

United States
Department of
Agriculture

Forest Service



Southeastern Forest
Experiment Station

Resource Bulletin
SE-104

Forest Statistics for Southeast Georgia, 1988

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SOUTHEAST



October 1988
Southeastern Forest Experiment Station
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Foreword

This report highlights the principal findings of the sixth forest survey in Southeast Georgia. Field work began in January 1988 and was completed in July 1988. Five previous surveys, completed in 1934, 1952, 1960, 1971, and 1981, provide statistics for measuring changes and trends over the past 54 years. The primary emphasis in this report is on the changes and trends since 1981. 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 Range-land 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 multi-resource 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 35-county area covered by this report is one of five Survey Units in Georgia. A similar report, USDA Forest Service Resource Bulletin SE-102 has been issued for Southwest Georgia. Comparable reports for the other three units will be issued as the statewide inventory progresses. When completed, the inventory will provide updated statistics on the timber resource for all of Georgia.

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.



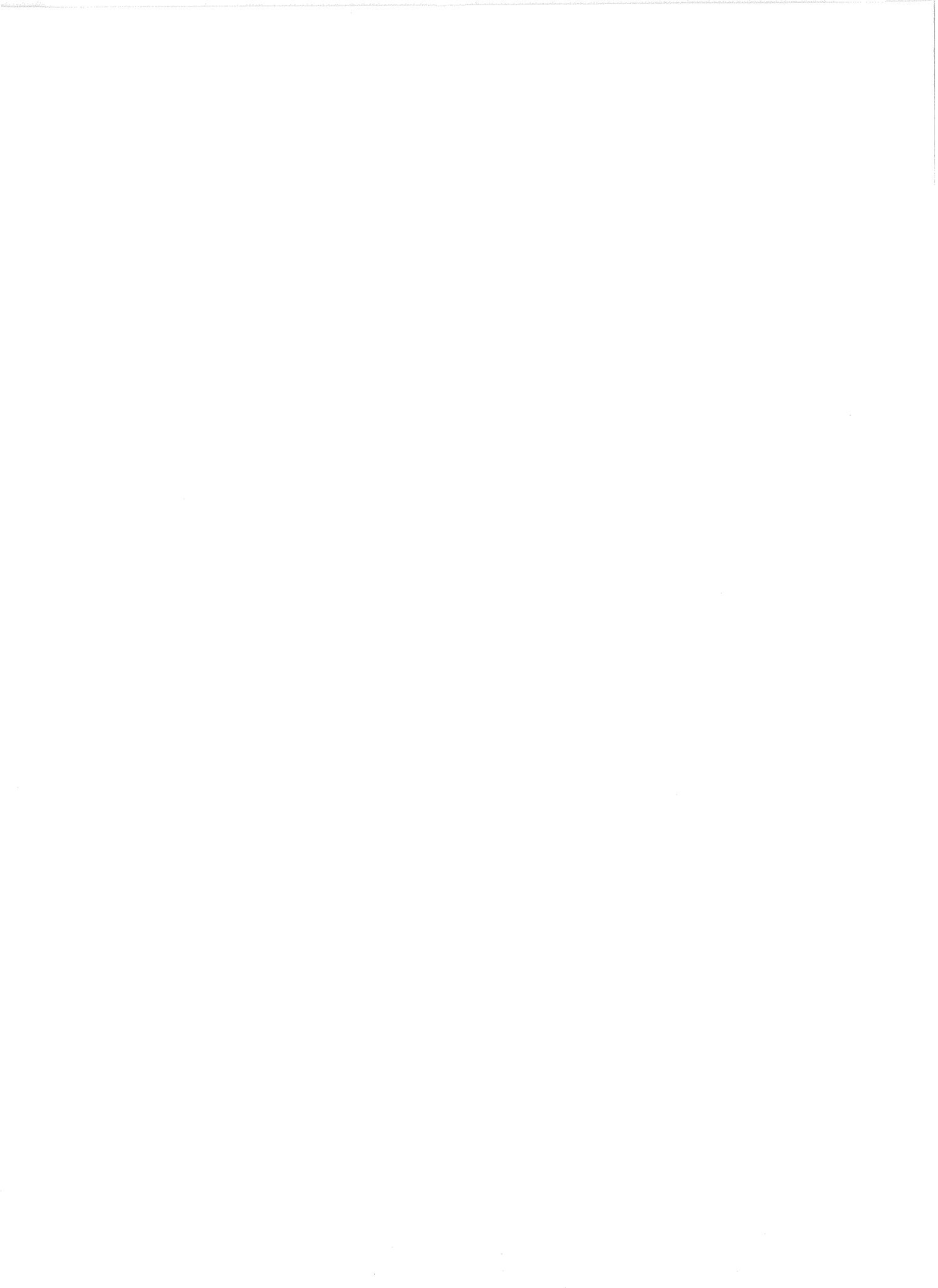
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Since 1981 in Southeast Georgia--

• area of timberland increased by less than 1 percent, and now totals 7.2 million acres. This is the first recorded increase in timberland acreage in this region since 1960. Timberland currently occupies more than 67 percent of this 35-county area. Within the 7-year remeasurement period, land use changes occurred on 0.5 million acres. More than 262,000 acres were added to the timberland base, while 233,000 acres were diverted to other land uses. Of the additions, 94 percent came from tree planting and natural seeding on former agricultural land. The remaining 6 percent increase was due to the reclassification of State-owned timberlands from reserved to a nonreserved status. Urban and related land uses accounted for 55 percent of the timberland clearing, and agricultural uses made up the remaining 45 percent.

• area of timberland controlled by nonindustrial private forest (NIPF) landowners increased by almost 2 percent. NIPF owners now control more than 4 million acres, or 56 percent, of the total timberland in this area. Within the NIPF category, farmer-owned timberland decreased by 17 percent to 1.5 million acres, whereas that owned by other individuals increased by almost 12 percent, and now totals 2.1 million acres. Timberland owned by corporations (excluding forest industry) increased by 82 percent to 378,000 acres. Forest industry fee-simple holdings increased by less than 1 percent, but land under long-term lease to forest industry decreased by 16 percent from 505,000 to 422,000 acres. Altogether, forest industry now controls almost 2.8 million acres, or about 39 percent of the timberland. Public agencies control 0.4 million acres, or 5 percent of the timberland in this area.

• pine plantation acreage increased by 37 percent to 2.5 million acres, 62 percent of all pine stands in the region. Natural pine stands declined by 30 percent to 1.6 million acres. Area of loblolly pine forest type increased by more than 60 percent to 1,067,000 acres. Loblolly stands accounted for 54 percent of the new pine plantations established within the 7-year remeasurement period. Slash pine remains the predominant pine forest type in the region with 2.7 million acres, down almost 8 percent from 2.9 million acres. Area of longleaf and pond pine types fell by 36 and 22 percent, respectively. Now only 230,000 acres are classed as longleaf pine and only 78,000 acres as pond pine. Area of oak-pine type declined more than 10 percent to 0.6 million acres. Oak-gum-cypress, the predominant hardwood type in this region increased by 145,000 acres to almost 1.8 million acres. Oak-hickory types declined by 5 percent to 0.7 million acres.

• area undergoing a final harvest and remaining in timberland averaged 225,000 acres annually. About 56 percent of the acres harvested were on NIPF land, 42 percent on land controlled by forest industry, and the remaining 2 percent on public land. About 102,000 acres of natural pine stands and 51,000 acres of pine plantations were harvested annually. Altogether, pine stands accounted for 68 percent of the total annual harvest. Hardwood stands made up 20 percent and oak-pine stands made up the remaining 12 percent of the annual acreage harvested. In addition to final harvests, partial harvests and other intermediate cutting occurred on over 56,000 acres yearly. Natural disturbances such as fire, disease, and weather damaged more than 55,000 acres each year.

• artificial regeneration increased from 75,000 acres annually during the previous survey to the current average of 155,000 acres. Including both artificial and natural regeneration, 159,000 acres of new pine stands were established yearly, exceeding the acreage of pine stands harvested by almost 4 percent. Almost 60 percent of the total regeneration occurred on NIPF land. Planted acreage on this land jumped from 19,000 to 80,000 acres annually and included some 29,000 acres of new pine plantations established yearly on nonforest land. Acreage in pine plantations on NIPF land more than doubled to almost 1.0 million acres; 63 percent of these plantations are less than 10 years old. Pine plantations make up 24 percent of all NIPF timberland. Artificial regeneration on forest industry land increased by 33 percent from 55,000 to 73,000 acres annually. Pine plantations account for 56 percent of all forest industry timberland.

• average basal area of live trees 5.0 inches d.b.h. and larger decreased from 60 to 58 square feet per acre. Current merchantable volume of softwoods and hardwoods averages 1,215 cubic feet per acre. Acreage in stands classed as fully stocked increased 21 percent to almost 3.1 million acres. Medium-stocked stands declined 7 percent to 2.7 million acres. Poorly stocked or nonstocked stands decreased by 18 percent to 1.5 million acres, but these stands still constitute 20 percent of the total timberland area.

• number of live softwood trees in almost all size classes declined. Exceptions to this trend included a 2-percent increase in number of 8-inch softwoods and a 9-percent increase in trees 17 inches and larger in diameter. The small increase in the 8-inch category was largely the result of a 26-percent increase in this class on forest industry land. The largest declines in softwood numbers occurred in the 2- and 4-inch

category, down by 18 percent. However, reductions of 14, 10, and 8 percent occurred in the 12-, 14-, and 6-inch diameter classes, respectively. Numbers of hardwood trees decreased in all diameter classes below 20 inches. The largest declines were recorded in the 2- and 10-inch classes, down 14 and 10 percent, respectively.

• volume of softwood growing stock declined less than 1 percent to 4.9 billion cubic feet. Loblolly pine inventory increased by 9 percent to just over 1.0 billion cubic feet. Volume of slash pine--still the dominant softwood species in the area--decreased by 1 percent to 2.8 billion cubic feet but accounts for 57 percent of the softwood growing-stock volume. The volume of longleaf pine fell by 21 percent to 401 million cubic feet, while that of cypress increased by 7 percent to 489 million cubic feet. Volume of softwood growing stock increased 3 percent in the 8-inch diameter class, but declined in all other diameter classes below 16 inches. The increase in the 8-inch class resulted from gains on forest industry land. Softwood volume declined by over 11 percent on NIPF land to 2.5 billion cubic feet. On forest industry land, it increased 13 percent to just under 2.0 billion cubic feet. Softwood volume on public land was up 15 percent to 0.4 billion cubic feet. Volume of softwood sawtimber increased by 1 percent to 14.9 billion board feet.

• volume of hardwood growing stock was up almost 4 percent to 3.3 billion cubic feet. Tupelo and blackgum, the major hardwood species group in the region, increased almost 3 percent to 1.2 billion cubic feet. Collectively, oak volumes were up 3 percent to 0.9 billion cubic feet. The two groups accounted for almost half of the total gain in hardwood volume. Hardwood volume increased in all diameter classes except the 14-inch and 18-inch classes. About 63 percent of the hardwood volume is on NIPF land. Forest industry holds 31 percent of the hardwood volume; the remaining 6 percent is on public land. Volume of hardwood sawtimber rose almost 8 percent to 9.2 billion board feet.

• net annual growth of softwood growing stock declined 111 million cubic feet to 331 million cubic feet, a drop of 25 percent. Although declines occurred across all ownership categories, more than 81 percent occurred on NIPF timberland. Here, net annual growth dropped from 224 to 134 million cubic feet, or by 40 percent. Softwood net growth dropped by 7 percent on forest industry land from 194 to 180 million cubic feet. Net growth per acre for softwood growing stock averaged 46 cubic feet, compared with 62 cubic feet in the previous survey. Net annual growth of hardwood growing stock declined by 18 percent to 92 million cubic feet. Net growth per acre of hardwood growing stock declined from 16 to 13 cubic feet. Net annual growth for all species included 1.4 billion board feet of sawtimber, down by 28 percent.

• annual mortality of softwood growing stock averaged 26 million cubic feet, a drop of 39 percent since 1980. Softwood mortality reduced gross growth by 7 percent and included 61 million board feet of sawtimber. Annual mortality of hardwood growing stock increased by 14 percent to 26 million cubic feet. Hardwood mortality reduced gross growth by 22 percent and included 79 million board feet of sawtimber. Declines in softwood mortality and increases in hardwood mortality occurred across all ownership categories.

• annual removals of softwood growing stock averaged 337 million cubic feet, down 19 percent since 1980. Annual removals included 1.1 billion board feet of sawtimber. By ownership, 53 percent of the softwood growing-stock removals came from NIPF timberland, 45 percent from forest industry land, and the remaining 2 percent from public land. Softwood removals were down across all ownership categories. Softwood removals exceeded growth by 34 percent on NIPF land. On forest industry and public land, growth exceeded removals by 19 and 175 percent, respectively. All ownerships combined, removals of softwoods exceeded net growth by 2 percent. Softwoods accounted for 82 percent of total growing-stock removals.

Hardwoods accounted for 18 percent and now total 74 million cubic feet, up from 56 million cubic feet. Hardwood removals on forest industry land nearly doubled and accounted for 47 percent of such removals. Removals on NIPF timberland increased by 5 percent and account for the remaining 53 percent of hardwood removals. Across all ownership categories, hardwood growth exceeded removals by 24 percent. In comparison, growth was more than double removals in 1980.

• the importance of pine plantations to current and future timber supplies continues to grow. Plantations now occupy 2.5 million acres or 35 percent of the timberland in this region. In addition, plantations contain almost a third of the current softwood inventory and are now supplying a third of all softwood removals. Although many pine plantations are recently established, almost three-fifths of the current softwood growth is accruing in plantations.

• the 14-county area south of the Altamaha River--where almost two-thirds of all forest industry holdings are located--experienced an 8-percent increase in volume of softwood growing stock. Softwood net annual growth exceeded annual removals by 15 percent, despite a 15-percent decline in net annual growth during the 7-year period. In comparison, volume of softwood growing stock declined by 8 percent in the 21-county area north of the Altamaha River. Softwood net annual growth dropped by 35 percent and removals exceeded growth by 24 percent. Although timberland acreage is roughly equal in the two regions, nearly three-fifths of the pine plantations are located south of the Altamaha River. However, more than three-fourths of the new pine stands established on nonforest lands during the last 7 years are north of the Altamaha River.

