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# Forest Statistics for South Carolina, 1993

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# **Forest Statistics for South Carolina, 1993**

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## Foreword

This report highlights the principal findings of the seventh forest survey of South Carolina. Field work began in January 1992 and was completed in May 1993. Six previous surveys, completed in 1936, 1947, 1958, 1968, 1978, and 1986, provide statistics for measuring changes and trends over the past 57 years. The primary emphasis in this report is on the changes and trends since 1986.

Periodic surveys of forest resources are authorized by the Forest and Rangeland Renewable Resources Research Act of 1978. These surveys are a continuing, nationwide undertaking by the Regional Experiment Stations of the USDA Forest Service. In Florida, Georgia, North Carolina, South Carolina, and Virginia, these surveys are administered by the Forest Inventory and Analysis (Forest Survey) Research Unit at the Southeastern Forest Experiment Station, with headquarters in Asheville, NC. The primary objective of the survey is to periodically inventory and evaluate all forest and related resources. These multiresource data help provide a basis for formulating forest policies and programs and for the orderly development and use of the resources. This report deals only with the extent and condition of forest land, associated timber volumes, and rates of timber growth, mortality, and removals.

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

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## Contents

	<i>Page</i>
Introduction . . . . .	1
Highlights . . . . .	1
How the Inventory is Made . . . . .	4
Statistical Reliability . . . . .	5
Definitions . . . . .	7
Conversion Factors . . . . .	12
Index of Tables . . . . .	13
Tables 1-47 <sup>a</sup> . . . . .	15

<sup>a</sup> All tables in this report are available in Lotus 1-2-3® worksheet files. These files will be supplied, upon request, on 3 ½- or 5 ¼-inch diskettes.

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## Introduction

This report summarizes the results from a 1993 inventory of the forest resources of South Carolina. Current estimates of forest area, associated conditions, and timber volume are highlighted and compared with previous inventories. Average annual levels of growth, removals, and mortality since the previous inventory in 1986 are provided.

Results from the latest inventory of South Carolina's forests take on added importance due to the severe damage inflicted by Hurricane Hugo, primarily in the Northern Coastal Plain. This region's forests incurred heavy losses in inventory volumes and suffered unusually high mortality. The result was low net growth. Impacts from the storm are evident in the statewide forest resource statistics. Current net annual growth, removals, mortality, and inventory volumes accurately portray change since the previous survey. These changes are unique, however, in that all have been influenced by the State's worst forest disaster. Salvage, regeneration, and protection efforts that began immediately after the storm should return damaged acres to productive condition. With the region's recovery, future statewide forest resource statistics will likely rival those of the past.

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## Highlights

Since the sixth inventory of South Carolina's forest resource in 1986 —

- *area of timberland increased 2 percent and no totals more than 12.4 million acres. Over 687,000 acres were added to the timber base through natural seeding or planting of trees on nonforest land. This addition to timberland area was offset by 411,000 acres diverted to other land uses, including 197,000 acres cleared for urban use and 76,000 acres cleared for cropland or other agricultural uses. Over 112,000 acres of timberland were reclassified to a reserved status, effectively removing them from the available timber base. Timberland now makes up 66 percent of South Carolina's total land area.*
- *timberland owned by nonindustrial private forest (NIPF) landowners increased 648,000 acres, or by 8 percent. Area in this ownership now totals more than 8.9 million acres, about 72 percent of the State's timberland. Farmer-owned timberland declined 14 percent to 2.7 million acres, while that owned by other private individuals rose nearly 17 percent to 4.6 million acres. Other corporate timberland owners increased their holdings by more than one-third to 1.6 million acres. Forest industry currently controls almost 2.4 million acres, down 12 percent from 1986. Public timberland amounted to 1.1 million acres, a decrease of 5 percent.*

- *area in a pine forest type increased 2 percent to over 5.5 million acres. Pine types currently occupy 45 percent of South Carolina's timberland. Loblolly pine accounted for virtually all of the recent gain in softwood area statewide, increasing from 3.8 to more than 4.3 million acres. Area of slash pine now totals 240,000 acres, down 36 percent. Shortleaf pine area dropped 28 percent to just under 265,000 acres, while that of longleaf pine declined 11 percent to 240,000 acres. Area in pine plantations increased 662,000 acres to an estimated 2.7 million acres, a 33-percent increase since 1986. Almost 2.4 million of the pine plantation acres are in loblolly pine.*

- *hardwood timberland area dropped 206,000 acres to 5.0 million in 1993. Oak-hickory forest types continue to predominate and now occupy more than 2.5 million acres, or 20 percent of the State's timberland. Lowland hardwoods declined almost 3 percent since 1986 to less than 2.5 million acres. Acreage of oak-pine increased 358,000 acres to 1.9 million and accounts for 15 percent of the total timberland area.*

- *an average of 279,000 acres annually underwent a final harvest and were retained in timberland. About 46 percent of this area was natural pine and another 15 percent was pine plantation. Some of the area harvested undoubtedly reflects efforts to salvage timber damaged*

in 1989 by Hurricane Hugo. Nearly 70 percent of the harvest was on NIPF land and 24 percent occurred on forest industry acres. In addition to acres undergoing a final harvest, over 38,000 acres received some type of partial harvest, and an average of 49,000 acres were commercially thinned. Since 1986, annual damage from fire, insects, disease, weather, and other natural causes affected timber stands on over 600,000 acres across the State. The area of timberland with evidence of natural disturbance increased fivefold, primarily because of the damage caused by Hugo.

● *almost 372,000 acres were regenerated annually, a 4 7-percent increase over 1986 estimates. Other private timberland accounted for 73 percent of the total area regenerated, and another 21 percent was forest industry land. Artificial regeneration occurred on nearly 152,000 acres; more than half was on other private land. Almost 28 percent of the artificial regeneration occurred on nonforest land. Pines were planted on an annual average of 42,000 acres of nonforest land. That total is four times the area reported in 1986. The annual rate of natural regeneration increased 46 percent from 151,000 to almost 220,000 acres per year. This increase was due primarily to regeneration of acres in the Northern Coastal Plain Survey Unit in the aftermath of Hurricane Hugo. Statewide, about 206,000 acres of new pine stands were established by both artificial and natural means and exceeded the area of pine harvested by 35,000 acres.*

● *average basal area of live trees 5.0 inches d.b.h. and larger has dropped from 71 to 63 square feet per acre, a decline of 77 percent.* Most of this decline was due to the loss of older, large-diameter trees damaged by the hurricane. Merchantable net volume averaged 1,435 cubic feet per acre in 1993. Currently, nearly 5.0 million of South Carolina's timberland acres are considered fully stocked—66,000 acres more than were in this class in 1986. There was an 11 -percent increase in area of poorly stocked stands, from 1.9 to 2.1 million acres. Stands considered medium stocked now occupy nearly 5.4 million acres, a decrease of less than 1,400 acres.

● *the number of live softwood stems in the 2-inch diameter class increased by one-third and now totals 7.3 billion.* This increase reflects the success of efforts to increase planting of pine in South Carolina during the 1980's. There was a 23-percent increase in number of 4-inch softwood trees between surveys. Hardwood trees increased by 2 percent in the 2-inch class, but dropped by 4 percent in the 4-inch class.

● *softwood growing-stock volume decreased from 8.9 to 8.0 billion cubic feet.* Much of the decrease was due to storm-related losses of trees 10 inches

d.b.h. and larger in the eastern half of the State. Slash pine volume fell 27 percent to 358 million cubic feet, and that of longleaf pine declined 22 percent to 513 million cubic feet. Loblolly pine, with 67 percent or 5.4 billion cubic feet of the growing-stock volume, is still the predominant species. However, the current volume of loblolly pine is 5 percent lower than the 1986 estimate. Softwoods account for 48 percent of South Carolina's total growing-stock volume. About 5.1 billion cubic feet of the current softwood inventory are on NIPF land. Softwood volume on public land dropped 12 percent to less than 1.2 billion cubic feet, and declined 6 percent to 1.7 billion on forest industry timberland. The present estimate of softwood growing stock includes 29.4 billion board feet of sawtimber.

● *volume of hardwood growing stock declined 5 percent from 9.7 to 8.7 billion cubic feet, and is down across the range of diameter classes. Collectively, other red oaks are the primary species in terms of volume and account for 1.7 billion cubic feet, or one-fifth of the current hardwood inventory. Volume in select white oaks totaled 733 million cubic feet, a net increase of about 3 percent, while select red oak volume declined 5 percent to 226 million cubic feet. Sweetgum accounted for 19 percent of the hardwood volume; tupelo and blackgum combined made up 17 percent. By ownership, hardwood growing stock fell from 1.6 to 1.3 billion cubic feet on forest industry land and decreased from 767 to about 731 million cubic feet on public land. NIPF landowners' share of hardwood growing stock remained comparatively unchanged at 6.7 billion cubic feet; down just 1 percent. The 1993 estimate of hardwood inventory includes 25.9 billion board feet of sawtimber.*

● *net annual growth of softwood growing stock declined 23 percent from 444 to 344 million cubic feet, largely due to the inordinately high mortality in the Northern Coastal Plain Survey Unit.* In the Piedmont and Southern Coastal Plain, net annual growth of softwoods increased to 168 million and 147 million cubic feet, respectively. Public land suffered the highest loss, an 85-percent decline in softwood net growth due to weather-related mortality. Softwood net growth on NIPF land declined from an average of 271 to 202 million cubic feet. Forest industry land fared somewhat better with a 15-percent increase in softwood net growth, which now averages 133 million cubic feet annually. Relatively young stands of pine, characteristic of industry timberland, were less adversely impacted by the hurricane. Net annual growth of softwood growing stock includes 1.2 billion board feet of sawtimber. Hardwood net annual growth also declined over the remeasurement period, from an average of 249 to 182 million cubic feet. Hardwood net growth fell 56 percent to 18 million cubic feet on forest industry timberland, and dropped from

188 to 155 million cubic feet on NIPF land. Statewide, losses from Hugo resulted in a decline in average net annual growth for all timberland from 57 to 42 cubic feet per acre. However, per acre growth rates averaged 60 cubic feet in the Piedmont and 62 cubic feet in the Southern Coastal Plain. Net annual growth for hardwood species includes over 678 million board feet of sawtimber. From 1986 to 1993, softwood removals exceeded net growth by an average 149 million cubic feet annually. Annual hardwood removals exceeded hardwood net annual growth by 54 million cubic feet.

● *annual removals of softwood growing stock rose 8 percent to 492 million cubic feet.* Almost two-thirds, or 324 million cubic feet, came from NIPF land—an increase of 17 percent since 1986. Average annual softwood removals from forest industry timberland declined 3 percent to 132 million cubic feet, and dropped 14 percent to 36 million on public land. The current estimate of removals from softwood growing stock included

2.0 billion board feet of sawtimber. Removals from hardwood growing stock jumped 37 percent from 172 to 236 million cubic feet. By ownership, about 72 percent of the hardwood removals came from NIPF land, 19 percent from forest industry land, and 9 percent from land administered by National Forests and other public agencies. Current removals of hardwood growing stock included 774 million board feet of sawtimber.

● *annual mortality of growing stock averaged 407 million cubic feet for al. timberland, nearly three times the 144 million cubic feet reported in 1986* Again, losses from Hurricane Hugo were the primary cause for the increase. Softwood mortality averaged 253 million cubic feet, up from 83 million. The 154 million cubic feet of hardwood mortality was an increase of more than 93 million over the previous estimate. About 70 percent of the hardwood mortality and 64 percent of the softwood mortality were on NIPF land.

## How the Inventory is Made

Procedures used in the seventh inventory of the forest resources in South Carolina included several basic steps.

1. Initial estimates of forest and nonforest areas were based on the classification of 90,126 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 6,867 of the 16-point clusters was ground checked, and a linear regression was fitted to the data to develop the relationship between the photo and ground classification of the subsample. This procedure provides a means for adjusting the initial estimates of area for change in land use since date of photography and for photo misclassification.

2. Estimates of timber volume and forest classification were based on measurements recorded at 4,356 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 South Carolina, 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 required to construct volume equations. Forest biomass estimates were made from equations developed by the Utilization of Southern Timber Research Work Unit, Southeastern Forest Experiment Station, Athens, GA.

4. Felled trees were measured at 102 active cutting operations. These data will supplement the standing-tree volume data and be used to generate utilization factors for product and species groups.

5. Estimates of growth, removals, and mortality were determined from the remeasurement of 4,453 permanent sample plots established in the sixth survey.

6. Ownership information was collected from correspondence, public records, and local contacts. In 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.

## Statistical Reliability

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

Item	Sample estimate and confidence interval	Sampling error (percent)
<b>Timberland (1,000 acres)</b>	12,454.9 ± 31.1	0.25
<b>Growing stock (M ft<sup>3</sup>)</b>		
Inventory	16,685.2 ± 251.9	1.51
Net annual growth	525.6 ± 27.8	4.14
Annual removals	728.0 ± 26.4	3.63
Annual mortality	407.3 ± 15.8	3.88
<b>Sawtimber (M fbm)</b>		
Inventory	55,255.1 ± 1,071.9	1.94
Net annual growth	1,864.6 ± 102.7	5.51
Annual removals	2,749.2 ± 113.3	4.12
Annual mortality	1,625.8 ± 75.9	4.67

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

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

where

$SE_s$  = sampling error for subdivision of Survey Unit or State total,

$SE_t$  = sampling error for Survey Unit or State total,

$X_s$  = sum of values for the variable of interest (area or volume) for subdivision of Survey Unit or State,

$X_t$  = total area or volume for Survey Unit or State.

For example, the estimate of sampling error for growing-stock volume on other private timberland is computed as:

$$SE_s = 1.51 \frac{\sqrt{16,685.2}}{\sqrt{11,771.6}} = 1.80.$$

Thus, the sampling error is 1.80 percent, and the resulting confidence interval (two times out of three) for growing-stock inventory on other private timberland is 11,771.6 ± 211.9 million cubic feet.

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

Sampling errors for county and unit totals, in terms of one standard error, South Carolina, 1993

County	Timberland area	Cubic-foot volume of growing stock			County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals			Inventory	Growth	Removals
<i>Sampling error<sup>a</sup></i>					<i>Sampling error<sup>a</sup></i>				
Abbeville	1.33	11,57	11.73	33,54	Hampton	2.26	10.95	9,76	25.35
Aiken	1.37	8.65	6.76	16,19	Horry	1.06	6,55	10.01	18.24
Allendale	2.36	14,10	11.81	28,71	Jasper	1.86	9.29	9.81	23.80
Anderson	2.18	12.14	14.08	27,23	Kershaw	1.23	9.31	14.37	18,92
Bamberg	2.72	14.68	17.23	31.78	Lancaster	1,45	11.04	87.77	26.95
Barnwell	2.66	11.60	9.88	38.47	Laurens	1.73	10.76	11.32	21.01
Beaufort	3.24	10,80	11,94	27.36	Lee	4,04	15,82	245.97	48,88
Berkeley	0,75	6.77	20.38	17,06	Lexington	2.00	12.82	14.17	27.73
Calhoun	3,98	15,47	71.86	27.43	Marion	1,36	12.39	14,65	19.64
Charleston	1.72	9.79	28.93	20.70	Marlboro	2,51	9.07	14.21	30.52
Cherokee	1.79	13.32	13.34	33,64	McCormick	1.08	10.90	11.73	25,80
Chester	1.27	10.37	16.20	24,57	Newberry	1,77	11.45	14.05	20.67
Chesterfield	1,42	9.21	25.09	21,67	Oconee	0.92	6.78	17.23	30.63
Clarendon	2.14	13,16	41.52	27,51	Orangeburg	1.85	8.75	15.71	20.19
Colleton	1.09	6,76	6,91	14.04	Pickens	1.57	9.26	13,44	32.97
Darlington	1.98	13.59	49.61	30.90	Richland	1.61	7.61	9.76	22.80
Dillon	2,18	12,00	18.30	29.86	Saluda	2.87	13.16	12.61	37.11
Dorchester	1.45	8.49	19.50	21.20	Spartanburg	2.24	10.65	11.79	33.53
Edgefield	1.75	12,49	9,72	22,72	Sumter	1.84	10.99	85,20	27.47
Fairfield	0.61	7.99	8,31	22,22	Union	0.76	7.85	9,29	32.60
Florence	1.32	8.70	116.40	19.70	Williamsburg	1,15	8.12	275.89	16,68
Georgetown	1.12	8.05	24.13	19.37	York	1,31	9.35	16,11	28.64
Greenville	1,86	8.28	12.11	34,93					
Greenwood	1.77	14,31	11.31	24.27	<b>Total</b>	<b>0.25</b>	<b>1.51</b>	<b>4.14</b>	<b>3,63</b>

<sup>a</sup>By random-sampling formula (in percent).

## Definitions

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

**Biomass.** The aboveground 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.

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

**Commercial forest land.** (see: Timberland).

**Commercial species.** Tree species currently or potentially suitable for industrial wood products. Noncommercial species 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 in inches (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 5.0-6.9 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 primary wood-using plants,

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

**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 5 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 tropicsls.** Forests in which palms and other tropicsls 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 1 2-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.

**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, honey locust, holly, black walnut, mulberry, and all commercial oaks.

**Idle farmland.** 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.

**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.

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

**Live trees.** All 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.

**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 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.

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

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

**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 1 2-foot saw log, or two non-contiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of rot or missing sections, and with less than one-third of the gross board-foot tree volume in sound material.

Rough trees. Live trees of commercial species that do not contain at least one 1 2-foot saw log, or two non-contiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of roughness, poor form, splits, and cracks, and with less than one-third of the gross board-foot tree volume in sound material; and live trees of noncommercial species.

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

Roundwood chipped. Any timber cut primarily for pulpwood, delivered to nonpulp mills, 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 sawlog portion of sawtimber-size trees in board feet (international 1/4-inch rule).

Seedlings. Trees less than 1.0 inch in d.b.h. Only seedlings of a commercial species that are not overtopped and are more than 6 inches tall for softwoods and 1 foot tall for hardwoods are counted.

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.

Softwoods. Gymnosperm; 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 red-cedar, 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 live trees in the stand.

*Sawtimber stands*. Stands at least 16.7 percent stocked with live trees, with half or more of total stocking in sawtimber and poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

*Poletimber stands*. Stands at least 16.7 percent stocked with live trees, of which half or more of total stocking is in poletimber and sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

*Sapling-seedling stands*. Stands at least 16.7 percent stocked with live 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.

*Poor/y stocked.* Less than 60 percent stocking.

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

<i>D.b.h. class</i>	<i>Trees per acre for full stocking</i>	<i>Basal area per acre</i>
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

**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.** Forest land that is capable of producing 20 cubic feet of industrial wood per acre per year and not withdrawn from timber utilization.

