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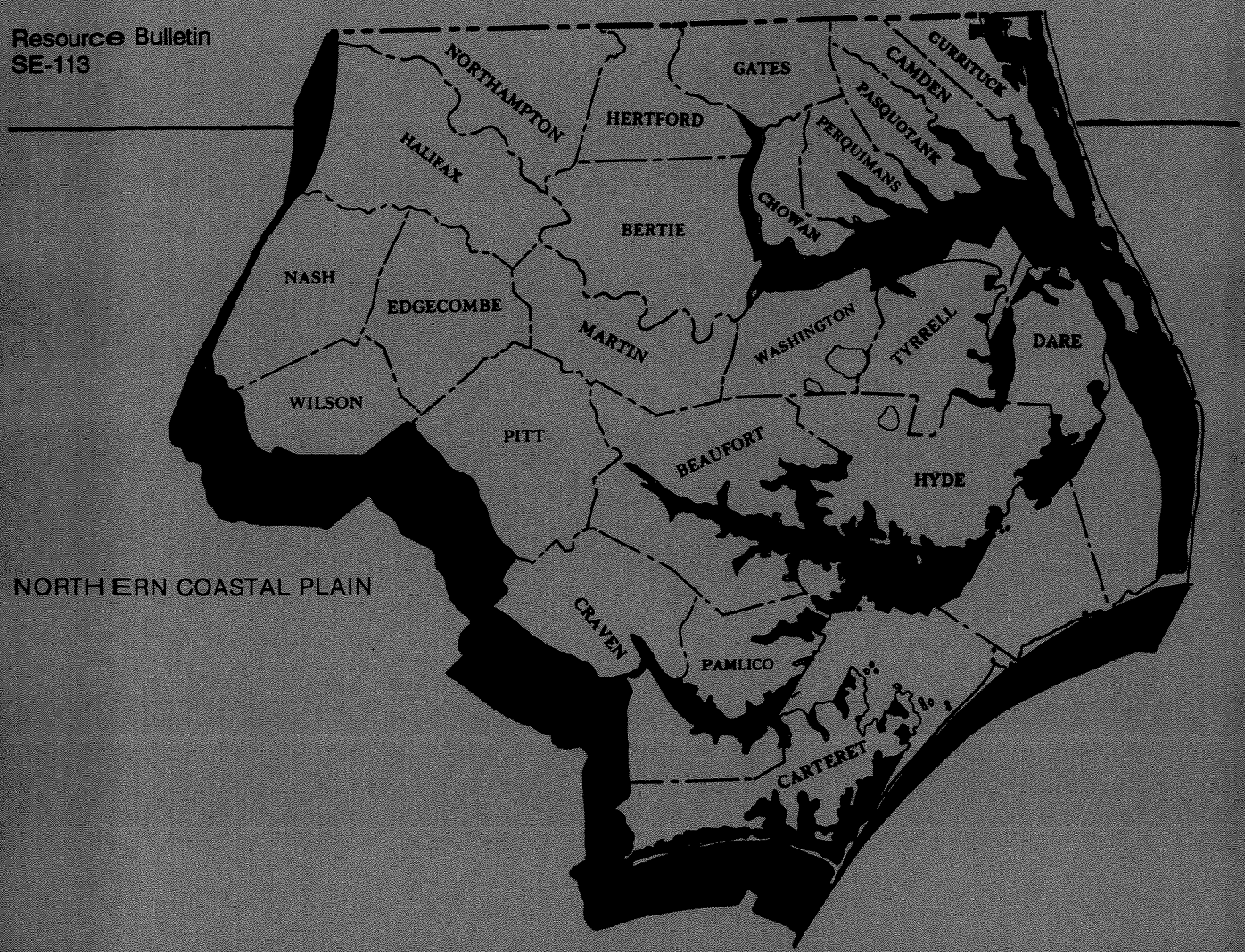
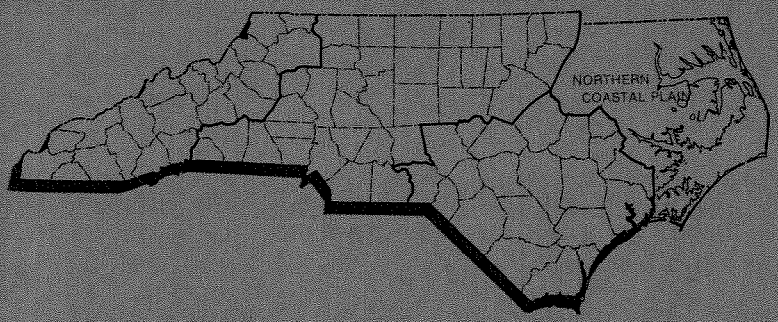
Forest Statistics for the Northern Coastal Plain of North Carolina, 1990

Michael T. Thompson



NORTHERN COASTAL PLAIN



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Southeastern Forest Experiment Station
P.O. Box 2680
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ERRATA SHEET

FOREST STATISTICS FOR THE NORTHERN COASTAL PLAIN OF NORTH CAROLINA, 1990

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Note that the values for Sweetgum in tables 41 and 42 are shown one line below their correct position.

Forest Statistics for the Northern Coastal Plain of North Carolina, 1990

Michael T. Thompson, Forester
Forest Inventory and Analysis
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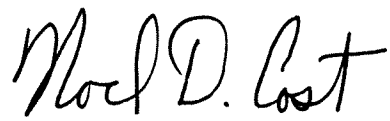
Foreword

This report highlights the principal findings of the sixth forest survey of the Northern Coastal Plain of North Carolina. Field work began in September 1989 and was completed in February 1989. Five previous surveys, completed in 1937, 1955, 1963, 1974, and 1984, provide statistics for measuring changes and trends over the past 53 years. The primary emphasis in this report is on the changes and trends since 1984. Previously reported figures have been adjusted to provide the best estimate of change.

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

The 23-county area covered by this report is one of four survey units in North Carolina. A similar report, USDA Forest Service Resource Bulletin SE-111, has been issued for the Southern Coastal Plain of North Carolina. Comparable reports for the other two units will be issued as the statewide inventory progresses. When completed, the inventory will provide updated statistics on the timber resource for all of North Carolina.

The Southeastern Station gratefully acknowledges the cooperation and assistance provided by the North Carolina Department of Environment, Health, and Natural Resources, Division of Forest Resources, in collecting field data. Appreciation is also expressed for the excellent cooperation of other public agencies, forest industry, and other private landowners in providing information and access to the sample locations.



Noel D. Cost
Project Leader

Contents

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

Since 1984 in the Northern Coastal Plain of North Carolina--

. area of timberland has remained stable at nearly 3.8 million acres, 56 percent of the land area in this 23-county region. Almost 48,000 acres were converted to timberland, but some 41,000 acres of timberland were converted to other uses. These statistics indicate a substantial reduction in the rate of timberland clearing since the previous survey period. Between 1974 and 1984, more than 382,000 acres of timberland were diverted to other land uses.

• area of timberland held by nonindustrial private forest (NIPF) landowners declined by 29,000 acres, or by slightly more than 1 percent. NIPF owners now control 2.5 million acres, or two-thirds of the timberland in the region. Within the NIPF category, area of farmer-owned timberland dropped 7 percent to under 1.1 million acres, and area of timberland owned by other corporations fell by 12 percent to 436,000 acres. Timberland held by other individuals rose by 11 percent to over 1.0 million acres. Forest industry holdings declined 5 percent and presently total 908,000 acres. Timberland controlled by public agencies increased 35 percent to 323,000 acres, and now accounts for over 8 percent of timberland in the region.

• area of timberland classified as a pine type increased by 6 percent to over 1.5 million acres. This gain resulted from a 32-percent jump in the area of planted pine stands. Pine plantations currently account for 44 percent of all pine stands in the region, compared with 35 percent in the previous period. Area of the loblolly pine type--by far the most extensive pine type in the region--increased by 120,000 acres to over 1.2 million acres and was responsible for nearly all the gain in pine-type area. Area of the pond pine type fell 6 percent to 273,000 acres. The area supporting oak-pine forest types increased by over 10 percent to 532,000 acres. Area of hardwood forest types dropped 8 percent to 1.7 million acres.

• over 85,000 acres were harvested annually and retained in timberland. The mean annual rate of final harvest has increased 32 percent since 1974-1984. Hardwood stands accounted for 45 percent of the total annual harvest. On the average, pine plantations and natural pine stands together constituted 42 percent of the area harvested each year and oak-pine stands made up 13 percent. Commercial thinning, primarily in pine plantations on forest industry land, occurred on an average of 18,000 acres annually. Partial harvests and other types of timber cutting occurred on an additional 22,000 acres annually. Natural disturbances such as fire, insects, and disease affected almost 30,000 acres yearly.

• the annual rate of stand regeneration increased from 53,000 acres to 94,000 acres per year, or by 78 percent. New planted and natural pine stands were established on more than 39,000 acres a year--slightly more than the area of pine harvested. The annual rate of planting across all ownerships has increased by 40 percent from 26,000 to 36,000 acres per year. All of the gain in artificial regeneration occurred on NIPF land, where annual planting rates almost tripled--climbing from under 7,000 to almost 19,000 acres per year. This continues a trend observed in the previous survey, indicating substantial improvement in pine regeneration on this ownership. The area planted on land managed by forest industry dropped 10 percent to 17,000 acres annually. The average annual rate of natural regeneration for all species rose from 27,000 to over 58,000 acres.

• average basal area of live trees 5.0 inches d.b.h. and larger has remained stable at 83 sauare feet ner acre. Basal area increased in the pine types, but decreased in the oak-pine and hardwood forest types. Current merchantable net volume per acre of softwoods and hardwoods averages 1,904 cubic feet per acre. Area in stands classified as fully stocked increased 5 percent to 2.1 million acres, whereas area in stands classified as medium stocked declined 9 percent to 1.2 million acres. Poorly stocked stands were up 5 percent to 475,000 acres and presently account for 13 percent of the total timberland area.