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 26,655 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 3,978 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 misclassifications.
2. Estimates of timber volume and forest classifications were based on measurements recorded at 2,671 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 51 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 2,692 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):

	<u>Percent</u>
Per million acres of timberland	1.06
Per billion cubic feet of growing stock.	6.26
Per billion cubic feet of net annual growth.	1.39
Per billion cubic feet of annual removals.	2.65

Sampling errors for county and unit totals,^a in terms of one standard error, Southeast Georgia, 1988

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
<u>Sampling error^b</u>				
Appling	2.18	11.80	11.00	23.62
Atkinson	2.14	14.21	12.00	31.87
Bacon	3.37	18.06	15.85	29.69
Brantley	1.29	14.78	13.90	23.93
Bryan	1.55	10.28	10.69	24.25
Bulloch	2.40	9.34	9.80	19.65
Camden	2.10	9.44	9.75	21.07
Candler	4.27	22.70	16.97	42.88
Charlton	1.19	9.44	9.80	20.69
Chatham	4.85	15.77	17.53	39.95
Clinch	.31	8.68	9.25	16.73
Coffee	2.37	15.32	13.60	20.59
Dodge	2.64	13.19	13.42	21.44
Echols	.89	8.67	9.96	26.76
Effingham	1.75	11.72	13.42	19.49
Emanuel	2.29	11.80	10.68	19.55
Evans	3.35	19.38	17.35	39.53
Glynn	3.42	18.11	14.53	29.21
Jeff Davis	3.33	20.09	14.10	26.33
Jenkins	3.18	18.11	13.62	28.97
Johnson	3.20	16.29	15.29	33.54
Laurens	2.18	10.83	9.63	15.73
Liberty	1.90	9.18	11.00	25.32
Long	.77	10.79	11.24	24.33
McIntosh	2.74	11.53	13.36	23.25
Montgomery	3.12	16.73	16.57	29.39
Pierce	2.68	16.99	14.96	27.69
Screven	2.47	10.55	9.11	24.98
Tattnall	2.22	15.90	12.88	27.23
Telfair	2.45	13.22	12.18	25.62
Toombs	3.94	17.83	16.51	31.00
Treutlen	3.26	16.37	18.19	45.19
Ware	1.19	8.87	9.28	18.10
Wayne	1.68	10.02	10.76	20.22
Wheeler	2.67	14.88	12.82	27.29
Total	.37	2.19	2.14	4.14

^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 flood-plains (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 saw-timber 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 non-commercial 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 non-pulpmills, 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	60.9	61.0	68.2	60.0
8	68.6	68.1	76.0	68.4
10	73.6	73.1	81.4	73.4
12	77.0	76.7	85.2	76.4
14	79.5	79.4	88.2	78.4
16	81.2	81.6	90.4	79.8
18	82.4	83.3	92.3	80.8
20	83.4	84.8	93.8	81.5
22	83.9	86.0	95.1	82.1
24+	85.2	87.8	98.1	83.2
Average	73.7	72.3	84.1	74.2

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, Southeast Georgia, 1988

County	All land ^a	Forest land				Nonforest land ^b
		Total	Timberland	Woodland	Reserved timberland	
<u>Acres</u>						
Appling	326,425	210,404	210,404	--	--	116,021
Atkinson	220,045	150,608	150,608	--	--	69,437
Bacon	182,816	124,795	124,795	--	--	58,021
Brantley	284,480	242,606	242,606	--	--	41,874
Bryan	282,406	233,918	233,895	23	--	48,488
Bulloch	433,875	218,676	218,676	--	--	215,199
Camden	415,654	309,104	297,795	309	11,000	106,550
Candler	158,822	86,827	86,827	--	--	71,995
Charlton	498,886	488,109	317,592	--	170,517	10,777
Chatham	283,802	95,926	92,980	506	2,440	187,876
Clinch	525,677	479,469	459,637	--	19,832	46,208
Coffee	385,184	232,957	232,957	--	--	152,227
Dodge	322,502	206,095	206,095	--	--	116,407
Echols	269,178	252,126	251,966	160	--	17,052
Effingham	308,429	244,154	244,154	--	--	64,275
Emanuel	440,525	305,760	305,760	--	--	134,765
Evans	119,341	70,179	70,179	--	--	49,162
Glynn	263,936	158,236	158,049	141	46	105,700
Jeff Davis	214,438	137,133	137,133	--	--	77,305
Jenkins	225,664	138,105	138,105	--	--	87,559
Johnson	196,103	112,863	112,863	--	--	83,240
Laurens	522,067	322,453	322,453	--	--	199,614
Liberty	330,669	246,273	246,273	--	--	84,396
Long	257,363	233,951	233,232	--	719	23,412
McIntosh	272,026	174,204	163,233	2,880	8,091	97,822
Montgomery	156,262	99,389	99,389	--	--	56,873
Pierce	220,102	142,819	142,819	--	--	77,283
Screven	419,040	253,981	253,981	--	--	165,059
Tattnall	309,677	195,430	195,430	--	--	114,247
Telfair	284,096	197,940	197,940	--	--	86,156
Toombs	237,466	133,970	133,970	--	--	103,496
Treutlen	129,319	91,894	91,894	--	--	37,425
Ware	580,557	512,394	342,959	14,142	155,293	68,163
Wayne	414,010	333,964	333,485	--	479	80,046
Wheeler	191,411	144,186	144,186	--	--	47,225
Total	10,682,253	7,580,898	7,194,320	18,161	368,417	3,101,355

^a From U.S. Bureau of the Census, 1980.

^b Includes 88,162 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, Southeast Georgia, 1988

County	All ownerships	Ownership class						Farmer	Corporate	Individual
		National Forest	Miscellaneous Federal	State	County and municipal	Forest industry ^a	Other private			
					Acres					
Appling	210,404	—	—	55	685	72,375	71,390	—	—	65,899
Atkinson	150,608	—	—	—	—	61,498	38,614	2,970	47,526	47,526
Bacon	124,795	—	—	—	2,440	32,582	29,924	5,985	53,864	53,864
Brantley	242,606	—	—	6,030	15	160,887	28,378	2,365	44,931	44,931
Bryan	233,895	—	—	95,220	7,371	162	51,914	19,807	5,659	53,762
Bullock	218,676	—	—	—	125	278	35,157	103,931	4,949	74,236
Camden	297,795	—	—	7,334	492	291	134,806	2,670	13,351	138,851
Candler	86,827	—	—	—	—	178	10,960	21,288	2,365	52,036
Charlton	317,592	—	—	5,490	—	1,194	175,576	24,930	49,859	60,543
Chatham	92,980	—	—	916	12,608	2,540	36,712	3,655	3,655	32,894
Clinch	459,637	—	—	2,410	—	40	375,830	18,596	11,622	51,139
Coffee	232,957	—	—	—	1,490	796	25,420	111,955	7,997	85,299
Dodge	206,095	—	—	—	—	10	34,525	66,173	19,607	85,780
Echols	251,966	—	—	—	—	—	212,796	11,191	—	27,979
Effingham	244,154	—	—	5,797	—	2,045	64,150	43,823	15,651	112,688
Emmanuel	305,760	—	—	980	—	588	75,157	117,454	17,618	93,963
Evans	70,179	—	—	14,525	—	178	7,153	22,551	—	25,772
Glynn	158,049	—	—	927	5,667	1,035	110,350	—	18,699	21,371
Jeff Davis	137,133	—	—	—	42	42	25,070	24,352	26,788	60,881
Jenkins	138,105	—	—	40	881	76	44,297	37,704	17,402	37,705
Johnson	112,863	—	—	350	—	57	18,538	67,830	5,218	20,870
Laurens	322,453	—	—	20	5,610	958	48,014	95,661	24,599	147,591
Liberty	246,273	—	—	104,940	42	300	63,662	3,362	6,724	67,243
Long	233,232	—	—	24,377	—	35	128,558	19,263	12,842	48,157
McIntosh	163,233	—	—	700	13,846	110	118,157	—	1,690	28,730
Montgomery	99,389	—	—	—	98	69	15,430	45,705	5,078	33,009
Pierce	142,819	—	—	—	—	8	33,333	73,834	7,638	28,006
Screven	253,981	—	—	—	30	1,814	46,521	95,136	49,102	61,378
Tattnall	195,430	—	—	4,145	2,214	62	39,110	88,716	—	61,183
Telfair	197,940	—	—	200	2,875	8	64,880	34,661	12,998	82,318
Toombs	133,970	—	—	—	248	396	34,612	51,707	—	47,007
Treutlen	91,894	—	—	—	—	51	10,336	38,037	5,434	38,036
Ware	342,959	—	—	3,932	29,874	1,469	179,350	32,084	12,340	83,910
Wayne	333,485	—	—	—	—	317	189,821	35,837	2,757	104,753
Wheeler	144,186	—	—	—	730	10	29,785	46,006	5,412	62,243
Total	7,194,320	—	271,323	91,266	18,257	2,767,322	1,526,225	378,374	2,141,553	

^a Includes 422,360 acres of other private land under long-term lease.

Table 3.—Area of timberland, by county and forest-type group, Southeast Georgia, 1988

County	All type groups	Forest-type group						
		White pine-hemlock	Spruce-fir	Longleaf-slash	Loblolly-shortleaf	Oak-pine	Oak-hickory	Oak-gum-cypress
Appling	210,404	—	—	124,816	18,670	10,674	16,475	39,769
Atkinson	150,608	—	—	85,353	16,801	11,881	13,832	22,741
Bacon	124,795	—	—	71,400	4,212	9,471	11,244	28,468
Brantley	242,606	—	—	131,050	5,796	24,038	11,036	70,686
Bryan	233,895	—	—	80,248	59,513	22,432	8,488	63,214
Bullock	218,676	—	—	43,048	26,351	44,885	24,744	—
Camden	297,795	—	—	117,451	46,058	24,909	26,345	80,481
Candler	86,827	—	—	24,457	10,335	7,096	21,285	2,551
Charlton	317,592	—	—	231,644	7,895	16,056	17,807	23,654
Chatham	92,980	—	—	10,999	25,873	14,305	23,810	44,190
Clinch	459,637	—	—	290,001	13,125	36,353	5,136	17,993
Coffee	232,957	—	—	115,874	26,834	22,118	9,485	—
Dodge	206,095	—	—	81,748	47,937	24,509	22,056	58,646
Echols	251,966	—	—	130,073	11,416	14,602	19,002	29,845
Effingham	244,154	—	—	76,582	68,397	8,399	37,717	—
Emanuel	305,760	—	—	98,853	66,649	37,686	44,044	58,528
Evans	70,179	—	—	16,584	17,623	3,222	8,864	23,886
Glynn	158,049	—	—	24,141	73,141	18,205	10,520	32,042
Jeff Davis	137,133	—	—	65,606	16,948	18,195	2,435	33,949
Jenkins	138,105	—	—	25,225	39,625	5,800	20,345	47,110
Johnson	112,863	—	—	21,300	36,698	13,044	18,302	23,519
Laurens	322,453	—	—	57,955	81,567	36,240	80,518	63,440
Liberty	246,273	—	—	89,876	73,627	16,099	13,134	53,537
Long	233,232	—	—	66,773	47,157	31,013	17,180	71,109
McIntosh	163,233	—	—	58,411	34,219	10,331	19,388	—
Montgomery	99,389	—	—	47,187	10,323	7,740	17,076	39,194
Pierce	142,819	—	—	65,058	10,585	18,214	7,834	12,697
Scituate	253,981	—	—	26,118	59,124	36,074	61,675	41,128
Tattnall	195,430	—	—	61,189	34,782	3,059	23,891	68,672
Telfair	197,940	—	—	69,129	33,167	13,956	17,018	69,781
Toombs	133,970	—	—	56,314	20,605	7,299	12,148	2,728
Treutlen	91,894	—	—	51,355	8,201	13,585	5,434	1,801
Ware	342,959	—	—	216,365	26,290	20,905	—	62,869
Wayne	333,485	—	—	159,674	52,638	22,030	11,027	88,116
Wheeler	144,186	—	—	54,948	21,087	18,944	15,084	2,350
Total	7,194,320	—	—	2,946,805	1,153,269	643,369	674,371	1,750,357
								26,149

Table 4.--Area of timberland, by county and stand-size class, Southeast Georgia, 1988

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
<u>Acres</u>					
Appling	210,404	65,730	57,730	84,507	2,437
Atkinson	150,608	31,652	65,581	45,485	7,890
Bacon	124,795	29,098	44,247	40,207	11,243
Brantley	242,606	38,362	66,544	120,881	16,819
Bryan	233,895	113,047	49,386	68,633	2,829
Bulloch	218,676	108,129	46,131	60,592	3,824
Camden	297,795	102,646	104,884	77,271	12,994
Candler	86,827	21,289	16,662	41,781	7,095
Charlton	317,592	71,039	129,400	90,413	26,740
Chatham	92,980	42,311	19,580	27,717	3,372
Clinch	459,637	63,254	198,050	182,617	15,716
Coffee	232,957	46,805	51,363	126,793	7,996
Dodge	206,095	78,871	39,649	87,575	--
Echols	251,966	26,711	133,708	86,647	4,900
Effingham	244,154	84,655	62,680	83,151	13,668
Emanuel	305,760	105,021	77,809	107,270	15,660
Evans	70,179	34,372	18,186	11,179	6,442
Glynn	158,049	50,972	37,688	68,607	782
Jeff Davis	137,133	29,266	35,095	70,336	2,436
Jenkins	138,105	48,808	31,026	54,490	3,781
Johnson	112,863	36,563	26,636	49,664	--
Laurens	322,453	111,761	62,535	139,957	8,200
Liberty	246,273	125,467	44,110	70,287	6,409
Long	233,232	88,165	56,809	66,444	21,814
McIntosh	163,233	59,548	50,780	46,583	6,322
Montgomery	99,389	45,099	19,607	32,144	2,539
Pierce	142,819	54,250	23,930	53,866	10,773
Screven	253,981	132,429	34,574	82,343	4,635
Tattnall	195,430	59,534	54,490	50,741	30,665
Telfair	197,940	92,563	36,532	54,587	14,258
Toombs	133,970	29,434	36,956	55,825	11,755
Treutlen	91,894	35,053	26,904	24,504	5,433
Ware	342,959	57,154	122,709	145,572	17,524
Wayne	333,485	79,859	115,618	118,728	19,280
Wheeler	144,186	46,832	33,710	57,455	6,189
Total	7,194,320	2,245,749	2,031,299	2,584,852	332,420