**Timber products.** Roundwood products and byproducts.

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

**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.

## CONVERSION FACTORS

Cubic feet of wood per average cord  
(excluding bark)

<b>D.b.h. class</b>	<b>All species</b>	<b>Pine</b>	<b>Other softwood</b>	<b>Hardwood</b>
6	60.6	61.0	68.2	60.0
8	68.5	68.1	76.0	68.4
10	73.4	73.1	81.4	73.4
12	76.7	76.7	85.2	76.4
14	79.1	79.4	88.2	78.4
16	80.8	81.6	90.4	79.8
18	82.6	83.3	92.3	80.8
20	83.0	84.8	93.8	81.5
22	83.9	86.0	95.1	82.1
24 +	84.9	87.9	97.5	83.1
<b>Average</b>	<b>74.9</b>	<b>74.4</b>	<b>85.3</b>	<b>74.6</b>

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**

## Index of Tables<sup>a</sup>

### County Tables

1. Area, by county and land class
2. Area of timberland, by county and ownership class
3. Area of timberland, by county and forest-type group
4. Area of timberland, by county and stand-size class
5. Area of timberland, by county and site class
6. Area of timberland, by county and stocking class of growing-stock trees
7. Volume of growing stock and sawtimber on timberland, by county and species group
8. Average net annual growth of growing stock and sawtimber on timberland, by county and species group
9. Average annual removals of growing stock and sawtimber on timberland, by county and species group
18. Volume of growing stock on timberland, by broad management class, species group, and stand-age class
19. Average net annual growth on timberland, by broad management class, species group, and stand-age class
20. Average annual removals of growing stock on timberland, by broad management class, species group, and stand-age class
21. Merchantable volume of live trees and growing stock on timberland, by forest-type and species group
22. Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and ownership class
23. Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and broad management class

### Unit Tables

10. Area of timberland, by forest type and ownership class
11. Area of timberland, by ownership and stocking classes of growing stock trees
12. Area of timberland, by forest type and stand-size class
13. Area of timberland, by stand-age and broad management classes, all ownerships
14. Area of timberland, by stand-age and broad management classes, public ownerships
15. Area of timberland, by stand-age and broad management classes, forest industry
16. Area of timberland, by stand-age and broad management classes, other private ownerships
17. Area of timberland, by broad management and stand-volume classes
24. Area of timberland regenerated annually, by type of regeneration and broad management class
25. Area of timberland, by treatment opportunity and broad management classes
26. Area of timberland, by treatment opportunity and ownership classes
27. Merchantable volume of live trees and growing stock on timberland, by ownership class and species group
28. Volume of sawtimber on timberland, by ownership class and species group
29. Average net annual growth and removals of growing stock on timberland, by ownership class and species group
30. Average net annual growth and removals of sawtimber on timberland, by ownership class and species group
31. Volume of timber on timberland, by class of timber and species group

- 32. Number of live trees on timberland, by species and diameter class
- 33. Number of growing-stock trees on timberland, by species and diameter class
- 34. Merchantable volume of live trees on timberland, by species and diameter class
- 35. Volume of growing stock on timberland, by species and diameter class
- 36. Volume of sawtimber on timberland, by species and diameter class
- 37. Volume of sawtimber on timberland, by species, size class, and tree grade
- 38. Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class
- 39. Total volume of live trees on timberland, by species and diameter class
- 40. Green weight of forest biomass on timberland, by species and diameter class
- 41. Average net annual growth and removals of live timber and growing stock on timberland, by species
- 42. Average net annual growth and removals of sawtimber on timberland, by species
- 43. Average annual removals of growing stock on timberland, by species and diameter class
- 44. Average annual mortality of live timber, growing stock, and sawtimber on timberland, by species
- 45. Change in number of live trees on timberland, by species group, survey completion date, and diameter class
- 46. Land area, by land use class, major forest type, and survey completion date
- 47. Volume of sawtimber, growing stock, and live timber on timberland, by species group, survey completion date, and diameter class

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

Table 1 --Area, by county and land class, South Carolina, 1993

County	All land <sup>a</sup>	Forest land			Reserved timberland	Nonforest land <sup>b</sup>
		Total	Timberland	Woodland		
<i>Acres</i>						
Abbeville	316,419	219,194	212,431	--	6,763	97,225
Aiken	686,772	484,656	483,139	--	1,517	202,116
Allendale	261,268	166,615	166,615	--	--	94,653
Anderson	459,546	204,656	204,261	--	395	254,890
Bamberg	251,699	165,919	165,511	--	408	85,780
Barnwell	351,040	245,680	245,388	--	292	105,360
Beaufort	375,692	132,865	128,350	--	4,515	242,827
Berkeley	703,712	552,928	548,104	--	4,824	150,784
Calhoun	243,404	153,634	153,634	--	--	89,770
Charleston	587,149	285,716	270,370	--	15,346	301,433
Cherokee	251,334	152,214	150,351	--	1,863	99,120
Chester	371,559	290,996	290,472	--	524	80,563
Chesterfield	511,220	369,397	361,872	--	7,525	141,823
Clarendon	388,640	222,651	221,802	--	849	165,989
Colleton	676,147	458,963	457,069	--	1,894	217,184
Darlington	359,718	191,840	188,865	--	2,975	167,878
Dillon	259,129	145,518	144,467	--	1,051	113,611
Dorchester	367,866	258,544	257,459	--	1,085	109,322
Edgefield	321,222	244,811	244,811	--	--	76,411
Fairfield	439,398	383,305	383,087	--	218	56,093
Florence	511,494	294,099	293,435	--	664	217,395
Georgetown	521,511	381,697	379,227	--	2,470	139,814
Greenville	506,937	280,084	247,175	--	32,909	226,853
Greenwood	291,539	202,667	201,403	--	1,264	88,872
Hampton	358,355	254,251	254,101	--	150	104,104
Horry	725,574	460,176	449,009	--	11,167	265,398
Jasper	418,772	311,844	299,613	--	12,231	106,928
Kershaw	464,832	376,508	375,934	--	574	88,324
Lancaster	351,373	264,666	262,985	--	1,681	86,707
Laurens	456,423	313,012	312,772	--	240	143,411
Lee	262,611	138,446	135,865	--	2,581	124,165
Lexington	448,525	255,483	255,441	--	42	193,042
Marion	313,024	219,553	217,523	--	2,030	93,471
Marlboro	307,021	184,752	184,702	--	50	122,269
McCormick	230,138	203,392	200,025	--	3,367	26,746
Newberry	403,719	289,625	288,965	--	660	114,094
Oconee	400,064	292,470	274,690	--	17,780	107,594
Orangeburg	707,833	402,239	399,718	--	2,521	305,594
Pickens	318,029	219,625	212,646	--	6,979	98,404
Richland	484,186	323,780	302,521	--	21,259	160,406
Saluda	280,877	189,821	189,821	--	--	99,056
Spartanburg	519,033	269,731	262,766	--	6,965	249,302
Sumter	425,894	237,791	235,443	--	2,348	188,103
Union	329,094	267,867	267,748	--	119	61,227
Williamsburg	597,760	409,310	409,310	--	--	188,450
York	436,832	272,566	264,029	--	8,537	164,266
<b>Total</b>	<b>19,262,384</b>	<b>12,645,557</b>	<b>12,454,925</b>	<b>--</b>	<b>190,632</b>	<b>6,616,827</b>

<sup>a</sup>From the U .S. Bureau of the Census, 1990,<sup>b</sup>Includes 37,424 acres of water according to Forest Inventory and Analysis standards of area classification, but defined by the Bureau of Census as land.

Table 2--Area of timberland, by county and ownership class, South Carolina, 1993

County	All ownerships	Ownership class							
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry <sup>a</sup>	Other private		
Acres									
							Farmer	Corporate	Individual
Abbeville	212,431	20,913	7,295	--	89	49,993	44,714	24,077	65,350
Aiken	483,139	--	69,011	600	1,034	58,338	103,886	66,109	184,161
Allendale	166,615	--	4,075	32	81	42,346	25,017	22,515	72,549
Anderson	204,261	--	9,057	5,928	418	4,625	68,552	25,707	89,974
Bamberg	165,511	--	--	110	295	23,857	40,357	15,134	85,758
Barnwell	245,388	--	111,667	1,042	413	24,170	30,489	8,315	69,292
Beaufort	128,350	--	4,042	210	481	33,202	3,847	23,085	63,483
Berkeley	548,104	183,769	9,518	18,157	221	162,595	51,419	34,279	88,146
Calhoun	153,634	--	--	1,679	90	6,056	54,321	5,718	85,770
Charleston	270,370	47,145	648	9,162	4,972	53,848	27,159	37,604	89,832
Cherokee	150,351	--	--	--	140	21,074	41,780	15,193	72,164
Chester	290,472	11,241	--	--	649	84,999	71,697	35,849	86,037
Chesterfield	361,872	--	43,150	43,445	440	35,874	116,001	27,840	95,122
Clarendon	221,802	--	2,426	4,714	46	44,311	82,648	25,045	62,612
Colleton	457,069	--	--	1,163	1,817	133,295	70,995	57,848	191,951
Darlington	188,865	--	1,010	1,600	417	29,128	73,746	21,509	61,455
Dillon	144,467	--	--	9	46	32,747	68,522	10,151	32,992
Dorchester	257,459	--	--	699	518	80,959	50,807	33,024	91,452
Edgefield	244,811	27,144	607	75	300	49,985	25,646	8,549	132,505
Fairfield	383,087	10,373	--	141	119	91,835	48,502	51,966	180,151
Florence	293,435	--	--	2,041	906	49,953	119,053	26,726	94,756
Georgetown	379,227	--	--	4,418	275	208,885	19,206	60,018	86,425
Greenville	247,175	--	--	15	1,605	8,180	28,649	53,205	155,521
Greenwood	201,403	8,491	--	--	748	34,974	55,229	21,242	80,719
Hampton	254,101	--	--	5,399	1,355	70,545	72,966	25,257	78,579
Horry	449,009	--	1,678	523	1,208	104,690	134,892	78,483	127,535
Jasper	299,613	--	--	2,081	133	103,507	14,257	99,797	79,838
Kershaw	375,934	--	--	594	1,693	69,793	50,224	65,291	188,339
Lancaster	262,985	--	--	56	616	43,746	48,570	45,101	124,896
Laurens	312,772	16,668	--	928	1,164	48,595	58,235	54,075	133,107
Lee	135,865	--	70	10	147	12,843	40,932	5,458	76,405
Lexington	255,441	--	--	20	477	4,997	54,866	42,674	152,407
Marion	217,523	--	--	10	846	92,560	50,771	--	73,336
Marlboro	184,702	--	--	--	105	57,762	87,577	18,119	21,139
McCormick	200,025	48,902	23,760	1,503	430	48,931	23,538	11,769	41,192
Newberry	288,965	57,615	--	5	198	59,974	75,635	19,904	75,634
Oconee	274,690	63,800	5,383	4,631	891	270	39,943	65,361	94,411
Orangeburg	399,718	--	1,396	2,781	579	55,044	102,515	32,373	205,030
Pickens	212,646	--	777	14,175	754	1,783	34,439	65,052	95,666
Richland	302,521	--	47,614	4,364	644	24,124	18,431	73,722	133,622
Saluda	189,821	4,452	--	21	198	26,457	75,379	11,902	71,412
Spartanburg	262,766	--	--	--	3,695	9,523	79,566	47,016	122,966
Sumter	235,443	--	275	44,823	425	12,958	62,311	37,386	77,265
Union	267,748	59,495	--	--	264	55,919	40,799	40,799	70,472
Williamsburg	409,310	--	--	--	50	86,074	143,050	29,140	150,996
York	264,029	--	--	249	1,107	38,937	80,405	52,438	90,893
Total	12,454,925	560,008	343,459	177,413	33,099	2,394,261	2,711,543	1,631,825	4,603,317

<sup>a</sup>Includes 72,252 acres of other private land under long-term lease.

Table 3 -- Area of timberland, by county and forest-type group, South Carolina, 1993

County	Forest-type group									
	All type groups	White pine-hemlock	Spruce-fir	Longleaf-slash	Loblolly-shortleaf	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch
	Acres									
Abbeville	212,431	--	--	--	86,201	43,015	79,776	--	3,439	--
Aiken	483,139	--	--	113,742	137,297	85,719	97,101	46,919	2,361	--
Allendale	166,615	--	--	5,035	90,371	18,036	10,530	40,142	2,501	--
Anderson	204,261	--	--	--	56,038	50,094	85,276	8,569	4,284	--
Bamberg	165,511	--	--	2,982	75,449	20,179	15,998	50,903	--	--
Barnwell	245,388	--	--	37,891	115,844	13,620	27,905	50,128	--	--
Beaufort	128,350	--	--	17,774	42,714	16,486	25,273	26,103	--	--
Berkeley	548,104	--	--	24,587	261,787	75,389	28,674	155,470	2,197	--
Calhoun	153,634	--	--	12,751	64,780	32,289	22,962	20,852	--	--
Charleston	270,370	--	--	15,046	93,179	52,459	22,139	87,547	--	--
Cherokee	150,351	--	--	--	51,830	26,587	68,136	3,798	--	--
Chester	290,472	--	--	--	170,872	63,403	43,231	9,418	3,548	--
Chesterfield	361,872	--	--	79,126	93,123	68,899	76,860	41,616	2,248	--
Clarendon	221,802	--	--	--	50,949	48,894	15,550	103,643	2,766	--
Colleton	457,069	--	--	20,294	212,457	54,847	36,070	133,401	--	--
Darlington	188,865	--	--	3,073	49,010	57,201	36,875	37,296	5,410	--
Dillon	144,467	--	--	--	49,556	24,939	12,688	54,746	2,538	--
Dorchester	257,459	--	--	15,241	93,827	33,002	21,511	88,797	5,081	--
Edgefield	244,811	--	--	--	128,614	34,878	63,561	13,484	4,274	--
Fairfield	383,087	--	--	--	234,975	46,975	79,383	11,362	10,392	--
Florence	293,435	--	--	5,670	99,662	43,731	31,588	109,543	3,241	--
Georgetown	379,227	--	--	17,048	182,752	42,275	14,649	122,503	--	--
Greenville	247,175	--	--	--	68,828	36,833	135,003	2,418	4,093	--
Greenwood	201,403	--	--	--	118,410	20,747	53,750	8,496	--	--
Hampton	254,101	--	--	18,189	94,855	22,450	10,030	105,771	2,806	--
Horry	449,009	--	--	11,045	165,000	59,984	44,823	168,157	--	--
Jasper	299,613	--	--	43,847	128,827	22,041	9,537	95,361	--	--
Kershaw	375,934	--	--	52,119	129,268	62,011	81,717	45,797	5,022	--
Lancaster	262,985	--	--	6,939	104,782	36,321	104,536	10,407	--	--
Laurens	312,772	--	--	--	146,390	29,118	130,125	7,139	--	--
Lee	135,865	--	--	--	65,885	10,540	24,184	35,256	--	--
Lexington	255,441	--	--	33,529	62,913	58,393	82,297	18,309	--	--
Marion	217,523	--	--	5,134	57,844	29,508	35,147	84,756	5,134	--
Marlboro	184,702	--	--	8,208	62,239	11,274	27,547	75,434	--	--
McCormick	200,025	--	--	--	112,553	46,094	33,228	8,150	--	--
Newberry	288,965	--	--	--	191,196	21,212	53,822	18,754	3,981	--
Oconee	274,690	--	--	--	100,805	80,283	93,602	--	--	--
Orangeburg	399,718	--	--	11,155	144,582	56,654	45,945	141,382	--	--
Pickens	212,646	11,479	--	--	28,005	30,611	138,724	--	3,827	--
Richland	302,521	--	--	23,367	100,532	61,777	56,669	57,872	2,304	--
Saluda	189,821	--	--	3,967	132,962	10,587	30,404	11,901	--	--
Spartanburg	262,766	--	--	--	85,474	54,249	112,194	3,616	7,233	--
Sumter	235,443	--	--	8,151	59,700	43,044	36,473	88,075	--	--
Union	267,748	--	--	--	114,030	38,781	86,667	18,046	10,224	--
Williamsburg	409,310	--	--	13,245	121,310	59,981	59,729	155,045	--	--
York	264,029	--	--	--	103,186	46,658	100,202	13,983	--	--
<b>Total</b>	<b>12,454,925</b>	<b>11,479</b>	<b>--</b>	<b>609,155</b>	<b>4,940,863</b>	<b>1,902,068</b>	<b>2,502,091</b>	<b>2,390,365</b>	<b>98,904</b>	<b>--</b>

Table 4—Area of timberland, by county and stand-size class, South Carolina, 1993

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
Acres					
Abbeville	212,431	58,140	75,397	78,894	--
Aiken	403,139	147,535	136,063	194,819	4,722
Allendale	166,615	56,281	43,166	64,667	2,501
Anderson	204,261	63,189	55,139	81,648	4,285
Bamberg	165,511	54,644	34,168	74,176	2,523
Barnwell	245,388	104,829	57,718	80,182	2,659
Beaufort	128,350	79,461	27,461	18,409	3,019
Berkeley	548,104	157,221	123,203	261,088	6,592
Calhoun	153,634	47,423	40,364	65,847	--
Charleston	270,370	97,012	52,254	116,926	4,178
Cherokee	150,351	64,338	44,605	37,610	3,798
Chester	290,472	110,407	82,371	97,694	--
Chesterfield	361,872	118,687	108,055	128,204	6,926
Clarendon	221,802	59,194	41,443	121,165	--
Colleton	457,069	202,971	103,036	148,803	2,259
Darlington	188,865	54,897	51,045	82,923	- -
Dillon	144,467	77,353	29,137	37,977	--
Dorchester	257,459	104,578	71,036	76,775	5,070
Edgefield	244,811	87,306	51,954	105,551	--
Fairfield	383,087	134,660	105,172	143,255	--
Florence	293,435	119,170	51,124	123,141	--
Georgetown	379,227	145,406	83,657	150,164	--
Greenville	247,175	155,449	45,961	45,765	- -
Greenwood	201,403	80,912	53,745	66,746	- -
Hampton	254,101	121,989	54,625	74,680	2,807
Horry	449,009	224,553	76,499	145,504	2,453
Jasper	299,613	143,966	64,883	87,912	2,852
Kershaw	375,934	88,852	108,383	174,061	4,638
Lancaster	262,985	38,779	99,744	124,462	--
Laurens	312,772	101,997	86,541	124,234	--
Lee	135,865	34,052	33,382	68,431	--
Lexington	255,441	88,894	54,866	108,633	3,048
Marion	217,523	83,794	41,595	92,134	- -
Marlboro	184,702	82,527	59,809	40,724	1,642
McCormick	200,025	94,131	46,132	56,064	3,698
Newberry	288,965	145,179	42,543	98,412	2,831
Oconee	274,690	170,076	66,962	37,652	--
Orangeburg	399,718	131,321	104,265	161,434	2,698
Pickens	212,646	122,379	58,310	31,957	--
Richland	302,521	127,460	77,473	93,091	4,497
Saluda	189,821	70,729	55,461	63,631	--
Spartanburg	262,766	112,195	79,678	70,893	--
Sumter	235,443	69,006	63,933	100,466	2,038
Union	267,748	113,727	97,979	56,042	--
Williamsburg	409,310	135,003	93,469	170,842	9,996
York	264,029	82,973	104,619	76,437	--
<b>Total</b>	<b>12,454,925</b>	<b>4,764,645</b>	<b>3,138,425</b>	<b>4,460,125</b>	<b>91,730</b>

