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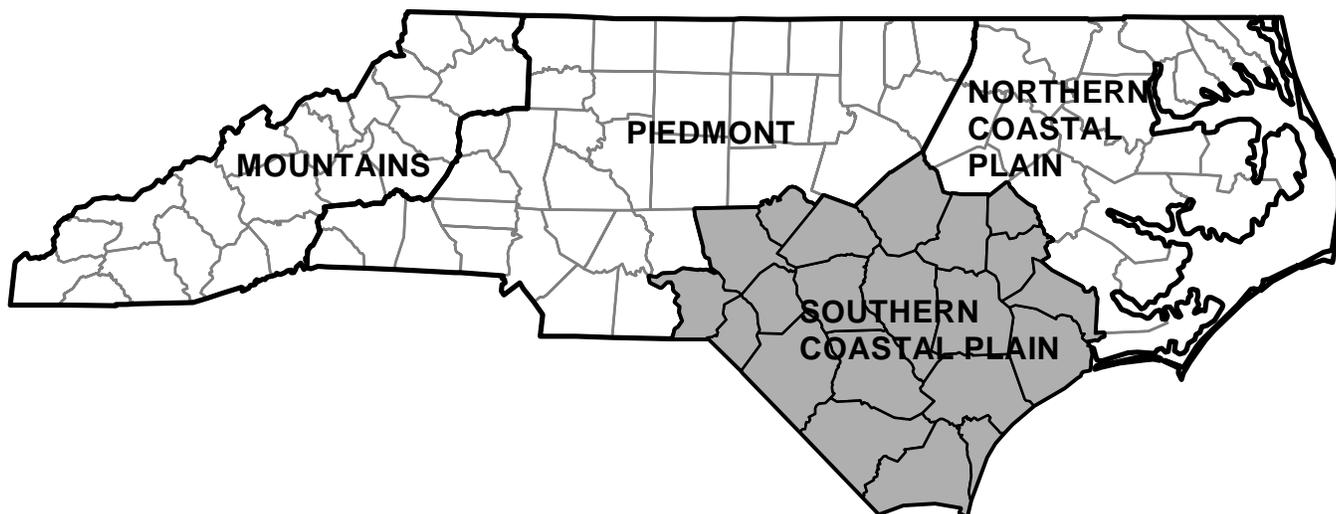


Forest Statistics for the Southern Coastal Plain of North Carolina, 1999

Southern
Research Station

Roger C. Conner and Raymond M. Sheffield

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Foreword

This report highlights the principal findings of the seventh forest survey of the Southern Coastal Plain of North Carolina. Fieldwork began in January 1998 and was completed in February 1999. Six previous surveys, completed in 1937, 1952, 1962, 1973, 1983, and 1990, provide statistics for measuring changes and trends over the past 62 years. This report primarily emphasizes changes and trends since 1990.

Periodic surveys of forest resources are authorized by the Forest and Rangeland Renewable Resources Research Act of 1978. These surveys are a continuing, nationwide undertaking by the Regional Experiment Stations of the U.S. Department of Agriculture, Forest Service. In the Southern United States, the Forest Inventory and Analysis Research Work Unit (FIA) at the Southern Research Station conducts these surveys in 13 Southern States and the Commonwealth of Puerto Rico. The FIA unit operates out of two locations, one in Starkville, MS, and the other in Asheville, NC. The primary objective of these surveys is to periodically inventory and evaluate all forest and related resources. These multiresource data help provide a basis for formulating forest policies and programs and for the orderly development and use of the resources. This report discusses the extent and condition of forest land, associated timber volumes, and rates of timber growth, mortality, and removals.

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

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

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Highlights

This report summarizes results from a 1999 inventory of the forest resources of the Southern Coastal Plain of North Carolina (fig. 1). Current estimates of forest area, timberland area, related classifications such as ownership and forest type, and timber volumes are presented and compared with previous values. Average annual rates of growth, removals, and mortality are summarized since the previous inventory in 1990. Although the previous and current inventories are similar in scope, they differ in sampling design and intensity, standards and definitions, and in methods used to determine key attributes such as stocking, forest type, and stand-size class. Many of the changes in methods, plot design, and sampling intensity were necessary to increase national consistency between Forest Inventory and Analysis Research Work Units (FIA). These changes complicate the comparison of data between the surveys and make detection of genuine resource trends difficult. However, some general comparisons are possible where differences between inventories can be reconciled or are considered minimal. Resource data are presented in 49 tables and 9 graphs. A summary of major findings follows.

Timberland area—The area of timberland in this 21-county region declined by 187,000 acres, to 5.0 million acres (see table 1). In 1999, 61 percent of the Southern Coastal Plain was forested. Land use changes involving forests occurred on 484,000 acres, including 335,000 acres diverted to other land uses. A total of 155,000 acres were cleared for agriculture, and another 164,000 acres of timberland were diverted to urban and other uses. On a positive note, 149,000 acres were added to the timber base through natural regeneration or planting on nonforest land.

Ownership—Nonindustrial private forest (NIPF) landowners accounted for 75 percent of the timberland in the region (see table 3). The NIPF owner group is composed of individual and corporate timberland owners. Individual ownership decreased 6 percent since 1990, from 3.2 to 3.0 million acres. Timberland under corporate ownership

increased substantially, from 508,000 to 797,000 acres. Nearly 1 out of every 6 acres of timberland in the region was under corporate ownership. Timberland owned by forest industry declined 32 percent, from 1.0 million acres in 1990 to 713,000 acres in 1999. Public ownership increased by 62,000 acres to 540,000 acres.

Forest type—Area of timberland classed as a softwood forest type declined by 414,000 acres to 1.9 million acres in 1999 (see table 8). Softwood forest types accounted for 38 percent of the timberland in North Carolina's Southern Coastal Plain in 1999, down from 44 percent in 1990. The decline was evident in all pine forest types. The area occupied by loblolly pine, the predominant softwood forest type, declined by 26,000 acres to 1.6 million acres (see table 9). Area of longleaf pine continued to shrink, falling by 70,000 acres to the 1999 level of 166,000 acres. The area of pond pine dropped to 125,000 acres, less than half its extent in 1990. Some of the reductions in softwood types were due to the reclassification of stands from a pine type to a mixed pine-hardwood type. Timberland classified as an oak-pine type climbed from 763,000 acres in 1990 to 1.0 million acres in 1999. Many recently planted stands were classified as an oak-pine forest type. Altogether, planted pine and oak-pine stands totaled 1.1 million acres, or 23 percent of the area of timberland. Area in the oak-hickory forest-type group rose 20 percent to 1.0 million acres. The only decline in area of hardwoods occurred in the oak-gum-cypress forest-type group, which dropped 190,000 acres to 1.1 million acres. Sweet bay-blackgum-red maple forest types still predominate, and occupied 624,000 acres, or 59 percent of the area within the oak-gum-cypress group.

Stand size—A shift toward smaller stands was evident in the distribution of timberland by stand-size class. The area of both sawtimber and poletimber stands declined since 1990. Sawtimber stands decreased by one-third to 1.4 million acres, and poletimber stands were down 26 percent to 967,000 acres (see table 11). Sapling-seedling stands

occupied 2.6 million acres, an increase of 893,000 acres or 51 percent since 1990. These changes in stand size were driven by increased timber cutting and major disturbances such as hurricanes that impacted the region.

Stand treatment—Final harvest occurred on 98,000 acres annually since 1990; 76 percent of the annual harvest occurred on NIPF land (see table 47). Thirty-five percent of the final harvest acres were natural pine, and another 23 percent were planted pine (see table 48). Hardwoods combined accounted for 28 percent, or 27,000 acres, of the area undergoing a final harvest. Partial harvests, seed tree cutting, and commercial thinning occurred annually on an additional 50,000 acres of timberland since 1990. New stands were established on nearly 127,000 acres each year since 1990 through reforestation and afforestation. One-third of the regeneration was due to planting and two-thirds were due to natural regeneration. Weather-related damage occurred on 83,000 acres annually since the previous survey. Much of this damage was due to high winds and flooding from the hurricanes that struck the State during the past 9 years. Hardwoods took the brunt of the weather-related damage, accounting for nearly two-thirds of the affected area. Other natural disturbances, such as disease and insects, combined, caused damage to an additional 35,000 acres each year since 1990.

Softwood volume—Merchantable volume of softwood live trees declined from 3.8 billion cubic feet in 1990 to 3.6 billion cubic feet in 1999, a drop of 7 percent (see table 28). Consistent with the reduction in forest industry acreage, softwood volume on forest industry timberland fell 23 percent to 583.4 million cubic feet. Softwood live-tree volume on NIPF land also declined since 1990, from 2.7 to 2.5 billion cubic feet in 1999. The reduction in softwood volume occurred in all softwood species except loblolly pine. Volume of loblolly pine rose 6 percent to 2.7 billion cubic feet and accounted for 76 percent of the total softwood volume (see table 19). Significant reductions in the volume of slash pine and pond pine occurred during the period, whereas the volume of longleaf pine remained relatively stable, dropping only 3 percent. Planted stands accounted for 34 percent of the softwood live tree inventory compared with 24 percent in 1990.

Hardwood volume—There was a decline in hardwood live-tree volume also, from 4.0 billion cubic feet in 1990 to 3.4 billion cubic feet in 1999. The decline was greatest on NIPF land in terms of a cubic-foot reduction as hardwood inventory fell 311.2 million cubic feet to 2.9 billion cubic

feet. Forest industry timberland experienced a 49 percent reduction in volume of hardwood live trees, largely attributable to the loss of forest industry acreage. Oak species combined accounted for one-third of the decline as oak volume fell from 1.0 billion cubic feet to 779.8 million cubic feet. Volume of tupelo and blackgum live trees decreased 25 percent to 643.2 million cubic feet. Yellow-poplar was one of the few hardwood species to see an increase in inventory, up 21 percent to 385.0 million cubic feet.

Growth—Net annual growth of softwood live trees increased 15 percent, from 220.9 million cubic feet to 253.5 million cubic feet (see table 42). Softwood net annual growth on forest industry increased 12 percent to 63.3 million cubic feet, and was up 13 percent to 163.3 million cubic feet per year on NIPF land. In 1999, planted stands accounted for 54 percent of the softwood growth compared with 40 percent in 1990. Net annual growth of hardwood live trees decreased 34 percent to 82.0 million cubic feet. A major factor in the reduced rate of hardwood growth was the increased level of mortality for hardwoods (discussed in Mortality section). Hardwood net growth reductions were recorded for all ownerships.

Mortality—Major increases in tree mortality were recorded for this inventory period due to damages from hurricanes occurring in the region since 1990. Annual mortality of softwood live trees increased 111 percent, from 25.6 to 53.9 million cubic feet (see table 40). Softwood mortality increased on all ownerships, doubling on NIPF land from 17.8 to 35.7 million cubic feet per year, and up 30 percent on forest industry land, from 5.6 to 7.3 million cubic feet per year. The largest percentage increase in annual mortality of softwoods occurred on public lands, a 402-percent increase to 11.0 million cubic feet. Hardwood mortality in the region was also up substantially, increasing 67 percent to 67.5 million cubic feet per year. Hardwood live-tree mortality on NIPF land increased 73 percent to 57.0 million cubic feet, and rose from 2.4 to 10.1 million cubic feet annually on public timberland. The rate of hardwood mortality was down 44 percent on forest industry timberland, from 6.6 to 3.7 million cubic feet per year.

Removals—Annual removals of softwood live-tree volume increased 41 percent to 261.1 million cubic feet. Seventy percent, or 183.7 million cubic feet, of the softwood removals came from NIPF land. Forest industry timberland contributed 23 percent, or 61.3 million cubic feet, of softwood removals per year. Softwood removals on public

timberland averaged 16.1 million cubic feet annually, 6 percent of the total softwood removals. More than 42 percent of the softwood removals came from planted stands during the latest inventory period, compared with only 16 percent for the previous inventory. Removals of hardwood live trees increased 21 percent to 124.7 million cubic feet per year. NIPF owners also provided most of the hardwood removals, accounting for 87 percent or 108.4 million cubic feet. Hardwood removals from forest industry timberland increased 59 percent to 14.3 million cubic feet per year. Public timberland accounted for 2 percent, or 2.0 million cubic feet, of the hardwood removals.

Inventory Methods

The Southern Research Station, FIA unit secured data on forest acreage and timber volume using a three-step process. A forest-nonforest classification using aerial photographs was accomplished using points representing approximately 204 acres. These photo classifications were adjusted based on ground observations at sample locations representing approximately 3,431 acres. Finally, field measurements were made at each of the sample locations where the plot design (described later) sampled forest land.

The plot installed at each ground sample location was a cluster of four points spaced 120 feet apart. Each point served as the center of a 1/24-acre circular subplot used to sample trees 5.0 inches diameter at breast height (d.b.h.) and larger. A 1/300-acre microplot, located at the subplot center, was used to sample trees 1.0 to 4.9 inches d.b.h. and seedlings (trees less than 1.0 inch d.b.h.). These fixed-radius sample plots were established without regard to land use or land cover. Forest and nonforest condition classes were delineated and recorded. Condition classes were defined by six attributes: land use, forest type, stand origin, stand size, forest density, and major ownership class. All trees tallied were assigned to their respective condition class.

The cluster of four fixed plots sampled timberland at 1,169 ground sample locations in this unit. Estimates of timber volume and forest classifications were derived from tree measurements and classifications made at these locations. Volumes for individual tally trees were computed using equations for each of the major species in the survey unit. The equations were developed from detailed measurements collected from standing trees throughout the region.

Estimates of growth, removals, and mortality were determined from the remeasurement of 987 permanent sample plots established in the previous inventory. The plot design for the previous inventory was based on a cluster of 10 points. Variable plots were systematically spaced within a single forest condition at three to five points. At each point, trees 5.0 inches d.b.h. and larger were selected for measurement on a variable-radius plot defined by a 37.5-factor prism. Trees less than 5.0 inches d.b.h. were tallied on a fixed-radius plot around points 1 through 3.

Statistical Reliability

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

Item	Sample estimate and confidence interval		Sampling error
	<i>Percent</i>		
Timberland (1,000 acres)	5,049.8 ±	29.3	0.58
All live ($M ft^3$)			
Inventory	6,944.8 ±	217.4	3.13
Net annual growth	335.5 ±	15.3	4.56
Annual removals	385.8 ±	24.4	6.32
Annual mortality	121.4 ±	9.0	7.40
Growing stock ($M ft^3$)			
Inventory	6,387.8 ±	205.7	3.22
Net annual growth	324.1 ±	14.7	4.53
Annual removals	374.8 ±	23.9	6.37
Annual mortality	107.9 ±	8.4	7.80
Sawtimber ($M fbm$)			
Inventory	21,570.3 ±	929.7	4.31
Net annual growth	1,223.1 ±	62.1	5.08
Annual removals	1,338.0 ±	98.1	7.33
Annual mortality	368.6 ±	35.6	9.67

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 softwood live-tree volume on forest industry land is computed as:

$$SE_s = 3.13 \frac{\sqrt{6,944.8}}{\sqrt{583.4}} = 10.80.$$

Thus, the sampling error is 10.80 percent, and the resulting confidence interval (two times out of three) for softwood live-tree inventory on forestry industry land is 583.4 ± 63.0 million cubic feet.

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

Sampling errors^a by counties and survey unit for timberland, live trees, growing stock, and sawtimber, Southern Coastal Plain of North Carolina, 1999

Counties and survey unit	Timberland area	Live trees			Growing stock			Sawtimber		
		Volume	Growth	Removals	Volume	Growth	Removals	Volume	Growth	Removals
<i>Percent</i>										
Bladen	2.2	10.5	16.5	27.8	10.7	16.6	28.1	15.3	16.5	31.0
Brunswick	1.7	11.4	16.7	18.7	11.7	16.7	18.8	16.5	16.6	25.9
Columbus	2.4	10.6	11.8	18.8	11.3	12.1	19.0	14.7	15.1	21.2
Cumberland	2.5	12.6	19.0	49.7	13.1	17.5	51.2	15.1	16.2	49.7
Duplin	2.1	16.7	77.0	26.0	16.9	73.1	26.1	24.0	112.1	27.7
Greene	3.5	23.2	43.6	41.3	24.4	46.8	41.7	30.8	43.6	41.6
Harnett	3.0	15.2	20.8	23.2	16.2	22.3	23.2	22.6	32.3	25.5
Hoke	4.7	11.6	16.7	53.9	12.5	16.5	54.2	14.9	17.4	54.3
Johnston	2.4	16.7	20.9	26.6	17.7	20.4	26.4	22.9	21.3	28.8
Jones	2.7	11.3	20.7	20.7	11.5	19.7	20.9	15.5	19.5	24.2
Lee	3.6	15.4	17.2	46.1	15.5	17.4	47.9	22.4	20.0	51.7
Lenoir	2.9	19.2	35.1	60.9	18.9	33.2	61.0	27.7	52.0	58.0
Moore	2.8	11.2	10.8	28.5	11.5	11.2	28.9	15.0	14.0	33.4
New Hanover	2.0	30.5	35.1	63.7	32.9	39.4	59.9	42.6	63.9	58.2
Onslow	2.8	13.0	48.1	26.4	13.3	44.9	26.3	20.9	51.1	29.5
Pender	1.6	12.3	13.1	21.6	12.2	12.5	21.7	16.0	16.7	23.7
Richmond	3.5	16.7	13.8	25.6	17.7	13.9	26.0	23.4	20.3	28.7
Robeson	1.9	10.6	16.5	23.0	10.9	16.6	23.2	14.1	15.4	26.7
Sampson	2.2	15.3	16.1	24.6	15.9	14.8	25.1	20.3	19.1	27.7
Scotland	3.9	19.3	24.2	54.8	20.7	24.7	55.5	26.1	27.9	67.2
Wayne	3.1	22.1	41.4	39.7	23.5	41.9	39.7	29.2	45.8	44.9
Survey unit	0.6	3.1	4.6	6.3	3.2	4.5	6.4	4.3	5.1	7.3

^a By random-sampling formula.

Definitions

Afforestation. Area of land previously classified as nonforest that is converted to forest by planting trees or by natural reversion to forest.

