timber	5,791,811	2,557,452	11,617	1,458,319	1,764,423

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

Table 32.--Number of live trees on timberland, by species and diameter class, North Central Georgia, 1989

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand trees												
Softwood													
Longleaf pine	1,714	431	221	139	160	161	165	304	97	36	--	--	--
Slash pine	841	--	--	150	162	261	116	64	88	--	--	--	--
Shortleaf pine	140,394	50,712	31,395	24,607	16,875	9,165	4,918	1,858	572	229	55	8	--
Loblolly pine	587,501	274,910	126,947	74,233	43,602	31,343	18,981	9,815	4,544	1,714	833	579	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	26,528	12,028	4,629	3,085	3,480	1,949	1,001	145	167	29	15	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	22,524	15,559	4,355	1,638	708	148	43	--	23	50	--	--	--
Total softwoods	779,502	353,640	167,547	103,852	64,987	43,027	25,224	12,186	5,491	2,058	903	587	--
Hardwood													
Select white oaks	85,604	42,049	16,720	9,410	6,253	3,555	2,422	2,137	1,363	898	343	396	58
Select red oaks	12,299	2,702	2,823	1,843	1,421	915	1,057	679	374	177	149	146	13
Chestnut oak	16,454	7,772	3,266	2,346	978	821	561	361	187	52	27	83	--
Other white oaks	43,770	25,379	6,849	4,605	2,482	2,402	822	490	363	140	97	130	11
Other red oaks	247,473	162,136	36,382	16,311	12,987	6,484	5,626	3,434	1,819	1,049	637	534	74
Hickory	127,507	86,163	18,764	11,024	4,708	2,497	1,960	1,091	757	309	103	126	5
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	4,222	2,957	677	212	152	193	31	--	--	--	--	--	--
Soft maple	140,400	103,224	20,361	6,128	4,210	2,789	1,465	781	709	333	176	217	7
Beech	7,793	6,652	470	163	--	195	--	133	--	21	67	77	15
Sweetgum	400,320	268,450	68,682	30,156	15,310	8,694	4,430	2,256	1,173	698	268	200	3
Tupelo and blackgum	76,491	58,756	10,710	3,240	1,085	1,247	702	420	192	93	37	9	--
Ash	15,792	6,668	2,459	3,084	1,511	545	631	345	322	100	23	96	8
Cottonwood	49	--	--	--	--	--	--	--	--	15	13	21	--
Basswood	2,685	1,437	980	191	--	--	41	30	--	--	--	--	6
Yellow-poplar	100,489	48,219	20,727	9,279	6,468	5,005	3,356	3,163	1,869	1,204	652	509	38
Bay and magnolia	2,999	1,619	676	260	258	55	73	58	--	--	--	--	--
Black cherry	77,864	59,832	11,524	3,902	1,956	341	259	50	--	--	--	--	--
Black walnut	659	232	--	163	--	122	63	55	--	--	13	11	--
Sycamore	863	229	--	122	241	98	--	--	106	14	25	28	--
Black locust	212	212	--	--	--	--	--	--	--	--	--	--	--
Elm	49,378	34,986	7,236	3,622	2,477	252	285	277	146	79	--	18	--
Other eastern hardwoods	443,299	330,277	86,341	18,369	4,862	1,972	771	351	163	48	86	38	21
Total hardwoods	1,856,622	1,249,951	315,647	124,430	67,359	38,182	24,555	16,111	9,543	5,230	2,716	2,639	259
All species	2,636,124	1,603,591	483,194	228,282	132,346	81,209	49,779	28,297	15,034	7,288	3,619	3,226	259

Table 33.--Number of growing-stock trees on timberland, by species and diameter class, North Central Georgia, 1989