Table 5- Area of timberland, by county and site class, South Carolina, 1993

County	All classes	Site class (cubic feet per acre per year)				
		>164	120-164	85-119	50-84	20-49
Acres						
Abbeville	212,431	--	--	44,383	148,204	19,844
Aiken	483,139	--	2,361	66,532	260,800	153,446
Allendale	166,615	--	2,501	49,300	112,312	2,502
Anderson	204,261	--	--	43,086	154,627	6,548
Bamberg	165,511	--	--	28,500	129,443	7,568
Barnwell	245,388	--	10,748	66,103	149,473	19,064
Beaufort	128,350	--	10,924	37,011	74,644	5,771
Berkeley	548,104	--	31,752	195,341	287,558	33,453
Calhoun	153,634	--	2,859	52,302	75,601	22,872
Charleston	270,370	--	31,614	98,228	98,240	42,288
Cherokee	150,351	--	--	15,194	120,335	14,822
Chester	290,472	--	7,096	48,666	219,759	14,951
Chesterfield	361,872	--	6,960	62,615	163,647	128,650
Clarendon	221,802	--	8,037	80,572	112,188	21,005
Colleton	457,069	--	48,905	198,431	191,326	18,407
Darlington	188,865	--	4,429	48,638	111,217	24,581
Dillon	144,467	--	2,538	50,399	66,589	24,941
Dorchester	257,459	2,540	12,683	132,401	92,054	17,781
Edgefield	244,811	--	15,289	103,579	108,846	17,097
Fairfield	383,087	--	--	60,409	272,232	50,446
Florence	293,435	--	7,290	70,502	208,354	7,289
Georgetown	379,227	--	9,844	97,066	227,346	44,971
Greenville	247,175	8,186	13,883	104,751	120,355	--
Greenwood	201,403	--	--	60,424	132,482	8,497
Hampton	254,101	--	23,232	83,679	132,637	14,553
Horry	449,009	2,452	11,821	111,945	252,860	69,931
Jasper	299,613	--	18,091	88,586	178,467	14,469
Kershaw	375,934	2,511	5,023	48,682	234,134	85,584
Lancaster	262,985	--	--	44,940	171,316	46,729
Laurens	312,772	--	1,164	82,769	220,519	8,320
Lee	135,865	--	--	21,291	91,658	22,916
Lexington	255,441	--	3,048	34,006	120,847	97,540
Marion	217,523	--	2,314	81,864	119,737	13,608
Marlboro	184,702	--	3,282	66,481	97,934	17,005
McCormick	200,025	--	4,075	61,208	119,276	15,466
Newberry	288,965	--	3,980	125,413	159,572	--
Oconee	274,690	10,894	26,842	56,846	152,907	27,201
Orangeburg	399,718	--	10,791	103,762	268,979	16,186
Pickens	212,646	11,479	15,307	54,561	123,646	7,653
Richland	302,521	--	4,608	57,761	197,506	42,646
Saluda	189,821	3,967	--	61,635	124,219	--
Spartanburg	262,766	--	7,311	52,810	199,028	3,617
Sumter	235,443	--	4,985	77,031	123,024	30,403
Union	267,748	--	7,683	52,216	189,803	18,046
Williamsburg	409,310	--	12,647	100,617	246,064	49,982
York	264,029	--	3,496	45,694	190,367	24,472
<b>Total</b>	<b>12,454,925</b>	<b>42,029</b>	<b>399,413</b>	<b>3,328,230</b>	<b>7,352,132</b>	<b>1,333,121</b>

Table 6- Area of timberland, by county and stocking class of growing-stock trees, South Carolina, 1993

County	All classes	Stocking class (percent) <sup>a</sup>				
		>130	100-130	60-99	16.7-59	<16.7
Acres						
Abbeville	212,431	10,364	88,514	105,351	8,202	--
Aiken	483,139	4,722	127,043	197,620	117,738	36,016
Allendale	166,615	11,577	70,251	69,777	12,509	2,501
Anderson	204,261	4,285	54,719	115,265	25,707	4,285
Bamberg	165,511	8,486	56,870	79,057	18,575	2,523
Barnwell	245,388	13,407	113,196	86,100	30,026	2,659
Beaufort	128,350	8,788	43,062	42,701	28,856	4,943
Berkeley	548,104	14,007	187,415	220,071	117,536	9,075
Calhoun	153,634	2,859	61,921	57,405	28,590	2,859
Charleston	270,370	10,510	81,721	120,642	49,076	8,421
Cherokee	150,351	10,652	52,943	60,540	22,418	3,798
Chester	290,472	24,906	112,401	124,597	28,568	--
Chesterfield	361,872	17,023	78,046	158,293	82,025	26,485
Clarendon	221,802	11,230	73,836	89,775	46,961	--
Colleton	457,069	36,479	201,083	166,511	45,477	7,519
Darlington	188,865	1,028	62,743	99,156	25,938	--
Dillon	144,467	10,151	51,592	60,030	20,156	2,538
Dorchester	257,459	12,671	101,480	125,568	12,670	5,070
Edgefield	244,811	4,274	82,927	122,557	23,839	11,214
Fairfield	383,087	12,332	146,037	183,568	41,150	--
Florence	293,435	4,860	97,230	141,839	41,406	8,100
Georgetown	379,227	27,869	170,423	136,502	42,032	2,401
Greenville	247,175	8,186	71,993	115,453	51,543	--
Greenwood	201,403	8,496	91,679	89,472	11,756	--
Hampton	254,101	24,844	113,975	89,762	22,713	2,807
Horry	449,009	44,730	169,006	176,843	53,524	4,906
Jasper	299,613	24,774	133,412	110,736	21,925	8,766
Kershaw	375,934	10,044	92,754	166,740	86,690	19,706
Lancaster	262,985	6,017	72,855	138,252	45,861	--
Laurens	312,772	14,279	107,968	136,443	54,082	--
Lee	135,865	--	51,480	59,989	24,396	--
Lexington	255,441	12,192	38,528	88,893	85,348	30,480
Marion	217,523	15,404	62,243	109,071	22,851	7,954
Marlboro	184,702	7,681	73,776	72,519	26,064	4,662
McCormick	200,025	7,775	89,931	84,585	14,036	3,698
Newberry	288,965	10,794	116,454	140,130	18,756	2,831
Oconee	274,690	14,524	76,514	142,997	40,655	--
Orangeburg	399,718	8,094	187,751	155,313	45,862	2,698
Pickens	212,646	11,480	54,510	101,021	41,808	3,827
Richland	302,521	2,304	116,175	120,736	58,809	4,497
Saluda	189,821	21,131	105,441	44,749	11,902	6,598
Spartanburg	262,766	13,027	81,122	119,426	41,958	7,233
Sumter	235,443	5,261	59,248	121,566	45,292	4,076
Union	267,748	19,854	101,124	125,822	20,948	--
Williamsburg	409,310	7,348	129,006	199,084	55,929	17,943
York	264,029	13,983	87,745	116,250	42,555	3,496
<b>Total</b>	<b>12,454,925</b>	<b>574,702</b>	<b>4,400,143</b>	<b>5,388,777</b>	<b>1,814,718</b>	<b>276,585</b>

<sup>a</sup>See stocking standards under "stocking" in definitions.

Table 7--Volume of growing stock and sawtimber on timberland, by county and species group, South Carolina, 1993

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	soft hardwood	Hard hardwood	All species	Pine	Other softwood	soft hardwood	Hard hardwood
	<i>Thousand cubic feet</i>					<i>Thousand board feet</i>				
Abbeville	271,915	87,446	10,522	82,401	91,546	784,408	262,091	8,985	250,749	262,583
Aiken	524,255	329,734	3,996	108,766	81,759	1,769,178	1,181,095	19,247	357,632	211,204
Allendale	223,729	113,781	6,903	60,313	42,732	804,679	415,634	32,447	198,981	157,617
Anderson	288,429	86,470	2,702	68,827	130,430	886,479	282,410	9,849	264,266	329,954
Bamberg	158,596	60,476	18,551	50,932	28,637	466,188	180,727	74,328	149,943	61,190
Barnwell	361,039	190,736	15,847	111,197	43,259	1,241,529	732,171	56,479	321,320	131,559
Beaufort	218,091	96,367	3,103	68,609	50,012	837,742	406,884	7,207	231,778	191,873
Berkeley	511,884	233,007	34,954	154,487	89,436	1,543,014	697,441	124,643	402,752	318,178
Calhoun	161,543	76,248	3,081	54,485	27,729	528,994	281,255	12,916	167,340	67,483
Charleston	321,076	125,924	20,162	109,684	65,306	1,073,588	499,425	78,710	307,793	187,660
Cherokee	201,219	69,783	3,913	44,582	82,941	601,762	202,519	6,431	137,095	255,717
Chester	409,500	267,816	9,786	64,115	67,783	1,290,728	974,800	18,785	148,464	148,679
Chesterfield	389,990	207,295	351	118,085	64,259	1,227,109	696,650	--	365,582	164,877
Clarendon	198,120	50,022	21,371	92,308	34,419	546,882	167,991	59,826	225,971	93,094
Colleton	791,883	434,306	30,050	184,871	142,656	2,740,334	1,625,332	112,141	488,613	514,248
Darlington	212,297	91,592	13,912	60,900	45,893	727,573	399,733	66,285	182,857	78,698
Dillon	257,637	91,511	14,234	115,766	36,126	951,322	443,500	74,385	334,765	98,672
Dorchester	374,895	131,901	31,254	127,376	84,364	1,200,262	498,018	131,244	323,220	247,780
Edgefield	333,220	212,126	--	76,728	44,366	1,413,781	1,021,662	--	267,399	124,720
Fairfield	460,648	281,440	11,367	72,076	95,765	1,373,430	923,921	12,188	196,654	240,667
Florence	355,296	133,413	14,271	135,580	72,032	1,298,993	585,391	55,274	450,024	208,304
Georgetown	485,857	239,673	25,859	159,608	60,717	1,602,067	855,217	104,443	435,774	206,633
Greenville	471,075	153,834	1,082	120,870	195,289	1,613,357	545,790	7,166	409,234	651,167
Greenwood	267,666	169,797	1,556	56,612	39,701	961,299	643,637	3,545	202,702	111,415
Hampton	473,425	146,294	29,813	173,143	124,175	1,747,552	544,533	127,629	583,203	492,187
Horry	767,671	294,292	44,965	335,066	93,348	2,726,614	1,326,776	179,312	878,935	341,591
Jasper	529,159	230,225	36,052	130,996	131,886	1,945,615	826,904	143,299	449,965	525,447
Kershaw	296,422	157,144	3,717	80,245	55,316	827,020	452,099	13,217	234,047	127,657
Lancaster	219,733	90,889	3,387	70,645	54,812	460,833	182,689	6,223	156,319	115,602
Laurens	410,361	215,044	3,688	79,464	112,165	1,302,073	741,402	4,208	218,823	337,640
Lee	121,773	54,216	--	48,344	19,213	375,712	200,130	--	131,593	43,989
Lexington	275,793	172,033	874	51,898	50,988	1,074,059	763,972	3,287	165,876	140,924
Marion	353,450	72,607	32,762	189,336	58,745	1,152,386	291,633	161,777	522,000	176,976
Marlboro	318,239	110,601	7,181	152,192	48,265	1,014,422	402,431	35,678	417,117	159,196
McCormick	327,930	194,713	3,319	67,767	62,131	1,202,064	845,366	4,415	210,654	141,629
Newberry	434,559	248,598	6,131	91,407	88,423	1,601,821	1,047,601	8,619	290,448	255,153
Oconee	485,972	201,462	38,250	79,028	167,232	1,585,289	618,143	205,050	258,003	504,093
Orangeburg	532,995	155,767	21,925	208,878	146,425	1,683,439	588,716	79,951	589,950	424,822
Pickens	352,642	67,745	25,947	74,127	184,823	1,137,966	233,805	84,883	248,890	570,388
Richland	378,276	167,403	4,841	106,558	99,474	1,258,356	644,652	9,168	305,611	298,925
Saluda	302,041	199,856	1,773	46,659	53,753	1,018,466	659,172	1,965	121,326	236,003
Spartanburg	391,119	161,202	6,184	86,981	136,752	1,187,746	480,251	11,696	249,669	446,130
Sumter	270,409	77,625	10,264	131,589	50,931	867,508	219,194	39,936	468,543	139,835
Union	442,652	184,078	7,762	107,925	142,887	1,434,455	563,935	14,100	377,014	479,406
Williamsburg	412,054	151,306	9,058	140,792	110,898	1,290,581	558,270	42,174	329,911	360,226
York	338,700	141,996	7,631	85,605	103,468	876,466	402,608	10,836	201,538	261,484
Total	16,685,235	7,429,794	604,351	4,837,823	3,813,267	55,255,141	27,117,576	2,263,947	14,230,343	11,643,275

Table 8—Average net annual growth of growing stock and sawtimber on timberland, by county and species group, South Carolina, 1986–1992

County	Growing stock						Sawtimber			
	Ail species	Pine	Other softwood	soft hardwood	Hard hardwood	All species	Pine	Other softwood	soft hardwood	Hard hardwood
	<i>Thousand cubic feet</i>						<i>Thousand board feet</i>			
Abbeville	12,603	7,129	668	1,847	2,959	40,149	21,385	653	5,185	12,926
Aiken	24,704	19,346	89	2,496	2,773	84,056	65,692	510	9,155	8,699
Allendale	12,598	9,051	113	1,599	1,835	43,840	27,349	803	7,477	8,211
Anderson	10,479	3,981	76	1,705	4,717	44,537	18,114	141	8,373	17,909
Bamberg	10,148	6,620	408	1,557	1,563	28,884	18,962	1,812	4,736	3,374
Barnwell	14,176	10,693	129	2,112	1,242	54,105	38,279	815	9,936	5,075
Beaufort	11,866	7,987	156	1,959	1,764	47,309	29,924	408	9,744	7,233
Berkeley	-32,021	-27,879	272	-150	-4,264	-179,559	-162,476	1,413	657	-19,153
Calhoun	3,687	2,318	41	975	353	8,687	3,718	232	5,060	-323
Charleston	-12,924	-12,597	-442	125	-10	-72,133	-66,869	-1,763	-1,112	-2,389
Cherokee	7,828	3,648	41	1,585	2,554	32,564	10,591	184	7,875	13,914
Chester	15,310	10,207	422	2,378	2,303	54,724	41,126	948	5,761	6,889
Chesterfield	12,252	8,464	31	2,464	1,293	38,763	24,735	—	11,075	2,953
Clarendon	-9,982	-2,933	473	-2,217	-5,305	-60,822	-26,602	644	-10,517	-24,347
Colleton	43,996	32,910	512	5,320	5,254	175,613	130,356	2,959	20,447	21,851
Darlington	5,753	4,003	-86	1,280	556	12,790	12,636	-80	3,049	-2,815
Dillon	8,520	5,014	352	2,577	577	41,684	27,234	2,295	10,612	1,543
Dorchester	11,878	8,487	-140	2,833	698	30,987	25,089	-268	8,219	-2,053
Edgefield	15,731	11,340	21	2,902	1,468	68,534	50,670	—	11,506	6,358
Fairfield	27,109	20,177	827	3,466	2,639	91,282	69,293	543	11,951	9,495
Florence	1,930	970	39	2,601	-1,680	7,414	11,849	-35	7,793	-12,193
Georgetown	11,348	10,878	378	1,608	-1,516	34,941	34,369	2,038	4,275	-5,741
Greenville	13,538	5,006	56	3,467	5,009	66,368	23,241	413	18,816	23,898
Greenwood	15,571	11,337	-52	2,071	2,215	59,194	46,706	—	6,973	5,515
Hampton	20,308	11,607	486	4,144	4,071	83,343	40,154	3,377	20,011	19,801
Horry	21,396	12,556	856	7,080	904	95,812	65,550	4,085	23,754	2,423
Jasper	25,613	17,527	918	3,272	3,896	90,981	55,013	3,023	15,179	17,766
Kershaw	12,963	8,889	74	2,204	1,796	47,800	31,998	119	7,519	8,164
Lancaster	3,860	1,220	98	3,056	-514	1,072	-4,221	296	5,922	-925
Laurens	20,119	11,901	-127	4,488	3,857	74,610	45,522	-328	13,746	15,670
Lee	-1,427	845	2	-1,615	-659	-11,560	516	14	-8,554	-3,536
Lexington	10,954	7,679	20	2,135	1,120	52,364	37,763	306	9,026	5,269
Marion	10,605	4,049	71	4,993	1,492	37,688	16,918	722	15,099	4,949
Marlboro	12,646	7,078	124	3,869	1,575	57,677	35,150	738	13,674	8,115
McCormick	14,767	11,592	110	1,536	1,529	54,609	45,432	238	5,381	3,558
Newberry	18,949	14,683	51	2,513	1,702	87,342	66,535	123	9,536	11,148
Oconee	15,108	6,609	1,461	2,511	4,527	68,317	33,422	7,272	10,413	17,210
Orangeburg	17,709	9,889	187	4,475	3,158	68,139	36,216	740	19,602	11,581
Pickens	9,510	1,558	1,267	2,739	3,946	46,090	9,381	6,282	11,414	19,013
Richland	16,054	9,381	78	3,160	3,435	62,358	38,969	16	9,748	13,625
Saluda	18,418	14,978	139	1,635	1,666	60,257	43,841	27	6,695	9,694
Spartanburg	14,378	6,787	358	3,620	3,613	55,055	24,898	492	12,121	17,544
Sumter	-4,614	-3,149	141	328	-1,934	-34,550	-27,791	274	2,819	-9,852
Union	20,835	13,549	243	3,217	3,826	77,703	48,244	354	11,967	17,138
Williamsburg	-1,366	404	-59	1,532	-3,243	-16,651	-6,408	-250	4,684	-14,677
York	12,670	6,340	582	3,084	2,664	52,248	31,092	92	13,949	7,115
Total	525,553	332,129	11,464	110,536	71,424	1,864,615	1,143,565	42,677	410,751	267,622

Table 9- Average annual removals of growing stock and sawtimber on timberland, by county and species group, South Carolina, 1986-1992