Average annual mortality. Average annual volume of trees 5.0 inches d.b.h. and larger that died from natural causes during the intersurvey period.

Average annual removals. Average annual volume of trees 5.0 inches d.b.h. and larger removed from the inventory by harvesting, cultural operations (such as timber-stand improvement), land clearing, or changes in land use during the intersurvey period.

Average net annual growth. Average annual net change in volume of trees 5.0 inches d.b.h. and larger in the absence of cutting (gross growth minus mortality) during the intersurvey period.

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

Biomass. The aboveground fresh weight of solid wood and bark in live trees 1.0 inch d.b.h. and larger from the ground to the tip of the tree. All foliage is excluded. The weight of wood and bark in lateral limbs, secondary limbs, and twigs under 0.5 inch in diameter at the point of occurrence on sapling-size trees is included but is excluded on poletimber and sawtimber-size trees.

Bole. That portion of a tree between a 1-foot stump and a 4-inch top d.o.b. in trees 5.0 inches d.b.h. and larger.

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

Commercial species. Tree species currently or potentially suitable for industrial wood products.

D.b.h. Tree diameter in inches (outside bark) at breast height (4.5 feet aboveground).

Diameter class. A classification of trees based on tree d.b.h. Two-inch diameter classes are commonly used by Forest Inventory and Analysis, with the even inch as the approximate midpoint for a class. For example, the 6-inch class includes trees 5.0 through 6.9 inches d.b.h.

D.o.b. (diameter outside bark). Stem diameter including bark.

Forest land. Land at least 10 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use. The minimum area considered for classification is 1 acre. Forested strips must be at least 120 feet wide.

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

Pine plantation. Stands that (a) have been artificially regenerated by planting or direct seeding, (b) are classed as a pine or other softwood forest type, and (c) have at least 10 percent stocking.

Natural pine. Stands that (a) have not been artificially regenerated, (b) are classed as a pine or other softwood forest type, and (c) have at least 10 percent stocking.

Oak-pine. Stands that have at least 10 percent stocking and classed as a forest type of oak-pine.

Upland hardwood. Stands that have at least 10 percent stocking and classed as an oak-hickory or maple-beech-birch forest type.

Lowland hardwood. Stands that have at least 10 percent stocking with a forest type of oak-gum-cypress, elm-ash-cottonwood, palm, or other tropical.

Nonstocked stands. Stands less than 10 percent stocked with live trees.

Forest type. A classification of forest land based on the species forming a plurality of live-tree stocking. Major eastern forest-type groups are:

White-red-jack pine. Forests in which eastern white pine, red pine, or jack pine, singly or in combination, constitute a plurality of the stocking. (Common associates include hemlock, birch, and maple).

Spruce-fir. Forests in which spruce or true firs, singly or in combination, constitute a plurality of the stocking. (Common associates include maple, birch, and hemlock).

Longleaf-slash pine. Forests in which longleaf or slash pine, singly or in combination, constitute a plurality of the stocking. (Common associates include oak, hickory, and gum).

Loblolly-shortleaf pine. Forests in which loblolly pine, shortleaf pine, or other southern yellow pines, except longleaf or slash pine, singly or in combination, constitute a plurality of the stocking. (Common associates include oak, hickory, and gum).

Oak-pine. Forests in which hardwoods (usually upland oaks) constitute a plurality of the stocking but in which pines account for 25 to 50 percent of the stocking. (Common associates include gum, hickory, and yellow-poplar).

Oak-hickory. Forests in which upland oaks or hickory, singly or in combination, constitute a plurality of the stocking, except where pines account for 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include yellow-poplar, elm, maple, and black walnut).

Oak-gum-cypress. Bottom-land forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, constitute a plurality of the stocking, except where pines account for 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include cottonwood, willow, ash, elm, hackberry, and maple).

Elm-ash-cottonwood. Forests in which elm, ash, or cottonwood, singly or in combination, constitute a plurality of the stocking. (Common associates include willow, sycamore, beech, and maple).

Maple-beech-birch. Forests in which maple, beech, or yellow birch, singly or in combination, constitute a plurality of the stocking. (Common associates include hemlock, elm, basswood, and white pine).

Nonstocked stands. Stands less than 10 percent stocked with live trees.

Forested tract size. The area of forest within the contiguous tract containing each Forest Inventory and Analysis sample plot.

Fresh weight. Mass of tree component at time of cutting.

Gross growth. Annual increase in volume of trees 5.0 inches d.b.h. and larger in the absence of cutting and mortality. (Gross growth includes survivor growth, ingrowth, growth on ingrowth, growth on removals before removal, and growth on mortality before death).

Growing-stock trees. Living trees of commercial species classified as sawtimber, poletimber, saplings, and seedlings. Trees must contain at least one 12-foot or two 8-foot logs in the saw-log portion, currently or potentially (if too small to qualify), to be classed as growing stock. The log(s) must meet dimension and merchantability standards to qualify. Trees must also have, currently or potentially, one-third of the gross board-foot volume in sound wood.

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

Hardwoods. Dicotyledonous trees, usually broadleaf and deciduous.

Soft hardwoods. Hardwood species with an average specific gravity of 0.50 or less, such as gums, yellow-poplar, cottonwoods, red maple, basswoods, and willows.

Hard hardwoods. Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maples, hickories, and beech.

Industrial wood. All roundwood products except fuelwood.

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

Live trees. All living trees. All size classes, all tree classes, and both commercial and noncommercial species are included.

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

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

Net annual change. Increase or decrease in volume of live trees at least 5.0 inches d.b.h. Net annual change is equal to net annual growth minus average annual removals.

Noncommercial species. Tree species of typically small size, poor form, or inferior quality that normally do not develop into trees suitable for industrial wood products.

Nonforest land. Land that has never supported forests and land formerly forested where timber production is precluded by development for other uses.

Nonstocked stands. Stands less than 10 percent stocked with live trees.

Other forest land. Forest land other than timberland and productive reserved forest land. It includes available and reserved forest land which is incapable of producing annually 20 cubic feet per acre of industrial wood under natural conditions, because of adverse site conditions such as sterile soils, dry climate, poor drainage, high elevation, steepness, or rockiness.

Other removals. The growing-stock volume of trees removed from the inventory by cultural operations such as timber stand improvement, land clearing, and other changes in land use, resulting in the removal of the trees from timberland.

Ownership. The property owned by one ownership unit, including all parcels of land in the United States.

National forest land. Federal land that has been legally designated as national forests or purchase units, and other land under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III land.

Forest industry land. Land owned by companies or individuals operating primary wood-using plants.

Nonindustrial private forest (NIPF) land. Privately owned land excluding forest industry land or forest industry-leased land.

Corporate. Owned by corporations, including incorporated farm ownerships.

Individual. All lands owned by individuals, including farm operators.

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

Miscellaneous Federal land. Federal land other than national forests.

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

Plant residues. Wood material generated in the production of timber products at primary manufacturing plants.

Coarse residues. Material, such as slabs, edgings, trim, veneer cores and ends, suitable for chipping.

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

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

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

Poletimber-size trees. Softwoods 5.0 to 8.9 inches d.b.h. and hardwoods 5.0 to 10.9 inches d.b.h.

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

Productive-reserved forest land. Forest land sufficiently productive to qualify as timberland but withdrawn from timber utilization through statute or administrative regulation.

Reforestation. Area of land previously classified as forest that is regenerated by planting trees or natural regeneration.

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

Rough trees. Live trees of commercial species not containing at least one 12-foot saw log, or two noncontiguous saw logs,

each 8 feet or longer, now or prospectively, primarily because of roughness, poor form, splits, and cracks, and with less than one-third of the gross board-foot tree volume in sound material; and live trees of noncommercial species.

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

Roundwood chipped. Any timber cut primarily for pulpwood, delivered to nonpulpmills, chipped, and then sold to pulpmills as residues, including chipped tops, jump sections, whole trees, and pulpwood sticks.

Roundwood products. Any primary product such as lumber, poles, pilings, pulp, or fuelwood, that is produced from roundwood.

Salvable dead trees. Standing or downed dead trees that were formerly growing stock and considered merchant-able. Trees must be at least 5.0 inches d.b.h. to qualify.

Saplings. Live trees 1.0 to 5.0 inches d.b.h.

Saw log. A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, with a minimum diameter inside bark for softwoods of 6 inches (8 inches for hardwoods).

Saw-log portion. The part of the bole of sawtimber trees between a 1-foot stump and the saw-log top.

Saw-log top. The point on the bole of sawtimber trees above which a conventional saw log cannot be produced. The minimum saw-log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

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

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

Seedlings. Trees less than 1.0 inch d.b.h. and greater than 1 foot tall for hardwoods, greater than 6 inches tall for softwood, and greater than 0.5 inch in diameter at ground level for longleaf pine.

Select red oaks. A group of several red oak species composed of cherrybark, Shumard, and northern red oaks. Other red oak species are included in the "other red oaks" group.

Select white oaks. A group of several white oak species composed of white, swamp chestnut, swamp white, chinkapin, Durand, and bur oaks. Other white oak species are included in the "other white oaks" group.

Site class. A classification of forest land in terms of potential capacity to grow crops of industrial wood based on fully stocked natural stands.

Softwoods. Coniferous trees, usually evergreen, having leaves that are needles or scalelike.

Yellow pines. Loblolly, longleaf, slash, pond, shortleaf, pitch, Virginia, sand, spruce, and Table Mountain pines.

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

Stand age. The average age of dominant and codominant trees in the stand.

Stand origin. A classification of forest stands describing their means of origin.

Planted. Planted or artificially seeded.

Natural. No evidence of artificial regeneration.

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

Sawtimber stands. Stands at least 10 percent stocked with live trees, with half or more of total stocking in sawtimber and poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands. Stands at least 10 percent stocked with live trees, of which half or more of total stocking is in poletimber and sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

Sapling-seedling stands. Stands at least 10 percent stocked with live trees of which more than half of total stocking is saplings and seedlings.

Nonstocked stands. Stands less than 10 percent stocked with live trees.

Stocking. The degree of occupancy of land by trees, measured by basal area or the number of trees in a stand and spacing in the stand, compared with a minimum standard, depending on tree size, required to fully utilize the growth potential of the land.

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

D.b.h. class	Trees per acre for full stocking	Basal area per acre
Seedlings	600	—
2	560	—
4	460	—
6	340	67
8	240	84
10	155	85
12	115	90
14	90	96
16	72	101
18	60	106
20	51	111

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

Timber products. Roundwood products and byproducts.

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

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

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

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

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

Metric Equivalents

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

Graphs

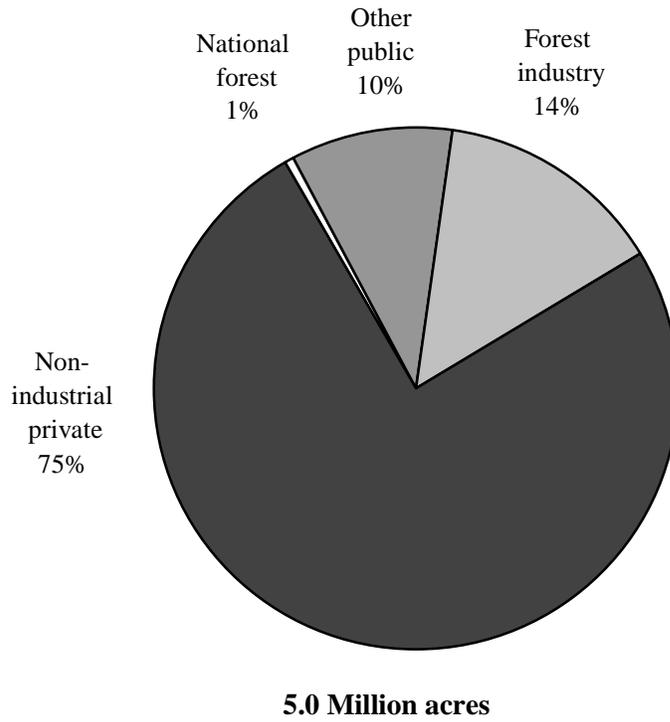


Figure 2—Distribution of timberland by ownership class, Southern Coastal Plain of North Carolina, 1999.

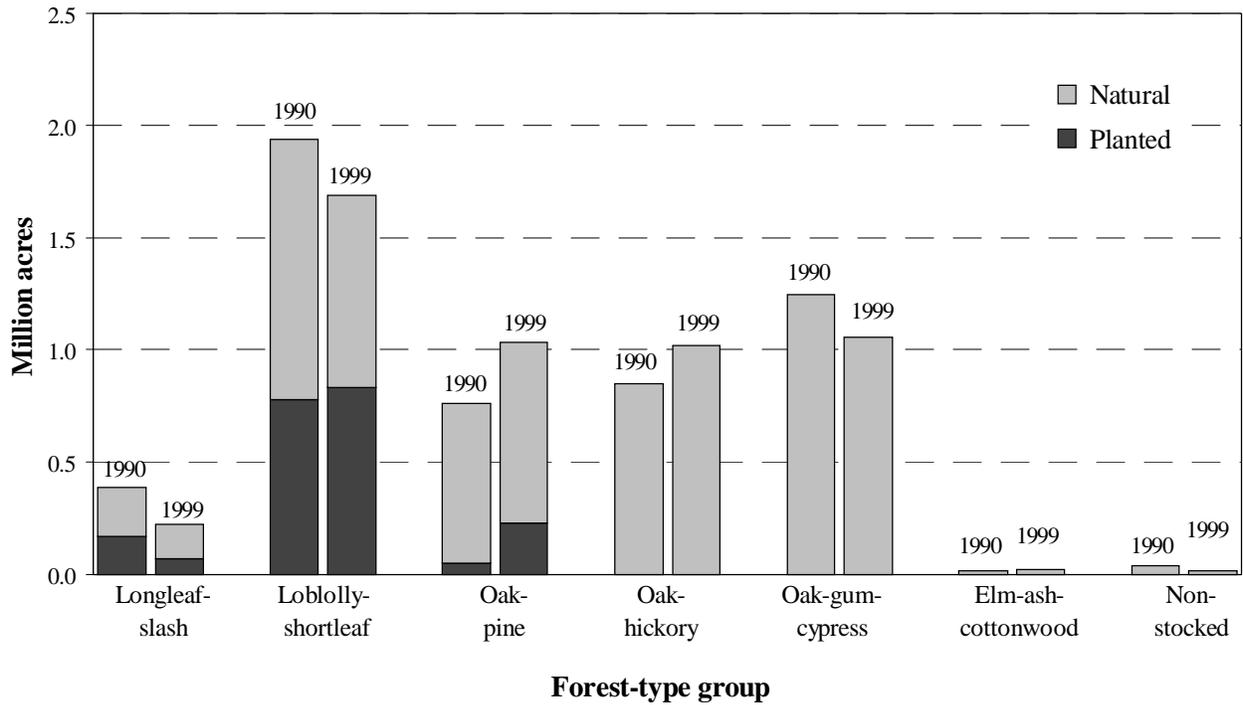


Figure 3—Area of timberland by forest-type group and stand origin, Southern Coastal Plain of North Carolina, 1990 and 1999.

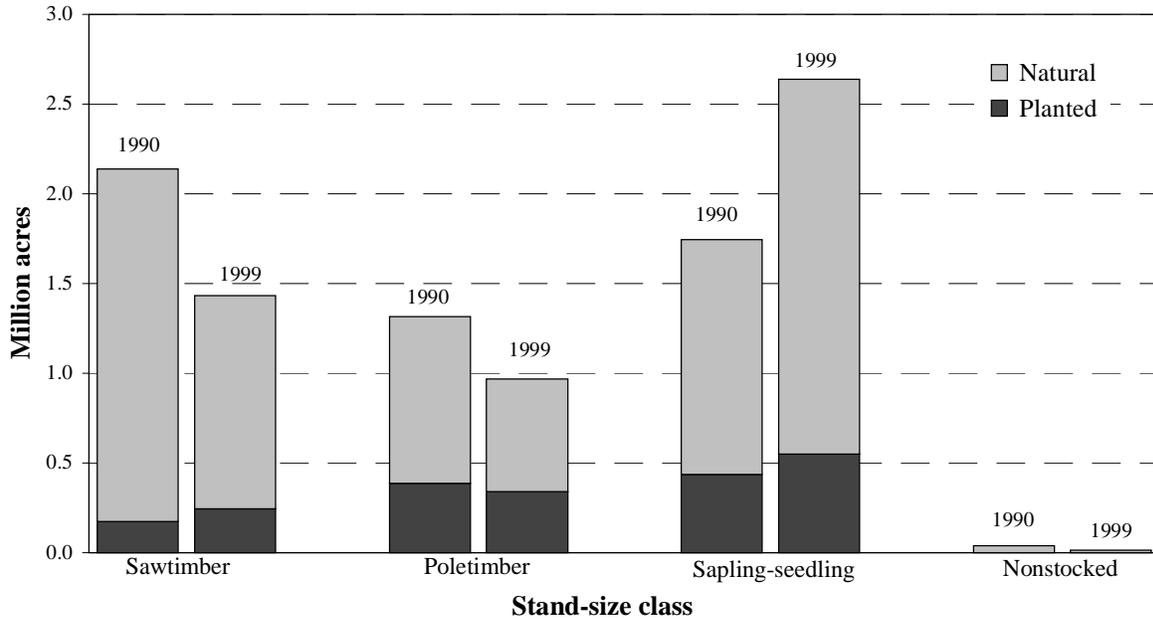


Figure 4—Area of timberland by stand-size class and stand origin, Southern Coastal Plain of North Carolina, 1990 and 1999.