Table 5.--Area of timberland, by county and site class, Southeast Georgia, 1988

County	All classes	Site class (cubic feet per acre per year)				
		>164	120-164	85-119	50-84	20-49
<u>Acres</u>						
Appling	210,404	--	2,746	29,639	162,471	15,548
Atkinson	150,608	--	5,942	27,149	109,626	7,891
Bacon	124,795	--	--	28,470	79,823	16,502
Brantley	242,606	--	--	35,818	174,078	32,710
Bryan	233,895	--	21,388	63,561	132,262	16,684
Bulloch	218,676	--	13,263	58,380	144,558	2,475
Camden	297,795	--	4,111	107,559	177,860	8,265
Candler	86,827	--	--	16,841	58,160	11,826
Charlton	317,592	--	3,561	98,124	197,618	18,289
Chatham	92,980	--	5,756	35,123	52,101	--
Clinch	459,637	--	2,325	80,149	313,196	63,967
Coffee	232,957	--	5,331	59,002	153,806	14,818
Dodge	206,095	--	12,255	29,844	161,546	2,450
Echols	251,966	--	--	72,183	160,006	19,777
Effingham	244,154	--	8,398	51,541	177,955	6,260
Emanuel	305,760	--	--	63,719	209,253	32,788
Evans	70,179	--	5,642	16,821	44,495	3,221
Glynn	158,049	--	2,507	28,603	121,434	5,505
Jeff Davis	137,133	--	2,436	15,758	101,892	17,047
Jenkins	138,105	--	5,362	56,073	64,189	12,481
Johnson	112,863	--	2,609	44,445	57,943	7,866
Laurens	322,453	--	5,466	109,758	196,009	11,220
Liberty	246,273	--	--	76,595	156,049	13,629
Long	233,232	--	8,154	22,980	169,895	32,203
McIntosh	163,233	--	2,317	22,579	121,702	16,635
Montgomery	99,389	--	5,078	24,758	57,112	12,441
Pierce	142,819	--	2,546	25,664	96,394	18,215
Screven	253,981	3,069	16,436	89,294	130,588	14,594
Tattnall	195,430	--	9,178	27,193	118,885	40,174
Telfair	197,940	--	4,332	75,265	108,869	9,474
Toombs	133,970	--	--	31,920	94,750	7,300
Treutlen	91,894	--	2,717	21,519	56,791	10,867
Ware	342,959	--	5,059	70,133	221,300	46,467
Wayne	333,485	--	--	49,867	231,305	52,313
Wheeler	144,186	--	2,707	44,546	87,673	9,260
Total	7,194,320	3,069	167,622	1,710,873	4,701,594	611,162

Table 6.--Area of timberland, by county and stocking class of growing-stock trees, Southeast Georgia, 1988

County	All classes	Stocking class (percent) ^a				
		>130	100-130	60-99	16.7-59	<16.7
<u>Acres</u>						
Appling	210,404	7,619	93,778	90,338	16,232	2,437
Atkinson	150,608	2,460	51,841	65,676	22,741	7,890
Bacon	124,795	7,523	55,624	37,215	13,190	11,243
Brantley	242,606	5,781	69,049	104,843	46,114	16,819
Bryan	233,895	10,616	88,099	85,181	47,170	2,829
Bullock	218,676	12,863	74,983	93,740	33,266	3,824
Camden	297,795	53,180	82,331	100,330	48,960	12,994
Candler	86,827	2,365	34,791	30,749	11,827	7,095
Charlton	317,592	21,850	143,512	81,785	43,705	26,740
Chatham	92,980	4,549	36,363	37,183	11,513	3,372
Clinch	459,637	21,521	195,480	164,173	62,747	15,716
Coffee	232,957	13,328	86,368	90,610	34,655	7,996
Dodge	206,095	7,353	62,200	85,068	51,474	--
Echols	251,966	12,871	117,508	80,884	35,803	4,900
Effingham	244,154	5,037	94,511	81,844	49,094	13,668
Emanuel	305,760	25,448	100,219	96,411	68,022	15,660
Evans	70,179	7,779	26,943	20,951	8,064	6,442
Glynn	158,049	22,086	48,910	64,634	21,637	782
Jeff Davis	137,133	4,871	50,996	45,985	32,845	2,436
Jenkins	138,105	15,645	54,491	47,148	17,040	3,781
Johnson	112,863	5,257	44,875	49,646	13,085	--
Laurens	322,453	10,209	79,407	153,590	71,047	8,200
Liberty	246,273	18,739	95,089	91,279	34,757	6,409
Long	233,232	11,430	68,841	95,864	35,283	21,814
McIntosh	163,233	11,584	75,369	53,950	16,008	6,322
Montgomery	99,389	--	42,531	32,524	21,795	2,539
Pierce	142,819	12,730	46,656	44,066	28,594	10,773
Screven	253,981	32,256	104,471	92,639	19,980	4,635
Tattnall	195,430	5,787	63,316	66,721	28,941	30,665
Telfair	197,940	4,332	63,338	77,293	38,719	14,258
Toombs	133,970	2,350	67,974	35,788	16,103	11,755
Treutlen	91,894	--	32,653	45,657	8,151	5,433
Ware	342,959	14,703	152,749	119,201	38,782	17,524
Wayne	333,485	27,516	102,166	121,166	63,357	19,280
Wheeler	144,186	--	33,719	77,909	26,369	6,189
Total	7,194,320	421,638	2,641,151	2,662,041	1,137,070	332,420

^aSee stocking standards on page 12.

Table 7.--Volume of growing stock and sawtimber on timberland, by county and species group, Southeast Georgia, 1988

County	Growing stock					Sawtimber				
	All species		Pine	Other softwood	Soft hardwood	Hard hardwood	All species		Pine	Other softwood
	Thousand cubic feet ^a					Thousand board feet				
Appling	234,254	146,337	11,087	56,329	20,501	732,685	500,538	47,870	120,943	63,334
Atkinson	147,896	108,155	8,931	26,837	3,973	366,677	296,078	26,329	36,605	7,665
Bacon	120,282	76,650	9,686	27,441	6,505	270,633	178,779	34,096	39,686	18,072
Brantley	172,050	84,482	19,778	55,346	12,444	411,708	175,651	52,304	143,029	40,724
Bryan	329,878	199,971	6,132	83,232	40,543	1,117,046	748,060	14,170	214,806	140,010
Bull loch	318,137	130,789	4,599	136,558	46,191	1,127,588	552,728	14,452	402,887	157,491
Camden	447,394	235,286	31,994	116,899	63,215	1,216,369	597,192	150,891	271,493	196,793
Candler	95,013	25,300	3,078	50,046	16,589	292,082	107,589	15,007	122,348	47,138
Charlton	329,385	269,087	19,999	35,464	4,835	668,540	526,920	58,369	73,802	9,449
Chatham	159,902	65,316	3,592	55,066	35,928	588,879	293,458	14,926	153,925	126,570
Clinch	390,026	228,254	72,811	81,657	7,304	736,085	369,651	170,345	166,166	29,323
Coffee	208,338	127,290	9,411	60,633	11,004	643,339	425,361	31,332	158,295	28,351
Dodge	237,376	146,577	4,086	59,892	26,821	772,430	517,906	20,121	148,503	85,900
Echols	277,326	160,932	37,624	70,081	8,689	398,297	183,231	91,747	108,031	15,288
Effingham	266,266	130,861	8,249	62,709	64,447	859,690	492,823	25,938	148,945	191,984
Emanuel	306,020	169,582	2,369	102,028	32,041	966,462	606,444	12,167	229,905	118,246
Evans	120,708	34,656	6,187	64,966	14,899	360,346	142,283	21,734	151,844	44,485
Glynn	217,203	112,792	24,164	45,830	34,417	658,991	305,434	95,087	126,206	132,264
Jeff Davis	108,046	80,924	2,893	11,699	12,530	352,853	307,960	6,176	9,622	29,095
Jenkins	206,552	56,976	12,712	76,884	59,980	674,116	190,050	56,383	217,239	210,504
Johnson	126,312	65,560	—	45,501	15,251	404,269	222,459	—	131,549	50,261
Laurens	328,046	120,534	8,477	112,648	86,387	1,009,538	422,831	34,679	258,244	293,784
Liberty	401,666	246,429	10,057	90,999	54,181	1,423,327	914,373	40,732	253,329	214,893
Long	283,956	125,820	30,781	77,776	49,579	953,246	415,235	118,556	197,455	222,000
McIntosh	207,94	94,535	14,563	53,173	45,523	629,151	273,52	55,756	121,473	178,170
Montgomery	105,722	64,617	334	24,513	16,258	366,359	233,581	1,957	78,895	51,926
Pierce	163,481	76,541	17,685	61,738	7,517	474,753	251,480	64,412	141,998	16,863
Screven	495,275	167,920	34,527	197,594	95,234	1,890,636	746,538	157,909	668,923	317,266
Tattnall	222,641	117,691	5,574	65,989	33,387	758,339	417,355	13,727	197,281	129,976
Telfair	239,021	121,725	7,866	59,993	49,437	816,847	431,784	36,845	159,94	188,724
Toombs	111,377	59,014	1,483	41,986	8,894	284,888	173,385	5,480	84,512	21,511
Treutlen	86,480	60,644	—	17,198	8,638	250,623	188,258	—	33,150	29,215
Ware	268,273	203,225	22,659	39,051	3,338	565,389	434,736	60,449	63,055	7,149
Wayne	305,458	198,909	36,030	55,009	15,510	680,209	365,477	118,907	137,376	58,449
Wheeler	131,686	70,418	1,241	43,535	16,492	406,092	215,249	1,991	134,707	54,145
Total	8,169,240	4,383,799	490,659	2,266,300	1,028,482	24,128,542	13,224,329	1,671,474	5,705,721	3,527,018

^aFactors for converting to cords are shown on page 12.

Table 8.—Average net annual growth of growing stock and sawtimber on timberland, by county and species group, Southeast Georgia, 1981-1987

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				
Appling	11,585	8,994	213	1,720	658	41,308	31,237	1,165	5,769	3,137
Atkinson	8,724	8,122	92	361	149	27,958	26,342	426	961	229
Bacon	7,420	6,172	209	690	349	19,855	15,612	618	2,776	849
Brantley	10,881	8,959	328	1,102	492	25,581	19,167	806	4,345	1,263
Bryan	14,065	10,943	86	1,703	1,333	60,557	50,869	186	5,361	4,141
Bullock	11,436	5,879	34	3,777	1,746	53,890	31,447	119	15,536	6,788
Camden	24,504	18,664	912	3,001	1,927	99,422	81,592	3,021	7,973	6,836
Candler	3,043	1,194	41	1,166	642	11,549	4,299	218	3,600	3,432
Charlton	23,437	21,829	274	1,194	140	56,898	54,432	1,102	1,159	205
Chatham	6,470	3,473	66	1,152	1,779	26,954	17,642	328	3,838	5,146
Clinch	27,374	24,782	861	1,522	209	52,583	45,035	3,383	3,236	929
Coffee	10,779	8,073	157	2,165	384	34,907	25,659	699	6,413	2,136
Dodge	10,386	7,323	121	1,715	1,227	48,965	39,757	680	4,560	3,968
Echols	20,529	18,026	510	1,648	345	33,620	27,764	1,410	2,698	1,748
Effingham	12,888	8,516	189	1,521	2,662	47,245	35,055	717	4,912	6,561
Emanuel	15,979	11,958	46	3,049	926	48,312	32,756	251	11,827	3,478
Evans	4,069	2,185	70	1,278	536	18,916	10,194	337	6,373	2,012
Glynn	11,926	9,751	307	823	1,045	47,795	41,157	1,129	2,414	3,095
Jeff Davis	5,707	4,465	61	609	572	20,198	17,356	276	770	1,796
Jenkins	8,343	4,090	190	2,339	1,724	28,796	12,780	1,023	7,746	7,247
Johnson	6,399	4,604	--	1,279	516	27,005	19,550	--	5,551	1,904
Laurens	14,016	7,348	99	3,531	3,038	53,977	27,605	376	11,569	14,487
Liberty	18,423	14,862	139	2,064	1,358	68,291	56,468	584	5,395	5,844
Long	13,314	9,406	657	1,771	1,480	41,607	28,700	2,476	4,492	5,939
McIntosh	12,276	9,611	261	1,313	1,091	32,054	23,557	1,102	3,637	3,758
Montgomery	4,534	3,366	15	705	448	19,828	14,910	87	3,248	1,583
Pierce	6,064	4,202	216	1,365	281	24,099	17,682	1,014	3,356	2,047
Screven	16,620	8,927	510	4,297	2,886	80,514	45,341	2,274	20,001	12,898
Tattnall	9,393	6,451	101	1,881	960	29,912	20,071	520	6,196	3,125
Telfair	9,861	6,714	203	1,555	1,389	43,740	31,642	674	4,656	6,768
Toombs	6,186	4,315	43	1,152	676	21,194	12,800	135	7,232	1,027
Treutlen	5,093	4,492	--	344	257	17,675	15,276	--	1,246	1,153
Ware	22,440	20,768	359	1,163	150	56,937	53,727	782	1,419	1,009
Wayne	22,238	20,034	556	1,178	470	53,893	46,854	2,743	2,679	1,617
Wheeler	6,824	5,009	24	1,223	568	30,923	22,504	130	4,080	4,209
Total	423,226	323,507	7,950	57,356	34,413	1,406,958	1,056,839	30,791	186,964	132,364

Table 9.—Average annual removals of growing stock and sawtimber on timberland, by county and species group, Southeast Georgia, 1981-1987