• volume of softwood growing stock increased from 2.9 to 3.1 billion cubic feet, or by 6 percent. Volume of growing stock of loblolly pine, the dominant species in the region, rose 9 percent to 2.4 billion cubic feet and accounted for nearly all of the gain in softwood volume. Volume of pond pine, the second leading softwood species, declined 5 percent to 403 million cubic feet. Cypress volume remained stable at 217 million cubic feet. Softwood inventories on NIPF land dropped by 8 percent to 1.9 billion cubic feet. In contrast, softwood inventories increased by 31 percent to 883 million cubic feet on forest industry land and by 52 percent to 344 million cubic feet on public land. Over three-fourths of the increase in softwood volume was in the 8- to lo-inch size classes, where volume increased by 23 percent. Softwood growing-stock volume in the 14-, 16-, and 18-inch classes decreased by 3 to 13 percent. Volume of softwood sawtimber increased by 4 percent to 11.6 billion board feet.

• volume of hardwood growing stock declined by 2 percent to less than 3.7 billion cubic feet. Tupelo and blackgum volume declined by 23 percent to 970 million cubic feet. However, tupelo and blackgum continue to comprise the region's dominant hardwood species group. Oak volume dropped 8 percent from 818 to 752 million cubic feet. The only major species to increase in volume were sweetgum and maple, which increased by 1 and 4 percent, respectively. Reductions in the 12-, 14-, and 16-inch diameter classes accounted for almost 83 percent of the total decline in hardwood volume. Moderate changes occurred in all other size classes. Declines of 4 and 12 percent in volume of hardwood growing stock on NIPF and forest industry land were nearly offset by a 69-percent increase in hardwood volume on public land. The current inventory of hardwood growing stock includes over 11 billion board feet of sawtimber, an increase of 1 percent.

• net annual growth of softwood growing stock was up by 38 percent from 129 to 178 million cubic feet. More than 75 percent of the increase in softwood growing stock occurred on land under forest industry control, where net annual growth soared from 47 to 84 million cubic feet. Net growth of softwoods on NIPF land rose 12 percent to 84 million cubic feet. Despite a substantial increase in softwood removals on forest industry land, softwood growth exceeded removals by 66 percent. Removals exceeded growth by 15 percent on NIPF ownerships, as compared with 28 percent during 1974-1984. For all ownerships combined, net annual growth of softwood growing stock exceeded removals by 18 percent. The increase in net annual growth of softwoods can be largely attributed to developing pine plantations, where growth more than doubled. In direct contrast to softwood growth,

net annual growth of hardwoods fell 14 percent to 121 million cubic feet. All of this reduction occurred on NIPF land, where hardwood growth decreased 19 percent to 91 million cubic feet. Hardwood removals exceeded growth by 10 percent across all ownerships--the first recorded overcut of hardwoods in this region. Mean net growth per year for softwoods and hardwoods jumped from 72 to 79 cubic feet per acre. Net annual growth for all species included 1.1 billion board feet of sawtimber.

- annual removals of softwood growing stock increased 18 percent from 129 to 152 million cubic feet. NIPF ownerships accounted for 64 percent of softwood removals, and forest industry ownerships made up most of the remaihder. The level of softwood removals was unchanged on NIPF land, whereas softwood removals from forest industry land increased 64 percent to more than 50 million cubic feet. Mean annual removals of hardwood growing stock increased to 133 million cubic feet since the previous survey period, a gain of 57 percent. Hardwood removals were up across all ownerships. Growing-stock removals included 675 million board feet of softwood sawtimber and 475 million board feet of hardwood sawtimber.

- annual mortality of softwood growing stock averaged 19 million cubic feet. Softwood mortality was down 30 percent, whereas annual mortality of hardwood growing stock increased 72 percent to almost 23 million cubic feet. Softwood mortality reduced gross growth by 10 percent. Hardwood mortality reduced gross growth by 16 percent. Annual mortality of growing stock included 51 million board feet of softwood sawtimber and 56 million board feet of hardwood sawtimber.

How the Inventory is Made

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

1. Initial estimates of forest and nonforest areas were based on the classification of 37,689 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 2,503 of the 16-point clusters was ground checked, and a linear regression was fitted to the data to develop the relationship between the photo and ground classification of the subsample. This procedure provides a means for adjusting the initial estimates of area for change in land use since date of photography and for photo misclassification.

2. Estimates of timber volume and forest classification were based on measurements recorded at 1,378 ground sample locations systematically distributed on timberland. The plot design at each location was based on a cluster of 10 points. In most cases, variable plots, established by using a basal-area factor of 37.5 square feet per acre, were systematically spaced within a single forest condition at 5 of the 10 cluster points. Trees less than 5 inches d.b.h. were tallied on a fixed-radius plot around each point center.

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

4. Felled trees were measured at 38 active cutting operations. These data will supplement the standing-tree volume data and be used to generate utilization factors for product and species groups. Forest biomass estimates were made from equations developed by the Utilization of Southern Timber Research Work Unit of the Southeastern Forest Experiment Station in Athens, GA.

5. Estimates of growth, removals, and mortality were determined from the remeasurement of 1,410 permanent sample plots established in the fifth survey.

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

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

Reliability of the Data

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

	Percent
Per million acres of timberland	0.83
Per billion cubic feet of growing stock	6.60
Per billion cubic feet of net annual growth	1.42
Per billion cubic feet of annual removals	3.38

Sampling errors for county and unit totals,[a] in terms of one standard error, Northern Coastal Plain of North Carolina, 1990

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
		Sampling error[b]		
Beaufort	1.22	7.17	7.65	17.72
Bertie	1.14	7.77	7.79	21.92
Camden	4.30	16.36	13.43	56.56
Carteret	3.06	14.81	14.47	34.44
Chowan	3.00	22.69	19.70	58.66
Craven	1.17	8.48	8.85	20.22
Currituck	4.62	18.77	18.75	46.32
Dare	2.72	12.19	12.36	66.00
Edgecombe	1.87	15.20	14.34	22.33
Gates	1.41	11.94	11.92	34.44
Halifax	1.35	9.64	9.26	20.97
Hertford	1.73	15.27	13.50	36.48
Hyde	2.33	11.25	12.31	55.96
Martin	1.71	11.91	11.79	22.97
Nash	1.58	12.42	12.31	24.58
Northampton	1.47	9.13	9.69	33.40
Pamlico	2.09	16.15	16.65	39.04
Pasquotank	7.82	27.13	24.01	49.06
Perquimans	4.03	17.72	21.57	31.91
Pitt	1.72	13.10	10.46	21.01
Tyrrell	1.53	11.24	15.48	50.32
Washington	3.10	15.85	16.73	54.58
Wilson	2.46	15.73	15.98	31.24
Total	.42	2.56	2.63	6.34

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

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

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

SE = Specified sampling error in table.

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

Definitions of Terms

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

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

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

Bole. That portion of a tree between a l-foot stump and a 4-inch top diameter outside bark (d.o.b.) in trees 5.0 inches d.b.h. and larger.

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

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

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

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

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

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

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

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

Commercial forest land.(see: Timberland).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Desirable tree. A tree that qualifies as growing stock and has no serious defects in quality limiting present or prospective use; is of relatively high vigor (30 percent or more live crown ratio); is compatible with the site and physiographic class; has a total board-foot loss not to exceed 15 percent in softwoods or 25 percent in hardwoods as a result of severe sweep, crook, or lean; and has a relatively clear bole.

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

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

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

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

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

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

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

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

Industrial wood. All roundwood products except fuelwood.

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

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

Land area. The area of dry land and land temporarily or partly covered by water such as marshes, swamps, and river floodplains (omitting tidal flats below mean high tide), streams, sloughs, estuaries, and canals less than one-eighth of a statute mile in width, and lakes, reservoirs, and ponds less than 40 acres in area.

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

Live-tree volume. Volume (cubic feet) of wood above the ground line in live trees 1.0 inch d.b.h. and larger. The volume in twigs and lateral limbs smaller than 0.5 inch in diameter at the point of occurrence on sapling-size trees is included but is excluded on poletimber and sawtimber-size trees.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Rough trees. Live trees of commercial species that do not contain at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of roughness, poor form, splits, and cracks, and with less than one-third of the gross board-foot tree volume in sound material; and live trees of noncommercial species.

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

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

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

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

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

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

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

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

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

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

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

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

Class 1. 165 or more cubic feet per acre.

Class 2. 120 to 164 cubic feet per acre.

Class 3. 85 to 119 cubic feet per acre.

Class 4. 50 to 84 cubic feet per acre.

Class 5. 20 to 49 cubic feet per acre.

Softwoods. Gymnosperms; in the order Coniferales, usually evergreen (includes the genus Taxodium which is deciduous), having needles or scalelike leaves.

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

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

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

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

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

Sapling-seedling stands. Stands at least 16.7 percent stocked with live trees of which more than half of total stocking is saplings and seedlings.

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

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

Fully stocked. 100 percent or more stocking.

Medium stocked. 60 to 99 percent stocking.

Poorly stocked. Less than 60 percent stocking.

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

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

Timber products. Roundwood products and byproducts.

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

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

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

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

Unproductive forest land. (see: Woodland).