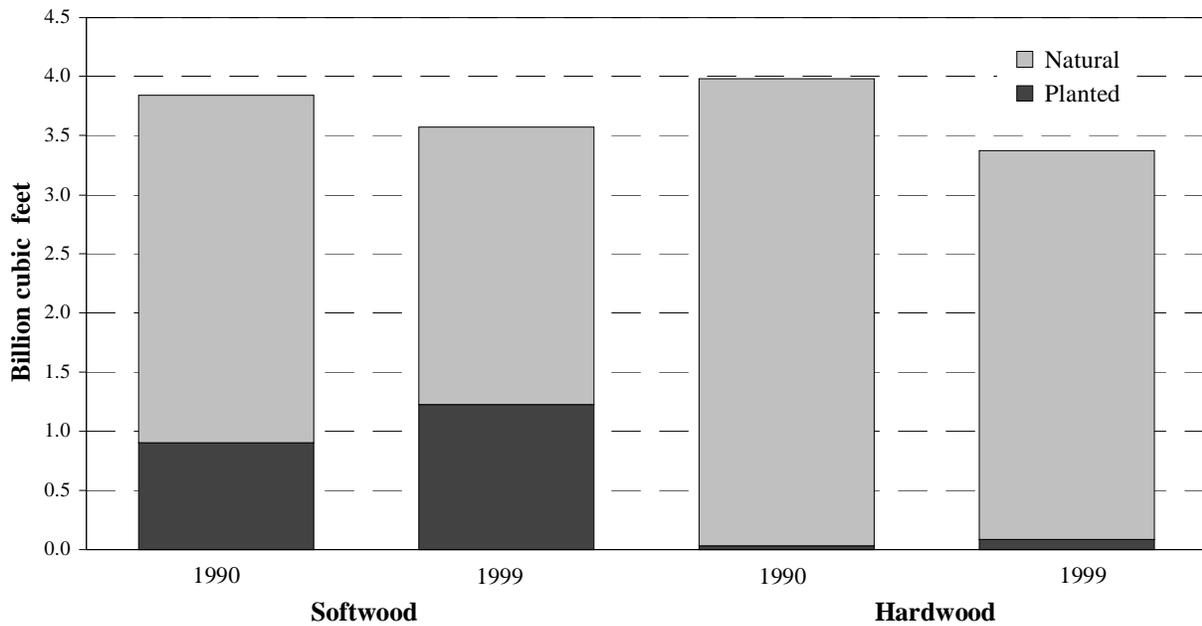


Figure 5—Volume of live trees on timberland by species group and stand origin, Southern Coastal Plain of North Carolina, 1990 and 1999.

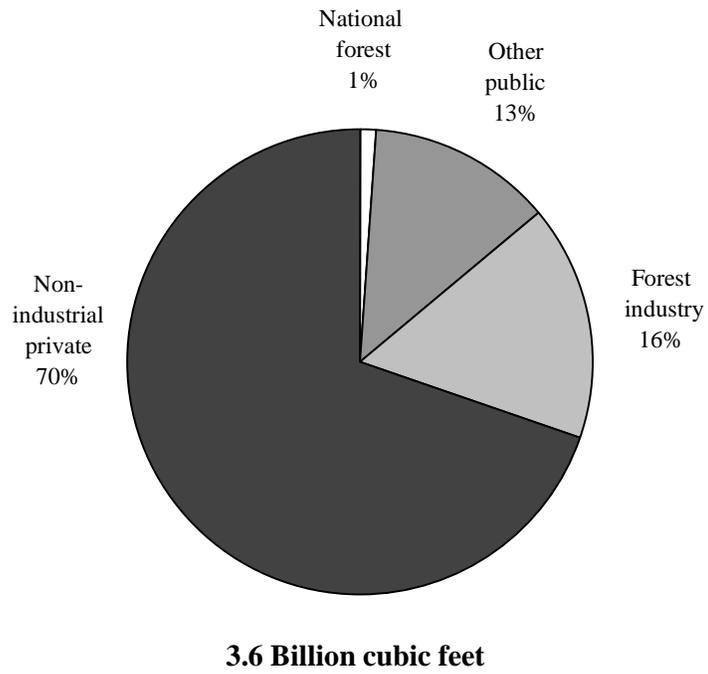


Figure 6—Distribution of softwood live tree volume by ownership class, Southern Coastal Plain of North Carolina, 1999.

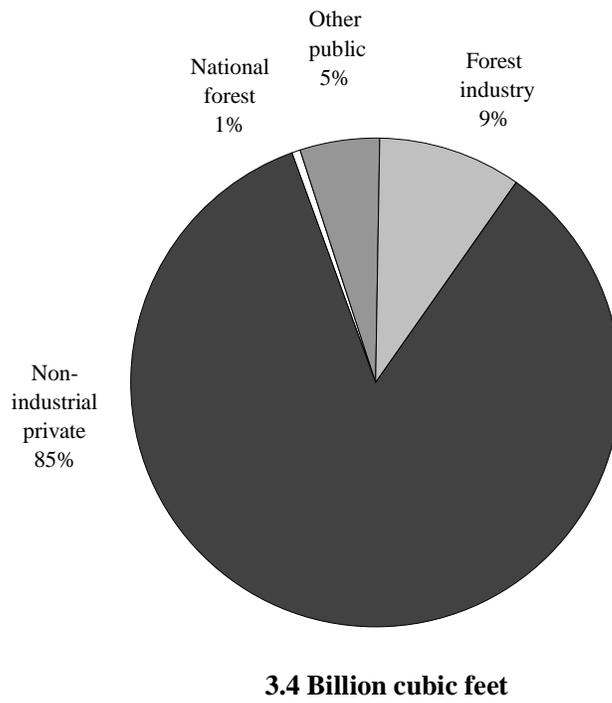


Figure 7—Distribution of hardwood live tree volume by ownership class, Southern Coastal Plain of North Carolina, 1999.

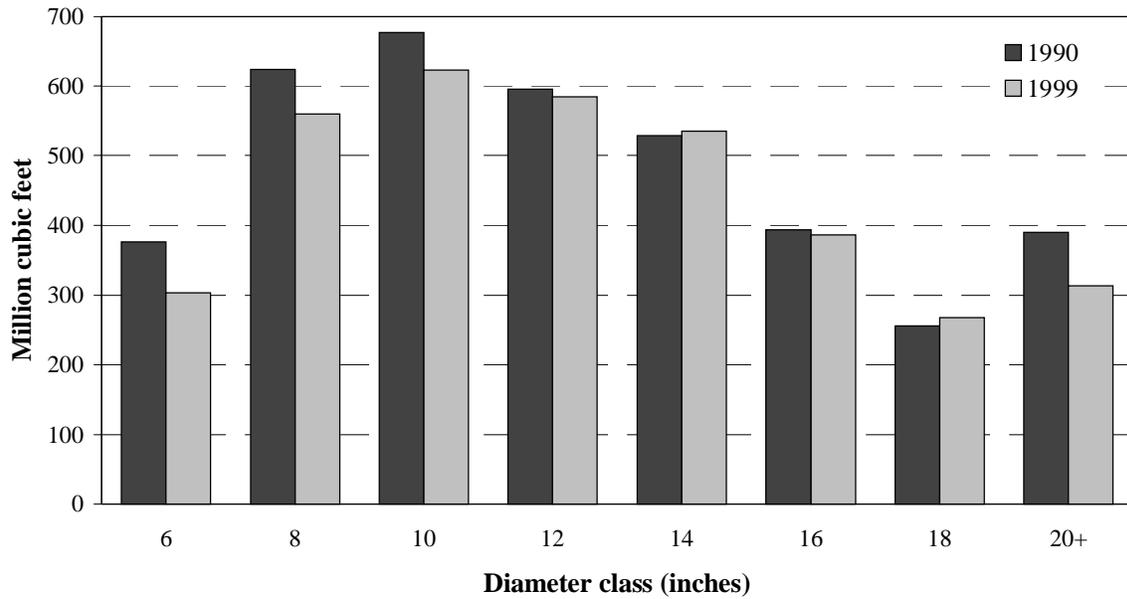


Figure 8—Volume of softwood live trees on timberland by diameter class, Southern Coastal Plain of North Carolina, 1990 and 1999.

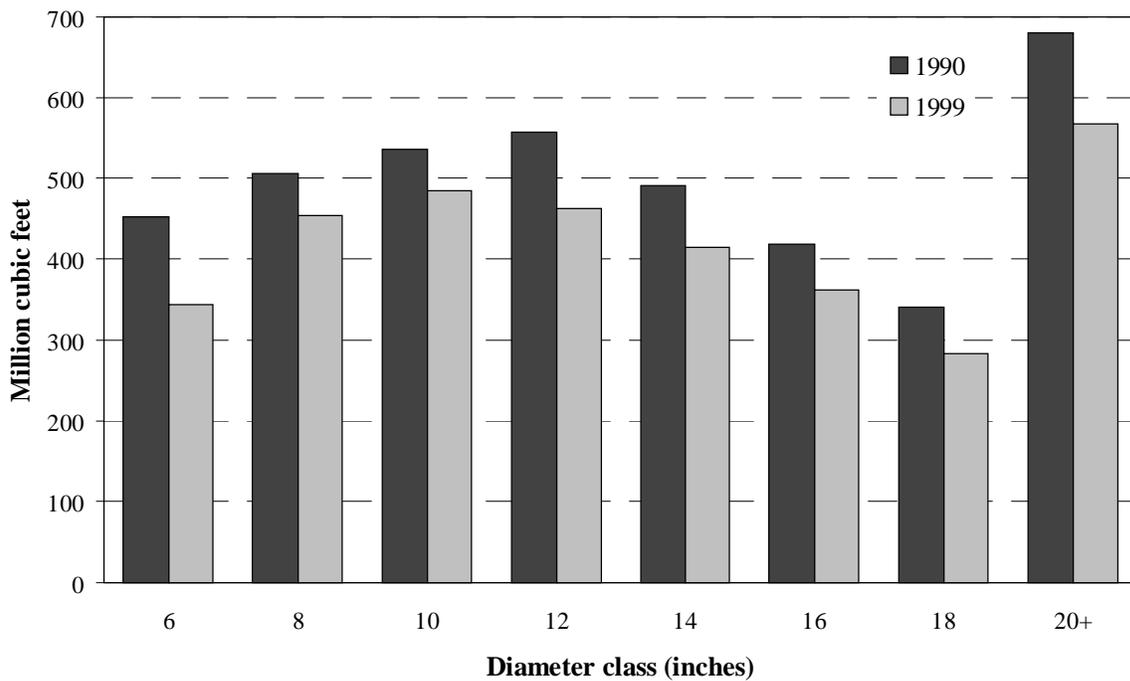


Figure 9—Volume of hardwood live trees on timberland by diameter class, Southern Coastal Plain of North Carolina, 1990 and 1999.

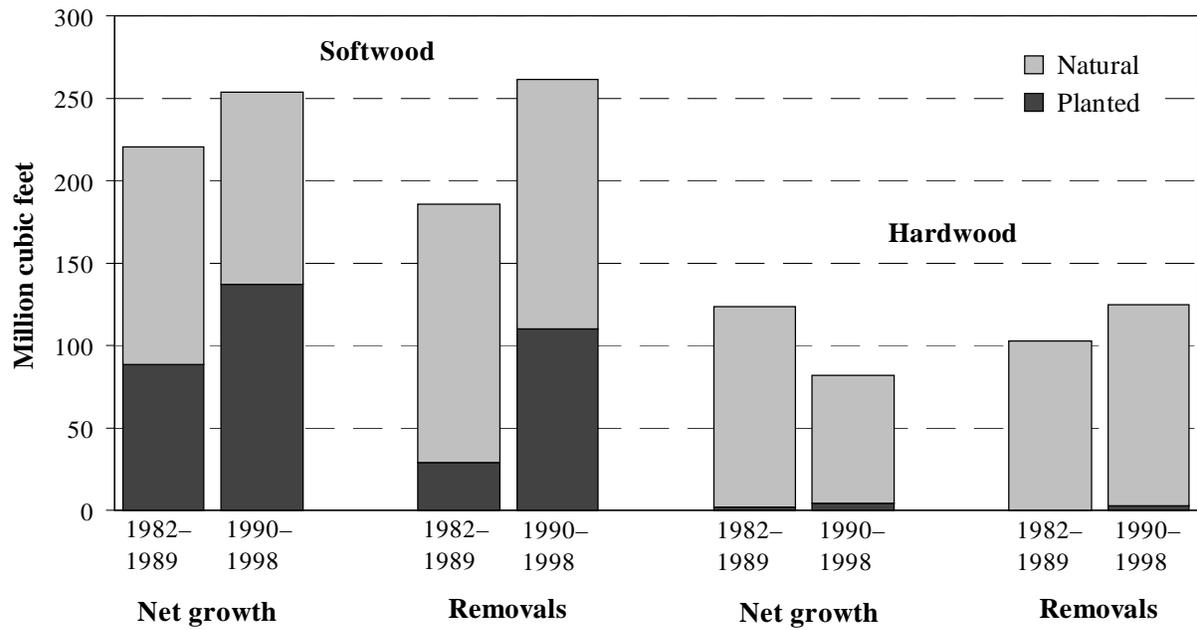


Figure 10—Average net annual growth and removals of live trees on timberland by species group and stand origin, Southern Coastal Plain of North Carolina, 1982–1989 and 1990–1998.

Cross Reference of Eastern Core Tables

Core table	Corresponding table number in this report	Core table	Corresponding table number in this report
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3	4	16	27
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5	6	18	32, 34
6	7	19	35, 37
7	8	20	38
8	10	21	38
9	11	22	40
10	17	23	41
11	18	24	43
12	20	25	23
13	21		

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Table 1—Land area by county and land class, Southern Coastal Plain of North Carolina, 1999

County	Total land area ^a	Forest land			Other land ^b	
		Total forest	Timberland	Productive reserved		
<i>Thousand acres</i>						
Bladen	560.0	393.1	390.2	2.9	—	166.9
Brunswick	547.1	422.0	422.0	—	—	125.1
Columbus	599.6	395.1	393.4	1.8	—	204.4
Cumberland	418.0	200.0	197.7	2.3	—	218.0
Duplin	523.4	279.9	279.9	—	—	243.5
Greene	169.9	65.8	65.8	—	—	104.1
Harnett	380.8	210.0	206.4	3.5	—	170.9
Hoke	250.4	171.0	171.0	—	—	79.4
Johnston	506.9	244.7	244.7	—	—	262.2
Jones	302.9	219.1	209.9	9.2	—	83.8
Lee	164.7	107.6	107.6	—	—	57.0
Lenoir	255.9	101.7	101.7	—	—	154.2
Moore	447.2	342.2	341.3	0.9	—	105.0
New Hanover	127.3	52.2	51.8	0.4	—	75.1
Onslow	490.8	326.1	326.1	0.0	—	164.7
Pender	557.3	420.8	420.7	0.1	—	136.5
Richmond	303.4	233.6	233.6	—	—	69.8
Robeson	607.3	277.2	273.3	3.9	—	330.1
Sampson	605.1	334.2	334.2	—	—	270.9
Scotland	204.3	137.6	137.0	0.6	—	66.7
Wayne	353.7	142.4	141.6	0.9	—	211.2
Total	8,375.9	5,076.4	5,049.8	26.6	—	3,299.5

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

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

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

^b Includes 30.1 thousand acres of water according to Forest Inventory and Analysis standards of area classification, but defined by the Bureau of Census as land.

Table 2—Area of forest land by forest-type group and ownership class, Southern Coastal Plain of North Carolina, 1999

Forest-type group	All classes	Ownership class					
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry	Nonindustrial private
<i>Thousand acres</i>							
Longleaf-slash pine	227.2	—	68.6	47.1	—	8.1	103.4
Loblolly-shortleaf pine	1,691.6	14.9	43.9	78.1	18.8	380.9	1,155.0
Oak-pine	1,042.3	14.8	46.7	60.6	11.8	131.5	776.9
Oak-hickory	1,018.5	5.3	22.0	14.6	17.0	55.4	904.1
Oak-gum-cypress	1,062.1	2.6	51.2	43.3	4.8	115.3	844.8
Elm-ash-cottonwood	20.6	—	—	—	—	7.5	13.0
Nonstocked	14.1	—	—	—	—	14.1	—
Total	5,076.4	37.7	232.4	243.8	52.5	712.8	3,797.2

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

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

Table 3—Area of timberland by county and ownership class, Southern Coastal Plain of North Carolina, 1999

County	All classes	Ownership class					
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry	Nonindustrial private Corporate Individual
<i>Thousand acres</i>							
Bladen	390.2	—	—	29.1	—	36.4	163.7 161.1
Brunswick	422.0	—	10.4	—	—	157.1	90.8 163.7
Columbus	393.4	—	—	—	—	134.7	29.4 229.3
Cumberland	197.7	—	16.5	5.9	4.7	9.4	18.8 142.3
Duplin	279.9	—	—	5.5	7.7	16.6	58.6 191.5
Greene	65.8	—	—	—	—	—	— 65.8
Harnett	206.4	—	5.3	1.3	—	5.3	27.8 166.7
Hoke	171.0	—	87.0	4.4	2.5	—	15.7 61.3
Johnston	244.7	—	—	—	—	4.5	34.4 205.7
Jones	209.9	28.4	—	23.8	—	48.8	15.8 93.0
Lee	107.6	—	—	—	5.1	—	15.2 87.4
Lenoir	101.7	—	—	—	—	8.5	4.3 88.9
Moore	341.3	—	10.0	15.0	5.0	62.6	21.0 227.7
New Hanover	51.8	—	—	5.0	0.5	—	19.2 27.0
Onslow	326.1	—	98.4	42.7	23.3	16.8	43.8 101.0
Pender	420.7	—	—	42.3	—	118.4	39.4 220.7
Richmond	233.6	—	4.7	18.8	3.5	55.5	17.7 133.3
Robeson	273.3	—	—	—	—	20.9	44.7 207.8
Sampson	334.2	—	—	6.1	—	12.1	78.9 237.1
Scotland	137.0	—	—	21.9	—	5.1	35.4 74.6
Wayne	141.6	—	—	4.6	—	—	22.1 114.9
Total	5,049.8	28.4	232.4	226.5	52.5	712.8	796.7 3,000.5

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

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

Table 4—Area of timberland by county and forest-type group, Southern Coastal Plain of North Carolina, 1999