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All 1 species	Pine	Other softwood	Soft hardwood	Hard hardwood
						Thousand cubic feet				
Appling	13,184	10,707	1,317	896	264	32,638	22,351	7,425	1,469	1,393
Atkinson	7,184	4,597	105	2,294	188	24,333	17,651	--	5,960	722
Bacon	8,111	7,045	--	807	259	23,525	20,053	--	2,807	665
Brantley	15,210	13,477	191	805	737	35,666	32,973	226	981	1,486
Bryan	12,833	11,393	--	1,164	276	35,188	31,375	--	2,897	916
Bulloch	12,566	9,456	--	1,847	1,263	45,483	33,780	--	7,850	3,853
Camden	13,060	9,592	--	1,665	1,803	42,292	30,405	--	3,684	8,203
Candler	3,998	3,672	--	270	56	16,600	15,584	--	1,016	--
Charlton	14,418	13,239	650	204	325	31,832	29,414	1,794	404	280
Chatham	6,081	4,094	315	674	998	14,707	10,187	196	923	3,401
Clinch	22,527	21,061	880	986	--	47,292	41,994	2,507	2,791	--
Coffee	13,480	12,557	221	144	558	34,733	32,169	506	413	1,645
Dodge	9,723	8,235	66	381	1,041	36,867	30,753	268	1,137	4,709
Echols	6,452	5,415	163	313	561	19,368	16,747	212	1,230	1,179
Effingham	20,887	15,002	360	3,107	2,418	72,605	54,869	1,229	8,861	7,646
Emanuel	16,166	12,253	--	2,885	1,028	59,608	47,197	--	10,435	1,976
Evans	2,894	2,714	--	43	137	10,554	10,554	--	--	--
Glynn	8,956	4,794	--	588	3,574	28,933	16,690	--	1,857	10,386
Jeff Davis	12,425	10,048	433	1,491	453	42,40	33,114	1,740	5,584	1,982
Jenkins	9,790	6,347	--	2,043	1,400	34,258	22,177	--	7,669	4,412
Johnson	4,360	2,952	--	1,080	328	14,719	10,795	--	2,429	1,495
Laurens	29,086	21,791	--	3,956	3,339	113,591	91,597	--	9,412	12,582
Liberty	12,156	8,939	--	1,943	1,274	40,287	31,250	--	5,279	3,758
Long	11,560	10,209	130	535	686	34,444	32,692	276	467	1,009
McIntosh	12,279	9,868	403	940	1,068	31,652	25,102	1,134	1,871	3,545
Montgomery	5,056	3,737	--	572	747	17,512	11,790	--	2,118	3,604
Pierce	8,723	7,954	227	391	151	29,173	28,188	499	243	243
Screven	9,805	5,190	255	2,122	2,238	38,981	20,339	1,239	9,340	8,063
Tattnall	11,415	8,945	390	1,962	118	37,607	33,381	979	3,247	--
Telfair	16,135	14,226	86	1,112	711	54,678	47,951	333	3,635	2,759
Toombs	7,112	4,960	--	1,529	623	18,035	9,642	--	5,217	3,176
Treutlen	4,001	3,779	--	222	--	16,766	16,766	--	--	--
Ware	18,252	16,611	784	722	135	54,621	52,295	1,636	301	389
Wayne	20,641	16,222	1,095	3,264	60	57,968	45,746	4,458	6,864	--
Wheeler	9,672	7,632	--	1,692	348	34,866	25,579	--	7,474	1,813
Total	410,598	328,713	8,071	44,649	29,165	1,282,962	1,033,150	26,657	125,865	97,290

Unit Tables

Table 10.--Area of timberland, by forest type and ownership class, Southeast Georgia, 1988

Forest type	All ownerships	Ownership class					
		National forest	Other public	Forest industry	Forest industry- leased	Other private	
<u>Acres</u>							
Softwood types							
White pine-hemlock	--	--	--	--	--	--	
Spruce-fir	--	--	--	--	--	--	
Longleaf pine	230,245	--	35,757	10,649	2,233	181,60	
Slash pine	2,716,560	--	121,779	1,114,885	209,927	1,269,96	
Loblolly pine	1,067,003	--	54,219	441,739	41,021	530,02	
Shortleaf pine	2,609	--	--	--	--	2,60	
Virginia pine	--	--	--	--	--	--	
Sand pine	5,187	--	--	5,187	--	--	
Eastern redcedar	--	--	--	--	--	--	
Pond pine	78,470	--	18,877	18,377	4,121	37,09	
Spruce pine	--	--	--	--	--	--	
Pitch pine	--	--	--	--	--	--	
Table Mountain pine	--	--	--	--	--	--	
Total	4,100,074	--	230,632	1,590,837	257,302	2,021,30	
Hardwood types							
Oak-pine	643,369	--	47,326	128,365	20,649	447,02	
Oak-hickory	533,372	--	23,868	96,942	6,419	406,14	
Chestnut oak	--	--	--	--	--	--	
Southern scrub oak	140,999	--	4,819	21,989	8,125	106,06	
Oak-gum-cypress	1,750,357	--	71,303	493,057	129,865	1,056,13	
Elm-ash-cottonwood	26,149	--	2,898	13,772	--	9,47	
Maple-beech-birch	--	--	--	--	--	--	
Total	3,094,246	--	150,214	754,125	165,058	2,024,84	
All types	7,194,320	--	380,846	2,344,962	422,360	4,046,15	

Table 11.—Area of timberland, by ownership and stocking classes of growing-stock trees,
Southeast Georgia, 1988

Ownership class	All classes	Stocking class (percent) ^a				<16.7
		>130	100-130	60-99	16.7-59	
<u>Acres</u>						
National forest	—	—	—	—	—	—
Other public	380,846	11,847	127,590	157,959	77,114	6,336
Forest industry	2,344,962	194,527	974,819	797,708	269,852	108,056
Forest industry-leased	422,360	25,125	208,077	127,881	42,993	18,284
Other private	4,046,152	190,139	1,330,665	1,578,493	747,111	199,744
All ownerships	7,194,320	421,638	2,641,151	2,662,041	1,137,070	332,420

^a See stocking standards on page 5.

Table 12.--Area of timberland, by forest type and stand-size class,
Southeast Georgia, 1988

Forest type	All stands	Stand-size class			Nonstocked areas		
		Sawtimber	Poletimber	Sapling-seedling			
<u>Acres</u>							
Softwood types							
White pine-hemlock	--	--	--	--	--		
Spruce-fir	--	--	--	--	--		
Longleaf pine	230,245	156,153	26,656	32,570	14,866		
Slash pine	2,716,560	616,491	1,055,597	965,074	79,398		
Loblolly pine	1,067,003	227,360	191,780	636,864	10,999		
Shortleaf pine	2,609	--	--	2,609	--		
Virginia pine	--	--	--	--	--		
Sand pine	5,187	--	5,187	--	--		
Eastern redcedar	--	--	--	--	--		
Pond pine	78,470	43,565	21,476	7,627	5,802		
Spruce pine	--	--	--	--	--		
Pitch pine	--	--	--	--	--		
Table Mountain pine	--	--	--	--	--		
Total	4,100,074	1,043,569	1,300,696	1,644,744	111,065		
Hardwood types							
Oak-pine	643,369	258,912	141,322	233,911	9,224		
Oak-hickory	533,372	167,264	96,382	227,137	42,589		
Chestnut oak	--	--	--	--	--		
Southern scrub oak	140,999	18,458	13,342	22,356	86,843		
Oak-gum-cypress	1,750,357	744,086	471,220	454,903	80,148		
Elm-ash-cottonwood	26,149	13,460	8,337	1,801	2,551		
Maple-beech-birch	--	--	--	--	--		
Total	3,094,246	1,202,180	730,603	940,108	221,355		
All types	7,194,320	2,245,749	2,031,299	2,584,852	332,420		

Table 13.--Area of timberland, by stand-age and broad management classes, all ownerships, Southeast Georgia, 1988

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
0-10	1,693,912	1,277,150	73,894	76,229	114,557	152,082
11-20	876,311	664,894	57,550	56,840	30,259	66,768
21-30	817,050	467,520	142,308	44,083	19,370	143,769
31-40	672,950	85,572	358,779	68,886	15,730	143,983
41-50	613,385	14,195	261,389	65,892	52,382	219,527
51-60	453,089	--	168,092	65,071	35,780	184,146
61-70	259,241	--	92,055	28,456	16,977	121,753
71-80	141,106	--	7,719	18,568	15,699	99,120
81+	203,265	--	4,994	8,442	10,199	179,630
No manageable stand	1,464,011	37,014	386,949	210,902	363,418	465,728
All classes	7,194,320	2,546,345	1,553,729	643,369	674,371	1,776,506

Table 14.--Area of timberland, by stand-age and broad management classes, public ownerships, Southeast Georgia, 1988

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
0-10	32,791	11,702	10,341	3,596	958	6,194
11-20	21,496	5,601	7,919	5,875	2,101	--
21-30	22,646	4,305	11,615	3,015	--	3,711
31-40	58,061	3,475	44,022	1,867	--	8,697
41-50	47,471	--	44,912	2,559	--	--
51-60	33,304	--	25,292	2,801	--	5,211
61-70	32,480	--	21,560	2,800	--	8,120
71-80	17,914	--	2,438	5,120	--	10,356
81+	19,911	--	--	2,800	1,270	15,841
No manageable stand	94,772	--	37,450	16,893	24,358	16,071
All classes	380,846	25,083	205,549	47,326	28,687	74,201

Table 15.--Area of timberland, by stand-age and broad management classes, forest industry,^a Southeast Georgia, 1988

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
0-10	716,533	656,624	4,740	10,637	12,836	31,696
11-20	528,694	485,542	11,289	4,764	6,880	20,219
21-30	513,029	375,441	34,997	25,460	2,425	74,706
31-40	182,275	30,931	81,895	5,097	2,461	61,891
41-50	151,137	5,153	46,772	29,200	9,026	60,986
51-60	105,752	--	10,358	19,939	5,571	69,884
61-70	54,364	--	2,448	5,207	2,138	44,571
71-80	41,976	--	--	7,442	4,868	29,666
81+	87,660	--	--	5,642	3,047	78,971
No manageable stand	385,902	4,693	97,256	35,626	84,223	164,104
All classes	2,767,322	1,558,384	289,755	149,014	133,475	636,694

^aIncludes 422,360 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 Southeast Georgia, 1988

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
0-10	944,588	608,824	58,813	61,996	100,763	114,192
11-20	326,121	173,751	38,342	46,201	21,278	46,549
21-30	281,375	87,774	95,696	15,608	16,945	65,352
31-40	432,614	51,166	232,862	61,922	13,269	73,395
41-50	414,777	9,042	169,705	34,133	43,356	158,541
51-60	314,033	--	132,442	42,331	30,209	109,051
61-70	172,397	--	68,047	20,449	14,839	69,062
71-80	81,216	--	5,281	6,006	10,831	59,098
81+	95,694	--	4,994	--	5,882	84,818
No manageable stand	983,337	32,321	252,243	158,383	254,837	285,553
All classes	4,046,152	962,878	1,058,425	447,029	512,209	1,065,611

^aExcludes 422,360 acres of other private land under long-term lease to forest industry.

Table 17.--Area of timberland, by broad management and stand-volume classes, Southeast Georgia, 1988

Broad management class	All classes	Stand-volume class (cubic feet of growing stock per acre)				
		0-499	500-999	1000-1499	1500-1999	2000+
<u>Acres</u>						
Pine plantation	2,546,345	1,591,180	287,824	264,314	164,109	238,918
Natural pine	1,553,729	366,918	210,651	231,525	201,142	543,493
Oak-pine	643,369	206,997	149,777	73,177	81,121	132,297
Upland hardwood	674,371	384,992	84,020	83,111	46,084	76,164
Lowland hardwood	1,776,506	496,950	231,080	229,389	204,072	615,015
All classes	7,194,320	3,047,037	963,352	881,516	696,528	1,605,887

Table 18.--Volume of growing stock on timberland, by broad management class, species group, and stand-age class, Southeast Georgia, 1988

Broad management class and species group	All classes	No manageable stand	Stand-age class (years)								
			0-10			11-20			21-30		
			41-50	51-60	61-70	71-80	81+				
<u>Thousand cubic feet</u>											
Pine plantation											
Softwood	1,563,368	5,614	29,855	525,331	808,918	177,414	16,236	--	--	--	--
Hardwood	25,548	763	5,434	3,095	11,682	4,574	--	--	--	--	--
Total	1,588,916	6,377	35,289	528,426	820,600	181,988	16,236	--	--	--	--
Natural pine											
Softwood	2,200,140	123,949	24,470	35,283	179,588	675,159	550,666	388,500	189,126	20,261	13,138
Hardwood	210,969	8,707	4,533	2,877	9,588	49,557	59,725	33,853	33,841	8,288	--
Total	2,411,109	132,656	29,003	38,160	189,176	724,716	610,391	422,353	222,967	28,549	13,138
Oak-pine											
Softwood	480,142	79,754	8,497	29,891	32,297	69,225	82,210	83,072	37,267	39,645	18,284
Hardwood	283,084	21,369	9,607	15,582	5,371	43,079	57,921	79,235	26,388	16,894	7,638
Total	763,226	101,123	18,104	45,473	37,668	112,304	140,131	162,307	63,655	56,539	25,922
<u>Upland hardwood</u>											
Softwood	64,935	27,092	5,194	1,902	1,472	3,294	10,666	3,707	6,510	3,063	2,035
Hardwood	433,143	76,162	24,990	11,715	18,344	29,384	98,176	75,203	31,839	34,511	32,819
Total	498,078	103,254	30,184	13,617	19,816	32,678	108,842	78,910	38,349	37,574	34,854
<u>Lowland hardwood</u>											
Softwood	565,873	36,401	14,590	11,045	54,823	47,210	76,043	85,552	53,733	36,440	150,036
Hardwood	2,342,038	153,156	20,176	32,836	89,990	181,655	423,048	405,684	283,682	271,125	480,686
Total	2,907,911	189,557	34,766	43,881	144,813	228,865	499,091	491,236	337,415	307,565	630,722
All types											
Softwood	4,874,458	272,810	82,606	603,452	1,077,098	972,302	735,821	560,831	286,636	99,409	183,493
Hardwood	3,294,782	260,157	64,740	66,105	134,975	308,249	638,870	593,975	375,750	330,818	521,143
Total	8,169,240	532,967	147,346	669,557	1,212,073	1,280,551	1,374,691	1,154,806	662,386	430,227	704,636

Table 19.—Average net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class, Southeast Georgia, 1981-1987