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

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

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

Stocking Standard

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

Conversion factors

Cubic feet of wood per average cord (excluding bark)

D.b.h. class	All species	Pine	Other softwood	Hardwood
6	60.5	61.0	68.2	60.0
8	68.4	68.1	76.0	68.4
10	73.4	73.1	81.4	73.4
12	76.7	76.7	85.2	76.4
14	79.0	79.4	88.2	78.4
16	80.8	81.6	90.4	79.8
18	82.2	83.3	92.3	80.8
20	83.3	84.8	93.8	81.5
22	84.3	86.0	95.1	82.1
24+	85.6	87.6	98.1	83.2
Average	75.3	74.6	89.4	75.0

Metric equivalents of units used in this report

1 acre = 4,046.86 square meters or 0.404686 hectare
1 cubic foot = 0.028317 cubic meter
1 inch = 2.54 centimeters or 0.0254 meter
Breast height (4.5 feet) = 1.4 meters above ground level
1 square foot = 929.03 square centimeters or 0.0929 square meter
1 square foot per acre basal area = 0.229568 square meter per hectare
1 pound = 0.454 kilogram
1 ton = 0.907 metric ton

County Tables

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

Table 1--Area, by county and land class, Northern Coastal Plain of North Carolina, 1990

County	All land[a]	Forest land				Nonforest land[b]
		Total	Timberland	Woodland	Reserved timberland	
	Acres					
Beaufort	528,704	325,201	323,964	--	1,237	203,503
Bertie	448,595	315,327	311,563	--	3,764	133,268
Camden	153,913	88,958	74,511	--	14,447	64,955
Carteret	336,365	174,135	157,678	4,858	11,599	162,230
Chowan	116,192	53,678	53,678		--	62,514
Craven	448,941	321,816	310,504		11,312	127,125
Currituck	163,578	64,343	63,038	1,305	--	99,235
Dare	250,106	161,637	142,212	18,635	790	88,469
Edgecombe	323,642	149,103	149,103	--	--	174,539
Gates	216,480	154,763	144,759		10,004	61,717
Halifax	463,162	281,927	279,652		2,275	181,235
Hertford	227,898	147,420	147,420	--	--	80,478
Hyde	399,501	235,791	235,119	672		163,710
Martin	294,886	175,218	175,218	--		119,668
Nash	345,344	180,496	180,496		--	164,848
Northampton	344,525	211,383	211,383	--		133,142
Pamlico	218,067	133,777	132,421	1,356	--	84,290
Pasquotank	145,920	49,813	49,813		--	96,107
Perquimans	157,696	76,070	76,070	--	--	81,626
Pitt	420,173	208,306	208,306		--	211,867
Tyrrell	260,364	153,234	153,112		122	107,130
Washington	212,243	92,723	87,254	4,741	728	119,520
Wilson	239,533	100,588	100,588	--	--	138,945
Total	6,715,828	3,855,707	3,767,862	31,567	56,278	2,860,121

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

[b] Includes 65,575 acres of water according to Forest Survey standards of area classification, but defined by the Bureau of Census as land.

Table 2--Area of timberland, by county and ownership class, Northern Coastal Plain of North Carolina, 1990

County	All ownerships	Ownership class							
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry[a]	Other private		
							Farmer	Corporate	Individual
					Acres				
Beaufort	323,964	--	--	3,309	88	168,499	34,561	32,257	85,250
Bertie	311,563	--	--	a,349	203	114,086	104,675	38,296	45,954
Camden	74,511		9,203	--	--	15,927	24,691	2,743	21,947
Carteret	157,678	44,109	4,935	71	121	41,262	7,072	28,286	31,822
Chowan	53,678	--	20	181	200	11,555	18,253	5,215	la,254
Craven	310,504	44,952	5,170	4,363	454	108,056	66,379	--	81,130
Currituck	63,038	--	1,694	10,581	117	4,902	20,013	2,859	22,872
Dare	142,212	--	126,113	372	9	--	--	2,620	13,098
Edgecombe	149,103	--	--	173	221	9,631	68,175	8,181	62,722
Gates	144,759	--	11,841	3,765	--	49,004	43,718	--	36,431
Halifax	279,652	--	27	2,047	342	43,904	136,110	13,889	83,333
Hertford	147,420	--	220	377	446	33,869	63,856	9,122	39,530
Hyde	235,119	--	8,260	14,205	--	31,748	26,314	98,676	55,916
Martin	175,218	--	--	725	38	62,948	76,816	9,912	24,779
Nash	180,496	--	--	93	91	7,955	62,405	8,915	101,037
Northampton	211,383	--	--	376	322	29,224	107,092	11,899	62,470
Pamlico	132,421	--	--	1,000	99	47,058	12,964	28,088	43,212
Pasquotank	49,813	--	3,831	la5	123	3,666	23,338	4,668	14,002
Perquimans	76,070	--	600	--	61	22,730	24,953	5,545	22,181
Pitt	208,306	--	10	36	430	21,966	80,541	21,684	83,639
Tyrrell	153,112	--	5,707	50	38	36,362	12,060	84,422	14,473
Washington	87,254	--	1,000	361	61	41,366	15,563	15,563	13,340
Wilson	100,588	--	--	2	836	1,894	32,619	2,718	62,519
Total	3,767,862	89,061	178,631	50,621	4,300	907,612	1,062,168	435,558	1,039,911

[a]Includes 26,509 acres of other private land under long-term lease.

Table 3--Area of timberland, by county and forest-type group, Northern Coastal Plain of North Carolina, 1990

county	All type groups	Forest-type group								
		White pine-hemlock	Spruce-fir	Longleaf-slash	Loblolly-shortleaf	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch
					Acres					
Beaufort	323,964	--	--	7,376	203,213	36,596	30,969	45,810	--	--
Bertie	311,563	--	--	--	121,930	35,743	59,325	89,308	5,257	--
Camden	74,511	--	--	--	8,673	2,744	26,015	37,079	--	--
Carteret	157,678	--	--	10,788	87,396	19,442	10,133	29,919	--	--
Chowan	53,678	--	--	--	25,188	10,154	15,548	2,788	--	--
Craven	310,504	--	--	5,181	121,961	65,301	23,169	94,892	--	--
Currituck	63,038	--	--	--	20,978	11,645	8,694	21,721	--	--
Dare	142,212	--	--	--	69,889	8,049	9	64,265	--	--
Edgecombe	149,103	--	--	--	40,428	16,362	35,672	48,460	8,181	--
Gates	144,759	--	--	--	57,052	21,667	16,811	49,229	--	--
Halifax	279,652	--	--	--	103,600	46,860	77,193	49,221	2,778	--
Hertford	147,420	--	--	--	62,426	31,557	31,556	21,881	--	--
Hyde	235,119	--	--	--	133,084	26,096	9,868	66,071	--	--
Martin	175,218	--	--	--	61,938	34,690	21,085	55,027	2,478	--
Nash	180,496	--	--	--	56,142	38,311	50,291	35,752	--	--
Northampton	211,383	--	--	--	63,938	36,698	69,112	37,176	4,459	--
Pamlico	132,421	--	--	--	80,027	8,641	13,064	30,689	--	--
Pasquo tank	49,813	--	--	--	6,501	916	14,920	22,808	4,668	--
Perquimans	76,070	--	--	--	28,206	11,691	13,993	22,180	--	--
Pitt	208,306	--	--	3,097	62,461	34,073	42,106	63,471	3,098	--
Tyrrell	153,112	--	--	--	58,651	19,682	--	74,779	--	--
Washington	87,254	--	--	--	31,001	6,882	6,730	42,641	--	--
Wilson	100,588	--	--	--	31,793	8,157	40,773	19,865	--	--
Total	3,767,862	--	--	26,442	1,536,476	531,957	617,036	1,025,032	30,919	--

Table 4--Area of timberland, by county and stand-size class, Northern Coastal Plain of North Carolina, 1990

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
	Acres				
Beaufort	323,964	137,552	109,978	73,112	3,322
Bertie	311,563	142,221	99,199	59,628	10,515
Camden	74,511	35,662	27,433	11,416	--
Carteret	157,678	66,756	38,621	43,861	8,440
Chowan	53,678	20,767	10,431	22,480	--
Craven	310,504	147,157	75,224	82,556	5,567
Currituck	63,038	36,764	4,975	21,299	--
Dare	142,212	66,889	53,983	18,721	2,619
Edgecombe	149,103	56,860	25,668	61,120	5,455
Gates	144,759	57,785	38,003	48,971	--
Halifax	279,652	118,129	76,168	85,355	--
Hertford	147,420	31,610	32,394	53,416	--
Hyde	235,119	97,998	78,847	47,031	11,243
Martin	175,218	87,483	25,276	59,981	2,478
Nash	180,496	80,009	47,225	53,262	--
Northampton	211,383	91,090	53,379	66,914	--
Pamlico	132,421	51,251	39,679	30,246	11,245
Pasquotank	49,813	36,728	--	13,085	--
Perquimans	76,070	30,566	19,675	25,829	
Pitt	208,306	92,486	32,396	72,725	10,699
Tyrrell	153,112	55,481	55,799	39,420	2,412
Washington	87,254	34,763	18,896	26,926	6,669
Wilson	100,588	38,893	21,746	34,513	5,436
Total	3,767,862	1,644,900	984,995	1,051,867	86,100

Table S--Area of timberland, by county and site class, Northern Coastal Plain of North Carolina, 1990