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand trees												
Softwood													
Longleaf pine	1,714	431	221	139	160	161	165	304	97	36	--	--	--
Slash pine	841	--	--	150	162	261	116	64	88	--	--	--	--
Shortleaf pine	131,695	42,969	30,707	24,339	16,875	9,165	4,918	1,858	572	229	55	8	--
Loblolly pine	558,372	251,785	123,135	72,948	43,022	31,140	18,884	9,815	4,544	1,700	820	579	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	25,075	10,575	4,629	3,085	3,480	1,949	1,001	145	167	29	15	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	20,662	14,553	3,891	1,349	639	148	43	--	23	16	--	--	--
Total softwoods	738,359	320,313	162,583	102,010	64,338	42,824	25,127	12,186	5,491	2,010	890	587	--
Hardwood													
Select white oaks	69,979	28,883	15,039	8,865	6,166	3,555	2,422	2,099	1,329	866	332	375	48
Select red oaks	10,774	1,333	2,823	1,843	1,342	867	1,057	650	374	177	149	146	13
Chestnut oak	14,318	6,314	2,746	2,346	978	715	531	361	165	52	27	83	--
Other white oaks	35,155	18,434	6,396	3,813	2,371	2,251	761	406	345	140	97	130	11
Other red oaks	202,107	123,867	30,450	15,793	12,801	6,378	5,486	3,403	1,792	1,001	589	494	53
Hickory	97,133	58,090	17,111	10,684	4,551	2,445	1,928	1,064	735	309	103	108	5
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	2,908	1,701	677	212	94	193	31	--	--	--	--	--	--
Soft maple	66,733	44,841	10,248	3,904	2,688	2,303	931	623	645	242	152	152	4
Beech	5,803	4,997	222	163	--	195	--	102	--	21	36	67	--
Sweetgum	315,487	198,040	58,003	27,870	14,653	8,296	4,176	2,206	1,114	687	258	181	3
Tupelo and blackgum	37,322	26,248	5,493	2,243	975	1,097	596	393	173	79	25	--	--
Ash	11,071	3,550	1,636	2,779	1,172	545	554	345	299	80	23	80	8
Cottonwood	49	--	--	--	--	--	--	--	--	15	13	21	--
Basswood	1,248	--	980	191	--	--	41	30	--	--	--	--	6
Yellow-poplar	91,995	41,602	19,434	9,145	6,229	4,948	3,356	3,163	1,806	1,189	619	484	20
Bay and magnolia	1,061	709	--	--	166	55	73	58	--	--	--	--	--
Black cherry	39,294	28,758	6,071	2,557	1,422	207	229	50	--	--	--	--	--
Black walnut	632	232	--	163	--	122	63	28	--	--	13	11	--
Sycamore	863	229	--	122	241	98	--	--	106	14	25	28	--
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	31,498	20,243	5,473	2,668	2,194	192	285	222	124	79	--	18	--
Other eastern hardwoods	16,808	10,016	3,906	804	848	639	244	162	63	14	62	38	12
Total hardwoods	1,052,238	618,087	186,708	96,165	58,891	35,101	22,764	15,365	9,070	4,965	2,523	2,416	183
All species	1,790,597	938,400	349,291	198,175	123,229	77,925	47,891	27,551	14,561	6,975	3,413	3,003	183

Table 34.--Merchantable volume of live trees on timberland, by species and diameter class, North Central Georgia, 1989

Species	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand cubic feet										
Softwood											
Longleaf pine	19,603	315	959	2,004	3,245	8,157	3,370	1,553	--	--	--
Slash pine	12,819	438	1,141	3,790	2,225	1,825	3,400	--	--	--	--
Shortleaf pine	505,467	72,503	118,906	114,680	103,304	55,276	23,196	12,780	3,934	888	--
Loblolly pine	1,887,620	189,828	289,943	380,817	367,952	280,960	178,104	90,316	54,606	55,094	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	103,307	12,013	31,237	27,145	21,356	3,887	5,202	1,501	966	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--
Cedars	11,617	3,977	3,176	1,414	637	--	686	1,727	--	--	--
Total softwoods	2,540,433	279,074	445,362	529,850	498,719	350,105	213,958	107,877	59,506	55,982	--
Hardwood											
Select white oaks	403,377	24,956	40,767	45,134	49,140	64,063	55,623	47,590	24,316	41,342	10,446
Select red oaks	124,712	6,297	10,656	12,787	21,075	19,488	15,243	10,166	10,258	15,350	3,392
Chestnut oak	59,867	6,879	7,072	8,250	9,235	10,224	6,073	2,772	1,585	7,777	--
Other white oaks	114,388	12,815	14,888	24,502	13,797	11,427	11,939	6,014	5,757	11,591	1,658
Other red oaks	622,945	44,659	84,032	78,230	104,322	89,733	67,848	51,799	38,429	48,032	15,861
Hickory	221,329	25,038	29,024	30,187	36,901	31,994	30,050	16,697	7,459	12,651	1,328
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	3,816	350	665	2,011	790	--	--	--	--	--	--
Soft maple	181,003	18,493	24,418	29,132	23,320	20,458	24,434	12,310	10,837	16,586	1,015
Beech	20,231	610	--	2,496	--	2,922	--	856	2,804	8,252	2,291
Sweetgum	550,824	72,208	96,155	104,436	89,315	65,025	46,595	38,806	18,653	18,976	655
Tupelo and blackgum	62,282	8,176	5,440	14,211	12,092	10,560	5,623	4,068	1,712	400	--
Ash	73,582	7,316	9,661	6,557	11,198	9,719	12,041	4,995	1,569	9,004	1,522
Cottonwood	4,000	--	--	--	--	--	--	987	1,008	2,005	--
Basswood	3,347	440	--	--	821	872	--	--	--	--	1,214
Yellow-poplar	551,604	27,740	44,282	66,010	71,679	97,014	77,771	65,668	45,869	49,551	6,020
Bay and magnolia	4,476	472	1,349	556	1,098	1,001	--	--	--	--	--
Black cherry	29,432	10,526	9,781	3,439	4,389	1,297	--	--	--	--	--
Black walnut	5,831	361	--	1,259	1,445	1,002	--	--	937	827	--
Sycamore	12,940	793	2,225	1,103	--	--	3,845	783	1,673	2,518	--
Black locust	--	--	--	--	--	--	--	--	--	--	--
Elm	46,252	6,863	13,456	3,042	5,655	6,853	4,794	3,695	--	1,894	--
Other eastern hardwoods	117,319	38,635	22,986	17,861	11,916	8,288	4,380	2,074	4,894	3,366	2,919
Total hardwoods	3,213,557	313,627	416,857	451,203	468,188	451,940	366,259	269,280	177,760	250,122	48,321
All species	5,753,990	592,701	862,219	981,053	966,907	802,045	580,217	377,157	237,266	306,104	48,321