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
Pine plantation										
Softwood	194,338	457	14,503	97,972	70,904	9,702	800	—	—	—
Hardwood	2,553	20	60	648	1,384	406	35	—	—	—
Total	196,891	477	14,563	98,620	72,288	10,108	835	—	—	—
Natural pine										
Softwood	99,432	7,500	1,800	3,939	12,823	33,043	21,782	12,007	5,437	805
Hardwood	9,595	373	335	323	955	2,615	2,328	1,069	1,162	435
Total	109,027	7,873	2,135	4,262	13,778	35,658	24,110	13,076	6,599	1,240
Oak-pine										
Softwood	20,062	4,424	468	1,965	1,472	3,621	3,186	2,807	961	750
Hardwood	9,371	754	438	1,344	377	1,583	1,796	1,935	653	338
Total	29,433	5,178	906	3,309	1,849	5,204	4,982	4,742	1,614	1,088
Upland hardwood										
Softwood	3,476	1,674	457	240	91	176	385	165	164	81
Hardwood	13,982	3,033	1,129	891	1,153	959	2,993	2,092	689	538
Total	17,458	4,707	1,586	1,131	1,244	1,135	3,378	2,257	853	619
Lowland hardwood										
Softwood	14,149	1,279	561	597	1,811	1,380	1,960	1,931	1,369	722
Hardwood	56,268	4,963	822	2,130	3,761	5,194	10,751	9,797	5,663	5,116
Total	70,417	6,242	1,383	2,727	5,572	6,574	12,711	11,728	7,032	5,838
All types										
Softwood	331,457	15,334	17,789	104,713	87,101	47,922	28,113	16,910	7,931	2,358
Hardwood	91,769	9,143	2,784	5,336	7,630	10,757	17,903	14,893	8,167	6,427
Total	423,226	24,477	20,573	110,049	94,731	58,679	46,016	31,803	16,098	8,785
										12,015

^aClassifications 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, Southeast Georgia, 1981-1987

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
Thousand cubic feet										
Pine plantation										
Softwood	106,999	267	118	34,940	69,078	2,192	404	—	—	—
Hardwood	1,532	—	450	561	521	—	—	—	—	—
Total	108,531	267	568	35,501	69,599	2,192	404	—	—	—
Natural pine										
Softwood	187,226	14,215	1,008	7,963	49,304	52,706	37,636	17,852	4,854	1,041
Hardwood	6,844	119	53	89	941	1,876	2,644	768	296	58
Total	194,070	14,334	1,061	8,052	50,245	54,582	40,280	18,620	5,150	1,099
Oak-pine										
Softwood	23,568	3,856	1,423	2,590	2,241	2,838	4,526	4,528	1,566	—
Hardwood	8,009	423	—	324	591	692	3,860	1,675	444	—
Total	31,577	4,279	1,423	2,914	2,832	3,530	8,386	6,203	2,010	—
Upland hardwood										
Softwood	4,278	951	635	404	369	571	762	586	—	—
Hardwood	16,478	907	275	968	1,798	4,194	4,547	2,442	801	—
Total	20,756	1,858	910	1,372	2,167	4,765	5,309	3,028	801	—
Lowland hardwood										
Softwood	14,713	1,159	401	1,306	624	1,973	883	4,229	397	1,511
Hardwood	40,951	1,258	—	1,886	1,357	6,248	5,921	10,767	5,886	3,595
Total	55,664	2,417	401	3,192	1,981	8,221	6,804	14,996	6,283	5,106
All types										
Softwood	336,784	20,448	3,585	47,203	121,616	60,280	44,211	27,195	6,817	2,552
Hardwood	73,814	2,707	778	3,828	5,208	13,010	16,972	15,652	7,427	3,653
Total	410,598	23,155	4,363	51,031	126,824	73,290	61,183	42,847	14,244	6,205
										7,456

^aClassifications before timber removals.

Table 21.—Merchantable volume of live trees and growing stock on timberland, by forest-type and species groups, Southeast Georgia, 1988

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
<u>Thousand cubic feet</u>										
White pine-hemlock	--	--	--	--	--	--	--	--	--	--
Spruce-fir	--	--	--	--	--	--	--	--	--	--
Longleaf-slash pine	3,069,309	2,894,384	24,830	92,988	57,107	3,040,483	2,890,818	22,309	79,140	—
Loblolly-shortleaf pine	983,490	852,119	1,443	45,803	84,125	959,542	848,938	1,443	42,926	48,216
Oak-pine	826,420	400,908	81,436	210,693	133,383	763,226	399,787	80,355	181,520	66,235
Oak-hickory	568,299	63,355	2,425	161,001	341,518	498,078	62,510	2,425	144,710	101,564
Oak-gum-cypress	3,216,999	182,636	393,072	2,030,388	610,903	2,840,811	181,746	381,256	1,790,029	288,433
Elm-ash-cottonwood	72,295	—	2,871	31,704	37,720	67,100	—	2,871	27,975	487,780
Maple-beech-birch	—	—	—	—	—	—	—	—	—	36,254
All types	8,736,812	6,393,402	506,077	2,572,577	1,264,756	8,169,240	4,383,799	490,659	2,266,300	1,028,482

Table 22.--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and ownership class, Southeast Georgia, 1981 to 1988

Treatment or disturbance	All ownerships	Ownership class			
		Public	Forest industry	Forest industry- leased	Other private
<u>Acres^a</u>					
Final harvest	225,122	3,385	87,675	7,905	126,157
Partial harvest ^b	30,271	1,922	3,742	792	23,815
Commercial thinning	13,820	1,068	3,998	288	8,466
Other stand improvement	2,806	--	450	--	2,356
Site preparation	132,952	1,642	67,153	6,839	57,318
Artificial regeneration ^c	154,583	1,642	66,800	5,903	80,238
Natural regeneration ^c	49,845	2,924	5,633	357	40,931
Other treatment	9,585	1,102	1,050	--	7,433
Natural disturbance	55,277	1,323	21,159	657	32,138

^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, Southeast Georgia, 1981 to 1988

Treatment or disturbance	All classes	Broad management class ^a				
		Pine plantation	Natural pine	Oak- pine	Upland hardwood	Lowland hardwood
<u>Acres^b</u>						
Final harvest	225,122	51,097	102,020	26,414	17,422	28,169
Partial harvest ^c	30,271	1,150	12,586	2,486	3,373	10,676
Commercial thinning	13,820	10,338	3,482	--	--	--
Other stand improvement	2,806	1,075	1,299	--	--	432
Site preparation	132,952	37,000	55,052	10,951	16,005	13,944
Other treatment	9,585	--	4,480	678	2,891	1,536
Natural disturbance	55,277	26,352	11,541	3,912	2,393	11,079

^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, Southeast Georgia, 1981 to 1988

Type of regeneration	All classes	Broad management class ^a				
		Pine plantation	Natural pine	Oak- pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
Artificial regeneration following harvest	95,296	91,932	--	2,254	339	771
Natural regeneration following harvest	33,335	--	3,364	4,755	11,709	13,507
Other artificial regeneration on forest land	30,243	28,764	--	1,479	--	--
Other natural regeneration on forest land	13,504	--	4,650	1,505	3,075	4,274
Artificial regeneration on nonforest land	29,044	28,688	--	356	--	--
Natural reversion of nonforest land	3,006	--	1,135	--	339	1,532
Total	204,428	149,384	9,149	10,349	15,462	20,084

^aClassification after regeneration.

Table 25.--Area of timberland, by treatment opportunity and broad management classes, Southeast Georgia, 1988

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
Salvage	17,492	7,345	7,078	--	3,069	--
Harvest	390,696	3,059	74,487	32,215	28,958	251,977
Commercial thinning	400,193	299,438	82,302	5,188	--	13,265
Other stand improvement	469,347	39,210	63,642	73,898	62,938	229,659
Stand conversion	38,817	12,118	5,098	1,867	6,193	13,541
Regeneration	1,423,139	37,014	381,155	208,011	363,418	433,541
Stands in relatively good condition	4,262,741	2,145,654	931,614	302,029	209,795	673,649
Adverse sites ^a	191,895	2,507	8,353	20,161	--	160,874
All classes	7,194,320	2,546,345	1,553,729	643,369	674,371	1,776,506

^aAreas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 26.--Area of timberland, by treatment opportunity and ownership classes, Southeast Georgia, 1988

Treatment opportunity class	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
<u>Acres</u>					
Salvage	17,492	2,438	4,907	--	10,147
Harvest	390,696	38,778	113,111	4,317	234,490
Commercial thinning	400,193	7,415	233,052	44,829	114,897
Other stand improvement	469,347	17,984	125,311	33,289	292,763
Stand conversion	38,817	6,293	10,957	4,337	17,230
Regeneration	1,423,139	94,772	309,745	47,181	971,441
Stands in relatively good condition	4,262,741	201,448	1,479,614	251,056	2,330,623
Adverse sites ^a	191,895	11,718	68,265	37,351	74,561
All classes	7,194,320	380,846	2,344,962	422,360	4,046,152

^aAreas 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, Southeast Georgia, 1988

Ownership class	Live trees				Growing stock			
	All species	Pine	Other softwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood
Thousand cubic feet								
National forest	--	--	--	--	--	--	--	--
Other public	696,990	398,766	22,299	171,090	104,835	639,301	396,887	21,171
Forest industry	2,679,400	1,431,876	240,362	624,244	382,918	2,525,042	1,428,226	229,755
Forest industry-leased	492,054	263,544	60,411	140,277	27,822	465,168	263,220	59,692
Other private	4,868,368	2,299,216	183,005	1,636,966	749,181	4,539,729	2,295,466	180,041
All ownerships	8,736,812	4,393,402	506,077	2,572,577	1,264,756	8,169,240	4,383,799	490,659
								2,266,300
								1,028,482

Table 28.—Volume of sawtimber on timberland, by ownership class and species group, Southeast Georgia, 1988

Ownership class	Small sawtimber ^a				Large sawtimber ^b			
	All species	Pine	Other softwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood
Thousand board feet								
National forest	--	--	--	--	--	--	--	--
Other public	1,162,387	870,274	37,054	185,931	69,128	1,234,688	829,175	37,042
Forest industry	3,255,231	2,058,053	404,886	537,450	254,842	2,890,054	792,208	373,812
Forest industry-leased	537,071	286,722	109,221	121,824	19,304	252,698	47,761	60,035
Other private	7,890,639	5,413,005	290,109	1,610,741	576,784	6,905,774	2,927,131	359,315
All ownerships	12,845,328	8,628,054	841,270	2,455,946	920,058	11,283,214	4,596,275	830,204
								3,249,775
								2,606,960

^aVolume of sawtimber trees less than 15.0 inches at d.b.h.

^bVolume 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, Southeast Georgia, 1981-1987

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	—	—	—	—	—	—	—	—	—	—
Other public	23,731	17,630	352	3,588	2,161	6,758	6,550	—	161	47
Forest industry	173,032	147,545	3,280	12,051	10,156	169,814	130,210	6,360	19,793	13,391
Forest industry-leased	32,364	27,980	880	2,657	847	15,737	13,964	163	952	658
Other private	194,099	130,352	3,438	39,060	21,249	218,289	177,929	1,548	23,743	15,069
All ownerships	423,226	323,507	7,950	57,356	34,413	410,598	328,713	8,071	44,649	29,165

Table 30.—Average net annual growth and removals of sawtimber on timberland, by ownership class and species group, Southeast Georgia, 1981-1987

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	—	—	—	—	—	—	—	—	—	—
Other public	102,155	80,179	1,032	12,053	8,891	24,991	24,453	—	361	177
Forest industry	469,552	385,712	12,905	32,620	38,315	459,738	336,583	22,506	54,262	46,297
Forest industry-leased	72,622	61,154	3,298	5,311	2,859	26,338	21,996	212	2,271	1,859
Other private	762,629	529,794	13,556	136,980	82,299	771,895	650,118	3,849	68,971	48,957
All ownerships	1,406,958	1,056,839	30,791	186,964	132,364	1,282,962	1,033,150	26,657	125,865	97,290

Table 31.--Volume of timber on timberland, by class of timber and species group, Southeast Georgia, 1988

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
<u>Thousand cubic feet</u>					
Sawtimber trees					
Saw-log portion	4,510,076	2,456,771	335,079	1,094,089	624,137
Upper-stem portion ^a	634,517	275,160	42,647	222,457	94,253
Total	5,144,593	2,731,931	377,726	1,316,546	718,390
Poletimber trees	<u>3,024,647</u>	<u>1,651,868</u>	<u>112,933</u>	<u>949,754</u>	<u>310,092</u>
All growing-stock trees	<u>8,169,240</u>	<u>4,383,799</u>	<u>490,659</u>	<u>2,266,300</u>	<u>1,028,482</u>
Rough trees					
Sawtimber size	213,889	3,960	4,148	107,955	97,826
Poletimber size	245,076	4,787	2,053	133,800	104,436
Total	458,965	8,747	6,201	241,755	202,262
Rotten trees					
Sawtimber size	91,734	502	8,857	51,963	30,412
Poletimber size	16,873	354	360	12,559	3,600
Total	108,607	856	9,217	64,522	34,012
Salvable dead trees					
Sawtimber size	6,667	3,850	156	1,513	1,148
Poletimber size	5,603	3,958	129	1,078	438
Total	12,270	7,808	285	2,591	1,586
Total, all timber	8,749,082	4,401,210	506,362	2,575,168	1,266,342

^aIncludes cull sections in the saw-log portion.