County	All groups	Forest-type group						Nonstocked
		Longleaf-slash	Loblolly-shortleaf	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	
<i>Thousand acres</i>								
Bladen	390.2	26.7	155.9	63.4	29.7	114.5	—	—
Brunswick	422.0	29.6	146.4	120.5	94.4	31.1	—	—
Columbus	393.4	—	137.9	73.3	55.1	118.2	—	8.8
Cumberland	197.7	11.8	76.4	44.1	35.8	29.6	—	—
Duplin	279.9	—	77.6	53.6	71.4	72.2	5.1	—
Greene	65.8	—	20.1	5.0	23.6	17.1	—	—
Harnett	206.4	—	65.7	44.1	67.8	28.9	—	—
Hoke	171.0	41.9	47.9	27.9	27.8	25.5	—	—
Johnston	244.7	—	81.9	53.3	52.0	57.4	—	—
Jones	209.9	—	97.8	20.4	58.7	27.7	—	5.3
Lee	107.6	—	37.5	12.2	53.1	4.9	—	—
Lenoir	101.7	—	45.7	15.6	9.4	26.9	4.2	—
Moore	341.3	44.8	111.3	57.7	104.8	18.9	3.8	—
New Hanover	51.8	5.2	13.4	10.8	3.9	18.5	—	—
Onslow	326.1	12.8	101.6	93.0	41.4	77.2	—	—
Pender	420.7	15.9	136.5	114.9	5.6	147.8	—	—
Richmond	233.6	22.8	60.5	58.7	75.0	12.7	3.8	—
Robeson	273.3	—	72.8	60.6	37.7	101.2	1.0	—
Sampson	334.2	—	101.8	51.2	87.8	91.9	1.5	—
Scotland	137.0	10.9	42.2	32.1	38.0	13.8	—	—
Wayne	141.6	—	56.5	20.2	44.5	19.1	1.2	—
Total	5,049.8	222.4	1,687.2	1,032.6	1,017.6	1,055.2	20.6	14.1

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

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

Table 5—Area of timberland by county and stand-size class, Southern Coastal Plain of North Carolina, 1999

County	All classes	Stand-size class			
		Sawtimber	Poletimber	Sapling-seedling	Nonstocked
<i>Thousand acres</i>					
Bladen	390.2	103.6	94.8	191.8	—
Brunswick	422.0	117.2	93.7	211.1	—
Columbus	393.4	126.8	70.3	187.5	8.8
Cumberland	197.7	90.7	18.5	88.5	—
Duplin	279.9	47.3	41.0	191.7	—
Greene	65.8	11.3	18.8	35.7	—
Harnett	206.4	65.6	38.8	102.0	—
Hoke	171.0	61.1	27.3	82.5	—
Johnston	244.7	87.7	45.0	112.0	—
Jones	209.9	75.1	36.2	93.3	5.3
Lee	107.6	33.7	32.6	41.3	—
Lenoir	101.7	25.1	30.8	45.8	—
Moore	341.3	126.2	72.2	142.9	—
New Hanover	51.8	8.6	11.1	32.1	—
Onslow	326.1	54.4	68.7	203.0	—
Pender	420.7	72.7	97.8	250.2	—
Richmond	233.6	75.8	38.7	119.1	—
Robeson	273.3	108.1	34.5	130.7	—
Sampson	334.2	59.7	72.7	201.8	—
Scotland	137.0	39.3	7.7	90.0	—
Wayne	141.6	42.8	15.6	83.2	—
Total	5,049.8	1,433.0	966.6	2,636.1	14.1

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

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

Table 6—Area of timberland by county and site class, Southern Coastal Plain of North Carolina, 1999

County	All classes	Site class (<i>cubic feet/acre/year</i>)				
		20–49	50–84	85–119	120–164	>165
<i>Thousand acres</i>						
Bladen	390.2	80.0	155.0	111.0	38.9	5.2
Brunswick	422.0	124.3	145.0	124.2	28.6	—
Columbus	393.4	23.9	129.9	145.1	79.3	15.1
Cumberland	197.7	43.4	48.1	77.6	28.6	—
Duplin	279.9	22.1	117.6	120.9	19.3	—
Greene	65.8	7.5	37.0	16.3	5.0	—
Harnett	206.4	17.0	104.1	57.0	20.4	8.0
Hoke	171.0	28.5	101.0	34.1	7.4	—
Johnston	244.7	23.1	74.4	79.2	55.3	12.7
Jones	209.9	24.8	66.0	66.3	51.6	1.2
Lee	107.6	17.0	44.9	28.3	17.4	—
Lenoir	101.7	1.4	31.6	55.2	9.2	4.3
Moore	341.3	48.8	190.2	73.5	27.5	1.3
New Hanover	51.8	16.2	22.7	6.8	1.3	4.8
Onslow	326.1	77.6	141.8	95.3	11.4	—
Pender	420.7	133.8	150.9	115.3	15.5	5.3
Richmond	233.6	66.0	74.9	73.8	18.8	—
Robeson	273.3	13.7	115.6	105.7	27.1	11.2
Sampson	334.2	68.0	192.0	62.0	12.1	—
Scotland	137.0	28.0	60.3	40.0	8.7	—
Wayne	141.6	12.8	63.2	50.8	14.8	—
Total	5,049.8	877.9	2,066.0	1,538.5	498.4	69.0

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

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

Table 7—Area of timberland by county and stocking class of growing-stock trees, Southern Coastal Plain of North Carolina, 1999

County	All classes	Stocking class (percent)				
		<16.7	16.7–59	60–99	100–130	>130
<i>Thousand acres</i>						
Bladen	390.2	14.0	39.8	75.0	146.2	115.2
Brunswick	422.0	6.8	46.6	93.7	166.2	108.8
Columbus	393.4	26.7	25.6	110.7	156.8	73.5
Cumberland	197.7	2.8	22.2	69.3	44.6	58.8
Duplin	279.9	5.7	31.7	75.5	130.6	36.4
Greene	65.8	0.1	12.1	—	34.9	18.7
Harnett	206.4	10.0	20.1	65.9	61.6	48.9
Hoke	171.0	1.8	32.3	64.9	35.1	36.8
Johnston	244.7	4.9	36.9	77.5	66.8	58.6
Jones	209.9	9.2	13.1	31.9	64.5	91.1
Lee	107.6	1.8	8.0	35.9	39.6	22.4
Lenoir	101.7	0.6	9.6	36.0	34.9	20.6
Moore	341.3	9.3	31.1	90.8	137.2	72.9
New Hanover	51.8	4.8	3.3	14.2	13.1	16.5
Onslow	326.1	2.9	48.8	61.4	117.4	95.5
Pender	420.7	11.4	18.5	70.0	158.6	162.2
Richmond	233.6	6.4	30.1	54.9	90.1	52.0
Robeson	273.3	3.1	22.0	71.9	88.3	88.0
Sampson	334.2	12.0	48.6	68.9	137.6	67.1
Scotland	137.0	16.7	8.7	52.7	38.6	20.3
Wayne	141.6	10.6	24.0	45.0	44.1	17.9
Total	5,049.8	161.7	532.9	1,266.2	1,806.7	1,282.2

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

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

Table 8—Area of timberland by forest-type group, stand origin, and ownership class, Southern Coastal Plain of North Carolina, 1999

Forest-type group and stand origin	All classes	Ownership class			
		National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand acres</i>					
Softwood types					
Longleaf-slash pine					
Planted	73.1	—	23.5	5.2	44.4
Natural	149.3	—	87.4	2.9	59.0
Total	222.4	—	111.0	8.1	103.4
Loblolly-shortleaf pine					
Planted	833.3	10.2	63.0	340.7	419.4
Natural	853.9	4.7	73.4	40.2	735.6
Total	1,687.2	14.9	136.3	380.9	1,155.0
Total softwoods	1,909.6	14.9	247.3	389.0	1,258.4
Hardwood types					
Oak-pine					
Planted	230.3	1.2	23.7	84.2	121.2
Natural	802.3	4.4	95.0	47.3	655.7
Total	1,032.6	5.6	118.7	131.5	776.9
Oak-hickory	1,017.6	5.3	52.8	55.4	904.1
Oak-gum-cypress	1,055.2	2.6	92.5	115.3	844.8
Elm-ash-cottonwood	20.6	—	—	7.5	13.0
Total hardwoods	3,126.1	13.5	264.0	309.7	2,538.8
Nonstocked	14.1	—	—	14.1	—
All groups	5,049.8	28.4	511.3	712.8	3,797.2

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

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

Table 9—Area of timberland by forest-type group, detailed forest type, and ownership class, Southern Coastal Plain of North Carolina, 1999

Forest-type group and detailed forest type	All classes	Ownership class			
		National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand acres</i>					
Softwood types					
Longleaf-slash					
Longleaf pine	166.3	—	96.1	—	70.2
Slash pine	56.1	—	14.9	8.1	33.2
Total	222.4	—	111.0	8.1	103.4
Loblolly-shortleaf					
Loblolly pine	1,554.0	10.2	104.6	368.1	1,071.1
Shortleaf pine	8.2	—	5.1	—	3.1
Pond pine	125.0	4.7	26.6	12.8	80.8
Total	1,687.2	14.9	136.3	380.9	1,155.0
Total softwoods	1,909.6	14.9	247.3	389.0	1,258.4
Hardwood types					
Oak-pine					
Longleaf pine-scrub oak	114.7	—	37.1	—	77.6
Shortleaf pine-oak	4.1	—	—	—	4.1
Virginia pine-s. red oak	4.7	—	—	—	4.7
Loblolly pine-hardwood	777.1	3.2	43.8	109.3	620.8
Slash pine-hardwood	13.0	—	—	10.3	2.6
Other oak-pine	119.1	2.4	37.8	11.8	67.1
Total	1,032.6	5.6	118.7	131.5	776.9
Oak-hickory					
Post oak-black oak	3.7	—	—	—	3.7
White oak-red oak-hickory	56.4	—	6.2	5.0	45.1
White oak	3.8	—	—	—	3.8
Yellow-poplar-white oak-n. red oak	11.3	—	—	—	11.3
Southern scrub oak	107.4	—	16.1	4.7	86.5
Sweetgum-yellow-poplar	374.4	0.6	18.3	21.4	334.0
Mixed hardwood	460.8	4.7	12.1	24.2	419.7
Total	1,017.6	5.3	52.8	55.4	904.1
Oak-gum-cypress					
Swamp chestnut oak-cherrybark oak	12.8	—	—	—	12.8
Sweetgum-water oak-willow oak	283.0	—	8.4	11.1	263.4
Sugarberry-elm-green ash	59.9	2.4	—	13.3	44.2
Atlantic white cedar	10.1	—	6.5	—	3.6
Cypress-water tupelo	65.7	—	5.0	5.2	55.5
Sweetbay-blackgum-red maple	623.7	0.3	72.6	85.7	465.1
Total	1,055.2	2.6	92.5	115.3	844.8
Elm-ash-cottonwood					
River birch-sycamore	8.0	—	—	2.6	5.4
Willow	8.8	—	—	1.2	7.7
Sycamore-pecan-elm	3.8	—	—	3.8	—
Total	20.6	—	—	7.5	13.0
Total hardwoods	3,126.1	13.5	264.0	309.7	2,538.8
Nonstocked	14.1	—	—	14.1	—
All groups	5,049.8	28.4	511.3	712.8	3,797.2

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

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

Table 10—Area of timberland by ownership and stocking class of growing-stock trees, Southern Coastal Plain of North Carolina, 1999

Ownership class	All classes	Stocking class (percent)				
		<16.7	16.7–59	60–99	100–130	>130
<i>Thousand acres</i>						
National forest	28.4	—	1.2	0.3	11.2	15.8
Other public	511.3	8.3	58.1	162.2	159.4	123.3
Forest industry	712.8	18.6	36.3	164.9	289.7	203.4
Nonindustrial private	3,797.2	134.8	437.4	938.9	1,346.4	939.8
All ownerships	5,049.8	161.7	532.9	1,266.2	1,806.7	1,282.2

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

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

Table 11—Area of timberland by forest-type group, stand origin, and stand-size class, Southern Coastal Plain of North Carolina, 1999

Forest-type group and stand origin	All classes	Stand-size class			
		Sawtimber	Poletimber	Sapling-seedling	Nonstocked
<i>Thousand acres</i>					
Softwood types					
Longleaf-slash pine					
Planted	73.1	13.9	33.4	25.8	—
Natural	149.3	83.3	12.7	53.3	—
Total	222.4	97.2	46.2	79.1	—
Loblolly-shortleaf pine					
Planted	833.3	219.8	303.0	310.4	—
Natural	853.9	341.0	162.3	350.6	—
Total	1,687.2	560.9	465.3	661.0	—
Total softwoods	1,909.6	658.1	511.5	740.0	—
Hardwood types					
Oak-pine					
Planted	230.3	12.2	4.4	213.7	—
Natural	802.3	162.0	119.2	521.1	—
Total	1,032.6	174.2	123.6	734.8	—
Oak-hickory	1,017.6	253.1	152.4	612.1	—
Oak-gum-cypress	1,055.2	341.2	174.9	539.1	—
Elm-ash-cottonwood	20.6	6.4	4.2	10.0	—
Total hardwoods	3,126.1	774.9	455.1	1,896.1	—
Nonstocked	14.1	—	—	—	14.1
All groups	5,049.8	1,433.0	966.6	2,636.1	14.1

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

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

Table 12—Area of timberland by stand-age class and forest management type, all ownerships, Southern Coastal Plain of North Carolina, 1999

Stand-age class	All types	Forest management type					Nonstocked
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood	
<i>Years</i>		<i>Thousand acres</i>					
0–10	1,146.0	184.1	142.7	267.6	303.5	234.0	14.1
11–20	1,128.7	396.3	183.3	249.3	148.8	151.1	—
21–30	626.8	197.3	121.5	117.2	101.6	89.2	—
31–40	595.5	115.4	157.0	106.9	105.4	110.8	—
41–50	463.4	8.1	128.8	119.2	98.4	108.9	—
51–60	418.2	—	91.8	89.0	91.5	145.9	—
61–70	318.7	5.2	94.0	60.4	79.8	79.3	—
71–80	142.6	—	49.4	15.5	33.3	44.4	—
81+	209.9	—	34.8	7.5	55.3	112.2	—
All classes	5,049.8	906.4	1,003.2	1,032.6	1,017.6	1,075.8	14.1

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

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

Table 13—Area of timberland by stand-age class and forest management type, public ownerships, Southern Coastal Plain of North Carolina, 1999

Stand-age class	All types	Forest management type					Nonstocked
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood	
<i>Years</i>		<i>Thousand acres</i>					
0–10	69.9	11.5	8.3	14.4	15.1	20.6	—
11–20	98.9	27.6	9.1	27.9	9.8	24.5	—
21–30	83.6	30.4	21.8	13.5	11.6	6.2	—
31–40	60.2	22.3	11.1	8.8	13.2	4.8	—
41–50	37.3	4.8	3.7	21.4	—	7.4	—
51–60	47.6	—	38.0	6.0	—	3.6	—
61–70	64.8	—	37.1	25.3	2.4	—	—
71–80	35.1	—	21.0	0.7	—	13.4	—
81+	42.4	—	15.4	6.4	6.0	14.6	—
All classes	539.8	96.7	165.6	124.3	58.1	95.1	—

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

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

Table 14—Area of timberland by stand-age class and forest management type, forest industry ownerships, Southern Coastal Plain of North Carolina, 1999

Stand-age class	All types	Forest management type					Nonstocked
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood	
<i>Years</i>							
<i>Thousand acres</i>							
0–10	195.7	63.6	2.9	57.5	30.9	26.8	14.1
11–20	247.6	171.0	19.6	39.6	6.3	11.0	—
21–30	110.2	80.6	4.8	12.3	2.1	10.3	—
31–40	50.3	30.7	7.1	7.8	—	4.7	—
41–50	30.8	—	5.7	5.4	4.6	15.1	—
51–60	43.8	—	1.7	8.8	6.4	26.8	—
61–70	11.6	—	1.3	—	5.0	5.3	—
71–80	—	—	—	—	—	—	—
81+	22.7	—	—	—	—	22.7	—
All classes	712.8	345.9	43.1	131.5	55.4	122.9	14.1

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

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

Table 15—Area of timberland by stand-age class and forest management type, nonindustrial private ownerships, Southern Coastal Plain of North Carolina, 1999

Stand-age class	All types	Forest management type					Nonstocked
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood	
<i>Years</i>							
<i>Thousand acres</i>							
0–10	880.4	109.0	131.5	195.7	257.5	186.6	—
11–20	782.2	197.7	154.6	181.8	132.6	115.6	—
21–30	433.0	86.3	94.9	91.3	87.9	72.7	—
31–40	485.0	62.4	138.8	90.3	92.2	101.2	—
41–50	395.3	3.3	119.3	92.5	93.9	86.4	—
51–60	326.7	—	52.1	74.2	85.0	115.4	—
61–70	242.3	5.2	55.6	35.1	72.5	74.0	—
71–80	107.5	—	28.4	14.8	33.3	31.0	—
81+	144.8	—	19.4	1.2	49.4	74.9	—
All classes	3,797.2	463.8	794.6	776.9	904.1	857.8	—

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

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

Table 16—Area of nonindustrial private timberland by ownership, forested tract-size class, and forest management type, Southern Coastal Plain of North Carolina, 1999

Ownership and forested tract-size class	All types	Forest management type					Nonstocked
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood	
<i>Acres</i>		<i>Thousand acres</i>					
Individual							
≤ 10	243.7	27.0	84.7	49.3	51.6	31.2	—
11–50	812.4	65.1	193.3	182.6	240.5	130.9	—
51–100	780.6	71.8	159.5	164.6	178.3	206.5	—
101–200	602.4	64.0	150.1	94.1	159.8	134.3	—
201–500	345.6	43.6	80.2	65.0	79.7	77.1	—
≥ 501	215.8	25.9	32.5	49.4	53.7	54.2	—
Total	3,000.5	297.4	700.4	605.1	763.5	634.1	—
Corporate							
≤ 10	6.5	3.6	—	0.8	0.9	1.2	—
11–50	50.8	12.3	4.8	15.4	10.5	7.7	—
51–100	98.4	30.2	11.9	25.5	11.1	19.7	—
101–200	168.6	41.7	19.2	40.6	15.9	51.3	—
201–500	129.4	15.6	15.4	34.0	25.2	39.2	—
≥ 501	343.0	63.1	42.9	55.5	76.9	104.6	—
Total	796.7	166.4	94.2	171.8	140.6	223.7	—
All nonindustrial private							
≤ 10	250.2	30.6	84.7	50.1	52.5	32.4	—
11–50	863.2	77.3	198.2	198.0	251.0	138.6	—
51–100	879.0	102.0	171.5	190.1	189.3	226.1	—
101–200	771.0	105.7	169.3	134.7	175.7	185.6	—
201–500	475.0	59.1	95.6	99.0	105.0	116.2	—
≥ 501	558.8	89.0	75.4	104.9	130.7	158.8	—
Total	3,797.2	463.8	794.6	776.9	904.1	857.8	—