Table 35.--Volume of growing stock on timberland, by species and diameter class, North Central Georgia, 1989

Species	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand cubic feet										
Softwood											
Longleaf pine	19,603	315	959	2,004	3,245	8,157	3,370	1,553	--	--	--
Slash pine	12,819	438	1,141	3,790	2,225	1,825	3,400	--	--	--	--
Shortleaf pine	504,923	71,959	118,906	114,680	103,304	55,276	23,196	12,780	3,934	888	--
Loblolly pine	1,877,223	187,188	286,659	379,150	365,883	280,960	178,104	89,996	54,189	55,094	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	103,307	12,013	31,237	27,145	21,356	3,887	5,202	1,501	966	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--
Cedars	9,813	3,477	2,921	1,414	637	--	686	678	--	--	--
Total softwoods	2,527,688	275,390	441,823	528,183	496,650	350,105	213,958	106,508	59,089	55,982	--
Hardwood											
Select white oaks	395,625	23,827	40,293	45,134	49,140	63,141	54,521	46,534	23,574	40,129	9,332
Select red oaks	122,878	6,297	10,037	12,064	21,075	18,996	15,243	10,166	10,258	15,350	3,392
Chestnut oak	58,630	6,879	7,072	7,588	9,138	10,224	5,595	2,772	1,585	7,777	--
Other white oaks	108,957	11,150	14,667	23,295	13,033	10,144	11,648	6,014	5,757	11,591	1,658
Other red oaks	606,339	43,561	83,335	77,775	101,824	89,339	66,765	50,207	36,980	45,411	11,142
Hickory	216,934	24,304	28,206	29,537	36,339	31,709	29,434	16,697	7,459	11,921	1,328
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	3,504	350	353	2,011	790	--	--	--	--	--	--
Soft maple	147,140	12,360	16,968	25,873	17,012	17,418	22,554	10,796	9,779	13,626	754
Beech	15,458	610	--	2,496	--	2,446	--	856	1,747	7,303	--
Sweetgum	533,593	68,167	94,258	101,052	85,478	63,935	45,345	38,470	18,384	17,849	655
Tupelo and blackgum	54,718	6,062	5,101	12,786	10,610	10,090	5,052	3,673	1,344	--	--
Ash	68,369	6,703	7,952	6,557	10,808	9,719	11,413	4,039	1,569	8,087	1,522
Cottonwood	4,000	--	--	--	--	--	--	987	1,008	2,005	--
Basswood	3,347	440	--	--	821	872	--	--	--	--	1,214
Yellow-poplar	543,092	27,373	43,442	65,373	71,679	97,014	76,126	65,214	43,951	48,114	4,806
Bay and magnolia	3,577	--	922	556	1,098	1,001	--	--	--	--	--
Black cherry	21,781	7,237	7,193	2,230	3,824	1,297	--	--	--	--	--
Black walnut	5,603	361	--	1,259	1,445	774	--	--	937	827	--
Sycamore	12,940	793	2,225	1,103	--	--	3,845	783	1,673	2,518	--
Black locust	--	--	--	--	--	--	--	--	--	--	--
Elm	42,323	5,743	11,878	2,616	5,655	6,088	4,754	3,695	--	1,894	--
Other eastern hardwoods	35,946	2,459	4,940	7,178	4,937	4,131	2,182	691	4,148	3,366	1,914
Total hardwoods	3,004,754	254,676	378,842	426,483	444,706	438,338	354,477	261,594	170,153	237,768	37,717
All species	5,532,442	530,066	820,665	954,666	941,356	788,443	568,435	368,102	229,242	293,750	37,717

Table 36.--Volume of sawtimber on timberland, by species and diameter class, North Central Georgia, 1989