County	All classes	Site class (cubic feet per acre per year)				
		>164	120-164	85-119	SO-84	20-49
	Acres					
Beaufort	323,964	--	4,608	134,451	168,042	16,863
Bertie	311,563	--	10,364	155,893	140,200	5,106
Camden	74,511	--	2,744	16,902	54,865	--
Carteret	157,678	--	--	14,715	83,026	59,937
Chowan	53,678	--	5,216	27,996	17,859	2,607
Craven	310,504	--	9,256	121,343	136,208	43,697
Currituck	63,038	--	--	22,989	34,122	5,927
Dare	142,212	--	--	8,049	74,947	59,216
Edgecombe	149,103	--	22,037	50,385	76,681	--
Gates	144,759	--	2,429	53,051	81,026	8,253
Halifax	279,652	--	19,442	112,382	145,219	2,609
Hertford	147,420	--	--	28,515	118,905	--
Hyde	235,119	--	3,290	21,790	100,480	109,559
Martin	175,218	--	12,390	62,188	100,640	--
Nash	180,496	--	11,887	89,332	76,305	2,972
Northampton	211,383	--	7,435	85,123	115,850	2,975
Pamlico	132,421	--	2,160	46,259	41,070	42,932
Pasquotank	49,813	--	--	33,794	16,019	--
Perquimans	76,070	--	8,387	30,833	34,077	2,773
Pitt	208,306	--	12,391	105,039	90,866	10
Tyrrell	153,112	--	2,412	23,634	76,186	50,880
Washington	87,254	--	2,223	32,805	40,110	12,116
Wilson	100,588	--	5,436	36,176	58,976	--
Total	3,767,862	--	144,107	1,313,644	1,881,679	428,432

Table 6--Area of timberland, by county and stocking class of growing-stock trees, Northern Coastal Plain of North Carolina, 1990

County	All classes	Stocking class (percent)[a]				
		>130	100-130	60-99	16.7-59	<16.7
		Acres				
Beaufort	323,964	48,322	171,018	87,478	13,824	3,322
Bertie	311,563	33,331	167,102	87,246	13,369	10,515
Camden	74,511	8,231	28,316	30,620	7,344	--
Carteret	157,678	14,323	38,303	80,847	13,800	10,405
Chowan	53,678	5,235	28,569	14,460	5,414	--
Craven	310,504	37,847	108,220	102,903	52,280	9,254
Currituck	63,038	5,310	37,171	11,436	9,121	--
Dare	142,212	24,086	45,861	56,229	10,734	5,302
Edgecombe	149,103	16,583	62,418	56,466	8,181	5,455
Gates	144,759	37,021	61,649	37,835	8,254	--
Halifax	279,652	24,999	144,683	93,666	16,304	--
Hertford	147,420	15,997	69,651	43,523	18,243	--
Hyde	235,119	33,125	81,909	60,864	47,978	11,243
Martin	175,218	18,842	86,718	54,293	12,887	2,478
Nash	180,496	17,830	62,178	82,658	17,830	--
Northampton	211,383	16,353	92,195	84,987	17,848	--
Pamlico	132,421	26,811	43,460	37,942	10,803	13,405
Pasquotank	49,813	9,334	12,169	18,059	10,251	--
Perquimans	76,070	8,456	31,235	33,607	2,772	--
Pitt	208,306	27,880	73,582	72,983	23,162	10,699
Tyrrell	153,112	17,654	62,433	26,426	39,363	7,236
Washington	87,254	6,881	48,999	19,049	4,656	7,669
Wilson	100,588	10,873	46,223	29,902	8,154	5,436
Total	3,767,862	465,324	1,604,068	1,223,479	372,572	102,419

[a] See stocking standards on page 13.

Table 7--Volume of growing stock and sawtimber on timberland, by county and specie6 group, Northern Coastal Plain of North Carolina, 1990

County	Growing stock					Sawtimber				
	All species	Pine	Other -softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet[a]					Thousand board feet				
Beaufort	575,787	330,626	11,279	172,256	61,626	1,686,446	1,007,489	49,921	437,571	191,465
Bertie	626,369	198,339	24,106	287,843	116,081	2,083,801	616,855	122,197	945,364	399,385
Camden	167,203	34,495	6,372	110,462	15,874	557,682	181,186	25,615	303,703	47,178
Carteret	228,487	156,203	- -	57,220	15,064	826,774	655,050	- -	130,608	41,116
Chowan	92,866	50,457	1,376	33,921	7,112	359,074	199,864	6,815	120,224	32,171
Craven	518,176	279,221	9,658	174,559	54,738	1,780,707	1,005,790	47,494	536,099	191,324
Currituck	120,170	49,811	7,705	56,022	6,632	429,463	245,497	32,459	137,138	14,369
Dare	265,362	117,824	21,891	122,369	3,278	748,566	426,082	99,283	205,906	17,295
Edgecombe	237,071	80, a26	5,512	88,807	61,926	777,023	272,627	25,894	286,513	191,989
Gates	311,410	106,925	19,020	155,354	30,111	938,067	352,705	90,914	415,188	79,260
Halifax	513,416	203,384	3,233	188,301	118,498	1,826,719	807,962	17,528	635 ,a34	365,395
Hertford	251,946	96,940	6,201	96,222	52,583	867,333	380,206	31,486	282,269	173,372
Hyde	401,119	241,497	13,109	133,390	13,123	1,287,454	854,892	65,032	306,519	61,011
Martin	355,772	87,689	30,943	196,506	40,634	1,191,795	318,320	161,775	577,533	134,167
Nash	340, 828	157,441	7,320	100,828	75,239	1,331,708	684,363	36,892	333,518	276,935
Northampton	351,848	144,284	2,786	112,041	92,737	1,188,485	518,430	14,895	354,046	301,114
Pamlico	215,296	116,768	3,290	76,175	19,063	792,981	490,307	17,404	230,308	54,962
Pasquotank	106,788	26,146	6,497	68,842	5,303	406,551	141,649	25,795	220,031	19,076
Perquimans	120,869	37,391	7,706	53,579	22,193	315,384	94,395	33,816	119,006	68,167
Pitt	379,827	129,805	26,298	175,985	47,739	1,466,853	449,738	143,133	699,452	174,530
Tyrrell	272,983	107,160	25,031	129,091	11,701	740,485	373,724	57,166	272,649	36,946
Washington	161,285	39,147	17,004	92,048	13,086	512,140	153,274	59,439	259,723	39,704
Wilson	184,180	55,159	2,525	67,329	59,167	671,199	231,791	12,183	243,175	184,050
Total	6,799,058	2,847,538	258, a62	2,749,150	943,508	22,786,690	10,462,196	1,177,136	8,052,377	3,094,981

[a] Factors for converting to cords are shown on page 13.

Table 8--Average net annual growth of growing stock and sawtimber on timberland, by county and species group, Northern Coastal Plain of North Carolina, 1984-1989

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet					Thousand board feet				
Beaufort	34,856	26,456	216	6,232	1,952	146,313	115,534	1,144	22,236	7,399
Bertie	30,476	16,731	619	9,711	3,415	93,856	43,456	3,089	33,543	13,768
Camden	4,535	1,178	152	2,743	462	18,652	5,132	911	10,118	2,491
Carteret	8,666	5,857	--	2,415	394	33,878	24,654	--	6,915	2,309
Chowan	5,221	3,721	9	1,318	173	22,280	15,722	54	5,646	858
Craven	26,990	18,071	196	6,919	1,804	105,753	69,183	1,213	25,508	9,849
Currituck	3,481	1,394	131	1,723	233	14,232	8,005	566	5,109	552
Dare	7,633	3,355	474	3,778	26	31,054	15,261	1,848	13,790	155
Edgecombe	10,775	5,436	139	2,786	2,414	40,023	16,377	721	13,243	9,682
Gates	13,144	7,366	501	4,327	950	43,712	21,567	1,937	15,963	4,245
Halifax	24,009	13,470	45	6,565	3,929	75,839	38,103	263	21,207	16,266
Hertford	11,035	6,525	115	2,911	1,484	36,041	18,290	647	11,454	5,650
Hyde	16,134	10,173	274	5,357	330	73,553	51,792	1,413	18,551	1,797
Martin	15,047	6,231	1,173	5,995	1,648	56,896	19,672	3,744	25,377	8,103
Nash	13,282	6,647	220	3,916	2,499	56,342	28,434	1,183	16,646	10,079
Northampton	16,249	8,894	74	4,320	2,961	59,231	28,471	421	17,091	13,248
Pamlico	8,830	5,407	81	2,776	566	31,300	20,909	447	7,982	1,962
Pasquotank	2,666	783	55	1,649	179	15,346	6,810	310	6,992	1,234
Perquimans	6,114	3,476	207	1,493	938	24,282	14,343	966	5,163	3,810
Pitt	16,452	9,341	403	5,087	1,621	70,829	36,084	2,249	25,175	7,321
Tyrrell	9,737	5,277	776	3,334	350	36,297	21,600	2,544	10,348	1,805
Washington	6,618	2,962	764	2,644	248	27,740	12,318	3,054	11,476	892
Wilson	7,158	2,765	7s	2,144	2,174	37,105	14,242	406	12,417	10,040
Total	299,108	171,516	6,699	90,143	30,750	1,150,554	645,959	29,130	341,950	133,515

Table g--Average annual removals of growing stock and sawtimber on timberland, by county and species group, Northern Coastal Plain of North Carolina, 1984-1989