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

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

Table 17—Number of live trees on timberland by species and diameter class, Southern Coastal Plain of North Carolina, 1999

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>													
Softwood													
Longleaf pine	51,822	13,532	10,842	8,171	6,371	4,083	4,055	2,433	1,495	689	61	90	—
Slash pine	28,425	15,736	4,346	2,942	2,661	1,883	582	156	89	30	—	—	—
Shortleaf pine	5,743	1,500	1,240	924	896	517	273	181	122	90	—	—	—
Loblolly pine	748,851	318,307	151,782	112,782	77,280	41,370	21,669	12,849	6,849	3,510	1,342	1,029	82
Pond pine	65,310	25,701	16,756	8,186	6,414	3,955	2,207	1,387	304	231	25	144	—
Virginia pine	2,369	1,488	375	178	112	125	35	28	28	—	—	—	—
Baldcypress	7,668	3,563	363	455	805	396	479	517	397	252	152	259	30
Pondcypress	4,973	626	1,428	318	493	524	442	514	241	86	119	152	30
Atlantic white-cedar	5,878	3,813	1,271	372	175	126	—	92	29	—	—	—	—
Redcedars	3,310	1,500	1,104	294	178	88	116	—	—	30	—	—	—
Total softwoods	924,349	385,766	189,507	134,622	95,385	53,067	29,858	18,157	9,554	4,918	1,699	1,674	142
Hardwood													
Select white oaks	50,341	25,812	10,536	3,951	3,553	2,132	1,619	1,090	856	297	122	313	60
Select red oaks	9,065	5,353	1,548	729	622	122	187	155	32	162	95	60	—
Other white oaks	34,209	21,167	6,012	2,742	1,961	1,215	468	231	121	178	58	25	31
Other red oaks	335,421	234,549	52,945	19,362	11,421	7,293	4,668	2,237	1,439	524	288	610	85
Hickory	38,870	24,491	7,960	2,466	1,687	930	529	203	333	91	62	88	30
Hard maple	966	749	—	62	—	32	63	30	30	—	—	—	—
Soft maple	566,038	433,995	78,930	25,586	12,481	6,744	3,231	2,220	1,219	851	361	420	—
Beech	5,486	1,470	2,830	357	205	203	126	59	89	59	30	58	—
Sweetgum	511,601	381,748	72,654	23,707	13,491	7,573	5,048	3,499	1,881	946	497	557	—
Tupelo and blackgum	240,283	146,770	40,685	15,953	12,826	8,906	6,243	3,688	2,589	1,448	767	347	61
Ash	52,461	35,160	10,737	2,564	1,628	813	727	329	234	118	32	119	—
Cottonwood	3,321	3,024	177	30	—	30	30	—	—	30	—	—	—
Basswood	464	375	—	60	29	—	—	—	—	—	—	—	—
Yellow-poplar	77,537	47,491	10,590	5,697	4,379	2,769	1,491	1,530	885	1,049	846	749	61
Bay and magnolia	222,103	183,359	29,901	5,262	2,473	697	225	75	54	28	—	29	—
Black cherry	28,582	22,998	2,349	2,045	732	251	60	119	28	—	—	—	—
Black walnut	570	414	—	32	—	—	32	32	32	28	—	—	—
Sycamore	1,196	633	—	91	151	36	64	32	—	35	—	124	30
Black locust	116	—	—	58	58	—	—	—	—	—	—	—	—
Elm	9,162	6,653	—	818	600	437	154	117	207	62	56	58	—
Other Eastern hardwoods	610,193	490,880	77,557	24,924	9,455	4,365	1,275	782	467	279	119	29	61
Total hardwoods	2,797,985	2,067,091	405,411	136,496	77,752	44,548	26,240	16,428	10,496	6,185	3,333	3,586	419
All species	3,722,334	2,452,857	594,918	271,118	173,137	97,615	56,098	34,585	20,050	11,103	5,032	5,260	561

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

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

Table 18—Number of growing-stock trees on timberland by species and diameter class, Southern Coastal Plain of North Carolina, 1999

Species	Diameter class (inches at breast height)												
	All classes	1.0– 2.9	3.0– 4.9	5.0– 6.9	7.0– 8.9	9.0– 10.9	11.0– 12.9	13.0– 14.9	15.0– 16.9	17.0– 18.9	19.0– 20.9	21.0– 28.9	29.0 and larger
<i>Thousand trees</i>													
Softwood													
Longleaf pine	49,257	12,408	9,755	7,992	6,311	4,027	4,027	2,433	1,464	689	61	90	—
Slash pine	27,491	15,736	3,618	2,825	2,602	1,853	582	156	89	30	—	—	—
Shortleaf pine	5,158	1,125	1,240	774	836	517	273	181	122	90	—	—	—
Loblolly pine	702,110	288,893	141,514	109,338	75,788	40,180	21,031	12,729	6,731	3,481	1,342	1,001	82
Pond pine	57,550	19,180	16,756	7,430	6,146	3,740	2,207	1,387	304	231	25	144	—
Virginia pine	1,936	1,113	375	148	84	125	35	28	28	—	—	—	—
Baldcypress	6,779	3,250	—	455	713	335	479	517	397	252	152	229	—
Pondcypress	4,943	626	1,428	318	493	524	442	514	241	86	89	152	30
Atlantic white-cedar	4,974	3,091	1,271	249	116	126	—	92	29	—	—	—	—
Redcedars	1,622	375	729	252	148	58	30	—	—	30	—	—	—
Total softwoods	861,820	345,797	176,686	129,781	93,237	51,485	29,106	18,037	9,405	4,889	1,669	1,616	112
Hardwood													
Select white oaks	34,240	12,882	8,672	3,472	3,276	1,923	1,562	1,029	790	297	94	213	30
Select red oaks	5,315	1,911	1,548	574	592	94	122	155	32	132	95	60	—
Other white oaks	20,376	10,620	4,467	1,997	1,636	851	287	166	121	148	58	25	—
Other red oaks	198,188	124,186	34,160	15,569	9,829	6,301	3,996	1,841	1,140	437	232	443	54
Hickory	19,577	9,303	5,334	1,828	1,285	778	359	203	247	60	62	88	30
Hard maple	122	—	—	32	—	32	28	30	—	—	—	—	—
Soft maple	250,033	170,380	43,417	16,954	8,583	5,222	2,116	1,575	817	582	174	213	—
Beech	2,656	414	1,285	269	119	174	126	59	89	59	30	32	—
Sweetgum	381,994	277,362	54,629	20,292	11,824	6,867	4,461	3,030	1,724	851	433	521	—
Tupelo and blackgum	135,414	63,444	28,394	12,481	10,650	7,417	5,479	3,233	2,288	1,085	710	233	—
Ash	19,196	7,420	6,891	1,497	1,352	689	576	329	205	118	—	119	—
Cottonwood	2,766	2,646	—	30	—	30	30	—	—	30	—	—	—
Basswood	58	—	—	29	29	—	—	—	—	—	—	—	—
Yellow-poplar	67,373	40,215	9,667	4,868	4,000	2,429	1,334	1,442	828	992	816	749	33
Bay and magnolia	103,216	79,257	17,922	3,399	1,853	516	136	50	54	—	—	29	—
Black cherry	10,256	8,079	816	751	404	86	60	32	28	—	—	—	—
Black walnut	474	414	—	—	—	—	—	32	—	28	—	—	—
Sycamore	811	280	—	91	151	36	64	32	—	35	—	92	30
Black locust	87	—	—	29	58	—	—	—	—	—	—	—	—
Elm	3,819	1,594	—	753	534	408	94	85	207	62	56	26	—
Other Eastern hardwoods	172,992	125,579	23,536	13,330	5,873	2,645	875	441	286	247	119	29	32
Total hardwoods	1,428,963	935,986	240,738	98,245	62,048	36,498	21,705	13,764	8,856	5,163	2,879	2,872	209
All species	2,290,783	1,281,783	417,424	228,026	155,285	87,983	50,811	31,801	18,261	10,052	4,548	4,488	321

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

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

Table 19—Volume of live trees on timberland by species and diameter class, Southern Coastal Plain of North Carolina, 1999

Species	All classes	Diameter class (inches at breast height)									
		5.0–6.9	7.0–8.9	9.0–10.9	11.0–12.9	13.0–14.9	15.0–16.9	17.0–18.9	19.0–20.9	21.0–28.9	29.0 and larger
<i>Million cubic feet</i>											
Softwood											
Longleaf pine	360.4	20.8	41.5	52.0	74.6	67.9	56.0	34.3	4.3	9.0	—
Slash pine	62.5	6.4	15.9	20.8	10.2	4.0	3.6	1.7	—	—	—
Shortleaf pine	37.5	2.6	5.5	6.7	6.0	5.6	5.3	5.8	—	—	—
Loblolly pine	2,716.1	251.3	449.5	485.9	434.5	390.6	287.0	196.0	97.2	107.5	16.6
Pond pine	207.6	16.9	35.3	43.4	39.1	36.5	10.5	11.0	2.2	12.7	—
Virginia pine	5.6	0.6	0.8	1.3	0.6	0.9	1.5	—	—	—	—
Baldcypress	101.9	1.4	5.8	4.3	10.2	14.7	13.7	13.6	9.7	23.3	5.1
Pondcypress	70.8	1.0	3.8	6.3	8.2	13.0	8.6	3.8	6.0	14.0	6.2
Atlantic white-cedar	6.6	1.2	1.2	1.2	—	2.5	0.6	—	—	—	—
Redcedars	4.8	0.7	0.8	0.8	1.5	—	—	1.0	—	—	—
Total softwoods	3,573.8	302.9	560.1	622.5	584.9	535.6	386.8	267.3	119.4	166.5	27.8
Hardwood											
Select white oaks	212.2	11.3	22.4	24.5	30.4	30.0	32.1	15.3	7.0	24.8	14.5
Select red oaks	34.8	2.3	4.2	1.4	2.8	4.1	1.1	8.5	6.0	4.5	—
Other white oaks	59.5	6.5	10.8	11.6	6.6	4.3	3.9	7.2	2.4	1.9	4.4
Other red oaks	473.3	51.9	68.5	76.1	81.0	51.4	46.1	24.4	15.4	44.2	14.2
Hickory	70.9	5.9	8.9	9.8	9.4	5.1	11.3	4.2	3.8	8.1	4.4
Hard maple	3.3	0.1	—	0.2	1.3	0.5	1.1	—	—	—	—
Soft maple	428.6	72.2	70.5	68.1	49.8	48.7	35.2	36.3	16.3	31.6	—
Beech	20.0	0.8	1.2	2.2	1.8	1.6	3.1	2.3	1.5	5.5	—
Sweetgum	628.2	53.7	82.4	93.1	96.9	99.6	72.6	49.0	31.2	49.8	—
Tupelo and blackgum	643.2	42.8	80.7	103.2	113.8	92.2	86.8	55.3	42.0	21.9	4.5
Ash	77.0	7.5	10.4	9.4	14.1	10.5	8.1	5.7	1.0	10.3	—
Cottonwood	2.6	0.1	—	0.4	0.5	—	—	1.7	—	—	—
Basswood	0.3	0.1	0.2	—	—	—	—	—	—	—	—
Yellow-poplar	385.0	14.9	28.6	32.2	28.1	42.9	36.0	55.3	58.8	74.3	14.0
Bay and magnolia	40.9	13.2	12.7	7.1	3.2	1.4	1.7	0.3	—	1.4	—
Black cherry	13.4	3.9	3.3	2.1	0.8	2.4	0.8	—	—	—	—
Black walnut	3.0	0.0	—	—	0.5	0.8	0.8	1.0	—	—	—
Sycamore	26.0	0.3	0.9	0.4	1.4	0.8	—	2.0	—	14.4	5.7
Black locust	0.3	0.1	0.2	—	—	—	—	—	—	—	—
Elm	36.1	1.9	3.6	5.0	2.1	3.3	6.9	2.8	3.7	6.8	—
Other Eastern hardwoods	212.2	54.6	44.5	38.4	17.3	14.2	14.5	11.6	7.9	3.0	6.3
Total hardwoods	3,371.0	344.2	453.8	485.2	461.8	413.7	362.1	282.7	197.0	302.4	68.0
All species	6,944.8	647.1	1,013.8	1,107.7	1,046.7	949.3	748.9	550.0	316.5	469.0	95.8

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

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

Table 20—Volume of growing-stock trees on timberland by species and diameter class, Southern Coastal Plain of North Carolina, 1999

Species	Diameter class (inches at breast height)										
	All classes	5.0–6.9	7.0–8.9	9.0–10.9	11.0–12.9	13.0–14.9	15.0–16.9	17.0–18.9	19.0–20.9	21.0–28.9	29.0 and larger
<i>Million cubic feet</i>											
Softwood											
Longleaf pine	358.2	20.5	41.1	51.4	74.3	67.9	55.3	34.3	4.3	9.0	—
Slash pine	61.7	6.2	15.6	20.5	10.2	4.0	3.6	1.7	—	—	—
Shortleaf pine	36.6	2.0	5.2	6.7	6.0	5.6	5.3	5.8	—	—	—
Loblolly pine	2,670.2	244.6	441.3	475.4	424.0	387.9	283.3	194.6	97.2	105.4	16.6
Pond pine	203.4	15.8	34.1	41.4	39.1	36.5	10.5	11.0	2.2	12.7	—
Virginia pine	5.3	0.4	0.7	1.3	0.6	0.9	1.5	—	—	—	—
Baldcypress	95.4	1.4	5.5	3.7	10.2	14.7	13.7	13.6	9.7	22.7	—
Pondcypress	69.7	1.0	3.8	6.3	8.2	13.0	8.6	3.8	4.9	14.0	6.2
Atlantic white-cedar	6.0	0.9	0.8	1.2	—	2.5	0.6	—	—	—	—
Redcedars	3.3	0.7	0.6	0.6	0.5	—	—	1.0	—	—	—
Total softwoods	3,509.7	293.5	548.7	608.4	573.1	532.9	382.3	265.8	118.3	163.8	22.8
Hardwood											
Select white oaks	189.1	10.2	21.0	22.3	29.5	28.8	30.2	15.3	6.2	20.2	5.3
Select red oaks	32.1	1.8	4.0	1.1	2.3	4.1	1.1	7.1	6.0	4.5	—
Other white oaks	45.9	5.2	9.4	9.0	4.9	3.4	3.9	5.9	2.4	1.9	—
Other red oaks	405.4	43.3	60.9	67.4	70.8	45.0	39.1	21.2	13.1	34.0	10.6
Hickory	61.0	4.6	7.1	8.5	7.0	5.1	9.7	2.7	3.8	8.1	4.4
Hard maple	1.3	0.1	—	0.2	0.4	0.5	—	—	—	—	—
Soft maple	306.1	50.9	51.0	56.2	34.7	36.1	24.2	26.3	9.4	17.3	—
Beech	16.7	0.7	0.7	1.9	1.8	1.6	3.1	2.3	1.5	3.1	—
Sweetgum	577.0	48.2	74.5	86.5	88.3	88.9	68.1	44.2	29.2	49.1	—
Tupelo and blackgum	569.5	35.1	69.3	90.0	103.9	83.5	81.8	48.3	41.1	16.7	—
Ash	69.0	4.9	9.1	8.8	11.7	10.5	8.1	5.7	—	10.3	—
Cottonwood	2.6	0.1	—	0.4	0.5	—	—	1.7	—	—	—
Basswood	0.3	0.1	0.2	—	—	—	—	—	—	—	—
Yellow-poplar	361.1	13.1	26.5	29.1	26.3	41.5	33.5	52.9	57.5	74.3	6.4
Bay and magnolia	30.9	9.2	9.9	5.5	2.2	1.1	1.7	—	—	1.4	—
Black cherry	6.7	1.7	2.1	0.7	0.8	0.6	0.8	—	—	—	—
Black walnut	1.7	—	—	—	—	0.8	—	1.0	—	—	—
Sycamore	24.1	0.3	0.9	0.4	1.4	0.8	—	2.0	—	12.5	5.7
Black locust	0.2	0.1	0.2	—	—	—	—	—	—	—	—
Elm	29.8	1.8	3.3	4.7	1.6	2.2	6.9	2.8	3.7	2.6	—
Other Eastern hardwoods	147.5	33.1	29.9	25.7	12.7	10.4	9.5	10.6	7.9	3.0	4.6
Total hardwoods	2,878.0	264.4	380.0	418.4	401.1	365.0	321.8	249.8	181.8	258.8	37.0
All species	6,387.8	558.0	928.7	1,026.8	974.2	897.9	704.0	515.6	300.1	422.6	59.8

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

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

Table 21—Volume in the saw-log portion of sawtimber trees on timberland by species and diameter class, Southern Coastal Plain of North Carolina, 1999