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
		Thousand board feet							
Softwood									
Longleaf pine	96,765	7,755	15,980	44,226	19,441	9,363	--	--	--
Slash pine	53,838	14,675	10,193	9,458	19,512	--	--	--	--
Shortleaf pine	1,413,162	420,847	472,221	283,926	129,942	76,153	24,376	5,697	--
Loblolly pine	6,707,190	1,360,130	1,641,500	1,445,987	1,005,615	542,529	343,076	368,353	--
Pond pine	--	--	--	--	--	--	--	--	--
Virginia pine	248,768	98,957	91,995	18,387	26,166	7,988	5,275	--	--
Pitch pine	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--
Cedars	16,607	5,939	2,874	--	3,774	4,020	--	--	--
Total softwoods	8,536,330	1,908,303	2,234,763	1,801,984	1,204,450	640,053	372,727	374,050	--
Hardwood									
Select white oaks	1,274,430	--	168,749	251,686	240,419	221,060	118,718	218,186	55,612
Select red oaks	402,645	--	70,503	72,462	64,078	45,756	49,450	80,285	20,111
Chestnut oak	152,527	--	29,558	39,414	23,533	12,577	7,617	39,828	--
Other white oaks	282,705	--	47,462	43,566	54,181	30,386	30,745	66,275	10,090
Other red oaks	1,783,103	--	358,021	366,197	303,704	245,075	189,611	251,454	69,041
Hickory	581,100	--	124,597	129,465	133,151	81,088	38,505	65,992	8,302
Yellow birch	--	--	--	--	--	--	--	--	--
Hard maple	2,923	--	2,923	--	--	--	--	--	--
Soft maple	389,610	--	55,910	67,836	96,057	48,888	47,332	69,316	4,271
Beech	50,124	--	--	9,304	--	3,382	7,048	30,390	--
Sweetgum	1,214,139	--	305,754	274,092	217,902	201,598	102,462	107,729	4,602
Tupelo and blackgum	118,820	--	34,887	38,333	21,761	17,219	6,620	--	--
Ash	201,752	--	35,109	37,863	49,616	18,786	7,874	43,448	9,056
Cottonwood	21,647	--	--	--	--	5,068	5,339	11,240	--
Basswood	13,242	--	2,647	3,411	--	--	--	--	7,184
Yellow-poplar	1,990,436	--	258,538	424,197	376,388	347,938	251,482	297,514	34,379
Bay and magnolia	7,309	--	3,642	3,667	--	--	--	--	--
Black cherry	18,403	--	13,080	5,323	--	--	--	--	--
Black walnut	15,185	--	5,067	2,796	--	--	3,865	3,457	--
Sycamore	41,694	--	--	--	16,304	3,742	8,271	13,377	--
Black locust	--	--	--	--	--	--	--	--	--
Elm	90,174	--	19,593	23,923	20,308	16,621	--	9,729	--
Other eastern hardwoods	89,319	--	17,241	16,153	9,202	3,033	18,496	15,758	9,436
Total hardwoods	8,741,287	--	1,553,281	1,809,688	1,626,604	1,302,217	893,435	1,323,978	232,084
All species	17,277,617	1,908,303	3,788,044	3,611,672	2,831,054	1,942,270	1,266,162	1,698,028	232,084

Table 37.--Volume of sawtimber on timberland, by species, size class, and tree grade, North Central Georgia, 1989

Species	All size classes					Trees 15.0 inches d.b.h. and larger				
	All grades	Tree grade				All grades	Tree grade			
		1	2	3	4		1	2	3	4
	Thousand board feet									
Softwood										
Yellow pines[a]	8,519,723	1,410,784	1,705,886	5,403,053	--	2,583,486	610,358	581,184	1,391,944	--
Eastern white pine[b]	--	--	--	--	--	--	--	--	--	--
Spruce and fir[b]	--	--	--	--	--	--	--	--	--	--
Cypress[c]	--	--	--	--	--	--	--	--	--	--
Other eastern softwoods[b]	16,607	--	--	3,560	13,047	7,794	--	--	--	7,794
Total	8,536,330	1,410,784	1,705,886	5,406,613	13,047	2,591,280	610,358	581,184	1,391,944	7,794
Hardwood[c]										
Select white and red oaks	1,677,075	454,310	448,654	590,635	183,476	1,113,675	454,310	340,824	250,115	68,426
Other white and red oaks	2,218,335	319,070	480,008	1,033,961	385,296	1,334,117	319,070	375,541	467,924	171,582
Hickory	581,100	67,272	144,852	242,722	126,254	327,038	67,272	105,446	92,220	62,100
Yellow birch	--	--	--	--	--	--	--	--	--	--
Hard maple	2,923	--	--	2,923	--	--	--	--	--	--
Sweetgum	1,214,139	169,700	351,167	543,144	150,128	634,293	169,700	251,321	177,046	36,226
Ash, walnut, and black cherry	235,340	30,541	73,753	119,756	11,290	136,102	30,541	55,745	44,692	5,124
Yellow-poplar	1,990,436	379,187	699,524	750,082	161,643	1,307,701	379,187	520,060	304,472	103,982
Other eastern hardwoods	821,939	48,685	176,015	358,802	238,437	525,392	48,685	146,746	192,828	137,133
Total	8,741,287	1,468,765	2,373,973	3,642,025	1,256,524	5,378,318	1,468,765	1,795,683	1,529,297	584,573
All species	17,277,617	2,879,549	4,079,859	9,048,638	1,269,571	7,969,598	2,079,123	2,376,867	2,921,241	592,367

[a]For yellow pines, tree grade is based on "Southern Pine Tree Grades for Yard and Structural Lumber," Research Paper SE-40, published by the Southeastern Forest Experiment Station, Asheville, NC, 1968. Tree grade 4 does not apply to yellow pine.

[b]For other softwoods (excluding cypress), tree grade is based on "Tree Grades for Eastern White Pine," Research Paper NE-214, published by the Northeastern Forest Experiment Station, Broomall, PA, 1971.

[c]For hardwoods and cypress, tree grades 1, 2, and 3 are based on "Hardwood Tree Grades for Factory Lumber," Research Paper NE-333, published by the Northeastern Forest Experiment Station, Broomall, PA, 1976. Grade 4 trees are sawtimber trees not qualifying as tree Grades 1, 2, or 3. The butt log of these trees qualify as construction (tie and timber) logs based on "A Guide to Hardwood Log Grading (revised)," General Technical Report NE-1, published by the Northeastern Forest Experiment Station, Broomall, PA, 1971.