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet					Thousand board feet				
Beaufort	24,678	14,671	297	6,529	3,181	75,701	39,440	1,750	20,860	13,651
Bertie	27,714	14,890	527	6,645	5,652	114,456	68,875	1,425	24,786	19,370
Camden	4,414	129	286	3,000	999	18,733	658	1,506	12,069	4,500
Carteret	10,264	9,143	- -	1,040	a l	32,504	30,152	- -	1,916	436
Chowan	3,914	573	- -	2,660	681	14,780	2,590	- -	9,861	2,329
Craven	19,920	14,012	- -	4,572	1,336	63,131	40,554	- -	16,738	5,839
Currituck	6,212	3,542	- -	1,258	1,412	27,877	19,102	- -	3,522	5,253
Dare	2,678	1,153	1,131	394	- -	9,894	5,463	3,441	990	- -
Edgecombe	22,405	7,043	944	9,016	5,402	92,019	34,323	5,226	35,404	17,066
Gates	9,253	7,310	- -	1,125	818	36,555	32,462	- -	3,590	503
Halifax	25,859	10,287	- -	9,222	6,350	114,947	51,485	- -	36,480	26,982
Hertford	9,187	1,322	514	5,125	2,226	29,792	5,326	2,523	15,953	5,990
Hyde	2,528	2,053	- -	47.5	- -	7,540	6,531	- -	1,009	- -
Martin	21,121	14,771	- -	5,537	a13	82,291	59,863	- -	20,083	2,345
Nash	20,034	8,983	- -	6,565	4,486	74,458	38,658	- -	20,617	15,183
Northampton	12,756	2,943	1,002	4,913	3,898	48,953	14,877	4,589	14,741	14,746
Pamlico	9,384	5,047	- -	4,263	74	26,134	18,634	--	7,500	- -
Pasquotank	6,993	2,750	- -	3,076	1,167	26,721	12,196	--	9,144	5,381
Perquimans	6,541	3,446	- -	1,408	1,687	17,745	7,690	- -	4,076	5,979
Pitt	19,003	12,289	591	3,562	2,561	67,542	44,697	3,109	ii ,a92	7,844
Tyrrell	5,639	3,850	445	1,155	la9	24,963	20,514	2,286	1,380	783
Washington	2,906	506	96	1,216	1,088	8,269	2,147	472	2,726	2,924
Wilson	11,002	5,111	- -	4,446	1,445	44,228	24,629	- -	17,042	2,557
Total	284,405	145,824	5,833	87,202	45,546	1,059,233	580,866	26,327	292,379	159,661

Table 10--Area of timberland, by forest type and ownership class, Northern Coastal Plain of North Carolina, 1990

Forest type	All ownerships	Ownership class				
		National forest	Other public	Forest industry	Forest industry-leased	Other private
	Acres					
Softwood types						
White pine-hemlock	--	--	--	--	--	--
Spruce-fir	--	--	--	--	--	--
Longleaf pine	19,066	12,281	1,723	1,965	--	3,097
Slash pine	7,376	--	--	--	5,072	2,304
Loblolly pine	1,257,885	15,737	10,238	551,534	19,012	661,364
Shortleaf pine	6,012	--	--	--	--	6,012
Virginia pine	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--
Eastern redcedar	--	--	--	--	--	--
Pond pine	272,579	25,076	83,640	32,485	--	131,378
Spruce pine	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--
Total	1,562,918	53,094	95,601	585,984	24,084	804,155
Hardwood types						
Oak-pine	531,957	20,229	20,305	64,718	1,020	425,685
Oak-hickory	617,036	6,398	7,437	55,623	1,405	546,173
Chestnut oak	--	--	--	--	--	--
Southern scrub oak	--	--	--	--	--	--
Oak-gum-cypress	1,025,032	9,340	110,209	170,590	--	734,893
Elm-ash-cottonwood	30,919	--	--	4,188	--	26,731
Maple-beech-birch	--	--	--	--	--	--
Total	2,204,944	35,967	137,951	295,119	2,425	1,733,482
All types	3,767,862	89,061	233,552	881,103	26,509	2,537,637

Table 11--Area of timberland, by ownership and stocking classes of growing-stock trees, Northern Coastal Plain of North Carolina, 1990

Ownership class	All classes	Stocking class (percent)[a]				
		>130	100-130	60-99	16.7-59	<16.7
		Acres				
National forest	89,061	10,551	15,042	29,746	30,782	2,940
Other public	233,552	32,778	76,049	84,480	35,186	5,059
Forest industry	881,103	134,692	460,343	209,518	49,239	27,311
Forest industry-leased	26,509	--	19,005	6,099	--	1,405
Other private	2,537,637	287,303	1,033,629	893,636	257,365	65,704
All ownerships	3,767,862	465,324	1,604,068	1,223,479	372,572	102,419

[a]See stocking standards on page 13.

Table 12--Area of timberland, by forest type and stand-size class, Northern Coastal Plain of North Carolina, 1990

Forest type	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
		Acres			
Softwood types					
White pine-hemlock	--				
Spruce-fir	--	--	--	--	--
Longleaf pine	19,066	10,087	2,941	6,038	--
Slash pine	7,376	7,376	--	--	--
Loblolly pine	1,257,885	474,378	441,075	316,248	26,184
Shortleaf pine	6,012	6,012	--	--	--
Virginia pine		--	--	--	--
Sand pine					
Eastern redcedar	--				
Pond pine	272,579	105,088	113,704	41,857	11,930
Spruce pine	--				
Pitch pine		--	--	--	--
Table Mountain pine		--	--	--	--
Total	1,562,918	602,941	557,720	364,143	38,114
Hardwood types					
Oak-pine	531,957	166,491	91,392	264,960	9,114
Oak-hickory	617,036	252,610	135,933	216,241	12,252
Chestnut oak	--	--	--	--	--
Southern scrub oak	--	--	--	--	--
Oak-gum-cypress	1,025,032	607,283	195,762	195,367	26,620
Elm-ash-cottonwood	30,919	15,575	4,188	11,156	--
Maple-beech-birch	--	--	--	--	--
Total	2,204,944	1,041,959	427,275	687,724	47,986
All types	3,767,862	1,644,900	984,995	1,051,867	86,100

Table 13--Area of timberland, by stand-age and broad management classes, all ownerships, Northern Coastal Plain of North Carolina, 1990

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
0-10	706,380	233,239	74,484	179,651	115,883	103,123
11-20	563,071	285,206	92,620	60,920	74,650	49,675
21-30	311,086	140,933	79,025	26,298	37,395	27,435
31-40	298,189	21,338	147,615	30,493	41,704	57,039
41-50	353,426	--	163,247	34,772	66,681	88,726
51-60	393,974	--	110,432	27,046	99,530	156,966
61-70	284,836	--	54,588	42,762	46,429	141,057
71-80	194,109	--	41,749	15,537	22,415	114,408
81+	242,213	--	29,802	30,443	25,921	156,047
No manageable stand	420,578	2,718	85,922	84,035	86,428	161,475
All classes	3,767,862	683,434	879,484	531,957	617,036	1,055,951

Table 14--Area of timberland, by stand-age and broad management classes, public ownerships, Northern Coastal Plain of North Carolina, 1990

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
0-10	8,244	--	2,941	600	2,020	2,683
11-20	19,139	1,729	11,077	2,116	--	4,217
21-30	11,171	--	7,000	--	61	4,110
31-40	40,280	--	37,979	--	--	2,301
41-50	43,008	--	31,431	--	5,024	6,553
51-60	40,704	--	18,581	20	338	21,765
61-70	40,179	--	8,725	10,193		21,261
71-80	31,867	--	2,683	1,729	6,392	21,063
81+	27,117	--	8,902	5,366	--	12,849
No manageable stand	60,904	--	17,647	20,510		22,747
All classes	322,613	1,729	146,966	40,534	13,835	119,549

Table 15--Area of timberland, by stand-age and broad management classes, forest industry,[a] Northern Coastal Plain of North Carolina, 1990

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
0-10	178,456	128,339	3,321	17,746	17,717	11,333
11-20	266,042	206,820	16,312	16,226	9,709	16,975
21-30	160,533	126,336	17,027	4,299	6,319	6,552
31-40	56,483	18,566	26,219	5,580	3,321	2,797
41-50	26,697	--	13,034	2,583	--	11,080
51-60	37,352	--	14,024	--	7,322	16,006
61-70	39,208	--	6,217	8,002	--	24,989
71-80	30,975	--	7,552	--	2,704	20,719
81+	44,990	--	3,817	1,485	3,615	36,073
No manageable stand	66,876	--	22,484	9,817	6,321	28,254
All classes	907,612	480,061	130,007	65,738	57,028	174,778

[a] Includes 26,509 acres of other private land under long-term lease.

Table 16--Area of timberland, by stand-age and broad management classes, other private ownerships,[a] Northern Coastal Plain of North Carolina, 1990

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
0-10	519,680	104,900	68,222	161,305	96,146	89,107
11-20	277,890	76,657	65,231	42,578	64,941	28,483
21-30	139,382	14,597	54,998	21,999	31,015	16,773
31-40	201,426	2,772	83,417	24,913	38,383	51,941
41-50	283,721	--	118,782	32,189	61,657	71,093
51-60	315,918	--	77,827	27,026	91,870	119,195
61-70	205,449	--	39,646	24,567	46,429	94,807
71-80	131,267	--	31,514	13,808	13,319	72,626
81+	170,106	--	17,083	23,592	22,306	107,125
No manageable stand	292,798	2,718	45,791	53,708	80,107	110,474
All classes	2,537,637	201,644	602,511	425,685	546,173	761,624

[a] Excludes 26,509 acres of other private land under long-term lease to forest industry.