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	soft hardwood	Hard hardwood	All species	Pine	Other softwood	soft hardwood	Hard hardwood
	<i>Thousand cubic feet</i>					<i>Thousand board feet</i>				
Abbeville	7,256	5,662	564	614	416	27,775	25,373	569	1,833	—
Aiken	16,024	12,799	—	1,728	1,497	52,473	41,317	—	6,646	4,510
Allendale	13,334	8,273	111	1,665	3,285	49,756	28,380	578	7,432	13,366
Anderson	14,966	8,107	91	1,129	5,639	56,454	31,723	—	4,834	19,897
Bamberg	6,780	4,813	225	945	797	24,444	18,456	968	1,921	3,099
Barnwell	7,491	5,246	—	535	1,710	29,697	20,811	—	2,523	6,363
Beaufort	12,532	9,427	—	1,754	1,351	53,764	44,504	—	3,908	5,352
Berkeley	20,440	15,714	—	1,737	2,989	73,828	57,738	—	3,428	12,662
Calhoun	12,794	9,384	—	2,749	661	47,996	34,575	—	10,072	3,349
Charleston	16,188	12,412	—	1,162	2,614	76,084	66,045	—	1,989	8,050
Cherokee	7,245	3,842	—	849	2,554	25,244	14,612	—	3,456	7,176
Chester	13,988	8,135	713	2,571	2,569	45,220	26,278	1,810	8,131	9,001
Chesterfield	11,025	6,629	—	3,030	1,366	41,007	23,785	—	13,303	3,919
Clarendon	14,705	7,847	411	4,071	2,376	65,596	41,413	1,987	13,331	8,865
Colleton	43,676	31,611	159	6,554	5,352	146,561	110,435	528	18,285	17,313
Darlington	7,821	5,274	—	669	1,878	31,602	24,701	—	2,262	4,639
Dillon	6,251	3,328	—	1,157	1,766	22,622	14,278	—	2,927	5,417
Dorchester	23,145	14,496	345	4,021	4,283	87,216	60,425	1,612	11,495	13,684
Edgefield	19,225	14,650	—	2,267	2,308	71,606	63,024	—	2,270	6,312
Fairfield	22,838	17,914	216	3,592	1,116	82,149	66,878	435	10,847	3,989
Florence	23,250	15,897	1,691	2,616	3,046	108,962	81,597	9,041	6,368	11,956
Georgetown	19,441	16,386	—	979	2,076	70,542	63,461	—	1,909	5,172
Greenville	8,639	2,563	—	1,196	4,880	28,801	9,624	—	2,132	17,045
Greenwood	14,784	10,283	—	2,302	2,199	47,553	37,091	—	5,610	4,852
Hampton	13,408	6,713	—	3,852	2,843	58,005	31,853	—	13,918	12,234
Horry	28,876	21,118	767	4,153	2,838	125,338	99,442	3,618	11,843	10,435
Jasper	17,894	11,467	—	3,196	3,231	68,611	45,245	—	11,015	12,351
Kershaw	19,169	15,032	—	2,342	1,795	75,042	59,945	—	9,776	5,321
Lancaster	14,219	10,510	59	2,159	1,491	44,979	34,692	—	6,404	3,883
Laurens	22,742	8,936	200	5,529	8,077	70,692	29,766	625	15,924	24,377
Lee	5,094	4,644	104	100	246	17,190	15,956	486	378	370
Lexington	9,436	7,560	—	729	1,147	38,490	32,688	—	2,152	3,650
Marion	24,885	12,091	545	7,421	4,828	107,686	60,471	2,174	25,740	19,301
Marlboro	5,013	2,830	—	1,448	735	14,811	6,045	—	5,198	3,568
McCormick	14,822	14,000	60	235	527	54,982	54,011	—	482	489
Newberry	26,374	21,785	154	2,058	2,377	92,777	79,954	395	5,635	6,793
Oconee	7,561	3,323	118	553	3,567	22,112	10,039	570	487	11,016
Orangeburg	25,281	12,655	827	8,068	3,731	90,098	51,802	4,007	23,641	10,648
Pickens	11,338	4,319	—	3,896	3,123	46,656	13,864	—	20,084	12,708
Richland	18,640	8,752	345	4,933	4,610	77,827	38,574	1,822	17,965	19,466
Saluda	10,355	9,014	—	812	529	40,756	36,396	—	2,700	1,660
Spartanburg	12,576	7,751	176	1,306	3,343	36,041	23,196	—	1,798	11,047
Sumter	11,627	5,196	101	5,233	1,097	46,214	21,284	518	19,357	5,055
Union	17,441	15,659	76	635	1,071	69,631	65,758	—	799	3,074
Williamsburg	29,975	17,578	604	6,537	5,256	128,545	81,840	3,233	23,544	19,928
York	17,403	11,473	477	3,015	2,438	55,768	40,176	350	10,495	4,747
<b>Total</b>	<b>727,967</b>	<b>483,098</b>	<b>9,139</b>	<b>118,102</b>	<b>117,628</b>	<b>2,749,203</b>	<b>1,939,521</b>	<b>35,326</b>	<b>376,247</b>	<b>398,109</b>

**Table 10--Area of timberland, by forest type and ownership class, South Carolina, 1993**

Forest type	Ownership class					
	All ownerships	National forest	Other public	Forest industry	Forest industry-- leased	Other private
<b>Acres</b>						
Softwood types						
White pine-hemlock	11,479	---	---	---	---	11,479
Spruce-fir	- -	---	---	---	---	---
Longleaf pine	369,054	18,703	96,566	15,511	---	238,274
Slash pine	240,101	2,483	45,790	68,332	---	123,496
Loblolly pine	4,322,869	258,086	155,801	1,320,689	50,990	2,537,303
Shortleaf pine	264,826	14,190	9,601	7,311	1,921	231,803
Virginia pine	165,809	7,974	---	---	---	157,835
Sand pine	---	---	---	- -	---	- -
Eastern redcedar	44,530	3,306	---	- -	---	41,224
Pond pine	138,841	2,484	14,233	27,554	---	94,570
Spruce pine	---	---	- -	---	---	---
Pitch pine	3,988	3,988	---	---	---	---
Table Mountain pine	---	---	---	---	---	---
<b>Total</b>	<b>5,561,497</b>	<b>311,214</b>	<b>321,991</b>	<b>1,439,397</b>	<b>52,911</b>	<b>3,435,984</b>
Hardwood types						
Oak-pine	1,902,068	87,778	74,449	168,072	12,097	1,558,872
Oak-hickory	2,255,802	63,923	61,330	203,140	- -	1,927,409
Chestnut oak	42,769	---	---	---	---	42,769
Southern scrub oak	203,520	---	15,471	4,320	---	183,729
Oak-gum-cypress	2,390,365	93,788	80,730	487,556	1,034	1,727,257
Elm-ash-cottonwood	98,904	3,305	---	19,524	5,410	70,665
Maple-beech-birch	---	- -	---	---	---	---
<b>Total</b>	<b>6,893,428</b>	<b>248,794</b>	<b>231,980</b>	<b>882,612</b>	<b>19,341</b>	<b>5,510,701</b>
<b>All types</b>	<b>12,454,925</b>	<b>560,008</b>	<b>553,971</b>	<b>2,322,009</b>	<b>72,252</b>	<b>8,946,685</b>

Table 11 – Area of timberland, by ownership and stocking classes of growing-stock trees, South Carolina, 1993

Ownership class	All classes	Stocking class (percent) <sup>a</sup>				
		>130	100–130	60 –99	16.7–59	<16.7
Acres						
National forest	560,008	15,833	250,894	211,333	79,465	2,483
Other public	553,971	18,470	201,756	221,054	97,670	15,021
Forest industry	2,322,009	190,489	1,034,163	784,984	262,321	50,052
Forest industry–leased	72,252	1,028	42,544	27,014	1,666	—
Other private	8,946,685	348,882	2,870,786	4,144,392	1,373,596	209,029
All ownerships	12,454,925	574,702	4,400,143	5,388,777	1,814,718	276,585

<sup>a</sup>See stocking standards under “stocking” in definitions.

Table 12 – Area of timberland, by forest type and stand-size class, South Carolina, 1993

Forest type	All stands	Stand -size class			
		Sawtimber	Poletimber	Sapling–seedling	Nonstocked areas
Acres					
<b>Softwood types</b>					
White pine – hemlock	11,479	11,479	—	—	—
Spruce–fir	—	—	—	—	—
Longleaf pine	369,054	186,219	67,627	106,011	9,197
Slash pine	240,101	110,859	74,533	46,920	7,789
Loblolly pine	4,322,869	1,390,442	1,127,368	1,779,066	25,993
Shortleaf pine	264,826	102,412	101,073	61,341	—
Virginia pine	165,809	83,515	49,669	32,625	—
Sand pine	—	—	- -	—	- -
Eastern redcedar	44,530	10,387	17,041	17,102	—
Pond pine	138,841	54,644	30,752	53,445	—
Spruce pine	—	—	—	—	—
Pitch pine	3,988	3,988	- -	—	- -
Table Mountain pine	—	- -	—	—	—
Total	5,561,497	1,953,945	1,468,063	2,096,510	42,979
<b>Hardwood types</b>					
Oak-pine	1,902,068	534,503	414,429	944,469	8,667
Oak–hickory	2,255,802	857,927	652,587	736,379	8,909
Chestnut oak	42,769	35,475	7,294	—	—
Southern scrub oak	203,520	- -	59,170	134,528	9,822
Oak–gum–cypress	2,390,365	1,326,676	522,088	522,749	18,852
Elm –ash–cottonwood	98,904	56,119	14,794	25,490	2,501
Maple–beech–birch	—	—	—	—	—
Total	6,893,428	2,810,700	1,670,362	2,363,615	48,751
All types	12,454,925	4,764,645	3,138,425	4,460,125	91,730

Table 13--Area of timberland, by stand-age and broad management classes, all ownerships, South Carolina, 1993

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
Acres						
0 -10	3,023,463	1,225,043	514,792	569,165	395,164	319,299
11 -20	1,605,848	710,484	321,888	248,440	200,198	124,838
21 -30	1,024,695	354,621	318,629	138,177	135,397	77,871
31 -40	1,101,374	279,730	426,528	113,580	128,744	152,792
41 -50	1,069,602	57,113	444,722	136,844	242,367	188,556
51 -60	1,074,943	—	310,796	123,539	331,193	309,415
61 -70	831,542	—	213,048	106,751	214,255	297,488
71 -80	432,855	—	56,563	53,137	129,986	193,169
81+	475,740	—	40,298	50,415	80,121	304,906
No manageable stand	1,814,863	44,959	242,283	362,020	644,666	520,935
All classes	12,454,925	2,671,950	2,889,547	1,902,068	2,502,091	2,489,269

Table 14--Area of timberland, by stand-age and broad management classes, public ownerships, South Carolina, 1993

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
Acres						
0 -10	176,595	68,616	48,766	23,605	21,623	13,985
11 -20	86,162	35,430	21,228	17,377	3,988	8,139
21 -30	88,614	43,201	37,837	6,106	545	925
31 -40	112,018	64,611	26,982	- -	6,889	13,536
41 -50	104,099	14,374	41,478	20,312	12,674	15,261
51 -60	144,357	—	88,556	8,410	21,448	25,943
61 -70	114,696	—	57,154	19,368	13,999	24,175
71 -80	48,059	—	16,371	4,075	14,386	13,227
81+	99,401	—	25,470	15,950	17,453	40,528
No manageable stand	139,978	2,287	40,844	47,024	27,719	22,104
All classes	1,113,979	228,519	404,686	162,227	140,724	177,823

Table 15- --Area of timberland, by stand-age and broad management classes, forest industry<sup>a</sup> South Carolina, 1993

Stand -age class (years)	Broad management class					
	All classes	Pine plantation	Natural pine	Oak- pine	Upland hardwood	Lowland hardwood
<i>Acres</i>						
0 -10	705,958	508,607	40,499	71,911	37,165	47,776
11-20	491,684	401,565	35,691	16,347	21,634	16,447
21 -30	275,328	198,185	35,180	22,076	4,101	15,786
31 -40	152,868	71,301	49,367	9,165	5,563	17,472
41-50	133,612	10,715	51,642	10,821	16,893	43,541
51 -60	120,882	---	28,786	16,349	15,603	60,144
61-70	86,795	---	11,167	2,318	14,469	58,841
71-80	36,798	---	---	---	---	36,798
81+	110,909	---	---	6,717	3,018	101,174
No manageable stand	279,427	13,496	36,107	25,265	89,014	115,545
<b>All classes</b>	<b>2,394,261</b>	<b>1,203,869</b>	<b>288,439</b>	<b>180,969</b>	<b>207,460</b>	<b>513,524</b>

<sup>a</sup>Includes 72,252 acres of other private land under long-term lease.

Table 16- --Area of timberland, by stand-age and broad management classes, other private ownerships,<sup>a</sup> South Carolina, 1993

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<i>Acres</i>						
0-10	2,140,910	647,820	425,527	473,649	336,376	257,538
11-20	1,028,002	273,489	264,969	214,716	174,576	100,252
21-30	660,753	113,235	245,612	109,995	130,751	61,160
31-40	836,488	143,818	350,179	104,415	116,292	121,784
41-50	831,891	32,024	351,602	105,711	212,800	129,754
51-60	809,704	—	193,454	98,780	294,142	223,328
61-70	630,051	—	144,727	85,065	185,787	214,472
71-80	347,998	—	40,192	49,062	115,600	143,144
81+	265,430	—	14,828	27,748	59,650	163,204
No manageable stand	1,395,458	29,176	165,332	289,731	527,933	383,286
<b>All classes</b>	<b>8,946,685</b>	<b>1,239,562</b>	<b>2,196,422</b>	<b>1,558,872</b>	<b>2,153,907</b>	<b>1,797,922</b>

<sup>a</sup>Excludes 72,252 acres of other private land under long-term lease to forest industry.

Table 17- --Area of timberland, by broad management and stand-volume classes, South Carolina, 1993

Broad management class	All classes	Stand-volume class (cubic feet of growing stock per acre)				
		0-499	500-999	1000-1499	1500-1999	2000+
<i>Acres</i>						
Pine plantation	2,671,950	1,377,805	374,740	343,882	191,899	383,624
Natural pine	2,889,547	776,527	395,202	341,702	368,430	1,007,686
Oak-pine	1,902,068	804,471	369,169	246,513	198,612	283,303
Upland hardwood	2,502,091	839,005	393,241	316,996	314,553	638,296
Lowland hardwood	2,489,269	514,310	297,276	328,713	282,751	1,066,219
<b>All classes</b>	<b>12,454,925</b>	<b>4,312,118</b>	<b>1,829,628</b>	<b>1,577,806</b>	<b>1,356,245</b>	<b>3,379,128</b>

Table 18--Volume of growing stock on timberland, by broad management class, species group, and stand-age class, South Carolina, 1993

Broad management class and species group	All classes	No manageable stand	Stand-age class (years)								
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
<i>Thousand cubic feet</i>											
Pine plantation											
Softwood	2,255,684	18,706	93,840	700,570	664,781	628,763	149,024	---	---	---	---
Hardwood	68,087	---	13,977	13,337	16,842	18,761	5,170	---	- -	---	---
<b>Total</b>	<b>2,323,771</b>	<b>18,706</b>	<b>107,817</b>	<b>713,907</b>	<b>681,623</b>	<b>647,524</b>	<b>154,194</b>	<b>---</b>	<b>---</b>	<b>- -</b>	<b>- -</b>
Natural pine											
Softwood	3,934,137	66,954	135,699	192,819	413,468	763,279	929,597	719,471	508,639	135,707	68,504
Hardwood	543,534	8,598	29,748	30,904	43,231	82,516	124,214	101,629	95,231	15,930	11,533
<b>Total</b>	<b>4,477,671</b>	<b>75,552</b>	<b>165,447</b>	<b>223,723</b>	<b>456,699</b>	<b>845,795</b>	<b>1,053,811</b>	<b>821,100</b>	<b>603,870</b>	<b>151,637</b>	<b>80,037</b>
Oak-pine											
Softwood	934,263	109,537	78,566	77,132	80,667	93,034	128,386	136,371	110,195	62,399	57,976
Hardwood	918,538	62,258	95,329	54,170	65,181	79,521	138,495	137,455	131,776	75,323	79,030
<b>Total</b>	<b>1,852,801</b>	<b>171,795</b>	<b>173,895</b>	<b>131,302</b>	<b>145,848</b>	<b>172,555</b>	<b>266,881</b>	<b>273,826</b>	<b>241,971</b>	<b>137,722</b>	<b>137,006</b>
Upland hardwood											
Softwood	296,452	42,262	17,242	23,427	22,246	26,157	34,466	60,039	39,303	15,633	15,677
Hardwood	2,851,472	247,057	97,330	100,999	113,602	170,621	437,961	716,990	448,820	337,212	180,880
<b>Total</b>	<b>3,147,924</b>	<b>289,319</b>	<b>114,572</b>	<b>124,426</b>	<b>135,848</b>	<b>196,778</b>	<b>472,427</b>	<b>777,029</b>	<b>488,123</b>	<b>352,845</b>	<b>196,557</b>
Lowland hardwood											
Softwood	613,609	31,450	15,666	12,960	15,904	29,309	52,090	105,471	85,775	76,235	188,749
Hardwood	4,269,459	321,365	89,219	95,134	79,916	262,272	408,143	771,723	807,047	519,166	915,474
<b>Total</b>	<b>4,883,068</b>	<b>352,815</b>	<b>104,885</b>	<b>108,094</b>	<b>95,820</b>	<b>291,581</b>	<b>460,233</b>	<b>877,194</b>	<b>892,822</b>	<b>595,401</b>	<b>1,104,223</b>
All types											
Softwood	8,034,145	268,909	341,013	1,006,908	1,197,066	1,540,542	1,293,563	1,021,352	743,912	289,974	330,906
Hardwood	8,651,090	639,278	325,603	294,544	318,772	613,691	1,113,983	1,727,797	1,482,874	947,631	1,186,917
<b>Total</b>	<b>16,685,235</b>	<b>908,187</b>	<b>666,616</b>	<b>1,301,452</b>	<b>1,515,838</b>	<b>2,154,233</b>	<b>2,407,546</b>	<b>2,749,149</b>	<b>2,226,786</b>	<b>1,237,605</b>	<b>1,517,823</b>

Table 19--Average net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class, South Carolina, 1986-1992

Broad management class <sup>a</sup> and species group	All classes	No manageable stand	Stand -age class <sup>a</sup> (years)								
			0-10-	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
<i>Thousand cubic feet</i>											
Pine plantation											
<b>Softwood</b>	204,466	1,031	87,701	70,593	33,589	11,028	416	108	--	--	--
<b>Hardwood</b>	3,624	71	806	794	1,414	290	181	68	--	--	--
<b>Total</b>	208,090	1,102	88,507	71,387	35,003	11,318	597	176	--	--	--
Natural pine											
<b>Softwood</b>	96,271	6,979	11,798	31,377	25,792	26,981	857	69	-684	-2,669	-4,229
<b>Hardwood</b>	24,553	61	1,375	2,004	3,847	6,276	4,832	4,942	764	151	301
<b>Total</b>	120,824	7,040	13,173	33,381	29,639	33,257	5,689	5,011	80	-2,518	-3,928
Oak-pine											
<b>Softwood</b>	29,779	5,729	7,307	8,319	2,749	4,246	1,174	217	1,145	-145	-962
<b>Hardwood</b>	21,775	3,019	2,500	3,345	2,735	3,942	3,341	2,538	1,162	-340	-467
<b>Total</b>	51,554	8,748	9,807	11,664	5,484	8,188	4,515	2,755	2,307	-485	-1,429
Upland hardwood											
<b>Softwood</b>	7,548	2,186	2,588	730	759	881	-559	319	416	185	43
<b>Hardwood</b>	78,605	7,742	6,460	4,430	6,329	9,728	20,940	12,849	7,553	740	1,834
<b>Total</b>	86,153	9,928	9,048	5,160	7,088	10,609	20,381	13,168	7,969	925	1,877
Lowland hardwood											
<b>Softwood</b>	5,529	1,356	574	609	612	1,314	844	555	-535	44	156
<b>Hardwood</b>	53,403	8,950	3,791	5,463	5,707	9,297	7,777	11,226	-2,211	-1,214	4,617
<b>Total</b>	58,932	10,306	4,365	6,072	6,319	10,611	8,621	11,781	-2,746	-1,170	4,773
All types											
<b>Softwood</b>	343,593	17,281	109,968	111,628	63,501	44,450	2,732	1,268	342	-2,585	-4,992
<b>Hardwood</b>	181,960	19,843	14,932	16,036	20,032	29,533	37,071	31,623	7,268	-663	6,285
<b>Total</b>	525,553	37,124	124,900	127,664	83,533	73,983	39,803	32,891	7,610	-3,248	1,293