Table 38.--Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class, North Central Georgia, 1989

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand cubic feet								
Softwood									
Longleaf pine	17,171	1,598	2,995	7,789	3,269	1,520	--	--	--
Slash pine	10,182	3,129	2,014	1,730	3,309	--	--	--	--
Shortleaf pine	277,763	91,005	94,142	52,626	22,604	12,612	3,895	879	--
Loblolly pine	1,257,647	294,695	327,949	265,578	172,734	88,516	53,639	54,536	--
Pond pine	--	--	--	--	--	--	--	--	--
Virginia pine	52,070	21,885	19,232	3,631	4,944	1,444	934	--	--
Pitch pine	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--
Cedars	3,042	1,179	558	--	651	654	--	--	--
Total softwoods	1,617,875	413,491	446,890	331,354	207,511	104,746	58,468	55,415	--
Hardwood									
Select white oaks	246,202	--	35,437	51,885	47,744	42,196	21,852	38,059	9,029
Select red oaks	77,940	--	15,019	15,053	12,819	8,806	9,109	13,957	3,177
Chestnut oak	30,945	--	6,473	8,428	4,852	2,487	1,452	7,253	--
Other white oaks	51,707	--	9,531	8,514	10,242	5,490	5,357	10,983	1,590
Other red oaks	336,388	--	71,594	72,989	58,297	45,523	34,218	43,044	10,723
Hickory	112,366	--	26,067	26,189	25,728	15,049	6,868	11,188	1,277
Yellow birch	--	--	--	--	--	--	--	--	--
Hard maple	609	--	609	--	--	--	--	--	--
Soft maple	76,376	--	11,696	13,955	19,206	9,495	8,825	12,490	709
Beech	10,958	--	--	1,992	--	745	1,556	6,665	--
Sweetgum	224,130	--	60,046	52,857	40,248	35,587	17,418	17,325	649
Tupelo and blackgum	24,370	--	7,458	8,048	4,363	3,279	1,222	--	--
Ash	39,694	--	7,515	7,951	9,976	3,648	1,458	7,668	1,478
Cottonwood	3,742	--	--	--	--	907	937	1,898	--
Basswood	2,447	--	559	716	--	--	--	--	1,172
Yellow-poplar	351,157	--	50,114	80,159	67,726	60,124	41,630	46,645	4,759
Bay and magnolia	1,549	--	759	790	--	--	--	--	--
Black cherry	3,829	--	2,760	1,069	--	--	--	--	--
Black walnut	3,302	--	1,104	617	--	--	837	744	--
Sycamore	7,751	--	--	--	3,210	697	1,511	2,333	--
Black locust	--	--	--	--	--	--	--	--	--
Elm	17,897	--	4,016	4,894	4,036	3,222	--	1,729	--
Other eastern hardwoods	18,149	--	3,455	3,337	1,867	631	3,827	3,184	1,848
Total hardwoods	1,641,508	--	314,212	359,443	310,314	237,886	158,077	225,165	36,411
All species	3,259,383	413,491	761,102	690,797	517,825	342,632	216,545	280,580	36,411

Table 39.--Total volume of live trees on timberland, by species and diameter class, North Central Georgia, 1989

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand cubic feet												
Softwood													
Longleaf pine	22,652	64	266	438	1,160	2,329	3,684	9,192	3,781	1,738	--	--	--
Slash pine	14,702	--	--	583	1,371	4,361	2,528	2,055	3,804	--	--	--	--
Shortleaf pine	650,835	12,073	35,463	99,943	143,593	133,267	117,952	62,615	26,150	14,371	4,413	995	--
Loblolly pine	2,421,066	59,187	127,985	271,731	353,260	444,123	421,191	318,508	200,778	101,477	61,214	61,612	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	131,815	3,197	6,160	15,581	37,380	31,654	24,622	4,458	5,949	1,712	1,102	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	23,536	3,546	4,585	5,907	4,115	1,736	775	--	819	2,053	--	--	--
Total softwoods	3,264,606	78,067	174,459	394,183	540,879	617,470	570,752	396,828	241,281	121,351	66,729	62,607	--
Hardwood													
Select white oaks	543,036	9,875	22,615	37,000	53,451	57,200	61,421	79,554	68,821	58,891	29,988	51,203	13,017
Select red oaks	160,549	526	4,441	8,609	13,602	15,989	26,159	24,164	18,802	12,504	12,709	18,886	4,158
Chestnut oak	81,480	1,795	4,610	9,757	9,015	10,284	11,427	12,468	7,437	3,364	1,918	9,405	--
Other white oaks	162,663	5,257	8,641	19,179	19,804	31,536	17,542	14,457	15,023	7,527	7,185	14,407	2,105
Other red oaks	878,094	32,860	48,372	70,707	112,359	99,444	130,150	111,150	83,642	63,598	47,220	58,900	19,692
Hickory	322,545	16,776	23,367	39,829	38,071	37,777	45,368	38,919	36,482	20,128	8,960	15,284	1,584
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	6,748	955	868	626	855	2,487	957	--	--	--	--	--	--
Soft maple	272,761	22,100	27,230	26,124	30,803	35,677	28,283	24,513	29,145	14,892	12,830	19,926	1,238
Beech	27,397	1,414	631	857	--	3,174	--	3,622	--	1,054	3,624	10,186	2,835
Sweetgum	806,762	55,754	82,592	106,704	119,316	123,424	103,508	74,605	53,245	44,108	21,200	21,555	751
Tupelo and blackgum	100,983	11,766	12,256	11,561	6,862	17,290	14,479	12,581	6,792	4,843	2,046	507	--
Ash	93,562	2,020	3,638	10,773	11,829	7,729	13,068	11,170	13,817	5,716	1,784	10,296	1,722
Cottonwood	4,609	--	--	--	--	--	--	--	--	1,139	1,162	2,308	--
Basswood	5,589	416	1,226	604	--	--	946	999	--	--	--	--	1,398
Yellow-poplar	673,873	11,545	28,723	37,654	52,836	76,094	81,556	109,678	87,678	73,825	51,572	55,717	6,995
Bay and magnolia	7,100	472	991	739	1,719	677	1,313	1,189	--	--	--	--	--
Black cherry	73,440	19,804	15,999	14,642	12,141	4,120	5,196	1,538	--	--	--	--	--
Black walnut	7,158	56	--	523	--	1,544	1,723	1,223	--	--	1,114	975	--
Sycamore	15,339	51	--	1,029	2,716	1,316	--	--	4,474	906	1,934	2,913	--
Black locust	49	49	--	--	--	--	--	--	--	--	--	--	--
Elm	74,358	6,866	9,366	10,390	17,008	3,653	6,719	8,156	5,659	4,325	--	2,216	--
Other eastern hardwoods	337,087	75,902	103,914	58,279	30,016	22,422	14,771	10,122	5,450	2,490	6,000	4,105	3,616
Total hardwoods	4,655,182	276,259	399,480	465,586	532,403	551,837	564,586	540,108	436,467	319,310	211,246	298,789	59,111
All species	7,919,788	354,326	573,939	859,769	1,073,282	1,169,307	1,135,338	936,936	677,748	440,661	277,975	361,396	59,111