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Table 32.—Number of live trees on timberland, by species and diameter class, Southeast Georgia, 1988

Table 33.—Number of growing-stock trees on timberland, by species and diameter class, Southeast Georgia, 1988

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	14.0-16.9	15.0-16.9	16.0-18.9	17.0-20.9	18.0-28.9	19.0-28.9	20.0-28.9
Thousand trees															
Softwood															
Longleaf pine															
Slash pine	51,493	15,634	8,576	5,472	5,829	6,949	4,848	2,563	1,157	306	110	49	—	—	
Shortleaf pine	859,465	218,449	241,532	208,483	112,409	45,373	17,491	9,247	3,912	1,599	634	324	12	—	
Loblolly pine	1,907	154	1,087	378	175	39	50	17	—	—	7	—	—	—	
Pond pine	293,449	119,309	68,850	46,726	27,797	14,124	7,333	3,865	2,326	1,382	946	754	35	—	
Virginia pine	20,118	4,341	4,084	3,994	2,681	2,014	1,620	716	410	128	95	35	—	—	
Pitch pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Table Mountain pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Spruce pine	1,661	636	149	292	43	244	96	35	84	69	—	11	2	—	
Sand pine	1,362	328	336	698	—	—	—	—	—	—	—	—	—	—	
Eastern white pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Eastern hemlock	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Spruce and fir	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Baldcypress	11,966	4,089	1,963	905	1,492	999	523	693	361	293	245	351	52	—	
Pondcypress	154,258	86,774	32,120	13,227	8,434	6,082	4,038	1,841	977	415	152	168	30	—	
Cedars	1,287	933	173	75	57	—	—	19	30	—	—	—	—	—	
Total softwoods	1,396,966	450,647	358,870	280,252	158,917	75,824	35,999	18,996	9,257	4,192	2,182	1,699	131	—	
Hardwood															
Select white oaks	6,619	2,655	1,009	879	853	345	302	153	133	108	63	101	18	—	
Select red oaks	2,581	1,203	493	325	70	82	193	17	65	45	46	28	14	—	
Chestnut oak	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Other white oaks	16,389	8,232	2,926	1,508	1,198	635	434	349	252	223	212	311	109	—	
Other red oaks	292,396	179,791	54,305	24,124	13,023	7,286	5,732	2,21	1,932	1,263	847	1,203	169	—	
Hickory	10,802	4,578	2,180	1,677	849	653	326	214	105	103	59	47	11	—	
Yellow birch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hard maple	166	166	—	—	—	—	—	—	—	—	—	—	—	—	
Soft maple	209,715	138,128	37,459	15,585	7,774	4,913	2,358	1,586	898	427	271	287	29	—	
Beech	109	—	—	109	—	—	—	—	—	—	—	—	—	—	
Sweetgum	189,525	111,639	40,132	17,553	8,192	4,397	3,196	2,094	1,201	571	292	244	14	—	
Tupelo and blackgum	469,877	238,337	110,523	49,572	29,871	17,496	11,585	5,964	3,049	1,755	807	825	93	—	
Ash	26,176	18,235	3,713	1,363	1,056	942	310	288	125	69	27	44	4	—	
Cottonwood	138	—	—	—	—	—	77	31	23	—	—	7	—	—	
Basswood	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Yellow-poplar	23,060	11,391	3,989	2,418	1,299	1,003	756	872	533	274	250	236	39	—	
Bay and magnolia	134,931	91,573	25,541	8,613	3,830	2,350	1,523	661	420	227	97	86	10	—	
Black cherry	20,622	14,607	4,484	609	569	241	78	34	—	—	—	—	—	—	
Black walnut	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Sycamore	544	—	—	—	189	123	111	27	39	28	—	9	18	—	
Black locust	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Elm	9,159	3,530	2,400	1,098	1,036	462	235	260	58	37	35	8	—	—	
Other eastern hardwoods	9,588	4,821	2,751	848	448	370	158	184	—	—	—	8	—	—	
Total hardwoods	1,422,397	828,886	291,905	126,470	70,191	41,363	27,244	15,459	8,799	5,102	3,015	3,453	510	—	
All species	2,819,363	1,279,533	650,775	406,722	229,108	117,187	63,243	34,455	18,056	9,294	5,197	5,152	641	—	

Table 34.—Merchantable volume of live trees on timberland, by species and diameter class, Southeast Georgia, 1988

Species	All classes	Diameter class (inches at breast height)										Thousands cubic feet					
		5.0-6.9	7.0-8.9	9.0-10.9	10.0-12.9	11.0-14.9	12.0-14.9	13.0-16.9	14.0-16.9	15.0-16.9	16.0-18.9		17.0-18.9	18.0-20.9	19.0-20.9	20.0-22.9	21.0-22.9
Softwood																	
Longleaf pine	401,904	16,013	42,112	95,882	100,140	76,039	45,797	15,217	7,430	3,274	—	—	—	—	—	—	
Slash pine	2,799,395	553,310	734,759	567,504	352,809	273,834	157,513	86,918	42,593	28,442	1,713	—	—	—	—	—	—
Shortleaf pine	4,744	1,281	1,004	434	1,135	352	—	—	—	—	538	—	—	—	—	—	—
Loblolly pine	1,038,280	110,027	169,407	167,271	146,901	114,640	97,122	77,898	67,152	80,824	7,038	—	—	—	—	—	—
Pond pine	130,621	9,259	17,091	23,125	30,076	19,891	15,090	6,331	6,384	3,374	—	—	—	—	—	—	—
Virginia pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pitch pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Table Mountain pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spruce pine	16,905	967	226	3,370	2,254	1,413	3,265	3,432	—	—	1,287	691	—	—	—	—	—
Sand pine	1,553	1,553	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eastern white pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eastern hemlock	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spruce and fir	135,077	2,814	8,573	11,351	9,865	18,293	11,986	13,946	13,578	31,717	12,954	—	—	—	—	—	—
Baldcypress	368,614	44,085	59,319	72,544	70,124	45,612	32,266	16,719	8,436	13,098	6,411	—	—	—	—	—	—
Pondcypress	2,386	243	312	264	—	536	957	—	—	—	74	—	—	—	—	—	—
Cedars	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total softwoods	4,899,479	739,552	1,032,803	941,745	713,304	550,610	363,996	220,461	145,573	162,628	28,807	—	—	—	—	—	—
Hardwood																	
Select white oaks	49,770	2,920	5,378	3,885	6,124	3,721	4,605	5,990	4,082	9,461	3,604	—	—	—	—	—	—
Select red oaks	20,211	931	238	1,045	3,449	417	2,909	2,372	3,324	2,723	2,803	—	—	—	—	—	—
Chestnut oak	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other white oaks	160,600	4,859	8,754	7,835	10,060	13,419	11,917	13,560	15,075	39,560	35,561	—	—	—	—	—	—
Other red oaks	797,364	72,972	90,730	87,989	112,115	77,136	72,918	66,798	53,908	121,255	41,543	—	—	—	—	—	—
Hickory	53,661	5,651	9,067	6,948	6,266	3,885	4,742	3,939	5,913	5,913	2,477	—	—	—	—	—	—
Yellow birch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hard maple	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Soft maple	419,479	64,859	62,722	67,747	54,356	46,394	35,946	25,982	19,952	34,716	6,805	—	—	—	—	—	—
Beech	1,055	347	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sweetgum	406,082	45,790	53,094	53,471	65,468	63,447	48,681	29,701	20,223	23,440	2,767	—	—	—	—	—	—
Tupelo and blackgum	1,328,462	166,473	205,064	217,507	226,992	167,656	114,656	87,975	47,007	73,409	21,723	—	—	—	—	—	—
Ash	60,122	5,030	9,403	13,456	7,684	7,880	4,863	3,308	2,107	5,165	1,026	—	—	—	—	—	—
Cottonwood	3,214	—	—	1,474	417	594	—	—	—	729	—	—	—	—	—	—	—
Basswood	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow-poplar	158,417	8,544	9,707	12,755	15,671	26,025	22,345	14,220	17,004	24,854	7,292	—	—	—	—	—	—
Bay and magnolia	186,959	30,301	30,546	30,197	31,118	21,378	15,542	11,090	6,149	9,191	1,447	—	—	—	—	—	—
Black cherry	11,492	2,280	4,307	2,631	1,538	736	—	—	—	—	—	—	—	—	—	—	—
Black walnut	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sycamore	8,212	736	1,074	1,729	570	1,072	1,235	—	—	647	1,149	—	—	—	—	—	—
Black locust	38,375	3,154	7,989	6,027	4,811	7,832	2,721	2,431	2,810	600	—	—	—	—	—	—	—
Elm	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other eastern hardwoods	133,858	33,871	26,994	27,935	16,328	10,359	4,941	6,535	3,914	2,981	—	—	—	—	—	—	—
Total hardwoods	3,837,333	447,840	521,651	544,750	563,649	454,332	347,618	274,904	200,141	355,400	127,048	—	—	—	—	—	—
All species	8,736,812	1,187,392	1,554,454	1,486,495	1,276,953	1,004,942	711,614	495,365	345,714	518,028	155,855	—	—	—	—	—	—

Table 35.—Volume of growing stock on timberland, by species and diameter class, Southeast Georgia, 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	21.0-22.9	29.0 and larger
Thousand cubic feet											
Softwood											
Longleaf pine	400,818	15,768	41,886	95,600	100,140	76,039	45,464	15,217	7,430	3,274	—
Slash pine	2,795,435	552,402	732,823	567,504	352,571	273,353	157,513	86,521	42,593	28,442	1,713
Shortleaf pine	4,744	1,281	1,004	434	1,135	352	—	—	—	538	—
Loblolly pine	1,034,861	109,620	168,661	166,396	146,515	114,640	97,122	77,898	67,152	79,819	7,038
Pond pine	129,483	8,785	16,892	22,660	30,076	19,891	15,090	6,331	6,384	3,374	—
Virginia pine	—	—	—	—	—	—	—	—	—	—	—
Pitch pine	—	—	—	—	—	—	—	—	—	—	—
Table Mountain pine	—	—	—	—	—	—	—	—	—	—	—
Spruce pine	16,905	967	226	3,370	2,254	1,413	3,265	3,432	—	1,287	691
Sand pine	1,553	1,553	—	—	—	—	—	—	—	—	—
Eastern white pine	—	—	—	—	—	—	—	—	—	—	—
Eastern hemlock	—	—	—	—	—	—	—	—	—	—	—
Spruce and fir	—	—	—	—	—	—	—	—	—	—	—
Baldcypress	128,438	2,590	8,573	11,351	9,389	18,015	11,986	13,946	13,278	29,812	9,998
Pondcypress	360,173	43,119	58,096	70,067	69,154	45,241	32,266	16,719	8,436	12,724	4,351
Cedars	2,048	243	312	—	—	536	957	—	—	—	—
Total softwoods	4,874,458	736,328	1,028,473	937,382	711,234	549,480	363,663	220,064	145,273	159,270	23,291
Hardwood											
Select white oaks	48,034	2,436	5,378	3,545	6,010	3,721	4,605	5,757	3,773	9,461	3,348
Select red oaks	20,211	931	238	1,045	3,449	417	2,909	2,372	3,324	2,723	2,803
Chestnut oak	—	—	—	—	—	—	—	—	—	—	—
Other white oaks	109,439	2,923	6,623	5,630	7,077	8,011	7,959	9,722	12,284	27,218	21,992
Other red oaks	740,25	69,458	82,829	82,974	105,401	70,519	69,850	60,762	50,970	113,210	34,552
Hickory	49,316	4,409	5,048	7,935	5,956	5,681	3,885	4,742	3,939	5,435	2,286
Yellow birch	—	—	—	—	—	—	—	—	—	—	—
Hard maple	—	—	—	—	—	—	—	—	—	—	—
Soft maple	335,171	46,679	48,843	57,989	43,494	41,616	31,662	20,204	16,028	24,179	4,477
Beech	347	347	—	—	—	—	—	—	—	—	—
Sweetgum	395,009	43,522	51,128	52,083	63,585	62,696	47,780	29,435	19,691	22,790	2,299
Tupelo and blackgum	1,160,989	138,574	180,700	193,797	202,685	149,742	102,307	77,616	42,154	60,155	13,259
Ash	51,922	3,906	7,492	12,165	5,893	7,703	4,667	3,215	1,668	4,482	808
Cottonwood	2,112	—	—	972	417	594	—	—	—	729	—
Basswood	—	—	—	—	—	—	—	—	—	—	—
Yellow-poplar	152,896	8,222	9,041	12,755	15,133	24,933	21,448	14,220	16,537	23,659	6,948
Bay and magnolia	160,333	26,280	24,745	26,444	27,506	17,101	14,221	10,236	5,115	7,238	1,447
Black cherry	9,775	1,664	3,206	2,631	1,538	736	—	—	—	—	—
Black walnut	—	—	—	—	—	—	—	—	—	—	—
Sycamore	8,212	736	1,074	1,729	570	1,072	1,235	—	—	647	1,149
Black locust	—	—	—	—	—	—	—	—	—	—	—
Elm	32,475	2,301	6,289	4,394	4,348	7,501	2,464	2,077	2,501	600	—
Other eastern hardwoods	17,516	2,205	2,507	4,101	3,225	4,826	—	—	—	652	—
Total hardwoods	3,294,782	354,593	435,064	470,189	496,287	406,869	314,992	240,358	178,631	303,680	94,119
All species	8,169,240	1,090,921	1,463,537	1,407,571	1,207,521	956,349	678,655	460,422	323,904	462,950	117,410

Table 36.--Volume of sawtimber on timberland, by species and diameter class, Southeast Georgia, 1988

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
Softwood									
Longleaf pine	1,703,059	391,846	481,798	406,541	261,751	92,355	47,307	21,461	—
Slash pine	7,040,298	2,084,886	1,617,288	1,433,360	900,848	527,774	272,369	191,234	12,539
Shortleaf pine	1,656	5,285	1,859	—	—	—	—	3,503	—
Loblolly pine	597,196	659,885	589,877	547,213	468,812	425,131	538,371	51,682	—
Pond pine	84,158	137,483	102,116	83,949	37,342	39,461	22,081	—	—
Virginia pine	—	—	—	—	—	—	—	—	—
Pitch pine	—	—	—	—	—	—	—	—	—
Table Mountain pine	83,312	14,256	10,611	7,353	18,142	19,853	—	8,292	4,805
Spruce pine	—	—	—	—	—	—	—	—	—
Sand pine	—	—	—	—	—	—	—	—	—
Eastern white pine	—	—	—	—	—	—	—	—	—
Eastern hemlock	—	—	—	—	—	—	—	—	—
Spruce and fir	—	—	—	—	—	—	—	—	—
Baldcypress	583,191	34,319	35,703	78,533	57,309	71,618	71,634	173,729	60,286
Pond Cypress	1,080,166	220,077	269,169	200,607	156,810	86,216	45,792	73,836	27,659
Cedars	8,117	—	—	2,802	5,315	—	—	—	—
Total softwoods	14,895,803	3,428,394	3,217,222	2,823,708	2,031,337	1,303,970	901,694	1,032,507	156,971
Hardwood									
Select white oaks	181,881	—	21,142	14,873	20,989	28,797	19,953	53,573	22,554
Select red oaks	92,817	—	11,431	1,694	13,819	11,997	18,419	16,562	18,895
Chestnut oak	—	—	—	—	—	—	—	—	—
Other white oaks	473,295	—	25,257	32,204	34,927	46,391	61,052	165,893	127,571
Other red oaks	2,492,665	—	402,170	306,885	33,708	308,624	272,059	652,783	218,436
Hickory	149,685	—	19,985	23,410	17,383	23,116	20,372	31,261	14,158
Yellow birch	—	—	—	—	—	—	—	—	—
Hard maple	—	—	—	—	—	—	—	—	—
Soft maple	751,704	—	143,076	158,673	133,288	91,633	76,485	123,448	25,101
Beech	—	—	—	—	—	—	—	—	—
Sweetgum	1,144,113	—	228,484	270,660	229,860	154,140	109,503	136,175	15,291
Tupelo and blackgum	2,703,403	—	667,619	586,412	449,578	370,704	211,619	332,925	84,546
Ash	121,464	—	19,206	29,553	20,383	15,089	8,359	24,082	4,792
Cottonwood	7,841	—	1,307	2,328	—	—	—	4,206	—
Basswood	—	—	—	—	—	—	—	—	—
Yellow-poplar	635,411	—	55,367	107,794	105,364	76,179	94,480	147,885	48,342
Bay and magnolia	336,406	—	90,585	66,498	60,260	47,122	24,730	38,389	8,822
Black cherry	8,425	—	5,334	3,091	—	—	—	—	—
Black walnut	—	—	—	—	—	—	—	—	—
Sycamore	20,494	—	1,849	4,073	5,425	—	—	3,229	5,918
Black locust	—	—	—	—	—	—	—	—	—
Elm	79,658	—	15,215	29,315	10,603	9,458	12,103	2,964	—
Other eastern hardwoods	33,477	—	11,211	19,303	—	—	—	2,963	—
Total hardwoods	9,232,739	—	1,719,238	1,656,766	1,433,587	1,183,250	932,363	1,719,027	588,508
All species	24,128,542	3,428,394	4,936,460	4,480,474	3,464,924	2,487,220	1,834,057	2,751,534	745,479