Table 17--Area of timberland, by broad management and stand-volume classes, Northern Coastal Plain of North Carolina, 1990

Broad management class	All classes	Stand-volume class (cubic feet of growing stock per acre)				
		0-499	500-999	1000-1499	1500-1999	2000+
		Acres				
Pine plantation	683,434	263,197	78,163	95,659	101,615	144,800
Natural pine	879,484	177,418	112,985	58,586	55,839	474,656
Oak-pine	531,957	237,032	65,042	61,507	29,073	139,303
Upland hardwood	617,036	175,918	77,257	72,603	68,954	222,304
Lowland hardwood	1,055,951	219,704	90,394	67,668	95,967	582,218
All classes	3,767,862	1,073,269	423,841	356,023	351,448	1,563,281

Table 18--Volume of growing stock on timberland, by broad management class, species group, and stand-age class, Northern Coastal Plain of North Carolina, 1990

Broad management class and species group	All classes	NO manageable stand	Stand-age class (years)								
			O-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
			Thousand cubic feet								
Pine plantation											
Softwood	705,985	- -	11,939	377,868	273,913	42,265	- -	- -	- -	- -	- -
Hardwood	42,845	- -	2,638	17,133	22,565	509	- -	- -	- -	- -	- -
Total	748,830	- -	14,577	395,001	296,478	42,774	- -	- -	- -	- -	- -
Natural pine											
Softwood	1,633,786	17,913	10,081	82,133	147,546	269,224	419,890	306,348	179,920	125,063	75,668
Hardwood	316,984	327	1,534	7,030	22,134	51,253	65,438	71,475	41,504	35,284	21,005
Total	1,950,770	18,240	11,615	89,163	169,680	320,477	485,328	377,823	221,424	160,347	96,673
Oak-pine											
Softwood	330,548	27,929	13,718	22,173	20,002	24,025	40,880	30,950	63,516	17,724	69,631
Hardwood	344,359	10,168	26,584	11,151	24,161	25,315	45,394	35,763	74,120	25,278	66,425
Total	674,907	38,097	40,302	33,324	44,163	49,340	86,274	66,713	137,636	43,002	136,056
Upland hardwood											
Softwood	102,171	1,364	2,055	14,007	6,129	8,660	11,587	29,598	11,571	11,122	6,078
Hardwood	862,227	30,786	24,815	46,242	41,777	63,029	145,679	260,074	126,534	57,180	66,111
Total	964,398	32,150	26,870	60,249	47,906	71,689	157,266	289,672	138,105	68,302	72,189
Lowland hardwood											
Softwood	333,213	13,906	2,386	3,172	7,641	17,151	29,400	43,281	38,052	51,455	127,456
Hardwood	2,126,243	61,369	17,863	31,843	32,769	89,530	200,421	409,995	432,293	328,071	522,089
Total	2,460,153	75,275	20,259	35,015	40,410	106,681	229,821	453,276	470,345	379,526	649,545
All types											
Softwood	3,106,468	61,112	40,189	499,353	455,231	361,325	501,757	410,177	293,059	205,364	278,833
Hardwood	3,692,658	102,650	73,434	113,399	143,406	229,636	456,932	777,307	674,451	445,813	675,630
Total	6,799,058	163,762	113,623	612,752	598,637	590,961	958,689	1,187,484	967,510	651,177	954,463

Table 19--Average net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class, Northern Coastal Plain of North Carolina, 1984-1989

Broad management class[a] and species group	All classes	NO manageable stand	Stand-age class[a] (years)								
			O-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
			Thousand cubic feet								
Pine plantation											
Softwood	88,566	--	4,449	56,762	25,018	2,337	--	--	--	--	--
Hardwood	4,413	--	108	2,059	2,205	41	--	--	--	--	--
Total	92,979	--	4,557	58,821	27,223	2,378	--	--	--	--	--
Natural pine	62,326	700	569	12,459	8,694	11,697	12,424	7,957	4,265	2,457	1,104
Softwood	14,349	18	131	685	1,399	3,375	3,035	2,580	1,602	1,070	454
Hardwood	76,675	718	700	13,144	10,093	15,072	15,459	10,537	5,867	3,527	1,558
Total											
Oak-pine	13,301	945	1,124	2,741	1,302	1,135	1,600	1,198	1,491	418	1,347
Softwood	11,672	447	1,160	559	1,211	896	1,706	1,255	2,083	985	1,370
Hardwood	24,973	1,392	2,284	3,300	2,513	2,031	3,306	2,453	3,574	1,403	2,717
Total											
Upland hardwood											
Softwood	4,512	65	302	994	479	369	415	1,180	310	267	131
Hardwood	29,835	1,096	1,422	3,271	2,456	2,990	4,961	7,749	3,117	1,196	1,577
Total	34) 347	1,161	1,724	4,265	2,935	3,359	5,376	8,929	3,427	1,463	1,708
Lowland hardwood											
Softwood	9,510	395	121	286	273	834	1,242	1,203	1,184	1,230	2,742
Hardwood	60,624	2,282	660	2,820	1,884	3,986	8,136	12,474	10,692	7,527	10,163
Total	70,134	2,677	781	3,106	2,157	4,820	9,378	13,677	11,876	8,757	12,905
All types											
Softwood	178,215	2,105	6,565	73,242	35,766	16,372	15,681	11,538	7,250	4,372	5,324
Hardwood	120,893	3,843	3,481	9,394	9,155	11,288	17,838	24,058	17,494	10,778	13,564
Total	299,108	5,948	10,046	82,636	44,921	27,660	33,519	35,596	24,744	15,150	18,888

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

Table 20--Average annual removals of growing stock on timberland, by broad management class, species group, and stand-age class, Northern Coastal Plain of North Carolina, 1984-1989

Broad management class[a] and species group	All classes	No manageable stand	Stand-age class[a] (years)								
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
			Thousand cubic feet								
Pine plantation											
Softwood	34,252	a9	--	24,249	9,914	--	--	--	--	--	--
Hardwood	814	--	--	454	360	--	--	--	--	--	--
Total	35,066	a9	--	24,703	10,274	--	--	--	--	--	--
Natural pine											
Softwood	84,800	753	--	3,976	8,818	19,785	8,797	21,449	10,204	6,741	4,277
Hardwood	13,748	--	--	275	1,039	3,244	1,534	3,605	2,151	1,188	712
Total	98,548	753	--	4,251	9,857	23,029	10,331	25,054	12,355	7,929	4,989
Oak-pine											
Softwood	17,256	678	533	901	2,103	3,534	1,272	3,174	3,663	663	735
Hardwood	13,643	514	738	--	1,231	1,586	963	3,312	3,291	1,638	370
Total	30,899	1,192	1,271	901	3,334	5,120	2,235	6,486	6,954	2,301	1,105
Upland hardwood											
Softwood	7,563	373	178	181	770	676	1,386	2,271	1,085	643	--
Hardwood	47,211	2,145	2,200	1,008	2,812	6,337	10,928	9,710	5,250	5,537	1,284
Total	54,774	2,518	2,378	1,189	3,582	7,013	12,314	11,981	6,335	6,180	1,284
Lowland hardwood											
Softwood	7,786	900	--	190	--	--	514	107	1,724	1,823	2,528
Hardwood	57,332	1,564	202	382	579	3,048	9,462	6,214	15,485	6,593	13,803
Total	65,118	2,464	202	572	579	3,048	9,976	6,321	17,209	8,416	16,331
All types											
Softwood	151,657	2,793	711	29,497	21,605	23,995	11,969	27,001	16,676	9,870	7,540
Hardwood	132,748	4,223	3,140	2,119	6,021	14,215	22,887	22,841	26,177	14,956	16,169
Total	284,405	7,016	3,851	31,616	27,626	38,210	34,856	49,842	42,853	24,826	23,709

[a]Classifications before timber removals.

Table 21--Merchantable volume of live trees and growing stock on timberland, by forest-type and species groups, Northern Coastal Plain of North Carolina, 1990

Forest-type group	Live trees					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet									
White pine-hemlock	--	--	--	--	--	--	--	--	--	--
Spruce-fir	--	--	--	--	--	--	--	--	--	--
Longleaf-slash pine	42,011	39,870	--	1,603	538	41,152	39,646	--	968	538
Loblolly-shortleaf pine	2,689,667	2,301,845	3,735	286,065	98,022	2,658,448	2,296,870	3,255	273,216	85,107
Oak-pine	709,314	315,973	15,835	233,514	143,992	674,907	315,726	14,822	219,360	124,999
Oak-hickory	1,024,617	100,424	2,153	461,506	460,534	964,398	100,018	2,153	441,025	421,202
Oak-gum-cypress	2,663,233	96,335	248,883	1,944,619	373,396	2,418,985	95,278	236,527	1,782,491	304,689
Elm-ash-cottonwood	45,734	--	2,105	34,315	9,314	41,168	--	2,105	32,090	6,973
Maple-beech-birch	--	--	--	--	--	--	--	--	--	--
All types	7,174,576	2,854,447	272,711	2,961,622	1,085,796	6,799,058	2,847,538	258,862	2,749,150	943,508

Table 22--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and ownership class, Northern Coastal Plain of North Carolina, 1984 to 1990

Treatment or disturbance	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
			Acres[a]		
Final harvest	85,495	755	19,046	213	65,481
Partial harvestb	9,319	565	1,460	--	7,294
Commercial thinning	17,695	--	13,490	1,274	2,931
Other stand improvement	781		376		405
Site preparation	37,574		17,710	361	19,503
Artificial regenerationc	35,756		16,541	361	18,854
Natural regenerationc	58,415	1,568	6,426	--	50,421
Other treatment	11,604	490	1,213		9,901
Natural disturbance	29,736	2,321	4,364	--	23,051

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

[b]Includes high grading and some selective cutting.

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

Table 23--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and broad management class, Northern Coastal Plain of North Carolina, 1984 to 1990

Treatment or disturbance	All classes	Broad management class[a]				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres[b]			
Final harvest	85,495	4,993	30,791	10,878	21,916	16,917
Partial harvestc	9,319	--	1,008	2,543	4,136	1,632
Commercial thinning	17,695	14,617	2,278	800	--	--
Other stand improvement	781	376	--	405	--	--
Site preparation	37,574	3,515	11,264	5,090	8,234	9,471
Other treatment	11,604	589	1,272	2,228	3,945	3,570
Natural disturbance	29,736	2,088	10,807	5,393	1,421	10,027

[a]Classification before treatment or disturbance.