Table 40.--Green weight of forest biomass on timberland, by species and diameter class, North Central Georgia, 1989

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Hundred thousand pounds												
Softwood													
Longleaf pine	18,035	46	229	327	900	1,781	2,922	7,385	3,045	1,400	--	--	--
Slash pine	11,325	--	--	446	1,041	3,338	1,961	1,592	2,947	--	--	--	--
Shortleaf pine	442,283	6,691	21,546	59,291	97,698	94,239	84,492	45,133	18,948	10,365	3,180	700	--
Loblolly pine	1,729,844	28,852	75,624	189,737	256,324	324,999	309,279	234,249	146,944	74,174	44,952	44,710	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	97,350	2,784	5,040	11,787	26,716	23,147	18,007	3,317	4,526	1,237	789	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	16,603	2,154	2,917	4,403	3,202	1,282	540	--	577	1,528	--	--	--
Total softwoods	2,315,440	40,527	105,356	265,991	385,881	448,786	417,201	291,676	176,987	88,704	48,921	45,410	--
Hardwood													
Select white oaks	436,085	7,733	16,707	26,731	41,788	45,268	49,548	64,549	56,393	48,603	24,792	42,652	11,321
Select red oaks	129,200	437	3,311	6,475	10,860	12,842	21,327	19,620	15,247	10,007	10,318	15,380	3,376
Chestnut oak	62,441	1,644	3,582	6,575	6,526	8,088	8,831	9,646	5,944	2,602	1,564	7,439	--
Other white oaks	129,911	3,719	5,996	13,351	15,390	25,333	14,334	12,131	12,636	6,540	6,129	12,468	1,884
Other red oaks	710,889	26,723	36,615	47,132	84,840	79,592	107,488	93,567	70,495	54,558	41,135	51,847	16,897
Hickory	259,414	14,494	20,397	27,895	29,606	29,674	36,432	31,691	30,255	16,825	7,576	13,151	1,418
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	5,737	834	733	388	819	2,148	815	--	--	--	--	--	--
Soft maple	201,538	16,706	19,614	18,606	24,083	26,909	21,203	17,979	21,428	11,055	9,155	13,926	874
Beech	23,163	1,142	532	604	--	2,371	--	3,254	--	905	3,249	8,541	2,565
Sweetgum	576,467	36,966	54,820	70,420	85,391	89,836	75,740	55,829	40,207	33,508	16,247	16,874	629
Tupelo and blackgum	68,299	9,064	9,061	6,489	4,317	11,007	9,616	8,526	4,897	3,433	1,502	387	--
Ash	58,238	1,253	2,264	7,947	8,390	5,058	8,103	6,694	8,075	3,217	989	5,396	852
Cottonwood	3,353	--	--	--	--	--	--	--	--	816	839	1,698	--
Basswood	3,841	289	857	325	--	--	615	681	--	--	--	--	1,074
Yellow-poplar	473,681	8,538	19,165	22,283	35,790	52,439	57,105	78,234	63,193	53,338	37,425	40,879	5,292
Bay and magnolia	4,523	293	615	434	1,073	426	862	820	--	--	--	--	--
Black cherry	43,858	9,414	10,681	8,448	7,946	2,775	3,534	1,060	--	--	--	--	--
Black walnut	6,112	48	--	407	--	1,280	1,469	1,091	--	--	951	866	--
Sycamore	10,632	34	--	502	1,545	828	--	--	3,316	691	1,457	2,259	--
Black locust	42	42	--	--	--	--	--	--	--	--	--	--	--
Elm	49,010	4,973	6,549	6,354	10,922	2,376	4,276	5,399	3,776	2,906	--	1,479	--
Other eastern hardwoods	278,544	65,507	90,512	41,863	23,571	18,485	11,865	8,008	4,640	2,109	5,276	3,705	3,003
Total hardwoods	3,534,978	209,853	302,011	313,229	392,857	416,735	433,163	418,779	340,502	251,113	168,604	238,947	49,185
All species	5,850,418	250,380	407,367	579,220	778,738	865,521	850,364	710,455	517,489	339,817	217,525	284,357	49,185