Species	All classes	Diameter class (inches at breast height)							
		9.0–10.9	11.0–12.9	13.0–14.9	15.0–16.9	17.0–18.9	19.0–20.9	21.0–28.9	29.0 and larger
<i>Million cubic feet</i>									
Softwood									
Longleaf pine	275.9	42.9	67.9	64.7	53.6	33.7	4.2	8.9	—
Slash pine	34.4	16.3	9.2	3.8	3.5	1.6	—	—	—
Shortleaf pine	27.2	5.5	5.5	5.3	5.1	5.7	—	—	—
Loblolly pine	1,801.5	369.7	381.2	367.3	274.9	191.4	96.3	104.3	16.4
Pond pine	140.0	33.6	35.7	34.8	10.2	10.9	2.2	12.6	—
Virginia pine	3.8	1.0	0.5	0.8	1.4	—	—	—	—
Baldcypress	81.1	2.6	8.7	13.3	12.7	12.8	9.2	21.8	—
Pondcypress	60.0	4.8	7.2	12.0	8.0	3.6	4.7	13.5	6.1
Atlantic white-cedar	3.9	0.9	—	2.4	0.6	—	—	—	—
Redcedars	1.8	0.4	0.5	—	—	0.9	—	—	—
Total softwoods	2,429.6	477.9	516.4	504.3	370.1	260.7	116.6	161.2	22.4
Hardwood									
Select white oaks	115.4	—	21.0	23.6	26.5	14.0	5.7	19.5	5.2
Select red oaks	22.0	—	1.7	3.3	1.0	6.4	5.5	4.1	—
Other white oaks	19.1	—	3.6	2.8	3.4	5.3	2.3	1.7	—
Other red oaks	195.0	—	51.3	36.9	34.0	19.1	12.0	31.7	10.1
Hickory	35.6	—	5.1	4.1	8.6	2.5	3.5	7.6	4.2
Hard maple	0.7	—	0.3	0.4	—	—	—	—	—
Soft maple	120.3	—	23.7	28.6	20.5	23.1	8.4	15.9	—
Beech	11.3	—	1.2	1.3	2.6	2.0	1.3	2.9	—
Sweetgum	311.5	—	61.6	73.4	60.5	40.9	27.7	47.4	—
Tupelo and blackgum	310.4	—	74.8	67.9	71.1	43.4	37.6	15.6	—
Ash	38.7	—	8.2	8.5	7.0	5.2	—	9.8	—
Cottonwood	1.9	—	0.4	—	—	1.5	—	—	—
Yellow-poplar	264.0	—	18.3	34.3	29.7	48.9	54.5	72.1	6.3
Bay and magnolia	5.2	—	1.5	0.9	1.5	—	—	1.3	—
Black cherry	1.8	—	0.6	0.5	0.7	—	—	—	—
Black walnut	1.4	—	—	0.6	—	0.8	—	—	—
Sycamore	20.5	—	1.0	0.6	—	1.8	—	11.7	5.4
Elm	17.0	—	1.2	1.8	5.9	2.4	3.3	2.4	—
Other Eastern hardwoods	38.0	—	7.9	6.9	6.3	7.3	5.2	1.8	2.8
Total hardwoods	1,530.0	—	283.3	296.4	279.2	224.6	167.0	245.6	34.0
All species	3,959.6	477.9	799.7	800.7	649.3	485.3	283.5	406.8	56.4

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

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

Table 22—Volume of sawtimber on timberland by species and diameter class, Southern Coastal Plain of North Carolina, 1999

Species	All classes	Diameter class (inches at breast height)							
		9.0–10.9	11.0–12.9	13.0–14.9	15.0–16.9	17.0–18.9	19.0–20.9	21.0–28.9	29.0 and larger
<i>Million board feet</i>									
Softwood									
Longleaf pine	1,549.4	211.3	356.5	365.2	319.1	209.6	27.3	60.4	—
Slash pine	173.1	75.6	46.1	20.5	20.8	10.2	—	—	—
Shortleaf pine	145.9	25.7	27.6	28.6	29.4	34.5	—	—	—
Loblolly pine	9,875.2	1,716.2	1,921.9	2,010.3	1,605.1	1,174.3	616.4	710.3	120.7
Pond pine	742.0	156.1	178.0	187.7	58.5	65.2	13.6	83.0	—
Virginia pine	19.0	4.6	2.6	4.3	7.5	—	—	—	—
Baldcypress	437.1	11.0	39.5	65.1	66.0	70.3	52.6	132.5	—
Pondcypress	318.2	19.8	32.3	58.2	41.4	19.7	26.3	80.9	39.7
Atlantic white-cedar	20.5	4.1	—	13.0	3.4	—	—	—	—
Redcedars	10.3	2.2	2.5	—	—	5.6	—	—	—
Total softwoods	13,290.7	2,226.5	2,607.1	2,752.8	2,151.2	1,589.3	736.2	1,067.2	160.4
Hardwood									
Select white oaks	602.6	—	100.3	114.6	134.0	74.4	31.0	116.8	31.3
Select red oaks	120.5	—	8.1	16.1	5.6	34.6	31.8	24.3	—
Other white oaks	102.2	—	17.8	14.3	17.9	29.5	12.9	9.8	—
Other red oaks	1,071.8	—	266.6	191.5	182.7	107.2	69.4	190.6	63.8
Hickory	193.7	—	24.5	20.1	44.9	13.5	19.6	44.6	26.4
Hard maple	3.4	—	1.5	1.9	—	—	—	—	—
Soft maple	605.7	—	113.5	137.2	102.0	119.2	44.7	89.2	—
Beech	52.7	—	6.6	6.0	11.9	9.2	6.0	13.0	—
Sweetgum	1,708.1	—	313.9	380.6	327.6	231.9	162.7	291.5	—
Tupelo and blackgum	1,544.2	—	344.0	318.0	357.5	229.3	204.9	90.5	—
Ash	197.0	—	38.0	40.6	35.0	26.8	—	56.4	—
Cottonwood	10.3	—	1.8	—	—	8.5	—	—	—
Yellow-poplar	1,557.9	—	94.6	181.6	164.0	283.8	328.7	461.0	44.1
Bay and magnolia	25.8	—	7.2	4.3	7.1	—	—	7.2	—
Black cherry	9.3	—	3.0	2.8	3.5	—	—	—	—
Black walnut	6.6	—	—	2.8	—	3.8	—	—	—
Sycamore	120.1	—	4.8	3.1	—	9.5	—	69.4	33.3
Elm	88.1	—	5.7	8.7	29.8	12.5	17.9	13.5	—
Other Eastern hardwoods	259.8	—	43.3	42.0	41.7	49.9	39.4	16.5	27.0
Total hardwoods	8,279.6	—	1,395.1	1,486.2	1,465.1	1,243.8	969.1	1,494.3	225.9
All species	21,570.3	2,226.5	4,002.2	4,239.1	3,616.3	2,833.1	1,705.4	2,561.5	386.3

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

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

Table 23—Volume of sawtimber on timberland by species, size class, and tree grade, Southern Coastal Plain of North Carolina, 1999

Species	All size classes						Trees ≥15.0 inches d.b.h.					
	All grades	Tree grade					All grades	Tree grade				
		1	2	3	4	5		1	2	3	4	5
<i>Million board feet</i>												
Softwood												
Longleaf pine	1,549.4	283.2	308.8	936.5	—	20.9	616.4	96.1	164.3	340.8	—	15.3
Slash pine	173.1	5.5	6.0	161.6	—	—	31.0	—	4.9	26.1	—	—
Shortleaf pine	145.9	61.8	42.1	41.9	—	—	63.9	29.3	27.8	6.8	—	—
Loblolly pine	9,875.2	2,596.8	1,691.2	5,566.2	—	21.0	4,226.8	1,691.5	831.5	1,696.3	—	7.4
Pond pine	742.0	70.7	119.7	551.6	—	—	220.2	45.2	48.4	126.6	—	—
Virginia pine	19.0	1.7	—	17.2	—	—	7.5	—	—	7.5	—	—
Baldcypress	437.1	227.4	125.8	83.9	—	—	321.4	195.8	93.3	32.3	—	—
Pondcypress	318.2	210.7	52.4	55.2	—	—	208.0	160.6	32.9	14.5	—	—
Atlantic white-cedar	20.5	4.9	9.2	6.5	—	—	3.4	—	—	3.4	—	—
Redcedars	10.3	—	2.5	7.8	—	—	5.6	—	—	5.6	—	—
Total softwoods	13,290.7	3,462.7	2,357.8	7,428.4	—	41.9	5,704.3	2,218.6	1,203.0	2,259.9	—	22.7
Hardwood												
Select white oaks	602.6	135.3	176.7	262.7	27.9	—	387.6	135.3	152.9	95.5	3.9	—
Select red oaks	120.5	41.4	44.9	24.4	—	9.8	96.4	41.4	34.6	10.6	—	9.8
Other white oaks	102.2	7.1	47.3	40.8	7.0	—	70.2	7.1	43.0	20.1	—	—
Other red oaks	1,071.8	123.1	201.2	497.2	211.0	39.2	613.7	123.1	178.3	199.8	80.0	32.5
Hickory	193.7	21.4	92.6	57.6	4.2	17.9	149.1	21.4	82.9	28.9	—	15.9
Hard maple	3.4	—	—	3.4	—	—	—	—	—	—	—	—
Soft maple	605.7	58.0	111.7	312.8	93.5	29.7	355.1	58.0	81.2	140.0	54.8	21.1
Beech	52.7	—	—	24.1	13.6	15.0	40.1	—	—	16.3	10.7	13.0
Sweetgum	1,708.1	466.9	465.7	684.0	57.7	33.9	1,013.6	466.9	291.1	207.3	27.9	20.4
Tupelo and blackgum	1,544.2	387.2	491.7	624.9	8.6	31.7	882.2	387.2	328.8	150.4	—	15.9
Ash	197.0	32.2	69.9	62.2	28.1	4.6	118.3	32.2	51.7	7.5	23.7	3.2
Cottonwood	10.3	—	8.5	1.8	—	—	8.5	—	8.5	—	—	—
Yellow-poplar	1,557.9	591.3	399.5	337.9	193.5	35.7	1,281.7	591.3	312.9	187.1	159.2	31.2
Bay and magnolia	25.8	—	10.7	15.1	—	—	14.3	—	10.7	3.6	—	—
Black cherry	9.3	—	3.5	2.8	—	3.0	3.5	—	3.5	—	—	—
Black walnut	6.6	3.8	—	2.8	—	—	3.8	3.8	—	—	—	—
Sycamore	120.1	102.7	3.1	4.8	—	9.5	112.2	102.7	—	—	—	9.5
Elm	88.1	4.9	52.4	27.7	3.2	—	73.6	4.9	52.4	13.2	3.2	—
Other Eastern hardwoods	259.8	11.7	88.8	122.6	29.7	7.0	174.5	11.7	71.3	70.7	13.9	7.0
Total hardwoods	8,279.6	1,986.9	2,268.2	3,109.6	677.9	237.0	5,398.2	1,986.9	1,703.7	1,150.8	377.2	179.5
All species	21,570.3	5,449.6	4,625.9	10,538.0	677.9	278.9	11,102.5	4,205.5	2,906.8	3,410.7	377.2	202.2

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

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

Table 24—Volume of growing stock on timberland by county and species group, Southern Coastal Plain of North Carolina, 1999

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Bladen	474.5	289.2	262.9	26.3	185.4	136.9	48.4
Brunswick	458.5	305.3	294.5	10.8	153.2	129.5	23.6
Columbus	565.1	264.7	240.9	23.8	300.4	226.1	74.3
Cumberland	329.4	198.4	189.9	8.5	131.0	87.1	43.9
Duplin	242.4	91.7	91.7	—	150.7	113.5	37.2
Greene	66.4	28.8	27.4	1.4	37.6	25.7	11.9
Harnett	270.3	159.4	159.4	—	110.8	63.2	47.6
Hoke	230.3	163.3	163.3	—	67.1	49.7	17.4
Johnston	334.6	138.3	138.3	—	196.3	128.3	67.9
Jones	305.4	218.9	215.0	3.9	86.5	65.9	20.7
Lee	195.5	87.1	85.7	1.4	108.4	62.2	46.1
Lenoir	136.1	58.1	52.3	5.9	78.0	50.8	27.2
Moore	559.3	336.3	312.9	23.4	223.0	121.3	101.7
New Hanover	44.5	28.1	20.2	7.9	16.4	9.7	6.7
Onslow	324.8	173.6	171.3	2.2	151.2	122.4	28.8
Pender	466.7	266.6	226.8	39.8	200.1	165.3	34.8
Richmond	300.6	189.5	189.1	0.4	111.1	75.8	35.2
Robeson	459.8	208.5	194.5	14.0	251.3	194.6	56.8
Sampson	324.1	120.3	115.6	4.7	203.7	161.6	42.1
Scotland	133.1	94.7	94.7	—	38.3	28.2	10.2
Wayne	166.5	88.8	88.8	—	77.7	48.8	28.9
Total	6,387.8	3,509.7	3,335.4	174.4	2,878.0	2,066.6	811.4

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

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

Table 25—Volume of live trees on timberland by county and species group, Southern Coastal Plain of North Carolina, 1999

County	Softwoods				Hardwoods		
	All species	All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Bladen	517.0	294.0	267.3	26.7	223.0	161.6	61.4
Brunswick	493.1	309.2	298.4	10.8	183.9	150.9	33.0
Columbus	647.7	283.3	252.5	30.8	364.4	279.7	84.7
Cumberland	348.3	199.6	191.1	8.5	148.7	97.1	51.6
Duplin	269.0	92.5	92.5	—	176.4	131.3	45.2
Greene	70.2	29.0	27.5	1.5	41.2	27.9	13.3
Harnett	289.9	160.3	160.3	—	129.7	76.3	53.3
Hoke	256.2	165.9	165.9	—	90.4	60.3	30.0
Johnston	375.2	139.3	139.3	—	236.0	152.5	83.4
Jones	317.5	220.5	216.5	4.0	97.0	75.0	21.9
Lee	208.2	89.3	87.8	1.6	118.9	69.6	49.3
Lenoir	149.7	59.3	53.5	5.9	90.4	59.8	30.5
Moore	611.1	343.8	319.8	24.0	267.2	140.7	126.5
New Hanover	49.4	28.9	20.7	8.2	20.5	11.0	9.5
Onslow	350.1	176.3	173.7	2.6	173.7	141.5	32.3
Pender	480.4	268.0	228.2	39.9	212.4	176.1	36.3
Richmond	328.2	196.4	195.4	1.0	131.8	88.6	43.2
Robeson	501.6	210.3	196.4	14.0	291.3	221.5	69.8
Sampson	341.4	122.0	117.1	4.8	219.5	170.3	49.1
Scotland	147.9	96.5	96.5	—	51.4	31.7	19.7
Wayne	192.6	89.4	89.4	—	103.2	66.3	36.9
Total	6,944.8	3,573.8	3,389.7	184.1	3,371.0	2,389.9	981.1

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

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

Table 26—Volume of sawtimber on timberland by county and species group, Southern Coastal Plain of North Carolina, 1999

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million board feet</i>							
Bladen	1,355.6	908.9	805.3	103.6	446.7	343.2	103.6
Brunswick	1,279.2	953.8	916.2	37.7	325.4	295.0	30.4
Columbus	1,914.7	1,041.1	944.5	96.6	873.6	652.3	221.3
Cumberland	1,153.5	845.6	813.1	32.5	307.9	222.8	85.1
Duplin	840.3	338.7	338.7	—	501.6	396.3	105.3
Greene	171.7	79.6	73.0	6.6	92.1	72.8	19.3
Harnett	927.0	594.9	594.9	—	332.1	202.4	129.7
Hoke	951.6	768.1	768.1	—	183.5	157.2	26.3
Johnston	1,145.8	544.9	544.9	—	601.0	408.8	192.2
Jones	993.7	748.1	734.7	13.4	245.6	181.5	64.1
Lee	658.8	355.1	349.5	5.6	303.8	163.0	140.8
Lenoir	463.5	233.7	201.5	32.3	229.7	126.9	102.8
Moore	2,021.0	1,393.9	1,262.7	131.2	627.0	365.5	261.6
New Hanover	145.6	117.0	73.5	43.5	28.6	13.0	15.6
Onslow	1,064.8	584.7	576.5	8.2	480.1	387.2	92.9
Pender	1,454.1	932.0	741.6	190.4	522.1	414.5	107.6
Richmond	1,078.3	738.2	737.1	1.2	340.1	230.5	109.6
Robeson	1,654.4	902.5	838.8	63.7	751.9	577.0	174.9
Sampson	1,044.5	350.5	330.5	20.0	694.0	593.9	100.1
Scotland	558.4	443.1	443.1	—	115.3	98.5	16.8
Wayne	693.9	416.3	416.3	—	277.6	180.6	97.0
Total	21,570.3	13,290.7	12,504.5	786.2	8,279.6	6,082.8	2,196.7

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

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

Table 27—Volume of timber on timberland by class of timber and species group, Southern Coastal Plain of North Carolina, 1999

Class of timber	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Sawtimber trees							
Saw-log portion	3,959.6	2,429.6	2,282.8	146.8	1,530.0	1,122.1	407.9
Upper-stem portion ^a	523.1	237.9	224.9	13.0	285.2	208.3	77.0
Total	4,482.7	2,667.5	2,507.7	159.8	1,815.2	1,330.4	484.8
Poletimber trees							
	1,905.1	842.3	827.6	14.6	1,062.8	736.3	326.5
All growing-stock trees	6,387.8	3,509.7	3,335.4	174.4	2,878.0	2,066.6	811.4
Rough trees							
Sawtimber size	292.7	43.2	34.8	8.4	249.5	162.3	87.3
Poletimber size	237.7	20.7	19.5	1.2	217.0	138.0	79.0
Total	530.4	63.9	54.3	9.6	466.6	300.3	166.3
Rotten trees							
Sawtimber size	23.3	0.2	0.1	0.1	23.1	20.1	3.0
Poletimber size	3.4	0.0	0.0	—	3.4	2.9	0.5
Total	26.6	0.2	0.1	0.1	26.4	22.9	3.5
Salvable dead trees							
Sawtimber size	15.8	4.9	4.9	—	10.9	5.1	5.8
Poletimber size	3.3	2.5	2.5	—	0.8	—	0.8
Total	19.1	7.4	7.4	—	11.7	5.1	6.6
All classes	6,964.0	3,581.3	3,397.1	184.1	3,382.7	2,395.0	987.7

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

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

^a Includes cull sections in the saw-log portion.