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

Table 20-- Average annual removals of growing stock on timberland, by broad management class, species group, and stand-age class, South Carolina, 1986-1992

Broad management class* and species group	All classes	No manageable stand	Stand -age class <sup>a</sup> (years)								
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
<i>Thousand cubic feet</i>											
Pine plantation											
Softwood	132,206	573	535	31,189	63,639	28,649	5,834	1,787	--	--	--
Hardwood	1,495	--	--	42	807	493	--	153	--	--	--
<b>Total</b>	<b>133,701</b>	<b>573</b>	<b>535</b>	<b>31,231</b>	<b>64,446</b>	<b>29,142</b>	<b>5,834</b>	<b>1,940</b>	<b>--</b>	<b>--</b>	<b>--</b>
Natural pine											
Softwood	294,925	5,947	6,820	11,380	35,205	84,339	80,482	41,338	19,562	8,659	1,193
Hardwood	23,142	271	428	1,010	1,997	4,172	7,953	5,120	1,335	856	--
<b>Total</b>	<b>318,067</b>	<b>6,218</b>	<b>7,248</b>	<b>12,390</b>	<b>37,202</b>	<b>88,511</b>	<b>88,435</b>	<b>46,458</b>	<b>20,897</b>	<b>9,515</b>	<b>1,193</b>
Oak-pine											
Softwood	39,668	4,535	1,579	2,654	3,256	6,740	8,596	7,695	3,305	973	335
Hardwood	23,534	1,492	884	636	627	5,987	5,125	7,005	1,406	106	266
<b>Total</b>	<b>63,202</b>	<b>6,027</b>	<b>2,463</b>	<b>3,290</b>	<b>3,883</b>	<b>12,727</b>	<b>13,721</b>	<b>14,700</b>	<b>4,711</b>	<b>1,079</b>	<b>601</b>
Upland hardwood											
Softwood	11,817	1,382	667	369	191	2,082	3,537	1,150	1,006	871	562
Hardwood	80,438	8,583	3,202	1,201	1,157	7,790	18,540	17,381	10,253	10,191	2,140
<b>Total</b>	<b>92,255</b>	<b>9,965</b>	<b>3,869</b>	<b>1,570</b>	<b>1,348</b>	<b>9,872</b>	<b>22,077</b>	<b>18,531</b>	<b>11,259</b>	<b>11,062</b>	<b>2,702</b>
Lowland hardwood											
Softwood	13,621	1,181	439	310	465	1,141	2,221	1,368	2,488	1,143	2,865
Hardwood	107,121	5,004	2,047	765	1,446	12,361	11,553	23,463	19,684	13,209	17,589
<b>Total</b>	<b>120,742</b>	<b>6,185</b>	<b>2,486</b>	<b>1,075</b>	<b>1,911</b>	<b>13,502</b>	<b>13,774</b>	<b>24,831</b>	<b>22,172</b>	<b>14,352</b>	<b>20,454</b>
All types											
Softwood	492,237	13,618	10,040	45,902	102,756	122,951	100,670	53,338	26,361	11,646	4,955
Hardwood	235,730	15,350	6,561	3,654	6,034	30,803	43,171	53,122	32,678	24,362	19,995
<b>Total</b>	<b>727,967</b>	<b>28,968</b>	<b>16,601</b>	<b>49,556</b>	<b>108,790</b>	<b>153,754</b>	<b>143,841</b>	<b>106,460</b>	<b>59,039</b>	<b>36,008</b>	<b>24,950</b>

\*Classifications at the beginning of the remeasurement period.

Table 21 -- Merchantable volume of live trees and growing stock on timberland, by forest-type and species groups, South Carolina, 1993

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
<i>Thousand cubic feet</i>										
White pine-hemlock	30,312	1,946	19,855	3,702	4,809	27,772	1,946	19,855	1,750	4,221
Spruce-fir	--	--	--	--	--	--	--	--	--	--
Longleaf- slash pine	766,135	722,267	2,442	16,634	24,792	748,463	718,031	2,099	14,336	13,997
Loblolly- shortleaf pine	6,150,643	5,425,602	53,540	348,320	323,181	6,025,207	5,396,300	51,590	309,169	268,148
Oak-pine	1,994,618	873,453	67,244	415,512	638,409	1,852,801	868,922	65,341	370,538	548,000
Oak-hickory	3,471,492	266,979	32,701	1,200,674	1,971,138	3,147,924	265,569	30,883	1,104,029	1,747,443
Oak- gum - cypress	5,262,534	179,428	445,647	3,302,879	1,334,580	4,713,449	177,708	432,810	2,930,748	1,172,183
Elm-ash-cottonwood	194,316	1,318	1,773	122,975	68,250	169,619	1,318	1,773	107,253	59,275
Maple-beech-birch	--	--	--	--	--	--	--	--	--	--
All types	17,870,050	7,470,993	623,202	5,410,696	4,365,159	16,685,235	7,429,794	604,351	4,837,823	3,813,267

Table 22-- Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and ownership class, South Carolina, 1986 to 1993

Treatment or disturbance	Ownership class				
	All ownerships	Public	Forest industry	Forest industry- leased	Other private
<i>Acres<sup>a</sup></i>					
Final harvest	279,037	17,121	66,963	101	194,852
Partial harvest <sup>b</sup>	38,062	3,358	4,285	--	30,419
Commercial thinning	48,778	3,205	11,678	822	33,073
Other stand improvement	17,463	5,122	1,542	- -	10,799
Site preparation	108,726	8,483	51,419	101	48,723
Artificial regeneration <sup>c</sup>	151,796	8,584	57,753	101	85,358
Natural regeneration <sup>c</sup>	219,844	13,904	20,043	--	785,897
Other treatment	113,636	9,604	9,772	--	94,260
Natural disturbance	600,635	67,843	120,763	2,482	409,547

<sup>a</sup> Since some acres experience more than one treatment or disturbance, there are no column totals.

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

<sup>c</sup> 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, South Carolina, 1986 to 1993

Treatment or disturbance	All classes	Broad management class <sup>a</sup>				
		Pine plantation	Natural pine	Oak – pine	Upland hardwood	Lowland hardwood
<i>Acres<sup>b</sup></i>						
Final harvest	279,037	43,061	128,036	28,888	36,607	42,445
Partial harvest <sup>c</sup>	38,062	4,077	12,411	10,425	5,472	5,677
Commercial thinning	48,778	26,997	20,447	807	527	--
Other stand improvement	17,463	1,479	10,651	2,753	1,832	748
Site preparation	108,726	18,626	40,159	13,014	21,409	15,518
Other treatment	113,636	8,094	43,414	20,245	27,644	14,239
Natural disturbance	600,635	90,674	168,890	69,717	82,419	188,935

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

<sup>b</sup> Since some acres experience more than one treatment or disturbance, there are no column totals.

<sup>c</sup> includes high-grading and some selective cutting.

Table 24-- Area of timberland regenerated annually, by type of regeneration and broad management class, South Carolina, 1986 to 1993

Type of regeneration	All classes	Broad management class <sup>a</sup>				
		Pine plantation	Natural pine	Oak– pine	Upland hardwood	Lowland hardwood
<i>Acres</i>						
Artificial regeneration following harvest	67,134	60,876	--	5,916	--	342
Natural regeneration following harvest	125,216	--	31,258	35,043	32,674	26,241
Other artificial regeneration on forest land	42,458	39,104	--	2,533	821	--
Other natural regeneration on forest land	73,875	--	19,721	23,523	16,304	14,327
Artificial regeneration on nonforest land	42,204	42,204	- -	--	--	--
Natural reversion of nonforest land	20,753	--	12,916	3,468	2,639	1,730
<b>Total</b>	<b>371,640</b>	<b>142,184</b>	<b>63,895</b>	<b>70,483</b>	<b>52,438</b>	<b>42,640</b>

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

**Table 25--Area of timberland, by treatment opportunity and broad management classes, South Carolina, 1993**

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<i>Acres</i>						
Salvage	122,507	26,589	45,738	2,090	11,307	36,863
Harvest	444,687	--	87,934	51,861	61,335	243,557
Commercial thinning	466,193	331,914	113,614	6,773	3,617	10,275
Other stand improvement	1,006,212	97,572	246,166	243,139	249,058	170,277
Stand conversion	109,556	4,607	--	18,202	56,370	30,377
Regeneration	1,743,171	44,959	239,689	350,783	628,637	479,103
Stand in relatively good condition	8,122,624	2,166,309	2,135,841	1,188,168	1,408,187	1,224,119
Adverse sites <sup>a</sup>	439,895	--	20,565	41,052	83,580	294,698
<b>All classes</b>	<b>12,454,925</b>	<b>2,671,950</b>	<b>2,889,547</b>	<b>1,902,068</b>	<b>2,502,091</b>	<b>2,489,269</b>

<sup>a</sup>Areas where management opportunities are severely limited because of steep slopes or poor drainage.

**Table 26--Area of timberland, by treatment opportunity and ownership classes, South Carolina, 1993**

Treatment opportunity class	All ownerships	Ownership class			
		Public	Forest industry	Forest industry--leased	Other private
<i>Acres</i>					
Salvage	122,587	16,455	24,456	1,187	80,489
Harvest	444,687	93,658	80,055	--	270,974
Commercial thinning	466,193	34,780	191,315	4,531	235,567
Other stand improvement	1,006,212	47,768	96,691	5,142	856,611
Stand conversion	109,556	7,094	5,116	--	97,346
Regeneration	1,743,171	132,753	263,338	--	1,347,080
Stand in relatively good condition	8,122,624	717,580	1,584,756	60,358	5,759,930
Adverse sites <sup>a</sup>	439,895	63,891	76,282	1,034	298,688
<b>All classes</b>	<b>12,454,925</b>	<b>1,113,979</b>	<b>2,322,009</b>	<b>72,252</b>	<b>8,946,685</b>

<sup>a</sup>Areas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 27-- Merchantable volume of live trees and growing stock on timberland, by ownership class and species group, South Carolina, 1993

Ownership class	Live trees					Growing stock				
	All species	Pine	Other softwood	soft hardwood	Hard hardwood	All species	Pine	Other softwood	soft hardwood	Hard hardwood
<i>Thousand cubic feet</i>										
National forest	995,526	515,930	68,860	237,572	173,164	951,200	515,179	67,234	218,866	149,921
Other public	1,017,384	569,466	37,200	216,179	194,539	966,278	567,186	37,200	197,983	163,909
Forest industry	3,116,974	1,560,049	124,099	919,267	513,559	2,934,269	1,551,368	120,601	807,330	454,970
Forest industry-leased	63,347	52,546	1,417	4,716	4,668	61,920	52,546	1,417	4,352	3,605
Other private	12,676,819	4,773,002	391,626	4,032,962	3,479,229	11,771,568	4,743,515	377,899	3,609,292	3,040,862
All ownerships	17,870,050	7,470,993	623,202	5,410,696	4,365,159	16,685,235	7,429,794	604,351	4,837,823	3,813,267

Table 28 -- Volume of sawtimber on timberland, by ownership class and species group, South Carolina, 1993

Ownership class	Small sawtimber <sup>a</sup>					Large sawtimber				
	All species	Pine	Other softwood	soft hardwood	Hard hardwood	All species	Pine	Other softwood	soft hardwood	Hard hardwood
<i>Thousand board feet</i>										
National forest	1,286,295	807,004	80,189	217,806	181,296	2,475,150	1,518,387	200,982	466,754	289,027
Other public	1,678,747	1,275,412	52,827	190,629	159,879	1,845,260	1,036,972	66,025	393,637	348,626
Forest industry	4,529,837	3,108,855	169,804	893,796	357,382	4,056,754	1,077,107	318,726	1,436,224	1,224,697
Forest industry-leased	109,575	103,545	3,014	3,016	-	34,166	14,478	2,877	4,339	12,472
Other private	17,623,424	9,961,358	527,149	3,883,763	3,251,154	21,615,933	8,214,458	842,354	6,740,379	5,818,742
All ownerships	25,227,878	15,256,174	832,983	5,189,010	3,949,711	30,027,263	11,861,402	1,430,964	9,041,333	7,693,564

<sup>a</sup>Volume of sawtimber trees less than 15.0 inches at d.b.h.

<sup>b</sup>Volume of sawtimber trees 15.0 inches and larger at d.b.h.

Table 29 -- Average net annual growth and removals of growing stock on timberland, by ownership class and species group, South Carolina, 1986-1992

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
<i>Thousand cubic feet</i>										
National forest	- 8,046	-10,616	524	2,848	- 802	19,851	14,326	76	2,960	2,489
Other public	25,713	17,820	820	2,871	4,202	37,014	21,142	862	5,723	9,287
Forest industry	145,781	126,090	1,439	12,981	5,271	175,368	129,774	1,494	21,390	22,710
Forest industry-leased	4,933	5,279	33	508	- 8 87	1,131	379	--	605	147
Other private	357,172	193,556	8,648	91,328	63,640	494,603	317,477	6,707	87,424	82,995
All ownerships	525,553	332,129	11,464	110,536	71,424	727,967	483,098	9,139	118,102	117,628

Table 30--Average net annual growth and removals of sawtimber on timberland, by ownership class and species group, South Carolina, 1986-1992

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
<i>Thousand board feet</i>										
National forest	-56,434	-66,214	2,735	11,270	-4,225	86,189	69,247	--	8,366	8,576
Other public	115,843	83,885	1,891	12,741	17,326	148,389	90,663	3,730	18,628	35,368
Forest industry	434,325	362,131	5,005	49,410	17,779	599,856	456,107	4,301	64,128	75,320
Forest industry--leased	8,105	12,684	184	202	-4,965	3,769	999	--	2,160	610
Other private	1,362,776	751,079	32,862	337,128	241,707	1,911,000	1,322,505	27,295	282,965	278,235
All ownerships	1,864,615	1,143,565	42,677	410,751	267,622	2,749,203	1,939,521	35,326	376,247	398,109

Table 31 --Volume of timber on timberland, by class of timber and species group, South Carolina, 1993

Class of timber	All species	Pine	Other softwood	soft hardwood	Hard hardwood
<i>Thousand cubic feet</i>					
<b>Sawtimber trees</b>					
Saw--log portion	10,205,229	4,949,094	427,172	2,660,987	2,167,976
Upper-stem portion <sup>a</sup>	1,385,253	470,468	46,929	487,458	380,398
Total	11,590,482	5,419,562	474,101	3,148,445	2,548,374
Poletimber trees	5,094,753	2,010,232	130,250	1,689,378	1,264,893
All growing-- stock trees	16,685,235	7,429,794	604,351	4,837,823	3,813,267
<b>Rough trees</b>					
Sawtimber size	377,962	15,761	5,640	187,573	168,988
Poletimber size	609,049	23,131	3,493	264,892	317,533
Total	987,011	38,892	9,133	452,465	486,521
<b>Rotten trees</b>					
Sawtimber size	174,581	1,868	9,503	106,484	56,726
Poletimber size	23,223	439	215	13,924	8,645
Total	197,804	2,307	9,718	120,408	65,371
<b>Salvable dead trees</b>					
Sawtimber size	67,368	54,482	1,343	4,185	7,358
Poletimber size	17,333	12,693	291	2,014	2,335
Total	84,701	67,175	1,634	6,199	9,693
<b>Total, all timber</b>	<b>17,954,751</b>	<b>7,538,168</b>	<b>624,836</b>	<b>5,416,895</b>	<b>4,374,852</b>

<sup>a</sup>Includes cull sections in the saw--log portion.

Table 32-- Number of live trees on timberland, by species and diameter class, South Carolina, 1993

Species	Diameter class (inches at breast height)												
	All classes	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Thousand trees</i>													
Softwood													
Longleaf pine	96,746	38,655	16,467	15,150	8,897	5,504	5,188	3,754	1,974	780	324	53	--
Slash pine	73,430	20,901	16,241	13,242	10,706	5,755	3,617	1,620	857	345	71	75	--
Shortleaf pine	181,890	77,328	43,337	23,755	16,989	10,520	5,645	2,427	1,139	531	158	61	--
Loblolly pine	2,009,817	956,123	457,687	288,059	144,104	70,141	40,637	25,433	14,181	7,167	3,415	2,749	121
Pond pine	46,911	16,517	10,691	7,023	5,091	2,582	2,351	1,240	707	377	188	139	5
Virginia pine	75,594	28,447	16,810	10,424	8,492	6,428	3,206	1,128	400	217	42	--	--
Pitch pine	5,465	2,519	1,155	582	561	241	243	109	44	--	--	11	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	4,129	3,241	302	115	217	78	24	32	41	41	18	20	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	10,288	6,375	1,308	449	1,076	290	345	102	21	69	89	119	45
Eastern hemlock	1,987	916	228	--	376	235	115	51	21	15	--	24	6
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	31,021	8,666	5,719	4,272	3,048	2,451	2,029	1,512	954	1,037	544	717	72
Pondcypress	28,668	12,755	5,660	2,501	2,955	2,122	1,325	597	392	205	76	76	4
Cedars	180,589	125,755	34,201	12,419	5,841	1,512	436	286	59	39	9	32	--
<b>Total softwoods</b>	<b>2,746,535</b>	<b>1,298,198</b>	<b>609,806</b>	<b>377,991</b>	<b>208,353</b>	<b>107,859</b>	<b>65,161</b>	<b>38,291</b>	<b>20,790</b>	<b>10,823</b>	<b>4,934</b>	<b>4,076</b>	<b>253</b>
Hardwood													
Select white oaks	156,548	78,776	26,961	16,224	11,170	8,131	5,943	4,068	2,270	1,528	705	707	65
Select red oaks	37,268	19,165	6,359	3,411	2,237	1,861	1,114	1,221	701	423	342	354	80
Chestnut oak	19,772	9,153	3,717	1,923	1,502	799	1,052	833	271	180	122	186	34
Other white oaks	114,056	66,364	19,930	10,631	6,704	4,088	2,571	1,495	881	482	239	550	121
Other red oaks	923,183	627,706	141,189	59,027	36,372	24,192	14,628	7,664	4,938	2,929	2,067	2,117	354
Hickory	208,069	132,116	36,358	16,784	9,902	5,532	2,936	1,814	1,107	693	359	411	57
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	32,275	25,827	4,734	1,170	267	146	60	27	39	--	--	--	5
Soft maple	727,403	522,421	114,235	44,049	21,779	10,262	6,253	3,731	1,802	1,341	787	691	52
Beech	20,844	14,638	2,750	1,330	1,092	312	165	210	123	39	26	141	18
Sweetgum	1,176,597	824,063	187,046	74,361	40,284	21,206	12,300	8,042	4,518	2,419	1,204	1,048	106
Tupelo and blackgum	509,114	291,498	91,626	40,243	27,437	19,839	14,221	11,655	6,016	3,262	1,768	1,434	115
Ash	196,301	134,336	37,469	9,373	5,374	3,823	2,189	1,572	1,193	396	272	266	38
Cottonwood	6,616	3,562	1,021	460	588	264	217	143	73	70	35	112	71
Basswood	659	--	--	372	240	--	--	21	20	--	--	--	6
Yellow-poplar	128,900	69,218	21,674	10,786	7,374	5,315	4,563	3,214	2,696	1,338	1,216	1,399	107
Bay and magnolia	115,883	95,725	12,864	4,694	1,471	658	214	84	81	54	9	22	7
Black cherry	165,175	128,877	24,273	8,731	2,283	630	274	83	13	11	--	--	--
Black walnut	2,201	214	348	816	335	243	140	15	22	20	14	34	--
Sycamore	10,458	6,812	1,158	951	186	195	256	215	272	160	83	142	28
Black locust	1,745	1,102	382	--	--	174	--	--	24	51	--	12	--
Elm	206,015	147,641	33,011	13,700	5,786	2,597	1,729	649	478	164	132	118	10
Other eastern hardwoods	1,301,590	997,997	211,891	61,258	19,418	5,769	2,627	1,482	497	256	151	237	7
<b>Total hardwoods</b>	<b>6,060,672</b>	<b>4,197,211</b>	<b>978,996</b>	<b>380,294</b>	<b>201,801</b>	<b>116,036</b>	<b>73,452</b>	<b>48,238</b>	<b>28,035</b>	<b>15,816</b>	<b>9,531</b>	<b>9,981</b>	<b>1,281</b>
<b>All species</b>	<b>8,807,207</b>	<b>5,495,409</b>	<b>1,588,802</b>	<b>758,285</b>	<b>410,154</b>	<b>223,895</b>	<b>138,613</b>	<b>86,529</b>	<b>48,825</b>	<b>26,639</b>	<b>14,465</b>	<b>14,057</b>	<b>1,534</b>