Table 41.--Average net annual growth and removals of live timber and growing stock on timberland, by species, North Central Georgia, 1983-1988

Species	Live timber[a]		Growing stock	
	Net annual growth	Annual timber removals	Net annual growth	Annual timber removals
	Thousand cubic feet			
Softwood				
Yellow pines	101,173	152,949	100,903	152,496
Eastern white pine	--	--	--	--
Spruce and fir	--	--	--	--
Cypress	--	--	--	--
Other eastern softwoods	564	550	534	550
Total softwoods	101,737	153,499	101,437	153,046
Hardwood				
Select white and red oaks	15,332	9,628	15,275	9,487
Other white and red oaks	25,305	15,607	25,011	14,954
Hickory	4,077	4,291	4,042	4,154
Yellow birch	--	--	--	--
Hard maple	127	267	125	267
Sweetgum	15,547	12,609	15,309	11,841
Ash, walnut, and black cherry	3,509	2,225	3,331	1,705
Yellow-poplar	18,399	7,645	18,343	7,549
Tupelo and blackgum	1,165	885	1,074	885
Bay and magnolia	54	--	47	--
Other eastern hardwoods	9,540	4,509	7,665	3,078
Total hardwoods	93,055	57,666	90,222	53,920
All species	194,792	211,165	191,659	206,966

[a]Merchantable portion only.

Table 42.--Average net annual growth and removals of sawtimber on timberland, by species, North Central Georgia, 1983-1988

Species	Net annual growth	Annual timber removals
	Thousand board feet	
Softwood		
Yellow pines	470,349	551,671
Eastern white pine	--	--
Spruce and fir	--	--
Cypress	--	--
Other eastern softwoods	883	288
Total softwoods	471,232	551,959
Hardwood		
Select white and red oaks	59,684	28,485
Other white and red oaks	95,550	44,689
Hickory	13,181	9,236
Yellow birch	--	--
Hard maple	255	--
Sweetgum	46,645	35,004
Ash, walnut, and black cherry	11,271	5,460
Yellow-poplar	82,775	33,056
Tupelo and blackgum	6,177	2,423
Bay and magnolia	116	--
Other eastern hardwoods	26,217	6,474
Total hardwoods	341,871	164,827
All species	813,103	716,786

Table 43.--Average annual removals of growing stock on timberland, by species and diameter class, North Central Georgia, 1983-1988

Species	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand cubic feet										
Softwood											
Yellow pines	152,496	12,896	25,244	30,942	25,886	25,381	15,841	8,522	4,336	3,448	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Cypress	--	--	--	--	--	--	--	--	--	--	--
Other eastern softwoods	550	333	151	66	--	--	--	--	--	--	--
Total softwoods	153,046	13,229	25,395	31,008	25,886	25,381	15,841	8,522	4,336	3,448	--
Hardwood											
Select white and red oaks	9,487	615	1,092	1,122	1,152	1,702	1,569	978	350	907	--
Other white and red oaks	14,954	1,186	1,445	2,394	2,093	2,513	1,750	994	646	1,639	294
Hickory	4,154	701	600	709	470	318	737	293	326	--	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	267	--	267	--	--	--	--	--	--	--	--
Sweetgum	11,841	1,465	1,636	758	2,074	3,124	1,500	749	535	--	--
Ash, walnut, and black cherry	1,705	189	110	102	100	293	656	131	124	--	--
Yellow-poplar	7,549	445	370	448	466	1,023	936	1,434	1,089	1,338	--
Tupelo and blackgum	885	110	149	--	137	300	122	67	--	--	--
Bay and magnolia	--	--	--	--	--	--	--	--	--	--	--
Other eastern hardwoods	3,078	218	346	963	50	321	487	124	409	160	--
Total hardwoods	53,920	4,929	6,015	6,496	6,542	9,594	7,757	4,770	3,479	4,044	294
All species	206,966	18,158	31,410	37,504	32,428	34,975	23,598	13,292	7,815	7,492	294

Table 44.--Average annual mortality of live timber, growing stock, and sawtimber on timberland, by species, North Central Georgia, 1983-1988

Species	Live timber[a]	Growing stock	Sawtimber
	Thousand cubic feet		Thousand board feet
Softwood			
Yellow pines	40,692	40,275	110,822
Eastern white pine	--	--	--
Spruce and fir	--	--	--
Cypress	--	--	--
Other eastern softwoods	--	--	--
Total softwoods	40,692	40,275	110,822
Hardwood			
Select white and red oaks	2,372	2,191	7,082
Other white and red oaks	10,247	8,976	25,214
Hickory	1,833	1,752	5,451
Yellow birch	--	--	--
Hard maple	206	--	--
Sweetgum	4,024	3,594	10,620
Ash, walnut, and black cherry	1,195	1,005	661
Yellow-poplar	1,411	1,136	4,784
Tupelo and blackgum	301	172	656
Bay and magnolia	41	--	--
Other eastern hardwoods	5,319	2,483	4,805
Total hardwoods	26,949	21,309	59,273
All species	67,641	61,584	170,095

[a]Merchantable portion only.