Table 28—Volume of live and growing-stock trees on timberland by ownership class and species group, Southern Coastal Plain of North Carolina, 1999

Ownership class	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
Live trees (million cubic feet)							
National forest	56.0	34.8	34.7	0.1	21.2	19.2	2.0
Other public	642.4	464.4	441.1	23.3	178.0	126.3	51.7
Forest industry	894.6	583.4	567.2	16.3	311.2	244.9	66.3
Nonindustrial private	5,351.8	2,491.2	2,346.7	144.5	2,860.6	1,999.5	861.1
All classes	6,944.8	3,573.8	3,389.7	184.1	3,371.0	2,389.9	981.1
Growing-stock trees (million cubic feet)							
National forest	54.8	34.7	34.7	0.0	20.1	18.0	2.0
Other public	601.7	456.4	433.1	23.3	145.3	107.5	37.8
Forest industry	824.3	565.4	549.3	16.1	258.9	204.2	54.7
Nonindustrial private	4,907.1	2,453.3	2,318.3	135.0	2,453.8	1,736.9	716.9
All classes	6,387.8	3,509.7	3,335.4	174.4	2,878.0	2,066.6	811.4

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

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

Table 29—Volume of sawtimber on timberland by ownership class, species group, and size class, Southern Coastal Plain of North Carolina, 1999

Ownership class	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
All size classes (million board feet)							
National forest	147.0	110.7	110.7	—	36.3	32.2	4.1
Other public	2,319.6	1,899.2	1,766.9	132.3	420.4	334.0	86.4
Forest industry	2,440.9	1,663.6	1,600.6	63.1	777.3	598.7	178.6
Nonindustrial private	16,662.7	9,617.2	9,026.4	590.8	7,045.5	5,117.9	1,927.6
All classes	21,570.3	13,290.7	12,504.5	786.2	8,279.6	6,082.8	2,196.7
Trees ≥ 15.0 inches d.b.h. (million board feet)							
National forest	37.1	19.5	19.5	—	17.5	14.3	3.2
Other public	1,161.0	854.1	727.9	126.2	306.9	244.6	62.3
Forest industry	966.4	431.0	388.8	42.1	535.4	403.1	132.3
Nonindustrial private	8,938.0	4,399.7	4,029.6	370.0	4,538.3	3,361.5	1,176.8
All classes	11,102.5	5,704.3	5,165.9	538.3	5,398.2	4,023.5	1,374.7

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

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

Table 30—Volume of growing stock on timberland by forest-type group, stand origin, and species group, Southern Coastal Plain of North Carolina, 1999

Forest-type group and stand origin	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Softwood types							
Longleaf-slash pine							
Planted	73.6	72.9	72.9	—	0.7	0.5	0.2
Natural	254.9	246.7	246.7	—	8.2	2.8	5.4
Total	328.5	319.6	319.6	—	8.9	3.3	5.6
Loblolly-shortleaf pine							
Planted	1,116.7	1,060.8	1,060.8	—	55.9	31.8	24.1
Natural	1,411.9	1,185.5	1,185.1	0.4	226.4	143.5	82.9
Total	2,528.6	2,246.3	2,245.9	0.4	282.3	175.3	107.0
Total softwoods	2,857.1	2,565.9	2,565.5	0.4	291.1	178.5	112.6
Hardwood types							
Oak-pine							
Planted	76.8	61.1	59.3	1.9	15.7	8.3	7.3
Natural	795.9	459.5	457.2	2.3	336.4	186.9	149.4
Total	872.6	520.6	516.5	4.1	352.0	195.3	156.7
Oak-hickory	1,100.7	145.6	133.5	12.1	955.1	590.4	364.7
Oak-gum-cypress	1,524.7	277.6	119.9	157.7	1,247.1	1,073.5	173.6
Elm-ash-cottonwood	32.7	—	—	—	32.7	29.0	3.7
Total hardwoods	3,530.7	943.8	769.9	174.0	2,586.9	1,888.1	698.8
Nonstocked	—	—	—	—	—	—	—
All groups	6,387.8	3,509.7	3,335.4	174.4	2,878.0	2,066.6	811.4

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

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

Table 31—Average basal area of live trees per acre on timberland by ownership class, species group, and d.b.h., Southern Coastal Plain of North Carolina, 1999

Ownership class and species group	All tree sizes	D.b.h. (inches)			
		1.0–4.9	5.0–10.9	11.0–14.9	≥15.0
<i>Square feet/acre</i>					
National forest					
Softwood	56.8	3.7	31.1	17.1	4.9
Hardwood	48.3	9.0	27.0	8.3	3.9
Total	105.1	12.7	58.1	25.5	8.8
Other public					
Softwood	41.4	4.5	16.1	10.7	10.1
Hardwood	29.9	10.5	9.5	3.2	6.6
Total	71.2	15.0	25.6	13.9	16.7
Forest industry					
Softwood	45.2	4.9	26.9	9.0	4.4
Hardwood	29.4	8.7	8.8	4.6	7.2
Total	74.6	13.6	35.7	13.6	11.7
Nonindustrial private					
Softwood	33.9	4.2	15.0	7.7	7.0
Hardwood	54.4	14.2	19.2	9.4	11.5
Total	88.3	18.4	34.2	17.1	18.6
All classes					
Softwood	36.2	4.3	16.7	8.2	7.0
Hardwood	49.0	13.2	17.1	8.3	10.5
Total	85.2	17.5	33.8	16.5	17.5

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

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

Table 32—Average net annual growth of growing stock on timberland by county and species group, Southern Coastal Plain of North Carolina, 1990–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Bladen	32.4	26.0	25.5	0.5	6.4	4.4	2.1
Brunswick	23.5	20.2	21.0	-0.9	3.3	2.3	1.0
Columbus	31.6	22.9	22.5	0.4	8.7	6.1	2.5
Cumberland	14.5	9.7	9.8	-0.0	4.8	2.6	2.2
Duplin	5.7	3.4	3.3	0.1	2.3	3.2	-0.9
Greene	4.5	2.8	2.7	0.1	1.7	0.9	0.8
Harnett	16.5	13.8	13.8	—	2.8	1.1	1.7
Hoke	8.5	6.6	6.6	—	1.9	1.4	0.5
Johnston	15.6	9.3	9.3	0.1	6.3	4.6	1.6
Jones	21.6	20.4	20.5	-0.1	1.2	1.0	0.2
Lee	10.1	5.1	5.2	-0.1	5.0	3.3	1.7
Lenoir	5.4	3.6	3.3	0.3	1.7	0.8	0.9
Moore	24.2	17.1	16.6	0.5	7.1	3.1	4.0
New Hanover	0.8	0.8	0.7	0.1	-0.0	-0.1	0.0
Onslow	9.3	9.2	9.1	0.0	0.1	1.2	-1.1
Pender	32.0	26.4	25.7	0.7	5.6	5.2	0.3
Richmond	20.3	15.1	15.1	—	5.3	3.5	1.8
Robeson	16.6	12.7	12.6	0.1	3.9	2.5	1.4
Sampson	17.4	12.5	12.2	0.2	4.9	4.0	0.9
Scotland	8.4	7.1	7.1	—	1.3	0.9	0.4
Wayne	5.2	3.1	3.1	—	2.1	1.0	1.1
Total	324.1	247.8	245.8	2.0	76.3	53.3	23.0

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

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

Table 33—Average net annual growth of live trees on timberland by county and species group, Southern Coastal Plain of North Carolina, 1990–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Bladen	34.3	26.7	26.2	0.5	7.7	5.5	2.2
Brunswick	24.0	20.8	21.7	-0.9	3.2	2.3	0.9
Columbus	33.3	23.7	23.2	0.5	9.5	7.0	2.6
Cumberland	15.3	10.5	10.7	-0.1	4.7	2.3	2.5
Duplin	5.7	3.4	3.3	0.1	2.3	3.4	-1.2
Greene	5.0	2.9	2.7	0.1	2.1	1.1	1.0
Harnett	18.1	14.3	14.3	—	3.8	1.6	2.2
Hoke	8.9	6.8	6.8	—	2.1	1.6	0.5
Johnston	16.4	9.4	9.3	0.1	7.0	4.7	2.3
Jones	21.3	20.5	20.7	-0.1	0.8	0.7	0.1
Lee	10.7	5.2	5.3	-0.1	5.6	3.7	1.9
Lenoir	5.3	3.6	3.3	0.3	1.7	0.9	0.7
Moore	26.4	18.4	17.8	0.6	8.0	3.2	4.7
New Hanover	1.0	0.8	0.7	0.1	0.2	-0.0	0.2
Onslow	8.9	9.1	9.1	-0.0	-0.2	0.5	-0.7
Pender	31.1	26.4	25.9	0.5	4.8	4.8	-0.0
Richmond	21.3	15.3	15.3	—	5.9	3.4	2.5
Robeson	17.0	12.6	12.6	0.1	4.4	2.6	1.7
Sampson	17.3	12.7	12.4	0.2	4.6	3.9	0.7
Scotland	8.9	7.2	7.2	0.0	1.7	1.3	0.4
Wayne	5.4	3.1	3.1	—	2.3	1.1	1.2
Total	335.5	253.5	251.6	1.8	82.0	55.5	26.5

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

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

Table 34—Average net annual growth of sawtimber on timberland by county and species group, Southern Coastal Plain of North Carolina, 1990–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million board feet</i>							
Bladen	119.2	105.2	103.4	1.8	14.0	9.5	4.5
Brunswick	95.2	87.6	87.6	-0.1	7.6	5.0	2.7
Columbus	131.8	95.0	92.7	2.2	36.9	25.2	11.6
Cumberland	69.2	50.1	49.5	0.6	19.1	10.1	9.1
Duplin	16.3	6.8	6.2	0.6	9.5	11.7	-2.2
Greene	17.2	12.5	11.8	0.7	4.7	3.1	1.6
Harnett	53.7	46.8	46.8	—	6.9	2.1	4.8
Hoke	41.8	33.8	33.8	—	8.0	7.9	0.0
Johnston	63.2	35.9	35.5	0.4	27.3	17.7	9.5
Jones	84.2	80.7	80.7	-0.0	3.5	2.8	0.7
Lee	37.8	23.9	23.9	—	13.9	9.4	4.4
Lenoir	13.6	13.6	11.7	1.9	0.1	-1.0	1.1
Moore	100.5	75.0	72.6	2.4	25.5	10.6	14.9
New Hanover	3.1	2.3	1.7	0.7	0.7	0.8	-0.0
Onslow	28.8	27.9	28.0	-0.1	0.9	4.7	-3.8
Pender	87.0	73.0	69.3	3.7	14.0	12.7	1.3
Richmond	64.9	57.8	57.8	—	7.1	4.8	2.2
Robeson	66.2	52.3	51.3	0.9	14.0	9.7	4.3
Sampson	65.8	45.9	44.4	1.4	20.0	17.5	2.5
Scotland	42.1	37.1	37.1	—	5.0	3.8	1.3
Wayne	21.5	17.2	17.2	—	4.3	1.3	3.0
Total	1,223.1	980.3	963.2	17.1	242.8	169.1	73.7

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

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

Table 35—Average annual removals of growing stock on timberland by county and species group, Southern Coastal Plain of North Carolina, 1990–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Bladen	24.2	18.0	17.8	0.2	6.2	4.9	1.3
Brunswick	27.1	22.2	20.3	1.9	4.9	2.9	2.0
Columbus	41.0	32.4	32.0	0.3	8.7	5.1	3.6
Cumberland	6.8	2.6	2.6	—	4.1	3.7	0.4
Duplin	28.1	12.8	12.1	0.7	15.3	10.2	5.1
Greene	8.0	4.8	3.8	1.0	3.2	1.3	2.0
Harnett	27.1	17.1	17.1	—	10.0	5.2	4.8
Hoke	3.2	1.8	1.8	—	1.4	0.9	0.5
Johnston	29.5	11.0	10.8	0.2	18.5	10.3	8.2
Jones	19.1	15.8	15.8	—	3.4	1.9	1.5
Lee	4.4	1.7	1.6	0.1	2.7	0.9	1.8
Lenoir	3.5	2.2	2.2	—	1.2	0.9	0.3
Moore	19.9	14.7	14.5	0.3	5.2	2.8	2.4
New Hanover	1.1	0.5	0.5	—	0.6	0.2	0.4
Onslow	21.3	18.0	18.0	—	3.3	1.3	1.9
Pender	31.0	27.9	27.9	—	3.1	1.8	1.3
Richmond	20.8	16.3	16.3	—	4.5	2.3	2.2
Robeson	18.5	13.0	13.0	—	5.5	3.8	1.7
Sampson	19.2	14.0	14.0	—	5.2	2.5	2.7
Scotland	7.7	4.1	4.1	—	3.6	2.9	0.7
Wayne	13.3	9.1	9.1	—	4.3	1.7	2.5
Total	374.8	259.8	255.2	4.6	114.9	67.6	47.3

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

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

Table 36—Average annual removals of live trees on timberland by county and species group, Southern Coastal Plain of North Carolina, 1990–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Bladen	24.5	18.0	17.8	0.2	6.5	4.9	1.6
Brunswick	28.6	22.4	20.5	1.9	6.2	4.1	2.2
Columbus	41.6	32.5	32.2	0.3	9.0	5.2	3.9
Cumberland	7.0	2.6	2.6	—	4.4	3.8	0.6
Duplin	28.7	12.8	12.1	0.7	15.9	10.5	5.4
Greene	9.4	5.0	3.8	1.2	4.4	1.7	2.7
Harnett	27.8	17.6	17.6	—	10.3	5.3	5.0
Hoke	3.2	1.8	1.8	—	1.4	0.9	0.5
Johnston	30.4	11.0	10.8	0.2	19.4	10.8	8.7
Jones	19.7	15.8	15.8	—	3.9	2.0	1.8
Lee	4.6	1.7	1.6	0.1	2.9	1.1	1.8
Lenoir	3.7	2.2	2.2	—	1.4	1.1	0.3
Moore	20.5	14.7	14.5	0.3	5.7	3.2	2.5
New Hanover	1.2	0.5	0.5	—	0.7	0.2	0.6
Onslow	21.6	18.0	18.0	—	3.6	1.3	2.2
Pender	31.2	27.9	27.9	—	3.3	1.9	1.4
Richmond	21.2	16.3	16.3	—	4.9	2.3	2.6
Robeson	19.1	13.1	13.1	—	6.1	3.9	2.1
Sampson	20.0	14.1	14.1	—	5.9	2.8	3.1
Scotland	8.3	4.1	4.1	—	4.2	3.2	1.0
Wayne	13.5	9.1	9.1	—	4.4	1.7	2.7
Total	385.8	261.1	256.3	4.8	124.7	72.0	52.8

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

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

Table 37—Average annual removals of sawtimber on timberland by county and species group, Southern Coastal Plain of North Carolina, 1990–1998

County	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million board feet</i>							
Bladen	74.3	64.5	63.6	0.9	9.7	7.7	2.1
Brunswick	76.4	64.7	55.6	9.1	11.7	7.1	4.6
Columbus	137.0	109.0	107.4	1.6	28.0	16.6	11.4
Cumberland	26.8	12.9	12.9	—	14.0	13.5	0.5
Duplin	109.0	55.0	51.3	3.7	53.9	34.0	19.9
Greene	29.8	20.7	14.6	6.1	9.1	3.4	5.7
Harnett	107.3	72.3	72.3	—	35.0	20.4	14.5
Hoke	13.9	8.5	8.5	—	5.4	3.7	1.7
Johnston	129.9	52.5	51.5	1.0	77.4	43.2	34.3
Jones	51.8	40.9	40.9	—	10.9	5.1	5.8
Lee	14.8	6.5	6.5	—	8.3	3.0	5.2
Lenoir	13.7	10.7	10.7	—	3.0	1.4	1.7
Moore	66.4	58.4	57.6	0.9	8.0	4.1	3.9
New Hanover	3.9	2.2	2.2	—	1.7	0.8	1.0
Onslow	91.1	79.6	79.6	—	11.5	4.6	6.9
Pender	95.2	88.8	88.8	—	6.5	1.9	4.6
Richmond	68.3	58.6	58.6	—	9.7	5.0	4.7
Robeson	67.6	58.8	58.8	—	8.8	6.5	2.3
Sampson	74.2	56.7	56.7	—	17.5	9.6	7.9
Scotland	25.8	15.2	15.2	—	10.6	8.4	2.2
Wayne	60.9	47.4	47.4	—	13.5	6.1	7.4
Total	1,338.0	983.9	960.7	23.2	354.2	206.0	148.1

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

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

Table 38—Average net annual growth and average annual removals of live trees, growing stock, and sawtimber on timberland by species, Southern Coastal Plain of North Carolina, 1990–1998

Species	Live trees		Growing stock		Sawtimber	
	Net annual growth	Annual removals	Net annual growth	Annual removals	Net annual growth	Annual removals
	<i>Million cubic feet</i>				<i>Million board feet</i>	
Softwood						
Longleaf pine	14.2	10.9	14.2	10.9	64.2	51.1
Slash pine	13.5	27.7	13.4	27.7	52.0	56.7
Shortleaf pine	1.2	3.0	1.3	3.0	6.2	14.3
Loblolly pine	218.4	201.1	213.1	200.2	823.6	790.0
Pond pine	4.2	13.4	3.8	13.4	16.4	48.5
Virginia pine	0.2	0.1	0.2	0.1	0.8	—
Baldcypress	1.9	3.5	2.0	3.3	11.9	19.9
Pondcypress	0.7	0.5	0.8	0.5	4.4	2.5
Atlantic white-cedar	-0.9	0.4	-0.9	0.4	0.2	—
Redcedars	0.1	0.4	0.1	0.4	0.6	0.9
Total softwoods	253.5	261.1	247.8	259.8	980.3	983.9
Hardwood						
Select white oaks	5.2	11.4	4.7	11.4	18.6	41.0
Select red oaks	1.4	1.4	1.2	1.4	3.1	4.5
Other white oaks	1.3	2.7	1.2	2.6	4.1	8.4
Other red oaks	13.0	27.5	11.7	26.5	37.8	82.8
Hickory	1.9	4.1	1.4	3.9	5.6	8.5
Hard maple	-0.1	—	-0.1	—	—	—
Soft maple	12.1	13.0	11.6	12.0	26.8	20.2
Beech	0.9	0.5	0.8	0.5	2.6	2.0
Sweetgum	15.5	29.5	14.3	28.6	35.9	83.1
Tupelo and blackgum	4.1	9.3	5.4	7.9	17.2	22.8
Ash	0.7	0.5	0.7	0.4	3.7	—
Basswood	-0.0	—	-0.0	—	0.2	—
Yellow-poplar	19.4	16.4	17.6	16.3	75.1	73.2
Bay and magnolia	1.2	1.0	1.2	0.8	1.4	—
Black cherry	0.1	0.2	0.1	0.1	-0.9	—
Black walnut	0.0	—	0.0	—	0.4	—
Sycamore	0.4	—	0.4	—	2.4	—
Elm	0.1	1.1	0.0	0.9	0.2	2.2
Other Eastern hardwoods	4.6	5.9	3.9	1.5	8.6	5.3
Total hardwoods	82.0	124.7	76.3	114.9	242.8	354.2
All species	335.5	385.8	324.1	374.8	1,223.1	1,338.0