Table 37.—Volume of sawtimber on timberland, by species, size class, and tree grade, Southeast Georgia, 1988

Species	All size classes				Trees 15.0 inches d.b.h. and larger				
	All		Tree grade		All		Tree grade		
	All grades	1	2	3	4	grades	1	2	3
<u>Softwood</u>									
Yellow pine ^a	13,224,329	3,690,222	3,156,540	6,377,567	—	4,596,275	2,010,708	1,172,526	1,413,041
Eastern white pine ^b	—	—	—	—	—	—	—	—	—
Spruce and fir ^c	—	—	—	—	—	—	—	—	—
Cypress	1,663,357	393,440	501,076	758,111	10,730	824,889	393,440	327,087	101,594
Other eastern softwoods ^b	8,117	—	—	5,569	2,548	5,315	—	—	2,767
Total	14,895,803	4,083,662	3,657,616	7,141,247	13,278	5,426,479	2,404,148	1,499,613	1,517,402
<u>Hardwood</u> ^c									
Select white and red oaks	274,698	67,903	79,622	105,381	21,792	225,558	67,903	79,622	71,998
Other white and red oaks	2,965,960	631,572	796,193	1,092,128	446,067	2,199,444	631,572	759,157	564,663
Hickory	149,685	13,564	61,954	47,683	26,484	106,290	13,564	55,184	20,819
Yellow birch	—	—	—	—	—	—	—	—	16,723
Hard maple	—	—	—	—	—	—	—	—	—
Sweetgum	1,144,113	188,534	385,846	472,145	97,588	644,969	188,534	251,520	161,436
Ash, walnut, and black cherry	129,889	19,312	40,103	61,729	8,745	72,705	19,312	31,740	12,908
Yellow-poplar	635,411	210,089	175,625	192,807	56,890	472,250	210,089	135,047	93,836
Other eastern hardwoods	3,932,983	564,179	1,119,473	1,995,389	253,942	2,135,519	564,179	828,002	662,658
Total	9,232,739	1,695,153	2,658,816	3,967,262	911,508	5,856,735	1,695,153	2,140,272	1,588,318
All species	24,128,542	5,778,815	6,316,432	11,108,509	924,786	11,283,214	4,099,301	3,639,885	3,105,720
									438,308

^aFor 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.

^bFor 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.

^cFor 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, Southeast Georgia, 1988

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	
<u>Thousand cubic feet</u>										
Softwood										
Longleaf pine	313,062	79,601	91,606	72,290	44,073	14,912	7,337	3,243	--	
Slash pine	1,338,881	449,346	319,169	259,884	153,204	85,264	42,164	28,155	1,695	
Shortleaf pine	2,271	357	1,044	338	--	--	--	532	--	
Loblolly pine	692,576	129,442	131,558	108,360	94,154	76,589	66,484	79,020	6,969	
Pond pine	95,298	18,193	27,487	19,008	14,706	6,244	6,321	3,339	--	
Virginia pine	--	--	--	--	--	--	--	--	--	
Pitch pine	--	--	--	--	--	--	--	--	--	
Table Mountain pine	--	--	--	--	--	--	--	--	--	
Spruce pine	14,683	2,807	2,040	1,340	3,171	3,367	--	1,274	684	
Sand pine	--	--	--	--	--	--	--	--	--	
Eastern white pine	--	--	--	--	--	--	--	--	--	
Eastern hemlock	--	--	--	--	--	--	--	--	--	
Spruce and fir	--	--	--	--	--	--	--	--	--	
Baldcypress	106,744	8,135	7,920	16,148	11,057	13,093	12,587	28,605	9,199	
Pondcypress	226,925	53,946	60,533	41,534	30,337	15,912	8,097	12,319	4,247	
Cedars	1,410	--	--	501	909	--	--	--	--	
Total softwoods	2,791,850	741,827	641,357	519,403	351,611	215,381	142,990	156,487	22,794	
Hardwood										
Select white oaks	32,689	--	4,390	3,051	4,055	5,275	3,534	9,069	3,315	
Select red oaks	15,830	--	2,282	343	2,567	2,148	3,114	2,621	2,755	
Chestnut oak	--	--	--	--	--	--	--	--	--	
Other white oaks	85,078	--	5,214	6,598	6,922	8,761	11,249	25,444	20,890	
Other red oaks	435,903	--	77,492	58,112	60,771	54,549	46,554	105,648	32,777	
Hickory	27,526	--	4,183	4,720	3,377	4,278	3,629	5,145	2,194	
Yellow birch	--	--	--	--	--	--	--	--	--	
Hard maple	--	--	--	--	--	--	--	--	--	
Soft maple	148,403	--	29,965	33,040	26,837	17,773	14,396	22,191	4,201	
Beech	--	--	--	--	--	--	--	--	--	
Sweetgum	209,601	--	44,870	52,097	42,441	27,224	18,639	22,057	2,273	
Tupelo and blackgum	532,700	--	143,879	122,164	89,013	69,820	38,647	56,468	12,709	
Ash	23,940	--	4,119	6,232	4,090	2,913	1,549	4,253	784	
Cottonwood	1,419	--	257	466	--	--	--	696	--	
Basswood	--	--	--	--	--	--	--	--	--	
Yellow-poplar	108,873	--	10,745	20,440	19,020	13,134	15,654	22,999	6,881	
Bay and magnolia	68,229	--	18,864	14,137	12,558	9,408	4,821	7,007	1,434	
Black cherry	1,745	--	1,131	614	--	--	--	--	--	
Black walnut	--	--	--	--	--	--	--	--	--	
Sycamore	3,895	--	375	827	1,053	--	586	1,054	--	
Black locust	--	--	--	--	--	--	--	--	--	
Elm	15,853	--	3,140	6,004	2,101	1,820	2,246	542	--	
Other eastern hardwoods	6,542	--	2,177	3,757	--	--	--	608	--	
Total hardwoods	1,718,226	--	353,083	332,602	274,805	217,103	164,618	285,802	90,213	
All species	4,510,076	741,827	994,440	852,005	626,416	432,484	307,608	442,289	113,007	

Table 39.—Total volume of live trees on timberland, by species and diameter class, Southeast Georgia, 1988

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	10.0-12.9	11.0-12.9	12.0-14.9	13.0-14.9	14.0-16.9	15.0-16.9	16.0-18.9	17.0-18.9	18.0-20.9	19.0-21.9	20.0-22.9	
		Thousand cubic feet																
Softwood																		
Longleaf pine	4,78,910	4,031	11,336	22,021	50,731	110,790	113,901	85,748	51,389	17,022	8,288	3,653	—	—	—	—	—	
Slash pine	3,725,670	62,603	282,902	772,439	838,026	656,561	400,744	308,122	176,303	96,981	47,413	31,618	1,898	—	—	—	—	
Shortleaf pine	7,146	23	1,411	1,707	1,209	502	1,294	398	—	—	—	602	—	—	—	—	—	
Loblolly pine	1,323,263	26,842	70,866	155,507	206,451	195,056	168,096	129,946	109,491	87,526	75,254	90,383	7,845	—	—	—	—	
Pond pine	159,106	1,120	5,158	12,685	20,509	26,967	34,575	22,702	17,158	7,180	7,240	3,812	—	—	—	—	—	
Virginia pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Pitch pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Table Mountain pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Spruce pine	19,798	289	127	1,270	266	3,897	2,579	1,603	3,687	3,866	—	—	—	—	—	—	—	
Sand pine	2,906	140	616	2,150	—	—	—	—	—	—	—	—	—	—	—	—	—	
Eastern white pine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Eastern hemlock	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Spruce and fir	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Baldcypress	170,612	1,535	3,163	4,084	11,082	14,082	12,043	22,176	14,464	16,725	16,363	38,456	16,439	—	—	—	—	
Pondcypress	574,515	28,287	48,109	74,665	82,686	95,652	90,194	58,017	40,711	20,994	10,561	16,509	8,530	—	—	—	—	
Cedars	3,309	180	142	326	397	323	—	654	1,146	—	—	141	—	—	—	—	—	
Total softwoods	6,465,235	125,050	423,830	1,046,514	1,261,357	1,103,830	823,426	629,366	414,349	250,294	165,119	186,616	35,484					
Hardwood																		
Select white oaks	65,807	940	1,637	4,282	7,032	4,936	7,681	4,626	5,724	7,507	5,101	11,710	4,631	—	—	—	—	
Select red oaks	26,597	365	1,110	1,316	327	1,309	4,282	515	3,579	2,916	4,080	3,347	3,451	—	—	—	—	
Chestnut oak	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Other white oaks	215,198	6,287	7,996	8,284	11,730	10,062	12,657	16,656	14,649	16,719	18,398	48,425	43,335	—	—	—	—	
Other red oaks	1,178,349	54,697	86,844	114,705	121,895	113,451	142,031	97,395	91,349	83,824	67,485	151,816	52,857	—	—	—	—	
Hickory	73,398	1,738	4,155	7,142	7,464	11,348	8,591	7,612	4,696	5,706	4,726	7,142	3,078	—	—	—	—	
Yellow birch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hard maple	27	27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Soft maple	692,462	71,810	94,535	93,072	79,236	83,344	66,087	55,727	43,289	31,310	23,892	41,837	8,323	—	—	—	—	
Beech	1,638	—	—	522	—	—	—	—	—	698	—	—	—	—	—	—	—	
Sweetgum	585,407	36,552	60,990	68,220	65,849	63,193	75,890	72,716	55,643	33,754	22,941	26,527	3,132	—	—	—	—	
Tupelo and blackgum	2,059,818	146,161	210,612	250,944	266,635	271,866	279,554	205,489	140,674	108,006	58,678	91,979	29,220	—	—	—	—	
Ash	100,229	15,022	13,345	7,090	11,602	15,876	8,962	9,103	5,575	4,039	2,453	5,959	1,203	—	—	—	—	
Cottonwood	3,777	—	—	—	—	—	—	1,752	492	694	—	—	—	—	839	—	—	
Basswood	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Yellow-poplar	191,776	3,229	7,432	11,171	11,589	14,693	17,813	29,426	25,184	15,986	19,092	27,941	8,220	—	—	—	—	
Bay and magnolia	323,829	35,759	53,693	44,847	38,661	36,754	37,441	25,459	18,376	13,103	7,341	10,921	1,674	—	—	—	—	
Black cherry	31,614	8,788	8,684	3,019	5,276	3,149	1,821	877	—	—	—	—	—	—	—	—	—	
Black walnut	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Sycamore	9,816	68	—	955	1,303	2,041	666	1,248	1,432	—	—	748	1,355	—	—	—	—	
Black locust	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Elm	55,724	2,805	5,907	4,595	10,048	7,314	5,714	9,238	3,258	2,860	3,286	699	—	—	—	—	—	
Other eastern hardwoods	304,496	61,885	63,280	51,124	35,598	35,895	20,391	12,902	6,448	8,340	4,836	3,797	—	—	—	—	—	
Total hardwoods	5,919,262	446,133	620,020	671,288	674,245	676,983	690,073	549,683	420,574	334,070	243,057	434,712	159,124					
All species	12,385,197	571,183	1,043,850	1,717,802	1,935,602	1,780,813	1,513,499	1,179,049	834,923	584,364	408,176	621,328	194,608					

Table 40.—Green weight of forest biomass on timberland, by species and diameter class, Southeast Georgia, 1988