Table 45.--Change in number of live trees on timberland, by species group, survey completion date, and diameter class, North Central Georgia

Species group and year	All classes	Diameter class (inches at breast height)							
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0 and larger
		Thousand trees							
Yellow pine									
1983	822,427	333,777	175,752	127,424	83,020	51,706	27,589	14,163	8,996
1989	756,978	338,081	163,192	102,214	64,279	42,879	25,181	12,186	8,966
Change	-65,449	+4,304	-12,560	-25,210	-18,741	-8,827	-2,408	-1,977	-30
Other softwood									
1983	26,377	18,633	4,460	2,614	392	160	--	28	50
1989	22,524	15,559	4,355	1,638	708	148	43	--	73
Change	-3,853	-3,074	-105	-976	+316	-12	+43	-28	+23
Hardwood									
1983	1,869,715	1,233,141	341,874	129,058	67,698	39,498	24,744	15,720	17,982
1989	1,856,622	1,249,951	315,647	124,430	67,359	38,182	24,555	16,111	20,387
Change	-13,093	+16,810	-26,227	-4,628	-339	-1,316	-189	+391	+2,405

Table 46.--Land area, by land use class, major forest type, and survey completion date, North Central Georgia

Land use class	Survey completion date			Change 1983-1989
	1972	1983	1989	
		Acres		
Forest land				
Timberland:				
Pine and oak-pine types	2,768,946	2,307,265	2,121,054	-186,211
Hardwood types	1,230,295	1,507,763	1,531,747	+23,984
Total	3,999,241	3,815,028	3,652,801	-162,227
Reserved timberland	7,502	14,236	8,737	-5,499
Woodland	--	--	--	--
Total forest land	4,006,743	3,829,264	3,661,538	-167,726
Nonforest land				
Cropland	657,669	669,387	516,896	-152,491
Pasture and range	795,578	601,060	692,232	+91,172
Other	713,895	1,029,783	1,309,474	+279,691
Total	2,167,142	2,300,230	2,518,602	+218,372
All land[a]	6,173,885	6,129,494	6,180,140	+50,646

[a]Excludes all water areas.

Table 47.--Volume[a] of sawtimber, growing stock, and live timber on timberland, by species group, survey completion date, and diameter class, North Central Georgia

Species group and year	All classes	Diameter class (inches at breast height)								
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0 and larger
					SAWTIMBER (in thousand board feet)					
Softwood										
1972	7,759,101	--	--	1,869,154	2,061,274	1,673,305	1,081,588	563,581	277,466	232,733
1983	9,069,983	--	--	2,074,971	2,360,908	2,073,244	1,171,715	743,114	342,911	303,120
1989	8,536,330	--	--	1,908,303	2,234,763	1,801,984	1,204,450	640,053	372,727	374,050
Hardwood										
1972	5,598,853	--	--	--	1,229,706	1,196,355	1,026,146	696,891	467,306	982,449
1983	7,570,102	--	--	--	1,468,699	1,662,653	1,386,367	1,102,900	677,763	1,271,720
1989	8,741,287	--	--	--	1,553,281	1,809,688	1,626,604	1,302,217	893,435	1,556,062
					GROWING STOCK (in thousand cubic feet)					
Softwood										
1972	2,824,928	487,535	600,968	539,622	477,013	339,481	200,593	97,711	45,658	36,347
1983	2,867,585	328,072	523,539	599,008	546,399	420,657	217,306	128,839	56,425	47,340
1989	2,527,688	275,390	441,823	528,183	496,650	350,105	213,958	106,508	59,089	55,982
Hardwood										
1972	2,269,394	271,096	334,920	374,772	360,559	294,105	226,155	142,060	90,414	175,313
1983	2,764,017	270,035	358,909	407,416	430,591	408,688	305,523	224,806	131,123	226,926
1989	3,004,754	254,676	378,842	426,483	444,706	438,338	354,477	261,594	170,153	275,485
					LIVE TIMBER[b] (in thousand cubic feet)					
Softwood										
1972	2,839,851	493,470	604,311	541,749	478,202	339,654	201,471	98,540	45,658	36,796
1983	2,881,384	331,785	526,791	601,335	547,925	421,021	218,263	129,967	56,425	47,872
1989	2,540,433	279,074	445,362	529,850	498,719	350,105	213,958	107,877	59,506	55,982
Hardwood										
1972	2,459,456	328,983	371,768	406,285	378,498	305,146	233,353	146,249	95,587	193,587
1983	2,979,776	327,431	398,343	441,945	452,106	424,049	315,223	231,495	138,582	250,602
1989	3,213,557	313,627	416,857	451,203	468,188	451,940	366,259	269,280	177,760	298,443

[a]To provide a basis for valid comparisons, adjustments have been made to allow for differences in volume tables and sawtimber specifications used in previous surveys.

[b]Merchantable volume.

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Johnson, Tony G.
Forest statistics for North Central Georgia, 1989. Resour. Bull. SE-108. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station; 1989. 50 pp.

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Keywords: Timberland, forest ownership, timber volume, timber growth, timber removals.

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