Table 33--Number of growing-stock trees on timberland, by species and diameter class, South Carolina, 1993

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Thousand trees</i>													
<b>Softwood</b>													
Longleaf pine	91,390	34,537	15,539	15,059	8,846	5,360	5,164	3,754	1,974	780	324	53	--
Slash pine	71,210	19,612	16,009	12,793	10,588	5,677	3,563	1,620	857	345	71	75	--
Shortleaf pine	166,228	64,560	41,467	23,003	16,800	10,463	5,619	2,427	1,139	531	158	61	--
loblolly pine	1,904,702	873,887	440,675	284,427	142,587	69,589	40,612	25,365	14,108	7,167	3,415	2,749	121
Pond pine	43,138	14,480	9,829	6,379	4,983	2,547	2,292	1,240	690	377	177	139	5
Virginia pine	68,755	24,228	15,199	9,685	8,349	6,367	3,163	1,128	377	217	42	--	--
Pitch pine	5,007	2,061	1,155	582	561	241	243	109	44	--	--	11	--
Table Mountain pin e	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	3,515	2,636	302	115	217	78	24	32	41	41	9	20	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	9,814	5,908	1,308	449	1,076	290	345	102	21	69	89	112	45
Eastern hemlock	1,758	687	228	--	376	235	115	51	21	15	--	24	6
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	27,772	6,229	5,568	4,149	2,901	2,345	1,958	1,443	940	968	535	686	50
Pondcypress	25,945	11,095	5,055	2,347	2,779	2,079	1,303	579	379	187	69	70	3
Cedars	150,587	100,559	30,413	11,589	5,841	1,350	436	286	59	28	9	17	--
<b>Total softwoods</b>	<b>2,569,821</b>	<b>1,160,479</b>	<b>582,747</b>	<b>370,577</b>	<b>205,904</b>	<b>106,621</b>	<b>64,837</b>	<b>38,136</b>	<b>20,650</b>	<b>10,725</b>	<b>4,898</b>	<b>4,017</b>	<b>230</b>
<b>Hardwood</b>													
Select white oaks	113,785	44,910	21,389	14,134	10,688	7,882	5,732	3,945	2,257	1,468	691	649	40
Select red oaks	26,033	10,016	4,983	3,040	2,137	1,781	1,067	1,175	701	423	317	315	78
Chestnut oak	12,994	4,148	3,020	1,656	1,255	692	937	698	227	144	83	128	6
Other white oaks	65,484	27,120	15,347	8,876	5,798	3,572	2,186	1,147	629	252	164	334	59
Other red oaks	615,062	366,614	109,148	51,633	33,208	22,282	13,777	7,061	4,600	2,689	1,868	1,883	299
Hickory	126,554	62,635	28,575	14,366	8,838	5,250	2,820	1,657	1,075	608	318	370	42
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	7,640	4,439	1,986	821	179	110	34	27	39	--	--	--	5
Soft maple	306,703	179,805	63,026	29,414	15,795	7,897	4,481	2,815	1,433	1,005	573	439	20
Beech	10,532	5,795	1,721	1,190	954	243	143	210	123	39	26	83	5
Sweetgum	822,455	535,526	140,114	63,262	36,349	19,368	11,461	7,685	4,205	2,316	1,102	977	90
Tupelo and Blackgum	271,560	107,014	59,624	31,883	23,322	16,947	12,238	10,030	5,296	2,764	1,472	928	42
Ash	66,204	33,135	15,465	5,469	3,933	3,036	1,841	1,448	1,047	331	264	205	30
Cottonwood	4,099	1,300	1,021	323	535	225	217	143	73	59	35	104	64
Basswood	355	--	--	246	62	--	--	21	20	--	--	--	6
Yellow-poplar	107,994	53,854	19,077	9,032	6,935	5,110	4,375	3,174	2,606	1,299	1,125	1,318	89
Bay and magnolia	30,840	21,371	4,996	2,880	753	485	160	70	81	32	--	8	4
Black cherry	66,792	49,325	11,643	4,014	1,184	480	128	18	--	--	--	--	--
Black walnut	1,697	--	205	816	270	243	103	15	--	20	14	11	--
Sycamore	6,835	3,583	1,158	717	124	153	214	215	272	149	83	142	25
Black locust	723	240	239	--	--	174	--	--	24	34	--	12	--
Elm	76,725	36,141	19,420	11,230	5,268	1,977	1,456	476	430	106	121	90	10
Other eastern hardwoods	39,514	20,240	7,361	5,092	2,729	1,419	990	878	356	189	109	151	--
<b>Total hardwoods</b>	<b>2,780,580</b>	<b>1,567,211</b>	<b>529,518</b>	<b>260,094</b>	<b>160,316</b>	<b>99,326</b>	<b>64,360</b>	<b>42,908</b>	<b>25,494</b>	<b>13,927</b>	<b>8,365</b>	<b>8,147</b>	<b>914</b>
<b>All species</b>	<b>5,350,401</b>	<b>2,727,690</b>	<b>1,112,265</b>	<b>630,671</b>	<b>366,220</b>	<b>205,947</b>	<b>129,197</b>	<b>81,044</b>	<b>46,144</b>	<b>24,652</b>	<b>13,263</b>	<b>12,164</b>	<b>1,144</b>

Table 34-- Merchantable volume of live trees on timberland, by species and diameter class, South Carolina, 1993

Species	Diameter class (inches at breast height)										
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Thousand cubic feet</i>											
Softwood											
Longleaf pine	516,321	43,311	58,427	69,305	102,836	106,468	75,392	36,643	19,155	4,784	--
Slash pine	360,300	35,258	68,581	70,304	71,749	46,972	35,697	19,331	4,817	7,591	--
Shortleaf pine	605,164	69,268	116,090	134,350	113,466	75,368	49,732	29,770	11,411	5,709	--
Loblolly pine	5,438,294	663,808	828,143	823,681	810,406	751,032	592,236	405,728	247,797	290,780	24,683
Pond pine	215,268	16,530	29,688	27,385	40,262	33,581	24,960	17,909	11,751	12,570	632
Virginia pine	306,019	34,406	62,787	85,924	62,688	32,876	14,369	10,695	2,274	--	--
Pitch pine	17,814	1,917	3,756	2,596	4,527	2,694	1,362	--	--	962	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	11,813	344	1,468	938	589	895	1,977	2,320	1,118	2,144	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	49,583	1,173	7,272	2,885	5,126	2,825	837	3,074	6,125	11,582	8,684
Eastern hemlock	15,175	--	2,743	2,774	1,997	1,792	661	1,018	--	3,216	974
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	340,485	13,225	21,441	31,133	37,189	41,619	34,932	49,956	32,884	66,128	11,978
Pondcypress	123,768	9,087	17,108	25,873	23,384	15,162	13,402	9,190	4,175	5,685	702
Cedars	94,191	29,295	32,614	13,592	6,544	5,843	1,430	1,513	586	2,774	--
<b>Total softwoods</b>	<b>8,094,195</b>	<b>917,622</b>	<b>1,250,138</b>	<b>1,290,740</b>	<b>1,280,763</b>	<b>1,117,127</b>	<b>846,987</b>	<b>587,147</b>	<b>342,093</b>	<b>413,925</b>	<b>47,653</b>
Hardwood											
Select white oaks	758,566	47,834	72,147	99,583	118,484	116,421	93,148	81,583	47,147	71,606	10,613
Select red oaks	234,175	11,230	15,414	23,727	21,444	34,304	29,646	22,213	23,500	34,863	17,834
Chestnut oak	107,074	4,663	8,375	8,977	19,215	21,446	9,756	7,861	6,927	16,382	3,472
Other white oaks	298,298	26,727	39,557	40,105	42,338	31,802	26,511	17,026	13,694	42,085	18,453
Other red oaks	1,841,478	167,591	224,223	269,290	257,826	201,297	182,261	143,229	130,808	200,341	64,612
Hickory	421,685	41,379	57,710	59,972	57,028	50,554	44,234	36,829	22,905	38,993	12,081
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	9,854	2,553	1,369	1,856	1,182	608	1,547	--	--	--	739
Soft maple	809,051	131,725	135,844	114,703	109,511	92,296	62,516	58,427	43,183	53,858	6,988
Beech	45,736	3,146	6,206	3,539	3,379	6,265	4,970	1,943	1,457	12,843	1,988
Sweetgum	1,721,393	188,519	254,782	253,373	240,039	245,374	188,948	133,197	83,113	113,251	20,797
Tupelo and blackgum	1,625,435	120,370	172,511	223,911	253,361	297,325	209,895	141,307	97,051	98,193	11,511
Ash	309,835	24,727	33,302	47,223	44,535	46,342	47,598	19,288	18,363	23,341	5,116
Cottonwood	56,588	946	3,345	3,570	4,528	4,269	2,919	3,760	2,869	12,298	18,084
Basswood	5,281	1,369	1,242	--	--	563	1,050	--	--	--	1,057
Yellow-poplar	757,480	33,652	50,691	67,151	93,024	95,140	110,393	71,048	81,013	136,914	18,454
Bay and magnolia	40,575	11,741	8,033	7,462	3,609	2,199	2,569	1,922	361	1,210	1,469
Black cherry	49,877	22,923	13,995	6,553	4,106	1,470	532	298	--	--	--
Black walnut	14,321	2,266	2,311	2,938	2,013	451	98	897	1,106	2,241	--
Sycamore	62,854	3,617	1,556	2,746	4,636	6,339	11,278	8,887	5,826	13,497	4,472
Black locust	5,862	--	--	2,031	--	--	816	2,212	--	803	--
Elm	193,835	31,253	33,119	32,280	31,217	16,110	18,012	8,148	9,757	11,219	2,720
Other eastern hardwoods	406,602	128,823	90,232	55,257	40,887	32,774	17,275	10,947	8,953	20,404	1,050
<b>Total hardwoods</b>	<b>9,775,855</b>	<b>1,007,054</b>	<b>1,225,964</b>	<b>1,326,247</b>	<b>1,352,362</b>	<b>1,303,349</b>	<b>1,065,972</b>	<b>771,022</b>	<b>598,033</b>	<b>904,342</b>	<b>221,510</b>
<b>All species</b>	<b>17,870,050</b>	<b>1,924,676</b>	<b>2,476,102</b>	<b>2,616,987</b>	<b>2,633,125</b>	<b>2,420,476</b>	<b>1,912,959</b>	<b>1,358,169</b>	<b>940,126</b>	<b>1,318,267</b>	<b>269,163</b>

Table 35- Volume of growing stock on timberland, by species and diameter class, South Carolina, 1993

Species	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Thousand cubic feet</i>											
Softwood											
Longleaf pine	513,494	43,112	58,201	67,459	102,280	106,468	75,392	36,643	19,155	4,784	--
Slash pine	357,644	34,518	68,062	69,742	70,914	46,972	35,697	19,331	4,817	7,591	--
Shortleaf pine	601,944	68,071	114,878	133,746	113,259	75,368	49,732	29,770	11,411	5,709	--
Loblolly pine	5,414,511	657,282	819,321	819,187	809,965	749,302	590,466	405,728	247,797	290,780	24,683
Pond pine	211,742	15,097	29,186	27,120	39,671	33,581	24,663	17,909	11,313	12,570	632
Virginia pine	301,418	33,001	61,998	85,243	61,790	32,876	13,541	10,695	2,274	--	--
Pitch pine	17,814	1,917	3,756	2,596	4,527	2,694	1,362	--	--	962	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	11,227	344	1,488	938	589	895	1,977	2,320	532	2,144	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	48,958	1,173	7,272	2,885	5,126	2,825	837	3,074	6,125	10,957	8,684
Eastern hemlock	15,175	--	2,743	2,774	1,997	1,792	661	1,018	--	3,216	974
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	329,951	13,001	20,671	30,432	36,688	40,425	34,586	48,236	32,439	64,632	8,841
Pondcypress	120,572	8,744	16,684	25,380	23,191	14,926	13,117	8,667	3,840	5,425	598
Cedars	89,695	27,348	32,614	12,446	6,544	5,843	1,430	1,237	586	1,647	--
<b>Total softwoods</b>	<b>8,034,145</b>	<b>903,608</b>	<b>1,236,874</b>	<b>1,279,948</b>	<b>1,276,541</b>	<b>1,113,967</b>	<b>843,461</b>	<b>584,628</b>	<b>340,289</b>	<b>410,417</b>	<b>44,412</b>
Hardwood											
Select white oaks	733,182	43,290	69,538	96,527	115,935	113,607	92,830	79,503	46,213	68,599	7,140
Select red oaks	225,604	10,353	14,976	22,939	20,875	33,228	29,646	22,213	21,971	31,943	17,460
Chestnut oak	91,794	4,212	7,016	8,522	17,853	18,931	8,995	7,031	5,398	13,041	795
Other white oaks	240,567	23,010	35,455	35,661	37,436	26,358	20,650	10,468	10,828	29,488	11,213
Other red oaks	1,734,539	150,785	211,228	254,956	248,502	189,039	174,592	136,347	122,799	187,080	59,211
Hickory	395,021	36,414	53,331	58,083	55,170	46,917	43,193	33,462	21,203	36,662	10,586
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	7,981	1,997	957	1,516	617	608	1,547	--	--	--	739
Soft maple	632,914	94,403	105,292	91,942	85,958	75,950	52,452	48,896	36,084	38,838	3,099
Beech	38,294	2,858	5,860	2,805	2,834	6,265	4,970	1,943	1,457	8,323	979
Sweetgum	1,626,094	166,165	236,967	237,527	229,728	237,736	181,281	29,425	79,583	108,599	19,083
Tupelo and blackgum	1,435,513	98,552	150,631	199,129	227,578	268,205	193,401	28,634	87,498	74,950	6,935
Ash	271,041	16,419	26,502	40,179	39,699	44,187	44,150	17,005	18,031	20,565	4,304
Cottonwood	53,490	731	3,208	2,888	4,528	4,269	2,919	3,485	2,869	11,602	16,991
Basswood	3,828	873	285	--	--	563	1,050	--	--	--	1,057
Yellow-poplar	730,594	29,326	48,565	65,477	90,081	94,237	108,019	69,664	77,353	131,401	16,471
Bay and magnolia	28,395	8,029	4,343	5,922	2,682	1,911	2,569	1,212	--	551	1,176
Black cherry	26,246	11,039	7,664	4,895	2,191	457	--	--	--	--	--
Black walnut	12,369	2,266	2,084	2,938	1,509	451	--	897	1,106	1,118	--
Sycamore	59,513	2,664	1,051	2,329	3,913	6,339	11,278	8,473	5,826	13,497	4,143
Black locust	5,465	--	--	2,031	--	--	816	1,815	--	803	--
Elm	167,630	26,309	30,077	25,955	27,208	13,371	17,246	5,958	9,255	9,531	2,720
Other eastern hardwoods	131,016	12,949	16,815	17,561	18,943	20,882	12,739	9,061	7,236	14,830	--
<b>Total hardwoods</b>	<b>8,651,090</b>	<b>742,644</b>	<b>1,031,845</b>	<b>1,179,782</b>	<b>1,233,240</b>	<b>1,203,511</b>	<b>1,004,343</b>	<b>715,492</b>	<b>554,710</b>	<b>801,421</b>	<b>184,102</b>
<b>All species</b>	<b>16,685,235</b>	<b>1,646,252</b>	<b>2,268,719</b>	<b>2,459,730</b>	<b>2,509,781</b>	<b>2,317,478</b>	<b>1,847,804</b>	<b>1,300,120</b>	<b>894,999</b>	<b>1,211,838</b>	<b>228,514</b>

Table 36- Volume of sawtimber on timberland, by species and diameter class, South Carolina, 1993