Species	All classes	Diameter class (inches at breast height)										Hundred thousand pounds	
		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		
Softwood													
Longleaf pine	373,504	3,337	9,629	15,738	38,318	85,528	89,305	67,713	40,820	13,570	6,596	2,950	
Slash pine	2,868,848	46,933	261,874	560,246	675,158	503,507	309,174	238,364	136,363	74,727	36,592	24,431	
Shortleaf pine	4,815	11	852	1,060	845	365	304	—	—	—	448	1,479	
Loblolly pine	951,750	13,200	41,821	114,004	153,059	143,615	122,962	95,053	79,352	63,323	54,632	65,138	
Pond pine	112,033	609	2,863	8,873	14,632	19,151	24,630	16,183	12,276	5,061	5,082	2,673	
Virginia pine	—	—	—	—	—	—	—	—	—	—	—	—	
Pitch pine	—	—	—	—	—	—	—	—	—	—	—	—	
Table Mountain pine	—	—	—	—	—	—	—	—	—	—	—	—	
Spruce pine	13,890	263	118	745	201	2,682	1,766	1,098	2,650	2,787	—	1,029	
Sand pine	2,267	117	497	1,653	—	—	—	—	—	—	—	—	
Eastern white pine	—	—	—	—	—	—	—	—	—	—	—	—	
Eastern hemlock	—	—	—	—	—	—	—	—	—	—	—	—	
Spruce and fir	—	—	—	—	—	—	—	—	—	—	—	—	
Baldcypress	132,615	847	1,985	2,218	7,054	9,728	8,860	16,939	11,461	13,398	13,496	32,467	
Pondcypress	354,778	15,107	30,314	32,273	44,968	58,567	59,951	40,526	29,494	15,592	7,973	12,911	
Cedars	2,377	106	93	264	300	263	—	437	807	—	—	107	
Total softwoods	4,816,877	80,530	350,046	737,074	934,535	823,406	617,578	476,617	313,223	188,458	124,371	142,154	
Hardwood													
Select white oaks	54,803	762	1,285	2,826	5,535	4,143	6,380	3,948	4,953	6,344	4,441	10,042	
Select red oaks	22,990	302	827	902	273	1,053	3,604	453	3,089	2,558	3,641	3,062	
Chestnut oak	—	—	—	—	—	—	—	—	—	—	—	—	
Other white oaks	191,464	4,660	5,980	5,130	9,315	8,481	10,885	14,828	13,367	15,187	16,850	45,054	
Other red oaks	941,658	47,583	65,328	84,055	99,271	92,231	115,069	79,679	74,533	68,032	54,222	121,205	
Hickory	60,699	1,527	3,654	5,349	5,883	8,972	6,890	6,348	3,941	4,941	4,059	6,324	
Yellow birch	—	—	—	—	—	—	—	—	—	—	—	—	
Hard maple	22	22	—	—	—	—	—	—	—	—	—	—	
Soft maple	506,785	54,525	67,139	65,384	60,931	61,731	48,974	41,031	31,666	22,800	17,177	29,610	
Beech	1,216	—	—	304	—	—	—	—	—	583	—	329	
Sweetgum	422,646	24,436	40,245	44,350	47,422	46,336	56,064	54,384	42,160	25,987	17,724	20,923	
Tupelo and blackgum	1,354,44	96,730	141,181	127,793	161,530	173,619	184,758	142,559	100,799	79,143	45,110	74,044	
Ash	63,704	9,127	8,436	5,432	8,344	10,334	5,710	5,545	3,328	2,343	1,407	3,107	
Cottonwood	2,631	—	—	—	—	1,176	348	480	—	—	627	—	
Basswood	—	—	—	—	—	—	—	—	—	—	—	—	
Yellow-poplar	136,886	2,393	4,851	6,911	7,822	10,253	12,735	21,162	18,289	11,691	14,029	20,637	
Bay and magnolia	200,676	22,259	32,779	23,289	23,605	23,281	23,822	16,783	12,298	8,790	5,062	7,468	
Black cherry	19,185	4,010	5,826	1,851	3,239	2,108	1,224	627	—	—	—	—	
Black walnut	—	—	—	—	—	—	—	—	—	—	—	—	
Sycamore	6,688	49	—	510	778	1,318	457	902	1,058	—	569	1,047	
Black locust	37,156	2,055	4,146	3,138	6,443	4,940	3,730	5,993	2,104	1,885	2,233	489	
Elm	—	—	—	—	—	—	—	—	—	—	—	—	
Other eastern hardwoods	247,822	51,108	55,790	41,267	29,750	29,469	15,415	9,758	3,970	5,645	3,116	2,534	
Total hardwoods	4,271,175	321,548	437,467	418,491	470,541	479,445	496,065	404,480	316,138	255,346	189,640	346,502	
All species	9,088,052	402,078	787,513	1,155,565	1,405,076	1,302,851	1,113,643	881,097	629,361	443,804	314,011	488,656	164,397

Table 41.--Average net annual growth and removals of live timber and growing stock on timberland, by species, Southeast Georgia, 1981-1987

Species	Live timber ^a		Growing stock	
	Net annual growth	Annual timber removals	Net annual growth	Annual timber removals
<u>Thousand cubic feet</u>				
Softwood				
Yellow pines	324,018	329,610	323,507	328,713
Eastern white pine	--	--	--	--
Spruce and fir	--	--	--	--
Cypress	7,959	8,176	7,896	8,071
Other eastern softwoods	56	--	54	--
Total softwoods	<u>332,033</u>	<u>337,786</u>	<u>331,457</u>	<u>336,784</u>
Hardwood				
Select white and red oaks	2,072	1,765	2,067	1,765
Other white and red oaks	30,592	27,485	29,917	24,783
Hickory	1,005	1,672	978	1,609
Yellow birch	--	--	--	--
Hard maple	--	--	--	--
Sweetgum	13,537	12,359	13,376	11,990
Ash, walnut, and black cherry	2,212	693	2,098	590
Yellow-poplar	6,553	4,042	6,486	3,969
Tupelo and blackgum	18,303	20,978	17,686	18,804
Bay and magnolia	6,681	3,081	6,329	2,987
Other eastern hardwoods	14,512	11,197	12,832	7,317
Total hardwoods	<u>95,467</u>	<u>83,272</u>	<u>91,769</u>	<u>73,814</u>
All species	427,500	421,058	423,226	410,598

^aMerchantable portion only.

Table 42.--Average net annual growth and removals of sawtimber on timberland, by species, Southeast Georgia, 1981-1987

Species	Net annual growth	Annual timber removals
<u>Thousand board feet</u>		
Softwood		
Yellow pines	1,056,839	1,033,150
Eastern white pine	--	--
Spruce and fir	--	--
Cypress	30,569	26,657
Other eastern softwoods	222	--
Total softwoods	1,087,630	1,059,807
Hardwood		
Select white and red oaks	7,863	6,622
Other white and red oaks	114,877	83,876
Hickory	3,745	4,702
Yellow birch	--	--
Hard maple	--	--
Sweetgum	44,142	35,799
Ash, walnut, and black cherry	4,712	1,211
Yellow-poplar	34,441	16,373
Tupelo and blackgum	54,279	51,426
Bay and magnolia	14,517	4,857
Other eastern hardwoods	40,752	18,289
Total hardwoods	319,328	223,155
All species	1,406,958	1,282,962

Table 43.--Average annual removals of growing stock on timberland, by species and diameter class, Southeast Georgia, 1981-1987

Species	All classes	Diameter class (inches at breast height)						Thousand cubic feet			
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
Softwood											
Yellow pines	328,713	39,944	71,640	70,284	53,147	42,452	25,469	13,079	7,324	4,974	400
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Cypress	8,071	997	1,367	1,080	1,379	457	885	228	--	914	764
Other eastern softwoods	--	--	--	--	--	--	--	--	--	--	--
Total softwoods	336,784	40,941	73,007	71,364	54,526	42,909	26,354	13,307	7,324	5,888	1,164
Hardwood											
Select white and red oaks	1,765	--	162	218	225	351	95	93	341	190	90
Other white and red oaks	24,783	2,286	2,133	3,119	3,422	3,122	2,423	2,552	686	3,659	1,381
Hickory	1,609	151	128	309	150	136	231	107	194	203	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--
Sweetgum	11,990	1,368	2,025	1,331	1,235	1,475	931	1,482	982	1,064	97
Ash, walnut, and black cherry	590	107	119	113	--	58	103	--	--	--	90
Yellow-poplar	3,969	190	384	132	82	1,190	648	404	160	779	--
Tupelo and blackgum	18,804	1,880	2,206	2,529	3,254	3,000	2,656	1,431	969	879	--
Bay and magnolia	2,987	377	920	428	466	422	213	101	--	60	--
Other eastern hardwoods	7,317	936	983	1,032	812	580	1,156	792	576	450	--
Total hardwoods	73,814	7,295	9,060	9,211	9,646	10,334	8,456	6,962	3,908	7,284	1,658
All species	410,598	48,236	82,067	80,575	64,172	53,243	34,810	20,269	11,232	13,172	2,822

Table 44.--Average annual mortality of live timber, growing stock, and sawtimber on timberland, by species, Southeast Georgia, 1981-1987

Species	Live timber ^a	Growing stock	Sawtimber
	<u>Thousand cubic feet</u>		<u>Thousand board feet</u>
Softwood			
Yellow pines	25,460	25,187	59,382
Eastern white pine	--	--	--
Spruce and fir	--	--	--
Cypress	1,003	862	1,664
Other eastern softwoods	79	57	319
Total softwoods	26,542	26,106	61,365
Hardwood			
Select white and red oaks	142	142	580
Other white and red oaks	12,125	9,128	34,667
Hickory	33	--	--
Yellow birch	--	--	--
Hard maple	--	--	--
Sweetgum	3,150	2,759	6,434
Ash, walnut, and black cherry	1,041	550	1,307
Yellow-poplar	1,449	1,318	5,914
Tupelo and blackgum	8,011	5,259	11,561
Bay and magnolia	3,573	3,076	6,586
Other eastern hardwoods	9,615	4,206	11,478
Total hardwoods	39,139	26,438	78,527
All species	65,681	52,544	139,892

^aMerchantable portion only.

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

Species group and year	All classes	Diameter class (inches at breast height)						<u>Thousand trees</u>	
		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	
Yellow Pine									
1981	1,428,026	441,956	410,442	289,928	145,839	70,116	36,876	18,682	14,187
1988	1,254,473	376,473	330,147	266,935	149,598	68,930	31,498	16,463	14,429
Change	-173,553	-65,483	-80,295	-22,993	+3,759	-1,186	-5,378	-2,219	+242
Other softwood									
1981	217,308	130,439	39,780	17,300	11,388	7,594	5,315	2,498	2,994
1988	179,103	99,981	36,093	14,743	10,290	7,521	4,674	2,626	3,175
Change	-38,205	-30,458	-3,687	-2,557	-1,098	-73	-641	+128	+181
Hardwood									
1981	2,994,662	2,098,935	475,630	186,959	95,260	57,540	34,214	19,812	26,312
1988	2,650,942	1,804,024	455,719	172,039	90,210	51,707	33,011	18,482	25,750
Change	-343,720	-294,911	-19,911	-14,920	-5,050	-5,833	-1,203	-1,330	-562

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

Land use class	Survey completion date			Change 1981-1988	
	1971	1981	1988		
<u>Acres</u>					
Forest land					
Timberland:					
Pine and oak-pine types	5,155,202	4,793,359	4,743,443	-49,916	
Hardwood types	2,273,803	2,371,557	2,450,877	+79,320	
Total	7,429,005	7,164,916	7,194,320	+29,404	
Reserved timberland	335,800	383,928	368,417	-15,511	
Woodland	22,766	18,161	18,161	--	
Total forest land	7,787,571	7,567,005	7,580,898	+13,893	
Nonforest land					
Cropland	1,613,848	1,759,674	1,620,596	-139,078	
Pasture and range	341,806	307,170	309,470	+2,300	
Other	835,260	944,636	1,083,127	+138,491	
Total	2,790,914	3,011,480	3,013,193	+1,713	
All land ^a	10,578,485	10,578,485	10,594,091	+15,606	

^aExcludes 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,
Southeast 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
SAWTIMBER (in thousand board feet)									
Softwood									
1971	13,489,978	--	3,399,362	3,687,385	2,842,255	1,699,939	845,591	451,758	563,688
1981	14,700,157	--	3,461,580	3,623,894	2,959,905	1,954,268	1,135,301	695,665	869,544
1988	14,895,803	--	3,428,394	3,217,222	2,823,708	2,031,337	1,303,970	901,94	1,189,478
Hardwood									
1971	6,940,264	--	--	1,309,903	1,434,326	1,124,639	870,858	617,047	1,583,491
1981	8,559,981	--	--	1,553,151	1,635,430	1,322,013	1,187,548	815,415	2,046,424
1988	9,232,739	--	--	1,719,238	1,656,766	1,433,587	1,183,250	932,363	2,307,535
GROWING STOCK (in thousand cubic feet)									
Softwood									
1971	4,478,863	681,967	881,770	927,973	817,179	556,572	308,111	143,786	73,640
1981	4,911,368	787,770	999,674	944,931	803,176	579,635	354,216	193,041	113,393
1988	4,874,458	736,328	1,028,473	937,382	711,234	549,480	363,663	220,064	145,273
Hardwood									
1971	2,685,040	289,577	381,446	416,978	401,016	365,216	254,831	181,206	120,704
1981	3,170,265	333,553	420,644	463,729	475,544	416,459	299,541	247,099	159,94
1988	3,294,782	354,593	435,064	470,189	496,287	406,869	314,992	240,358	178,631
LIVE TIMBER^b (in thousand cubic feet)									
Softwood									
1971	4,502,355	688,856	883,977	913,083	820,122	556,773	308,719	143,954	74,285
1981	4,938,790	793,783	1,003,35	950,002	806,264	579,987	354,919	193,271	114,346
1988	4,899,479	739,552	1,032,803	941,745	713,304	550,610	363,996	220,461	145,573
Hardwood									
1971	3,154,222	369,392	461,096	501,182	452,596	407,398	285,712	202,866	138,794
1981	3,724,250	427,192	509,140	557,215	536,985	464,607	335,781	276,614	183,435
1988	3,837,333	447,840	521,651	544,750	563,649	454,332	347,618	274,904	200,141

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

^bMerchantable volume.

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Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern
Forest Experiment Station; 1988. 53 pp.

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Forest Experiment Station; 1988. 53 pp.

Since 1981, area of timberland in Southeast Georgia increased less than 1 percent and now totals 7.2 million acres. About 39 percent of the timberland is under forest industry control. Pine plantation acreage increased by 37 percent to 2.5 million acres. New pine stands were established annually on 155,000 acres, exceeding pine stands harvested by 4 percent. Number of softwood stems declined in most diameter classes with exceptions in the 8-inch and 18-inch and larger diameter classes. Volume of softwood growing stock declined less than 1 percent to 4.9 billion cubic feet. Volume of hardwood growing stock was up 4 percent to 3.3 billion cubic feet. Volume of hardwood growing stock was up 4 percent to 3.3 billion cubic feet. Net annual growth of softwoods dropped from 442 to 331 million cubic feet. Net annual growth of hardwoods declined 18 percent to 92 million cubic feet. Annual removals of softwood growing stock was down 19 percent and exceeded net growth by 2 percent. Hardwood removals averaged 74 million cubic feet annually. Annual mortality of softwood growing stock averaged 26 million cubic feet, a drop of 39 percent. Annual mortality of hardwood growing stock increased by 14 percent to 26 million cubic feet.

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

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