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

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

Table 39—Average annual removals of growing stock on timberland by species and diameter class, Southern Coastal Plain of North Carolina, 1990–1998

Species	All classes	Diameter class (inches at breast height)									
		5.0–6.9	7.0–8.9	9.0–10.9	11.0–12.9	13.0–14.9	15.0–16.9	17.0–18.9	19.0–20.9	21.0–28.9	29.0 and larger
<i>Million cubic feet</i>											
Softwood											
Longleaf pine	10.9	0.2	0.7	2.4	1.8	3.1	1.8	0.6	0.3	—	—
Slash pine	27.7	3.3	10.0	10.7	2.9	0.6	0.2	—	—	—	—
Shortleaf pine	3.0	—	—	0.4	1.1	0.9	0.4	0.2	—	—	—
Loblolly pine	200.2	11.7	31.2	34.2	36.1	27.9	25.8	15.6	8.9	8.8	—
Pond pine	13.4	1.4	1.7	2.6	3.5	2.1	1.4	0.4	0.3	—	—
Virginia pine	0.1	0.1	—	—	—	—	—	—	—	—	—
Baldcypress	3.3	—	—	—	—	—	0.1	0.1	0.3	1.3	1.5
Pondcypress	0.5	—	—	—	0.1	0.1	0.2	—	0.2	—	—
Atlantic white-cedar	0.4	0.1	0.3	—	—	—	—	—	—	—	—
Redcedars	0.4	0.1	0.1	0.2	—	—	—	—	—	—	—
Total softwoods	259.8	16.8	44.1	50.6	45.4	34.7	29.8	16.9	10.0	10.1	1.5
Hardwood											
Select white oaks	11.4	0.6	0.8	1.2	1.5	1.6	1.4	1.7	1.0	1.4	0.3
Select red oaks	1.4	0.2	0.1	0.2	0.4	—	0.2	—	—	0.3	—
Other white oaks	2.6	0.3	0.2	0.3	0.7	0.1	0.3	0.1	—	0.6	—
Other red oaks	26.5	2.5	2.0	4.5	2.9	4.4	3.2	1.9	1.5	2.9	0.6
Hickory	3.9	0.6	0.9	0.4	0.6	0.7	0.6	—	—	0.1	—
Soft maple	12.0	2.6	2.4	1.8	1.9	1.2	0.8	0.5	0.2	0.5	—
Beech	0.5	—	—	—	—	—	0.1	0.4	—	—	—
Sweetgum	28.6	2.6	4.0	4.9	3.9	3.2	2.4	2.7	2.1	2.3	0.5
Tupelo and blackgum	7.9	0.6	0.9	1.2	1.2	1.2	0.4	0.6	0.5	1.1	0.2
Ash	0.4	0.2	—	0.3	—	—	—	—	—	—	—
Yellow-poplar	16.3	0.2	0.4	1.5	2.5	2.3	2.3	2.0	1.4	3.5	0.2
Bay and magnolia	0.8	0.4	0.2	0.2	—	—	—	—	—	—	—
Black cherry	0.1	—	0.1	—	—	—	—	—	—	—	—
Elm	0.9	—	0.4	—	0.1	0.3	—	—	0.2	—	—
Other Eastern hardwoods	1.5	—	0.2	0.1	0.2	0.4	—	—	0.3	0.3	—
Total hardwoods	114.9	10.8	12.4	16.7	15.9	15.3	11.9	9.9	7.2	13.1	1.8
All species	374.8	27.6	56.5	67.3	61.3	50.0	41.7	26.8	17.1	23.2	3.3

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

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

Table 40—Average annual mortality of live trees, growing stock, and sawtimber on timberland by species, Southern Coastal Plain of North Carolina, 1990–1998

Species	Live trees	Growing stock	Sawtimber
	<i>Million cubic feet</i>		<i>Million board feet</i>
Softwood			
Longleaf pine	1.0	1.0	4.7
Slash pine	1.2	1.2	4.1
Shortleaf pine	0.7	0.7	1.9
Loblolly pine	39.8	39.7	119.8
Pond pine	7.2	7.0	30.0
Virginia pine	0.5	0.5	0.9
Baldcypress	0.9	0.7	4.1
Pondcypress	0.8	0.7	2.3
Atlantic white-cedar	1.7	1.6	2.6
Redcedars	0.2	0.2	0.3
Total softwoods	53.9	53.3	170.6
Hardwood			
Select white oaks	4.4	4.4	16.8
Select red oaks	0.7	0.7	3.5
Other white oaks	1.2	1.1	4.6
Other red oaks	14.0	12.6	46.3
Hickory	1.6	1.4	5.3
Hard maple	0.1	0.1	—
Soft maple	10.3	7.7	19.2
Beech	0.4	0.4	1.2
Sweetgum	11.2	10.3	38.7
Tupelo and blackgum	6.2	3.8	13.1
Ash	2.1	1.9	4.7
Yellow-poplar	6.8	6.6	33.0
Bay and magnolia	0.9	0.4	—
Black cherry	0.6	0.4	1.3
Elm	1.0	0.9	2.9
Other Eastern hardwoods	5.8	2.0	7.7
Total hardwoods	67.5	54.6	198.0
All species	121.4	107.9	368.6

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

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

Table 41—Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group, Southern Coastal Plain of North Carolina, 1990–1998

Ownership class	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
Average net annual growth (million cubic feet)							
National forest	4.7	3.9	4.1	-0.1	0.8	0.6	0.2
Other public	22.8	22.7	22.1	0.5	0.1	0.2	-0.0
Forest industry	69.7	60.9	61.9	-1.0	8.8	7.6	1.3
Nonindustrial private	226.8	160.3	157.8	2.5	66.6	44.9	21.6
All classes	324.1	247.8	245.8	2.0	76.3	53.3	23.0
Average annual removals (million cubic feet)							
National forest	1.5	1.5	1.5	—	—	—	—
Other public	16.5	14.6	14.6	—	1.9	0.7	1.3
Forest industry	73.7	60.8	58.9	1.9	12.9	10.3	2.6
Nonindustrial private	283.0	183.0	180.2	2.7	100.1	56.7	43.4
All classes	374.8	259.8	255.2	4.6	114.9	67.6	47.3

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

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

Table 42—Average net annual growth and average annual removals of live trees on timberland by ownership class and species group, Southern Coastal Plain of North Carolina, 1990–1998

Ownership class	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
Average net annual growth (million cubic feet)							
National forest	4.7	4.0	4.2	-0.2	0.7	0.5	0.2
Other public	23.0	22.8	22.3	0.5	0.2	0.2	-0.0
Forest industry	72.3	63.3	64.2	-1.0	9.1	7.8	1.3
Nonindustrial private	235.4	163.3	161.0	2.4	72.1	47.0	25.1
All classes	335.5	253.5	251.6	1.8	82.0	55.5	26.5
Average annual removals (million cubic feet)							
National forest	1.5	1.5	1.5	—	—	—	—
Other public	16.6	14.6	14.6	—	2.0	0.7	1.3
Forest industry	75.6	61.3	59.4	1.9	14.3	11.1	3.1
Nonindustrial private	292.1	183.7	180.8	2.9	108.4	60.1	48.3
All classes	385.8	261.1	256.3	4.8	124.7	72.0	52.8

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

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

Table 43—Average net annual growth and average annual removals of sawtimber on timberland by ownership class and species group, Southern Coastal Plain of North Carolina, 1990–1998

Ownership class	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
Average net annual growth (million board feet)							
National forest	18.5	16.3	16.9	-0.6	2.2	2.2	—
Other public	88.0	90.3	87.9	2.4	-2.3	-0.9	-1.4
Forest industry	231.6	205.0	205.3	-0.4	26.6	22.3	4.3
Nonindustrial private	885.0	668.7	653.0	15.7	216.3	145.6	70.8
All classes	1,223.1	980.3	963.2	17.1	242.8	169.1	73.7
Average annual removals (million board feet)							
National forest	3.1	3.1	3.1	—	—	—	—
Other public	55.9	51.2	51.2	—	4.8	1.3	3.5
Forest industry	198.7	164.1	155.0	9.1	34.7	28.3	6.4
Nonindustrial private	1,080.2	765.5	751.4	14.1	314.7	176.5	138.2
All classes	1,338.0	983.9	960.7	23.2	354.2	206.0	148.1

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

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

Table 44—Average net annual growth of growing stock on timberland by forest-type group, stand origin, and species group, Southern Coastal Plain of North Carolina, 1990–1998

Forest-type group and stand origin ^a	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Softwood types							
Longleaf-slash pine							
Planted	17.4	17.0	17.0	—	0.4	0.2	0.2
Natural	9.0	8.6	8.6	—	0.4	0.0	0.4
Total	26.4	25.6	25.6	—	0.8	0.3	0.5
Loblolly-shortleaf pine							
Planted	117.5	113.9	113.9	—	3.7	3.2	0.4
Natural	81.1	70.8	70.8	0.0	10.3	6.6	3.7
Total	198.6	184.7	184.7	0.0	13.9	9.8	4.1
Total softwoods	225.0	210.3	210.3	0.0	14.7	10.1	4.6
Hardwood types							
Oak-pine							
Planted	3.1	3.1	3.1	—	—	—	—
Natural	36.8	24.6	24.1	0.5	12.2	6.7	5.5
Total	39.9	27.7	27.2	0.5	12.2	6.7	5.5
Oak-hickory	38.0	7.3	7.2	0.1	30.8	19.5	11.2
Oak-gum-cypress	20.2	2.5	1.2	1.3	17.7	15.9	1.7
Elm-ash-cottonwood	1.0	—	—	—	1.0	1.0	—
Total hardwoods	99.1	37.5	35.5	2.0	61.6	43.2	18.4
Nonstocked							
	—	—	—	—	—	—	—
All groups	324.1	247.8	245.8	2.0	76.3	53.3	23.0

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

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

^a Classifications at the beginning of the remeasurement period.

Table 45—Average annual removals of growing stock on timberland by forest-type group, stand origin, and species group, Southern Coastal Plain of North Carolina, 1990–1998

Forest-type group and stand origin ^a	All species	Softwoods			Hardwoods		
		All softwood	Yellow pine	Other softwood	All hardwood	Soft hardwood	Hard hardwood
<i>Million cubic feet</i>							
Softwood types							
Longleaf-slash pine							
Planted	29.2	28.4	28.4	—	0.8	0.6	0.2
Natural	9.2	9.2	9.2	—	—	—	—
Total	38.4	37.6	37.6	—	0.8	0.6	0.2
Loblolly-shortleaf pine							
Planted	83.5	81.4	81.4	—	2.1	1.8	0.3
Natural	117.8	102.0	102.0	0.1	15.7	9.9	5.8
Total	201.3	183.4	183.4	0.1	17.9	11.8	6.1
Total softwoods	239.7	221.0	220.9	0.1	18.7	12.4	6.3
Hardwood types							
Oak-pine							
Planted	—	—	—	—	—	—	—
Natural	46.6	25.1	24.9	0.2	21.6	12.7	8.9
Total	46.6	25.1	24.9	0.2	21.6	12.7	8.9
Oak-hickory							
	51.2	7.0	6.7	0.3	44.3	25.7	18.6
Oak-gum-cypress							
	37.2	6.8	2.8	4.1	30.4	16.9	13.5
Total hardwoods	135.1	38.9	34.3	4.6	96.2	55.3	41.0
Nonstocked							
	—	—	—	—	—	—	—
All groups	374.8	259.8	255.2	4.6	114.9	67.6	47.3

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

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

^a Classifications at the beginning of the remeasurement period.

Table 46—Fresh weight of live trees on timberland by ownership class, species group, and tree component, Southern Coastal Plain of North Carolina, 1999

Ownership class and species group	Component							
	All components	All live saplings	Growing-stock trees			Cull trees		
			Total	Boles	Stumps, tops, and limbs	Total	Boles	Stumps, tops, and limbs
<i>Thousand tons</i>								
National forest								
Softwood	1,562.4	58.0	1,500.1	1,263.1	237.0	4.3	3.2	1.2
Hardwood	1,064.5	155.9	856.9	688.6	168.3	51.8	38.2	13.6
Total	2,626.9	213.9	2,357.0	1,951.7	405.3	56.1	41.4	14.8
Other public								
Softwood	21,437.6	891.1	20,199.9	17,329.3	2,870.6	346.6	297.6	49.0
Hardwood	11,449.5	2,951.0	6,769.3	5,485.5	1,283.9	1,729.2	1,327.0	402.2
Total	32,887.0	3,842.1	26,969.2	22,814.8	4,154.4	2,075.8	1,624.6	451.2
Forest industry								
Softwood	26,812.0	1,154.7	24,865.4	20,846.1	4,019.3	792.0	665.8	126.2
Hardwood	17,872.2	3,202.4	12,081.2	9,730.7	2,350.5	2,588.7	1,989.1	599.6
Total	44,684.2	4,357.1	36,946.5	30,576.8	6,369.8	3,380.6	2,654.9	725.7
Nonindustrial private								
Softwood	114,533.8	6,328.4	106,268.9	90,483.8	15,785.1	1,936.5	1,465.7	470.8
Hardwood	165,277.0	29,645.7	115,151.2	93,459.3	21,691.9	20,480.2	15,740.6	4,739.6
Total	279,810.7	35,974.0	221,420.1	183,943.1	37,477.0	22,416.7	17,206.3	5,210.4
All ownerships								
Softwood	164,345.7	8,432.2	152,834.2	129,922.3	22,912.0	3,079.4	2,432.3	647.1
Hardwood	195,663.1	35,954.9	134,858.5	109,364.0	25,494.5	24,849.8	19,094.9	5,755.0
Total	360,008.8	44,387.0	287,692.7	239,286.3	48,406.4	27,929.2	21,527.1	6,402.1

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

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

Table 47—Area of timberland treated or disturbed annually and retained in timberland by treatment or disturbance and ownership class, Southern Coastal Plain of North Carolina, 1990 to 1999

Treatment or disturbance	All classes	Ownership class		
		Public	Forest industry	Nonindustrial private
<i>Thousand acres</i>				
Final harvest	97.6	3.9	19.4	74.2
Partial harvest ^a	23.2	0.6	3.2	19.3
Seed tree/shelterwood	4.0	0.5	—	3.4
Commercial thinning	23.3	3.3	9.8	10.2
Other stand improvement	4.0	1.1	1.0	1.9
Site preparation	32.6	2.3	9.8	20.5
Artificial regeneration ^b	42.2	3.3	14.5	24.5
Natural regeneration ^b	84.4	6.1	6.5	71.8
Other treatment	19.5	2.7	2.4	14.4
Natural disturbance				
Disease	29.3	7.6	10.6	11.1
Insects	5.7	3.1	1.1	1.6
Fire	—	—	—	—
Weather	83.3	8.4	8.0	67.0
Animals	5.1	0.7	0.6	3.8
Other disturbances				
Grazing	1.5	—	—	1.5
Other human-caused disturbance	9.6	1.0	0.9	7.7

Since some acres experience more than one treatment or disturbance, there are no column totals. Numbers in rows may not sum to totals due to rounding.

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

^a Includes high-grading and some selective cutting.

^b Includes establishment of trees for timber production on forest and nonforest land.

Table 48—Area of timberland treated or disturbed annually and retained in timberland by treatment or disturbance and forest management type, Southern Coastal Plain of North Carolina, 1990 to 1999

Treatment or disturbance	All types	Forest management type ^a					Nonstocked
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood	
<i>Thousand acres</i>							
Final harvest	97.6	22.6	34.3	13.4	16.3	11.0	—
Partial harvest ^b	23.2	2.0	10.7	3.5	3.8	3.1	—
Seed tree/shelterwood	4.0	1.5	1.4	0.5	—	0.6	—
Commercial thinning	23.3	17.0	4.3	1.3	0.7	—	—
Other stand improvement	4.0	2.1	0.0	0.8	0.5	0.5	—
Site preparation	32.6	12.0	9.3	4.4	4.1	2.8	—
Other treatment	19.5	3.1	3.2	3.7	4.6	5.0	—
Natural disturbance							
Disease	29.3	11.6	10.2	2.7	1.3	3.0	0.6
Insects	5.7	0.6	2.8	1.6	0.8	—	—
Fire	—	—	—	—	—	—	—
Weather	83.3	6.9	12.2	10.0	20.7	32.9	0.6
Animals	5.1	0.2	—	—	0.9	3.6	0.4
Other disturbance							
Grazing	1.5	—	0.3	0.6	0.6	—	—
Other human-caused disturbance	9.6	1.1	3.2	1.5	1.7	2.1	—

Since some acres experience more than one treatment or disturbance, there are no column totals. Numbers in rows may not sum to totals due to rounding.

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

^a Classification before treatment or disturbance.

^b Includes high-grading and some selective cutting.

Table 49—Area of timberland regenerated annually by type of regeneration and forest management type, Southern Coastal Plain of North Carolina, 1990 to 1999

Type of regeneration	All types	Forest management type ^a					
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood	Nonstocked
<i>Thousand acres</i>							
Artificial regeneration following harvest	28.8	14.7	—	10.7	2.8	0.6	—
Natural regeneration following harvest	57.1	—	10.4	9.9	21.1	15.8	—
Other artificial regeneration on forest land	8.4	5.4	—	2.6	0.4	—	—
Other natural regeneration on forest land	15.0	—	3.1	4.1	4.2	3.6	—
Artificial regeneration on former nonforest land	4.8	3.3	—	1.0	0.5	—	—
Natural reversion of former nonforest land	12.1	—	5.3	3.4	2.3	1.1	—
Total	126.2	23.5	18.8	31.5	31.4	21.0	—

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

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

^a Classification after regeneration.



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This report summarizes a 1999 inventory of the forest resources of a 21-county area of North Carolina. Major findings are highlighted in text and graphics; detailed data are presented in 49 tables.

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

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