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

'Includes high grading and some selective cutting.

Table 24--Area of timberland regenerated annually, by type of regeneration and broad management class, Northern Coastal Plain of North Carolina, 1984 to 1990

Type of regeneration	All classes	Broad management class[a]				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
		Acres				
Artificial regeneration following harvest	20,578	17,710	--	2,868	--	--
Natural regeneration following harvest	41,271	--	3,389	14,601	11,995	11,286
Other artificial regeneration on forest land	12,139	10,187	--	1,952	--	--
Other natural regeneration on forest land	13,109	--	4,035	3,640	2,481	2,953
Artificial regeneration on nonforest land	3,039	2,201	--	433	--	405
Natural reversion of nonforest land	4,035	--	1,721	1,941	373	--
Total	94,171	30,098	9,145	25,435	14,849	14,644

[a]Classification after regeneration.

Table 25--Area of timberland, by treatment opportunity and broad management classes, Northern Coastal Plain of North Carolina, 1990

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
				Acres		
Salvage	11,000	2,976	8,024	--	--	--
Harvest	326,831	--	102,203	46,014	36,763	141,851
Commercial thinning	260,283	160,481	76,009	2,334	6,039	15,420
Other stand improvement	235,178	20,910	34,840	47,951	80,399	51,078
Stand conversion	24,816	--	--	11,706	10,809	2,301
Regeneration	403,104	2,718	83,510	82,314	86,428	148,134
Stands in relatively good condition	2,285,729	496,349	558,774	335,250	396,598	498,758
Adverse sites[a]	220,921	--	16,124	6,388	--	198,409
All classes	3,767,862	683,434	879,484	531,957	617,036	1,055,951

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

Table 26--Area of timberland, by treatment opportunity and ownership classes, Northern Coastal Plain of North Carolina, 1990

Treatment opportunity class	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
			Acres		
Salvage	11,000	--	5,953	--	5,047
Harvest	326,831	40,218	60,190	--	226,423
Commercial thinning	260,283	2,684	145,626	2,947	109,026
Other stand improvement	235,178	10,947	30,719	5,072	188,440
Stand conversion	24,816	2,301	--	--	22,515
Regeneration	403,104	59,183	62,673	1,405	279,843
Stands in relatively good condition	2,285,729	169,445	535,669	17,085	1,563,530
Adverse sites[a]	220,921	37,835	40,273	--	142,813
All classes	3,767,862	322,613	881,103	26,509	2,537,637

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

Table 27--Merchantable volume of live trees and growing stock on timberland, by ownership class and species group, Northern Coastal Plain of North Carolina, 1990

Ownership class	Live trees					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet									
National forest	183,562	128,466	4,440	35,697	14,959	176,813	128,242	1,909	33,299	13,363
Other public	519,704	183,971	34,754	257,381	43,598	473,085	182,960	30,879	236,926	22,320
Forest industry	1,484,661	835,999	41,226	495,310	112,126	1,427,884	834,416	39,594	458,351	95,523
Forest industry-leased	10,762	8,699	--	1,205	858	10,762	8,699	--	1,205	858
Other private	4,975,887	1,697,312	192,291	2,172,029	914,255	4,710,514	1,693,221	186,480	2,019,369	811,444
All ownerships	7,174,576	2,854,447	272,711	2,961,622	1,085,796	6,799,058	2,847,538	258,862	2,749,150	943,508

Table 28--Volume of sawtimber on timberland, by ownership class and species group, Northern Coastal Plain of North Carolina, 1990

Ownership class	Small sawtimber[a]					Large sawtimber[b]				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand board feet									
National forest	280,415	233,969	--	27,490	18,956	399,949	317,192	3,015	51,984	27,758
Other public	706,810	433,553	45,223	210,165	17,869	658,045	206,888	92,006	309,998	49,153
Forest industry	1,924,758	1,485,161	25,146	348,879	65,572	1,847,112	560,336	143,005	886,133	257,638
Forest industry-leased	22,836	22,836	--	--	--	3,169	--	--	3,169	--
Other private	6,151,471	3,121,872	165,289	2,067,339	796,971	10,792,125	4,080,389	703,452	4,147,220	1,861,064
All ownerships	9,086,290	5,297,391	235,658	2,653,873	899,368	13,700,400	5,164,805	941,478	5,398,504	2,195,613

[a]Volume of sawtimber trees les‘s than 15.0 inches at d.b.h.

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

Table 29--Average net annual growth and removals of growing stock on timberland, by ownership class and species group, Northern Coastal Plain of North Carolina, 1984-1989

Ownership class	Net annual growth					Annual timber removals				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet									
National forest	5,438	3,896	29	1,148	365	3,861	3,102	- -	678	81
Other public	14,236	5,772	834	6,892	738	5,666	- -	1,658	3,047	961
Forest industry	103,837	81,401	1,398	18,062	2,976	69,323	49,444	297	12,801	6,781
Forest industry-leased	954	866	- -	40	48	900	806	- -	94	- -
Other private	174,643	79,581	4,438	64,001	26,623	204,655	92,472	3,878	70,582	37,723
All ownerships	299,108	171,516	6,699	90,143	30,750	284,405	145,824	5,833	87,202	45,546

Table 30--Average net annual growth and removals of sawtimber on timberland, by ownership class and species group, Northern Coastal Plain of North Carolina, 1984-1989

Ownership class	Net annual growth					Annual timber removals				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand board feet									
National forest	21,032	15,984	284	2,169	2,595	12,477	10,125	- -	1,916	436
Other public	60,435	26,177	2,675	25,373	6,210	21,383	- -	4,866	13,305	3,212
Forest industry	355,511	289,149	4,777	50,445	11,140	196,907	125,218	1,750	42,698	27,241
Forest industry-leased	5,229	5,142	- -	87	- -	1,851	1,851	- -	- -	- -
Other private	708,347	309,507	21,394	263,876	113,570	826,615	443,672	19,711	234,460	128,772
All ownerships	1,150,554	645,959	29,130	341,950	133,515	1,059,233	580,866	26,327	292,379	159,661

Table 31--Volume of timber on timberland, by class of timber and species group, Northern Coastal Plain of North Carolina, 1990

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
			Thousand cubic feet		
Sawtimber trees					
Saw-log portion	4,188,994	1,895,224	210,901	1,510,245	572,624
Upper-stem portion[a]	557,480	181,653	17,411	267,724	90,692
Total	4,746,474	2,076,877	228,312	1,777,969	663,316
Poletimber trees	2,052,584	770,661	30,550	971,181	280,192
All growing-stock trees	6,799,058	2,847,538	258,862	2,749,150	943,508
Rough trees					
Sawtimber size	80,740	1,015	4,824	48,597	26,304
Poletimber size	168,184	5,047	--	65,106	98,031
Total	248,924	6,062	4,824	113,703	124,335
Rotten trees					
Sawtimber size	115,284	847	8,751	90,409	15,277
Poletimber size	11,310	--	274	8,360	2,676
Total	126,594	847	9,025	98,769	17,953
Salvable dead trees					
Sawtimber size	3,385	2,471	84	600	230
Poletimber size	3,045	2,325	49	462	209
Total	6,430	4,796	133	1,062	439
Total, all timber	7,181,006	2,859,243	272,844	2,962,684	1,086,235

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

Table 32--Number of live trees on timberland, by species and diameter class, Northern Coastal Plain of North Carolina, 1990

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand trees												
Softwood													
Longleaf pine	4,152	997	171	835	571	424	358	426	243	109	10	8	--
Slash pine	669	--	--	--	244	316	56	37	16	--	--	--	--
Shortleaf pine	4,578	1,917	677	135	601	563	216	212	161	36	--	--	--
Loblolly pine	541,248	200,044	107,123	99,543	65,224	33,440	14,658	8,515	6,076	3,416	1,806	1,383	20
Pond pine	87,889	26,326	18,782	14,159	11,870	8,968	4,437	2,075	797	294	127	54	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--				--	--		--	--	--
Table Mountain pine	--	--	--	--		--	--	--	--		--	--	--
Spruce pine	--	--	--	--	--				--	--	--	--	--
Sand pine	--	--	--	--				--	--		--	--	--
Eastern white pine	--	--	--	--	--				--	--	--	--	--
Eastern hemlock	--	--	--	--	--				--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	10,031	2,347	2,069	705	845	754	639	496	487	431	367	745	146
Pondcypress	1,850	146	161	297	504	167	86	92	137	121	60	54	25
Cedars	17,875	8,725	4,405	2,173	1,140	828	405	114	26	44	--	15	--
Total softwoods	668,292	240,562	133,388	117,847	80,999	45,460	20,855	11,967	7,943	4,451	2,370	2,259	191
Hardwood													
Select white oaks	75,322	40,726	14,256	6,279	4,346	3,640	2,128	1,516	952	650	407	353	69
Select red oaks	12,017	7,679	1,800	192	617	381	393	277	207	183	106	147	35
Chestnut oak	178	178	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	16,878	10,693	2,659	907	1,090	508	384	198	211	107	29	76	16
Other red oaks	143,221	93,798	22,325	9,742	7,177	3,882	2,418	1,573	861	540	374	476	55
Hickory	24,054	17,171	3,272	1,303	1,030	527	293	116	106	80	64	92	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	166	166	--	--	--	--	--	--	--	--	--	--	--
Soft maple	628,613	468,049	93,118	31,078	16,215	8,824	4,814	2,589	1,738	1,022	574	530	62
Beech	12,667	a,472	1,469	592	559	540	246	103	307	159	77	132	11
Sweetgum	475,195	329,794	79,825	30,313	14,043	7,916	5,645	3,716	1,807	1,047	495	570	24
Tupelo and blackgum	281,161	158,956	50,162	24,967	14,925	10,068	6,805	5,241	3,962	2,346	1,406	1,778	54s
Ash	77,129	51,553	14,941	5,117	2,247	1,315	743	729	177	138	78	88	3
Cottonwood	6,214	1,460	2,059	1,182	893	178	55	112	136	59	46	34	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	70,525	46,881	9,152	3,720	3,022	1,995	1,404	1,299	1,096	693	491	635	57
Bay and magnolia	150,990	111,828	24,233	7,380	3,771	2,855	504	299	72	22	10	16	--
Black cherry	24,800	18,974	4,036	1,213	467	37	27	40	--	--	--	6	--
Black walnut	219	--	171	--	--	--	29	--	14	--	--	5	--
Sycamore	5,099	1,480	1,841	972	438	70	121	86	17	11	--	57	6
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	16,754	9,034	3,800	1,532	595	684	495	240	190	70	30	80	4
Other eastern hardwoods	399,572	299,366	70,235	19,182	7,509	1,900	649	379	182	108	38	24	--
Total hardwoods	2,420,774	1,676,258	399,354	145,671	78,944	45,320	27,233	18,513	12,035	7,235	4,225	5,099	887
All species	3,089,066	1,916,820	532,742	263,518	159,943	90,780	48,088	30,480	19,978	11,686	6,595	7,358	1,078