Species	Diameter class (inches at breast height)								
	All classes	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Thousand board feet</i>									
Softwood									
Longleaf pine	2,148,337	273,670	492,249	571,493	435,007	222,594	121,571	31,753	--
Slash pine	1,235,353	258,408	325,706	246,662	204,320	117,713	30,943	51,601	--
Shortleaf pine	1,958,728	496,739	511,865	387,422	278,662	176,491	70,631	36,918	--
Loblolly pine	19,947,163	2,940,553	3,650,538	3,864,424	3,331,924	2,447,704	1,569,709	1,961,172	181,139
Pond pine	855,381	101,684	181,223	173,310	137,472	105,228	70,024	82,013	4,427
Virginia pine	865,324	310,120	262,194	155,385	68,209	56,878	12,538	--	--
Pitch pine	54,551	7,755	19,993	13,375	7,286	--	--	6,142	--
Table Mountain pine	--	--	--	--	--	--	--	--	--
Spruce pine	52,739	3,862	2,799	4,745	11,092	13,454	3,213	13,574	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	233,063	9,784	22,142	14,192	4,458	17,276	36,737	69,661	58,813
Eastern hemlock	62,225	10,332	8,246	8,602	3,345	5,634	--	19,888	6,178
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	1,424,066	92,656	139,833	176,441	165,349	247,088	174,727	372,470	55,502
Pondcypress	402,480	81,120	90,596	66,418	63,611	44,702	20,881	31,284	3,868
Cedars	142,113	50,419	31,675	30,527	8,005	7,276	3,634	10,577	--
<b>Total softwoods</b>	<b>29,381,523</b>	<b>4,637,102</b>	<b>5,739,059</b>	<b>5,712,996</b>	<b>4,718,740</b>	<b>3,462,038</b>	<b>2,114,608</b>	<b>2,687,053</b>	<b>309,927</b>
Hard wood									
Select white oaks	2,306,725	--	397,001	454,874	412,331	381,485	234,352	383,530	43,152
Select red oaks	833,354	--	69,597	129,773	130,810	103,796	108,830	172,652	117,896
Chestnut oak	300,638	--	59,187	72,871	38,328	32,194	25,569	68,032	4,457
Other white oaks	672,713	--	135,929	109,560	95,222	50,762	54,740	160,196	66,304
Other red oaks	5,314,849	--	914,927	805,081	815,706	683,247	649,237	1,072,336	374,315
Hickory	1,117,533	--	191,074	190,009	194,031	163,530	109,528	203,583	65,778
Yellow birch	--	--	--	--	--	--	--	--	--
Hard maple	15,313	--	2,219	2,350	6,662	--	--	--	4,082
Soft maple	1,404,492	--	280,577	290,300	221,812	221,803	173,151	199,653	17,196
Beech	105,874	--	10,312	23,863	19,392	7,714	5,894	34,521	4,178
Sweetgum	4,620,115	--	819,505	1,022,090	873,799	677,157	443,642	656,973	126,949
Tupelo and blackgum	4,056,639	--	703,659	1,022,475	834,166	603,902	439,235	410,323	42,879
Ash	794,915	--	129,797	170,033	190,162	79,764	89,784	110,165	25,210
Cottonwood	257,521	--	15,932	17,819	13,540	17,755	15,209	66,439	110,827
Basswood	12,870	--	--	2,254	4,664	--	--	--	5,952
Yellow-poplar	3,004,552	--	323,494	409,175	533,113	372,958	441,017	812,297	112,498
Bay and magnolia	43,216	--	8,646	7,449	11,388	5,581	--	2,636	7,516
Black cherry	9,142	--	7,338	1,804	--	--	--	--	--
Black walnut	19,461	--	4,905	1,680	--	3,592	4,555	4,729	--
Sycamore	251,391	--	12,192	23,781	48,702	39,954	29,253	73,047	24,462
Black locust	13,292	--	--	--	3,059	7,032	--	3,201	--
Elm	354,621	--	93,133	52,206	73,847	27,262	44,325	48,621	15,227
Other eastern hardwoods	364,392	--	66,720	83,130	55,852	43,428	36,614	78,648	--
<b>Total hardwoods</b>	<b>25,873,618</b>	<b>--</b>	<b>4,246,144</b>	<b>4,892,577</b>	<b>4,576,586</b>	<b>3,522,916</b>	<b>2,904,935</b>	<b>4,561,582</b>	<b>1,168,878</b>
All species	55,255,141	4,637,102	9,985,203	10,605,573	9,295,326	6,984,954	5,019,543	7,248,635	1,478,805

**Table 37- -Volume of sawtimber on timberland, by species, size class, and tree grade, South Carolina, 1993**

Species	All size classes					Trees 15.0 inches d.b.h. and larger				
	All grades	Tree grade				All grades	Tree grade			
		1	2	3	4		1	2	3	4
	<i>Thousand board feet</i>									
Softwood										
Yellow pines <sup>a</sup>	27,117,576	5,837,310	7,451,496	13,828,770	--	11,861,402	3,900,186	3,553,159	4,408,057	--
Eastern white pine <sup>b</sup>	233,063	45,090	124,500	63,473	--	186,945	45,090	113,955	27,900	--
Spruce and fir <sup>b</sup>	--	--	--	--	--	--	--	--	--	--
Cypress <sup>c</sup>	1,826,546	645,349	525,767	638,278	17,152	1,179,482	645,349	393,439	132,568	8,126
Other eastern softwoods <sup>b</sup>	204,338	--	42,475	120,521	41,342	64,537	--	19,567	25,051	19,919
Total	<u>29,381,523</u>	<u>6,527,749</u>	<u>8,144,238</u>	<u>14,651,042</u>	<u>58,494</u>	<u>13,292,366</u>	<u>4,590,625</u>	<u>4,080,120</u>	<u>4,593,576</u>	<u>28,045</u>
Hardwood <sup>c</sup>										
Select white and red oaks	3,140,079	623,193	1,082,264	1,344,693	89,929	2,088,834	623,193	875,248	561,786	28,607
Other white and red oaks	6,288,200	740,372	1,783,892	3,124,000	639,936	4,190,645	740,372	1,583,841	1,569,561	296,871
Hickory	1,117,533	110,801	398,353	538,334	70,045	736,450	110,801	345,196	251,044	29,409
Yellow birch	--	--	--	--	--	--	--	--	--	--
Hard maple	15,313	--	--	15,313	--	10,744	--	--	10,744	--
Sweetgum	4,620,115	799,021	1,601,560	2,076,300	143,234	2,778,520	799,021	1,232,365	696,336	50,798
Ash, walnut, and black cherry	823,518	106,911	295,960	389,964	30,683	507,961	106,911	232,052	153,317	15,681
Yellow-poplar	3,004,552	809,708	1,155,510	949,456	89,878	2,271,883	809,708	965,391	441,107	55,677
Other eastern hardwoods	6,864,308	951,585	2,127,017	3,375,052	410,654	4,149,860	951,585	1,620,907	1,373,549	203,819
Total	<u>25,873,618</u>	<u>4,141,591</u>	<u>8,444,556</u>	<u>11,813,112</u>	<u>1,474,359</u>	<u>16,734,897</u>	<u>4,141,591</u>	<u>6,855,000</u>	<u>5,057,444</u>	<u>680,862</u>
All species	<u>55,255,141</u>	<u>10,669,340</u>	<u>16,588,794</u>	<u>26,464,154</u>	<u>1,532,853</u>	<u>30,027,263</u>	<u>8,732,216</u>	<u>10,935,120</u>	<u>9,651,020</u>	<u>708,907</u>

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

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

<sup>c</sup>For hardwoods and cypress, tree grades 1, 2, and 3 are based on "Hardwood Tree Grades for Factory Lumber," Research Paper NE-333, published by the Northeastern Forest Experiment Station, Radnor, 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, Radnor, PA, 1971.

Table 38--Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class, South Carolina, 1993

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Thousand cubic feet</i>									
Softwood									
Longleaf pine	383,310	55,719	93,569	101,342	73,123	35,913	18,908	4,736	--
Slash pine	230,536	55,570	64,237	44,672	34,728	19,045	4,768	7,516	--
Shortleaf pine	376,395	107,159	102,684	71,774	48,470	29,357	11,299	5,652	--
Loblolly pine	3,602,796	637,237	727,480	708,770	572,574	399,126	245,299	287,873	24,437
Pond pine	156,235	21,946	36,235	32,090	24,046	17,650	11,201	12,442	625
Virginia pine	179,996	68,684	55,251	30,696	12,873	10,290	2,202	--	--
Pitch pine	10,820	1,962	4,106	2,521	1,294	--	--	937	--
Table Mountain pine	--	--	--	--	--	--	--	--	--
Spruce pine	9,006	763	536	856	1,924	2,278	527	2,122	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	38,177	2,191	4,535	2,636	792	2,940	5,920	10,661	8,502
Eastern hemlock	11,329	2,263	1,742	1,654	619	971	--	3,115	945
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	267,571	21,938	30,967	36,230	31,910	45,269	30,754	61,928	8,555
Pondcypress	83,944	19,806	20,331	13,714	12,325	8,247	3,689	5,247	585
Cedars	26,151	10,037	5,930	5,456	1,362	1,190	569	1,607	--
<b>Total softwoods</b>	<b>5,376,266</b>	<b>1,005,295</b>	<b>1,147,623</b>	<b>1,052,411</b>	<b>816,040</b>	<b>572,276</b>	<b>335,136</b>	<b>403,836</b>	<b>43,649</b>
Hardwood									
Select white oaks	445,251	--	82,976	93,254	81,373	72,263	42,926	65,528	6,931
Select red oaks	151,987	--	14,564	26,461	25,338	19,503	19,705	29,407	17,009
Chestnut oak	60,664	--	12,994	15,586	7,852	6,334	4,923	12,219	756
Other white oaks	125,154	--	27,494	21,784	18,145	9,456	9,943	27,645	10,687
Other red oaks	953,139	--	178,508	155,203	152,346	122,832	112,727	175,147	56,376
Hickory	210,551	--	40,017	38,552	37,632	30,228	19,529	34,430	10,163
Yellow birch	--	--	--	--	--	--	--	--	--
Hard maple	2,996	--	462	488	1,342	--	--	--	704
Soft maple	277,692	--	58,634	60,401	44,551	43,015	32,473	35,715	2,903
Beech	22,860	--	2,013	5,118	4,243	1,700	1,301	7,579	906
Sweetgum	838,416	--	160,899	196,951	161,180	119,651	75,398	105,448	18,889
Tupelo and blackgum	820,327	--	160,885	218,822	167,960	115,554	80,260	70,199	6,647
Ash	157,827	--	27,803	35,841	38,405	15,406	16,713	19,493	4,166
Cottonwood	42,776	--	3,199	3,503	2,558	3,191	2,668	11,042	16,615
Basswood	2,411	--	--	470	930	--	--	--	1,011
Yellow-poplar	517,340	--	62,636	77,505	96,006	64,319	73,177	127,390	16,307
Bay and magnolia	8,469	--	1,778	1,593	2,297	1,113	--	524	1,164
Black cherry	1,921	--	1,553	368	--	--	--	--	--
Black walnut	4,144	--	985	373	--	788	987	1,011	--
Sycamore	46,150	--	2,498	4,828	9,518	7,494	5,294	12,571	3,947
Black locust	2,946	--	--	--	672	1,564	--	710	--
Elm	69,189	--	19,102	10,695	14,659	5,233	8,277	8,692	2,531
Other eastern hardwoods	66,753	--	12,962	16,039	10,584	7,705	6,259	13,204	--
<b>Total hardwoods</b>	<b>4,828,963</b>	<b>--</b>	<b>871,962</b>	<b>983,835</b>	<b>877,591</b>	<b>647,349</b>	<b>512,560</b>	<b>757,954</b>	<b>177,712</b>
<b>All species</b>	<b>10,205,229</b>	<b>1,005,295</b>	<b>2,019,585</b>	<b>2,036,246</b>	<b>1,693,631</b>	<b>1,219,625</b>	<b>847,696</b>	<b>1,161,790</b>	<b>221,361</b>

Table 39- Total-volume of live trees on timberland, by species and diameter class, South Carolina, 1993

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Thousand cubic feet</i>													
<b>Softwood</b>													
Longleaf pine	632,514	9,468	22,570	60,457	70,600	80,170	116,956	120,016	84,590	40,979	21,381	5,327	--
Slash pine	447,794	5,941	19,017	49,131	82,750	81,298	81,489	52,841	39,962	21,564	5,373	8,428	--
Shortleaf pine	782,231	18,711	48,149	95,304	140,392	155,958	129,643	85,368	56,050	33,462	12,801	6,393	--
Loblolly pine	7,102,646	207,680	441,564	949,179	1,010,980	960,614	927,320	851,347	667,711	455,839	277,755	325,142	27,515
Pond pine	266,015	3,020	10,906	22,550	35,869	31,929	46,353	38,347	28,426	20,325	13,354	14,209	727
Virginia pine	390,029	5,883	21,776	45,589	75,292	100,206	72,336	37,709	16,434	12,206	2,598	--	--
Pitch pine	23,250	859	1,385	2,459	4,522	3,040	5,225	3,099	1,562	--	--	1,099	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	14,422	629	230	502	1,783	1,088	673	1,014	2,230	2,613	1,257	2,403	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	61,063	1,467	1,649	1,567	8,807	3,416	5,984	3,272	967	3,545	7,050	13,371	9,968
Eastern hemlock	18,091	265	180	--	3,334	3,252	2,321	2,061	757	1,161	--	3,655	1,105
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	429,724	2,076	8,708	19,602	27,721	38,756	45,572	50,596	42,345	60,240	39,428	79,331	15,349
Pondcypress	176,316	4,124	7,531	15,004	24,178	33,924	30,152	19,314	16,951	11,699	5,312	7,155	972
Cedars	191,154	27,378	37,393	45,252	41,895	16,748	7,922	7,005	1,705	1,798	707	3,351	--
<b>Total softwoods</b>	<b>10,535,249</b>	<b>287,501</b>	<b>621,058</b>	<b>1,306,596</b>	<b>1,528,123</b>	<b>1,510,399</b>	<b>1,471,946</b>	<b>1,271,989</b>	<b>959,690</b>	<b>665,431</b>	<b>387,016</b>	<b>469,864</b>	<b>55,636</b>
<b>Hardwood</b>													
Select white oaks	1,013,588	18,636	35,171	69,874	94,477	126,103	148,331	144,665	115,399	100,852	58,123	88,648	13,309
Select red oaks	305,351	4,404	8,636	15,615	19,760	29,751	26,665	42,449	36,517	27,348	28,974	43,173	22,059
Chestnut oak	141,216	2,490	5,163	6,818	10,709	11,201	23,629	26,287	11,894	9,653	8,473	20,098	4,801
Other white oaks	426,608	14,226	27,123	41,751	52,783	51,474	53,453	39,994	33,198	21,331	16,801	51,711	22,763
Other red oaks	2,702,681	134,403	185,044	262,375	301,470	346,098	324,845	251,339	226,692	177,802	162,106	249,426	81,081
Hickory	605,321	26,859	42,383	64,586	76,226	75,391	70,108	61,597	53,608	44,606	27,797	47,390	14,770
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	23,826	5,548	5,451	3,819	1,780	2,296	1,434	735	1,858	--	--	--	905
Soft maple	1,321,585	124,900	179,082	188,420	171,998	140,602	132,977	111,748	75,296	70,481	52,291	65,010	8,780
Beech	65,000	2,944	3,100	4,860	8,298	4,504	4,225	7,766	6,132	2,397	1,806	16,177	2,791
Sweetgum	2,462,335	164,014	226,295	279,702	316,956	300,334	278,999	281,847	215,881	151,654	94,554	128,463	23,636
Tupelo and blackgum	2,271,521	79,014	124,352	179,041	224,745	282,377	316,073	368,672	259,571	175,960	120,834	125,111	15,771
Ash	448,715	34,788	45,480	35,373	41,116	55,993	51,836	53,523	54,809	22,118	20,914	26,813	5,952
Cottonwood	68,779	706	1,707	1,395	4,217	4,243	5,308	4,967	3,388	4,385	3,317	14,149	20,997
Basswood	6,233	--	--	1,696	1,484	--	--	645	1,207	--	--	--	1,201
Yellow-poplar	915,343	15,880	32,379	45,089	60,567	77,450	105,976	107,620	124,468	79,912	91,324	153,811	20,867
Bay and magnolia	92,756	22,062	16,961	18,246	10,330	9,101	4,327	2,600	3,033	2,298	465	1,525	1,808
Black cherry	139,504	42,249	33,007	31,532	17,235	7,867	4,883	1,758	624	349	--	--	--
Black walnut	18,607	21	633	3,253	2,869	3,561	2,443	535	188	1,069	1,304	2,731	--
Sycamore	77,189	1,480	1,967	4,809	1,889	3,269	5,446	7,381	13,099	10,297	6,734	15,623	5,195
Black locust	7,794	270	281	--	--	2,517	--	--	1,002	2,721	--	1,003	--
Elm	315,511	29,908	44,505	45,274	41,766	38,975	37,179	19,249	21,285	9,597	11,419	13,177	3,177
Other eastern hardwoods	990,250	214,863	233,834	192,241	117,584	69,340	50,869	40,021	21,013	13,400	10,975	24,807	1,303
<b>Total hardwoods</b>	<b>14,419,713</b>	<b>939,665</b>	<b>1,252,554</b>	<b>1,495,769</b>	<b>1,578,259</b>	<b>1,642,447</b>	<b>1,649,006</b>	<b>1,575,398</b>	<b>1,280,162</b>	<b>928,230</b>	<b>718,211</b>	<b>1,088,846</b>	<b>271,166</b>
<b>All species</b>	<b>24,954,962</b>	<b>1,227,166</b>	<b>1,873,612</b>	<b>2,802,365</b>	<b>3,106,382</b>	<b>3,152,846</b>	<b>3,120,952</b>	<b>2,847,387</b>	<b>2,239,852</b>	<b>1,593,661</b>	<b>1,105,227</b>	<b>1,558,710</b>	<b>326,802</b>

Table 40--Green weight of forest biomass on timberland, by species and diameter class, South Carolina, 1993

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Hundred thousand pounds</i>													
Softwood													
Longleaf pine	494,282	7,784	19,054	42,266	53,708	62,208	92,104	95,372	67,456	32,884	17,200	4,246	--
Slash pine	345,899	4,549	17,636	35,749	63,369	62,685	63,007	40,969	30,787	16,543	4,136	6,469	--
Shortleaf pine	534,687	10,407	29,238	56,697	95,633	110,321	92,983	61,210	40,303	24,120	9,185	4,590	--
Loblolly pine	5,085,249	101,889	261,112	687,338	756,608	707,176	678,496	623,818	483,986	330,063	201,134	233,979	19,650
Pond pine	187,405	1,626	6,111	15,678	25,502	22,923	33,371	27,382	20,443	14,381	9,438	10,034	516
Virginia pine	292,282	5,072	17,815	35,186	56,283	73,775	53,466	27,696	12,174	8,891	1,924	--	--
Pitch pine	15,842	750	1,262	1,525	2,886	2,011	3,540	2,100	1,058	--	--	710	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	10,072	454	213	250	1,185	749	462	729	1,571	1,859	904	1,696	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	37,079	593	747	1,072	5,795	2,286	4,112	2,141	603	2,245	4,257	7,808	5,420
Eastern hemlock	13,280	162	117	--	2,662	2,674	1,793	1,456	585	778	--	2,340	713
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	322,407	1,051	5,487	9,957	17,234	26,414	33,325	38,162	32,878	47,726	31,905	65,074	13,194
Pondcypress	112,578	2,260	4,734	6,631	13,175	20,933	20,052	13,489	12,261	8,658	4,016	5,559	810
Cedars	131,705	16,469	23,924	32,164	30,505	12,352	5,817	5,158	1,298	1,300	474	2,244	--
<b>Total softwoods</b>	<b>7,582,767</b>	<b>153,066</b>	<b>387,450</b>	<b>924,513</b>	<b>1,124,545</b>	<b>1,106,507</b>	<b>1,082,528</b>	<b>939,682</b>	<b>705,403</b>	<b>489,448</b>	<b>284,573</b>	<b>344,749</b>	<b>40,303</b>
Hardwood													
Select white oaks	819,734	14,769	26,221	49,927	74,357	101,151	119,919	119,010	94,708	83,788	48,817	75,413	11,654
Select red oaks	251,732	3,695	6,645	10,978	15,641	24,066	21,891	35,214	30,330	22,770	24,151	36,086	20,265
Chestnut oak	110,558	2,259	4,040	4,691	8,297	8,648	18,180	20,509	9,352	7,708	6,748	16,128	3,998
Other white oaks	352,318	10,242	18,889	27,688	40,975	42,210	44,413	34,654	28,881	19,406	15,113	48,108	21,739
Other red oaks	2,170,567	113,843	139,854	187,018	239,117	278,779	267,454	207,711	188,346	148,223	133,832	202,240	64,150
Hickory	491,072	23,398	37,174	45,136	58,986	59,905	56,169	50,389	44,280	37,414	23,793	41,117	13,311
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	20,089	4,550	4,626	3,050	1,514	1,924	1,277	666	1,640	--	--	--	842
Soft maple	955,049	94,731	127,098	129,760	128,952	103,873	96,674	81,401	54,209	50,408	36,816	45,204	5,923
Beech	52,174	2,394	2,635	3,030	6,359	3,568	3,278	6,274	5,007	1,954	1,580	13,730	2,365
Sweetgum	1,759,851	108,197	150,244	179,744	224,587	216,837	204,444	208,649	161,696	114,963	72,466	99,312	18,712
Tupelo and blackgum	1,543,448	54,651	85,264	89,113	136,412	182,160	213,530	259,385	187,425	131,244	91,833	98,954	13,477
Ash	274,982	21,207	28,864	25,952	28,907	35,392	31,260	31,294	31,139	12,560	11,421	14,032	2,954
Cottonwood	49,685	451	1,168	816	2,760	2,816	3,638	3,504	2,429	3,184	2,375	10,461	16,083
Basswood	4,202	--	--	1,072	1,029	--	--	460	798	--	--	--	843
Yellow-poplar	649,687	11,756	21,433	27,387	40,979	53,903	74,598	76,966	89,927	58,091	66,495	112,650	15,502
Bay and magnolia	55,405	13,403	10,427	9,203	6,339	5,586	2,721	1,685	2,020	1,542	309	1,000	1,170
Black cherry	82,279	20,030	22,084	18,441	11,190	5,235	3,348	1,242	435	274	--	--	--
Black walnut	15,623	12	518	2,387	2,461	2,968	2,133	469	195	951	1,111	2,418	--
Sycamore	55,619	971	1,344	2,437	1,147	2,011	3,731	5,207	9,589	7,680	5,132	12,225	4,145
Black locust	7,353	223	248	--	--	2,291	--	--	945	2,671	--	975	--
Elm	206,043	21,676	31,032	27,698	26,417	24,120	24,025	12,570	13,900	6,364	7,399	8,745	2,097
Other eastern hardwoods	811,588	183,782	208,700	147,839	94,413	53,151	38,356	30,803	16,234	10,253	8,028	19,297	732
<b>Total hardwoods</b>	<b>10,739,058</b>	<b>706,240</b>	<b>928,508</b>	<b>993,367</b>	<b>1,150,839</b>	<b>1,210,594</b>	<b>1,231,039</b>	<b>1,188,062</b>	<b>973,485</b>	<b>721,448</b>	<b>557,419</b>	<b>858,095</b>	<b>219,962</b>
All species	18,321,825	859,306	1,315,958	1,917,880	2,275,384	2,317,101	2,313,567	2,127,744	1,678,888	1,210,896	841,992	1,202,844	260,265

Table 41 -- Average net annual growth and removals of live timber and growing stock on timberland, by species, South Carolina 1986- 1992

Species	Live timber <sup>a</sup>		Growing stock	
	Net annual growth	Annual timber removals	Net annual growth	Annual timber removals
<i>Thousand cubic feet</i>				
<b>Softwood</b>				
Yellow pines	334,257	488,461	332,129	483,098
Eastern white pine	2,186	240	2,274	240
Spruce and fir	--	--	--	--
Cypress	5,431	6,569	5,229	6,235
Other eastern softwoods	4,112	2,713	3,961	2,664
<b>Total softwoods</b>	<b>345,986</b>	<b>497,983</b>	<b>343,593</b>	<b>492,237</b>
<b>Hardwood</b>				
Select white and red oaks	24,419	27,565	24,726	27,002
Other white and red oaks	34,095	76,987	34,921	71,046
Hickory	7,726	9,837	7,327	9,514
Yellow birch	--	--	--	--
Hard maple	462	- -	385	--
Sweetgum	35,347	55,306	34,400	52,834
Ash, walnut, and black cherry	4,299	8,309	4,099	7,344
Yellow--poplar	25,918	19,160	25,646	18,474
Tupelo and blackgum	19,728	24,056	21,167	20,453
Bay and magnolia	1,032	327	1,009	207
Other eastern hardwoods	34,660	37,332	28,280	28,856
<b>Total hardwoods</b>	<b>187,686</b>	<b>258,879</b>	<b>181,960</b>	<b>235,730</b>
<b>All species</b>	<b>533,672</b>	<b>756,862</b>	<b>525,553</b>	<b>727,967</b>

<sup>a</sup>Merchantable portion only.

**Table 42--Average net annual growth and removals of sawtimber on timberland, by species, South Carolina, 1986- 1992**

Species	Net annual growth	Annual timber removals
<i>Thousand board feet</i>		
<b>Softwood</b>		
Yellow pines	1, 143, 565	1, 939, 521
Eastern white pine	11, 725	570
Spruce and fir	- -	- -
Cypress	25, 510	30, 572
Other eastern softwoods	5. 442	4. 184
<b>Total softwoods</b>	<b>1, 186, 242</b>	<b>1, 974, 847</b>
<b>Hardwood</b>		
Select white and red oaks	104, 064	92, 761
Other white and red oaks	118, 696	241, 926
Hickory	19, 864	32, 997
Yellow birch	- -	- -
Hard maple	583	- -
Sweetgum	119, 250	151, 803
Ash, walnut, and black cherry	17, 877	22, 149
Yellow-poplar	124, 540	81, 240
Tupelo and blackgum	<b>88,863</b>	66, 706
Bay and magnolia	<b>1,340</b>	- -
Other eastern hardwoods	<b>83,296</b>	<b>84.774</b>
<b>Total hardwoods</b>	<b>678,373</b>	<b>774,356</b>
<b>All species</b>	<b>1,864,615</b>	<b>2, 749, 203</b>

**Table 43--Average annual removals of growing stock on timberland, by species and diameter class, South Carolina, 1986- 1992**

Species	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
<i>Thousand cubic feet</i>											
<b>Softwood</b>											
Yellow pines	483,098	34,311	63,699	85,418	86,390	74,247	51,090	36,749	24,629	25,451	1,114
Eastern white pine	240	--	122	--	--	118	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Cypress	6,235	86	239	85	568	1,009	412	989	660	1,817	370
Other eastern softwoods	2,664	1,221	483	557	403	--	--	--	--	--	--
<b>Total softwoods</b>	<b>492,237</b>	<b>35,618</b>	<b>64,543</b>	<b>86,060</b>	<b>87,361</b>	<b>75,374</b>	<b>51,502</b>	<b>37,738</b>	<b>25,289</b>	<b>27,268</b>	<b>1,484</b>
<b>Hardwood</b>											
Select white and red oaks	27,002	1,610	2,253	3,010	3,551	3,450	3,792	2,982	1,977	3,516	861
Other white and red oaks	71,046	5,534	6,511	9,043	9,784	7,772	6,881	6,684	4,473	10,901	3,463
Hickory	9,514	1,003	938	721	1,016	908	929	1,241	490	1,455	813
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--
Sweetgum	52,834	5,262	6,624	8,237	9,382	6,300	5,922	4,561	2,080	3,918	548
Ash, walnut, and black cherry	7,344	923	566	967	909	726	768	413	309	1,521	242
Yellow-poplar	18,474	467	642	1,815	1,764	2,130	3,096	1,591	1,527	5,323	119
Tupelo and blackgum	20,453	1,140	1,496	2,200	3,578	2,847	2,658	2,479	1,969	1,875	211
Bay and magnolia	207	127	--	80	--	--	--	--	--	--	--
Other eastern hardwoods	28,856	2,803	3,759	2,874	3,744	3,726	3,789	2,415	1,319	3,748	679
<b>Total hardwoods</b>	<b>235,730</b>	<b>18,869</b>	<b>22,789</b>	<b>28,947</b>	<b>33,728</b>	<b>27,859</b>	<b>27,835</b>	<b>22,366</b>	<b>14,144</b>	<b>32,257</b>	<b>6,936</b>
<b>All species</b>	<b>727,967</b>	<b>54,487</b>	<b>87,332</b>	<b>115,007</b>	<b>121,089</b>	<b>103,233</b>	<b>79,337</b>	<b>60,104</b>	<b>39,433</b>	<b>59,525</b>	<b>8,420</b>

Table 44- -Average annual mortality of live timber, growing stock, and sawtimber on timberland, by species, South Carolina, 1986-1992

Species	Live timber <sup>a</sup>	Growing stock	Sawtimber
	<i>Thousand cubic feet</i>		<i>Thousand board feet</i>
Softwood			
Yellow pines	250,269	246,967	1,056,058
Eastern white pine	290	160	1,082
Spruce and fir	---	---	--
Cypress	4,366	4,269	19,784
Other eastern softwoods	1,620	1,577	3,887
Total softwoods	256,545	252,973	1,080,811
Hardwood			
Select white and red oaks	15,892	14,123	56,747
Other white and red oaks	73,999	65,873	254,872
Hickory	5,103	4,631	19,162
Yellow birch	--	--	--
Hard maple	--	--	--
Sweetgum	30,059	26,745	83,833
Ash, walnut, and black cherry	9,115	6,254	15,322
Yellow-poplar	7,662	6,923	30,947
Tupelo and blackgum	13,572	8,468	24,087
Bay and magnolia	856	486	708
Other eastern hardwoods	34,872	20,797	59,326
Total hardwoods	191,130	154,300	545,004
All species	447,675	407,273	1,625,815

<sup>a</sup>Merchantable portion only.

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

Species group and year	All classes	Diameter class (inches at breast height)							
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0 and larger
<i>Thousand trees</i>									
Yellow pine									
1986	2,010,939	808,467	448,168	287,902	187,508	120,355	73,981	42,158	42,400
1993	2,493,982	1,143,731	562,690	358,350	195,057	101,249	60,911	35,743	36,251
Change	+483,043	+335,264	+114,522	+70,448	+7,549	-19,106	-13,070	-6,415	-6,149
Other softwood									
1986	270,972	171,259	48,773	20,125	11,962	6,775	3,652	2,769	5,657
1993	252,553	154,467	47,116	19,641	13,296	6,610	4,250	2,548	4,625
Change	-18,419	-16,792	-1,657	-484	+1,334	-165	+598	-221	-1,032
Hardwood									
1986	6,096,607	4,122,705	1,019,738	416,076	213,854	123,520	79,434	50,023	71,257
1993	6,060,672	4,197,211	978,996	380,294	201,801	116,036	73,452	48,238	64,644
Change	-35,935	+74,506	-40,742	-35,782	-1,205	-7,484	-5,982	-1,785	-6,613

Table 46-- Land area, by land use class, major forest type, and survey completion date, South Carolina

Land use class	Survey completion date			Change
	1978	1986	1993	1986-1993
	<i>Acres</i>			
Forest land				
<b>Timberland</b>				
Pine and oak-pine types	7,289,464	6,980,797	7,463,565	+482,768
Hardwood types	5,213,442	5,197,959	4,991,360	-206,599
<b>Total</b>	<b>12,502,906</b>	<b>12,178,756</b>	<b>12,454,925</b>	<b>+276,169</b>
Reserved timberland	72,399	78,216	190,632	+112,416
Woodland	3,893	--	--	--
<b>Total forest land</b>	<b>12,579,198</b>	<b>12,256,972</b>	<b>12,645,557</b>	<b>+388,585</b>
Nonforest land				
Cropland	3,606,957	3,573,102	3,051,240	-521,862
Pasture and range	1,006,997	898,212	875,214	-22,998
Other	1,926,247	2,338,368	2,652,949	+314,581
<b>Total</b>	<b>6,540,201</b>	<b>6,809,682</b>	<b>6,579,403</b>	<b>-230,279</b>
All land <sup>a</sup>	19,119,399	19,066,654	19,224,960	+158,306

<sup>a</sup>Excludes all water areas.

**Table 47– –Volume of sawtimber growing stock, and live timber on timberland, by species group, survey completion date, and diameter class, South Carolina**

Species group and year	All classes	Diameter class (inches at breast height)								
		5.0 - 6.9	7.0 - 8.9	9.0 - 10.9	11.0 - 12.9	13.0 - 14.9	15.0 - 16.9	17.0 - 18.9	19.0 - 20.9	21.0 and larger
<b>SAWTIMBER (in thousand board feet)</b>										
<b>Softwood</b>										
1978	32,022,323	- -	- -	5,988,600	6,838,075	6,202,690	4,973,270	3,332,364	1,929,266	2,758,058
1986	34,220,415	- -	- -	5,495,893	6,764,956	6,505,600	5,243,584	4,009,442	2,512,230	3,688,710
1993	29,381,523	- -	- -	4,637,102	5,739,059	5,712,996	4,718,740	3,462,038	2,114,608	2,996,980
<b>Hardwood</b>										
1978	24,851,642	- -	- -	- -	4,274,819	4,561,232	4,326,739	3,386,414	2,537,599	5,764,839
1986	27,086,868	- -	- -	- -	4,452,598	4,886,187	4,601,710	3,889,639	2,921,053	6,335,681
1993	25,873,618	- -	- -	- -	4,246,144	4,892,577	4,576,586	3,522,916	2,904,935	5,730,460
<b>GROWING STOCK (in thousand cubic feet)</b>										
<b>Softwood</b>										
1978	9,178,031	995,912	1,528,908	1,664,765	1,534,443	1,232,624	906,182	571,501	317,762	425,934
1986	8,944,142	789,388	1,251,162	1,519,398	1,507,204	1,279,192	945,162	678,403	408,175	566,056
1993	8,034,145	903,608	1,236,874	1,279,948	1,276,541	1,113,967	843,461	584,628	340,289	454,829
<b>Hardwood</b>										
1978	8,527,577	813,314	1,035,999	1,183,241	1,255,147	1,128,828	954,077	685,831	482,829	988,311
1986	9,064,511	832,839	1,074,539	1,212,929	1,288,355	1,201,219	1,012,311	791,332	557,565	1,093,422
1993	8,651,090	742,644	1,031,845	1,179,782	1,233,240	1,203,511	1,004,343	715,492	554,710	985,523
<b>LIVE TIMBER<sup>a</sup>(in thousand cubic feet)</b>										
<b>Softwood</b>										
1978	9,376,013	1,044,466	1,583,548	1,701,416	1,553,095	1,243,280	914,518	573,617	320,896	441,177
1986	9,041,228	808,727	1,274,023	1,538,598	1,515,360	1,285,806	950,529	681,813	410,362	576,010
1993	8,094,195	917,622	1,250,138	1,290,740	1,280,763	1,117,127	846,987	587,147	342,093	461,578
<b>Hardwood</b>										
1978	10,306,946	1,182,541	1,329,194	1,438,993	1,479,962	1,292,877	1,054,318	775,822	547,730	1,205,509
1986	10,454,808	1,106,819	1,283,612	1,397,432	1,452,630	1,330,822	1,094,985	870,086	618,918	1,299,504
1993	9,775,855	1,007,054	1,225,964	1,326,247	1,352,362	1,303,349	1,065,972	771,022	598,033	1,125,852

<sup>a</sup> Merchantable volume.

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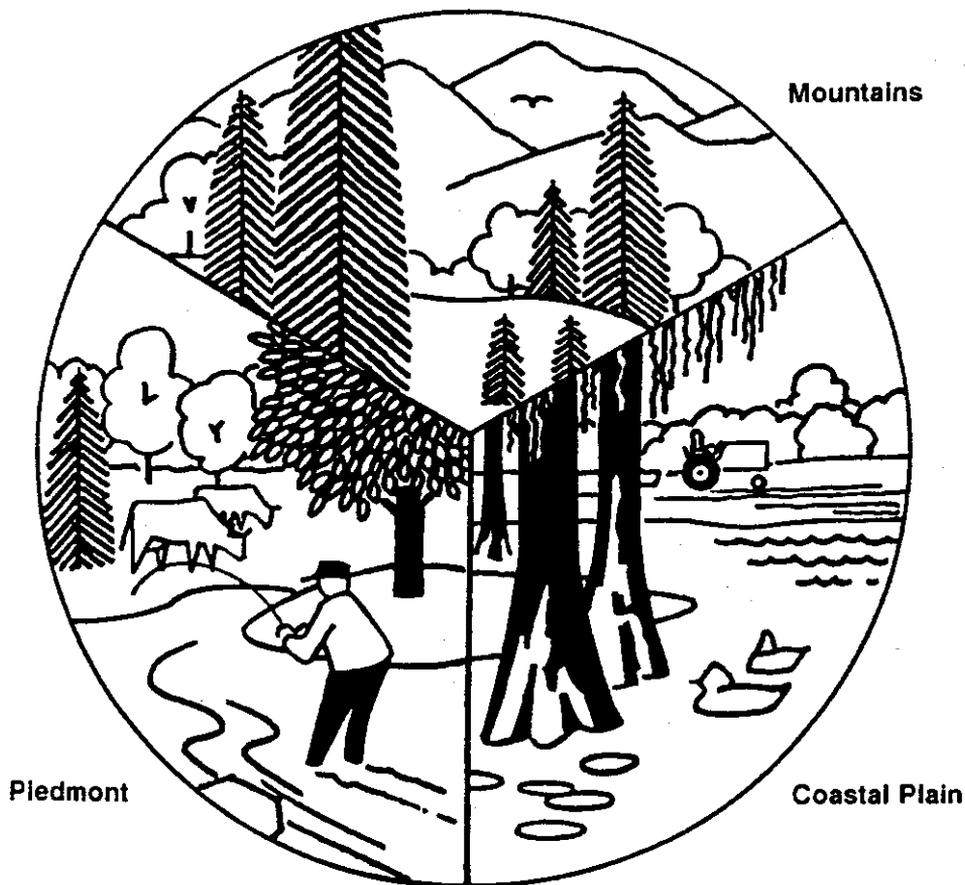
Since 1986, area of timberland in South Carolina increased 2 percent to 12.4 million acres. Nonindustrial private forest landowners control 72 percent of the State's timberland. Area of softwood forest types increased 2 percent to over 5.5 million acres. More than 279,000 acres were harvested annually, while 372,000 acres were regenerated by artificial and natural means. Volume of softwood growing stock decreased 10 percent to 8.0 billion cubic feet. Hardwood growing-stock volume declined 5 percent to 8.7 billion cubic feet. Net annual growth of softwoods declined 23 percent to 344 million cubic feet. Hardwood growth dropped 27 percent to 182 million cubic feet. Annual removals of softwood growing stock increased 8 percent to 492 million cubic feet, and hardwood removals jumped 37 percent to 236 million cubic feet. Annual mortality of softwood growing stock was 253 million cubic feet, three times the softwood mortality reported in 1986. Hardwood mortality increased 153 percent to 154 million cubic feet.

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

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## Southeastern Forest Experiment Station

Established 1921

The Southeastern Forest Experiment Station, headquartered in Asheville, North Carolina, is one of the eight regional Experiment Stations, and the Forest Products Laboratory, that make up the Forest Service research organization.

### RESEARCH MISSION:

To acquire the knowledge, develop the technology, and disseminate the research findings required to manage the Southeast's forest resources in ways that satisfy demands of goods and services while maintaining a quality environment.

### RESEARCH LOCATIONS:

Blacksburg, VA  
 Research Triangle Park, NC  
 Franklin, NC  
 Clemson, SC  
 Charleston, SC  
 Athens, GA  
 Macon, GA  
 Olustee/Gainesville, FL

### EXPERIMENTAL FORESTS:

Chipola, Marianna, FL  
 Holt Walton, Vienna, GA  
 Cowetta, Otto, NC  
 Bent Creek, Asheville, NC  
 Santee, Moncks Corner, SC  
 Scull Shoals, Athens, GA  
 Hitchiti, Juliette, GA  
 Olustee, Olustee, FL