Table 33--Number of groving-stock trees on timberland, by species and diameter class, Northern Coastal Plain of North Carolina, 1990

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-a.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand trees												
Softwood													
Longleaf pine	4,007	997	171	733	571	381	358	426	243	109	10	8	--
Slash pine	669	--	--	--	244	316	56	37	16	--	--	--	--
Shortleaf pine	4,578	1,977	677	135	601	563	216	212	161	36	--	--	--
Loblolly pine	534,949	196,152	105,501	99,057	65,093	33,289	14,658	8,498	6,076	3,416	1,806	1,383	20
Pond pine	71,574	15,357	14,447	13,637	11,396	8,968	4,437	2,075	782	294	127	54	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	9,173	1,870	2,069	705	734	675	618	464	487	396	337	704	114
Pondcypress	1,782	146	161	297	504	167	86	92	137	73	60	49	10
Cedars	17,339	8,227	4,405	2,173	1,140	790	405	114	26	44	--	15	--
Total softwoods	644,071	224,726	127,431	116,737	80,283	45,149	20,834	11,918	7,928	4,368	2,340	2,213	144
Hardwood													
Select white oaks	64,885	31,997	13,296	5,966	4,130	3,521	2,102	1,465	952	638	407	348	63
Select red oaks	9,858	5,704	1,640	192	617	381	393	277	207	183	86	147	31
Chestnut oak	178	178	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	13,887	8,458	2,338	907	856	430	302	178	193	107	29	76	13
Other red oaks	124,560	78,784	19,710	9,445	6,823	3,677	2,365	1,573	829	530	355	437	32
Hickory	20,116	13,696	2,934	1,303	956	527	266	116	90	80	64	84	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	166	166	--	--	--	--	--	--	--	--	--	--	--
Soft maple	401,567	277,902	67,789	24,633	14,268	7,453	4,038	2,260	1,516	853	489	347	19
Beech	8,372	4,890	1,150	436	498	497	246	83	277	147	68	76	4
Sweetgum	391,718	258,156	72,128	27,729	13,369	7,585	5,413	3,659	1,690	968	478	523	20
Tupelo and blackgum	191,276	83,973	41,570	22,588	13,841	9,422	6,371	4,933	3,614	2,159	1,147	1,417	241
Ash	40,019	24,256	7,742	3,827	1,790	957	420	592	147	138	68	82	--
Cottonwood	5,846	1,276	1,900	1,182	893	178	55	112	120	59	37	34	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	63,383	40,648	8,652	3,501	3,022	1,949	1,407	1,276	1,080	693	491	613	51
Bay and magnolia	91,641	62,743	16,440	5,724	3,327	2,614	444	242	59	22	10	16	--
Black cherry	15,643	11,384	2,902	1,034	256	--	27	40	--	--	--	--	--
Black walnut	219	--	171	--	--	--	29	--	14	--	--	5	--
Sycamore	4,747	1,156	1,841	972	438	70	121	67	17	11	--	50	4
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	10,609	4,543	2,632	1,148	543	653	495	240	190	70	20	75	--
Other eastern hardwoods	16,977	10,962	2,711	946	1,192	410	209	247	156	98	38	8	--
Total hardwoods	1,475,667	920,872	267,546	111,533	66,819	40,324	24,703	17,360	11,151	6,756	3,787	4,338	478
All species	2,119,738	1,145,598	394,977	228,270	147,102	85,473	45,537	29,270	19,079	11,124	6,127	6,551	622

Table 34--Merchantable volume of live trees on timberland, by species and diameter class, Northern Coastal Plain of North Carolina, 1990

Species	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand cubic feet										
Softwood											
Longleaf pine	46,815	2,106	3,808	4,883	7,158	11,963	9,630	5,925	575	767	--
Slash pine	7,153	--	1,393	3,413	1,075	803	469	--	--	--	--
Shortleaf pine	33,531	224	5,190	7,997	4,353	6,468	7,149	2,150	--	--	--
Loblolly pine	2,361,131	251,354	397,802	390,718	290,976	263,003	271,098	206,341	135,704	149,869	4,266
Pond pine	405,817	37,142	76,689	102,190	77,476	54,218	29,506	15,543	8,606	4,447	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	197,663	2,238	6,162	9,597	11,990	12,961	19,300	19,760	22,261	68,978	24,416
Pondcypress	33,262	922	3,592	2,231	1,764	2,844	4,676	4,513	3,610	4,639	4,471
Cedars	41,786	8,647	9,263	9,876	6,983	2,792	1,042	2,205	--	978	--
Total softwoods	3,127,158	302,633	503,899	530,905	401,775	355,052	342,870	256,437	170,756	229,678	33,153
Hardwood											
Select white oaks	311,255	17,085	26,503	40,831	40,770	39,752	36,037	35,021	26,680	32,326	16,250
Select red oaks	71,838	620	4,315	5,230	7,427	7,263	8,287	9,958	6,721	14,931	7,086
Chestnut oak	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	50,375	2,443	5,586	5,108	5,776	4,736	7,116	4,936	1,940	7,462	5,272
Other red oaks	343,811	25,525	44,528	43,103	45,320	43,130	32,512	27,438	24,378	46,210	11,667
Hickory	43,109	3,295	5,908	5,971	5,103	3,418	3,027	4,144	4,086	8,157	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--
Soft maple	643,024	91,288	108,269	102,604	86,594	66,585	60,705	46,179	32,897	39,890	8,013
Beech	53,003	1,559	3,961	5,846	4,561	2,574	10,276	7,575	4,935	9,805	1,911
Sweetgum	713,188	74,329	89,835	100,737	113,851	109,974	76,215	55,379	34,909	53,961	3,998
Tupelo and blackgum	1,059,058	76,559	100,296	118,682	124,645	134,366	132,051	100,771	69,859	130,199	71,630
Ash	104,249	13,355	14,691	15,434	13,235	19,304	7,497	7,271	5,185	8,111	166
Cottonwood	28,922	2,591	5,427	2,231	940	3,494	5,185	3,252	2,603	3,199	--
Basswood	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	316,858	12,146	19,905	24,975	29,967	39,617	44,901	38,063	34,123	62,227	10,934
Bay and magnolia	95,689	19,737	25,135	31,413	7,648	6,812	2,049	970	426	1,499	--
Black cherry	7,595	3,482	1,983	404	360	952	--	--	--	414	--
Black walnut	1,626	--	--	--	492	--	524	--	--	610	--
Sycamore	17,246	2,961	2,675	874	2,240	1,979	559	466	--	4,742	750
Black locust	--	--	--	--	--	--	--	--	--	--	--
Elm	54,043	3,573	3,735	8,526	9,531	7,040	7,525	4,097	1,724	8,271	21
Other eastern hardwoods	132,529	43,381	39,168	17,728	9,433	8,474	5,786	4,786	2,467	1,306	--
Total hardwoods	4,047,418	393,929	501,920	529,697	507,893	499,470	440,252	350,306	252,933	433,320	137,698
All species	7,174,576	696,562	1,005,819	1,060,602	909,668	854,522	783,122	606,743	423,689	662,998	170.851

Table 35--Volume of growing stock on timberland, by species and diameter class, Northern Coastal Plain of North Carolina, 1990

Species	All classes	Diameter class finches at breast height)									
		5.0-6.9	7.0-a.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand cubic feet										
Softwood											
Longleaf pine	46,262	1,882	3,808	4,554	7,158	11,963	9,630	5,925	575	767	--
Slash pine	7,153	--	1,393	3,413	1,075	803	469	--	--	--	--
Shortleaf pine	33,531	224	5,190	7,997	4,353	6,468	7,149	2,150	--	--	--
Loblol ly pine	2,357,987	250,289	396,992	389,871	290,976	262,581	271,098	206,341	135,704	149,869	4,266
Pond pine	402,605	36,215	74,668	102,190	77,476	54,218	29,242	15,543	8,606	4,447	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--		--	--	--	--			
Table Mountain pine			--			--					
Spruce pine	--			--	--	--	--				
Sand pine		--		--		--		--			
Eastern white pine	--	--	--	--	--		--				
Eastern hemlock		--		--		--		--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	187,747	2,238	5,888	9,131	ii ,587	12,481	19,300	18,602	20,951	66,757	20,812
Pondcypress	29,607	922	3,592	2,231	1,764	2,844	4,676	3,635	3,610	4,210	2,123
Cedars	41,508	8,647	9,263	9,598	6,983	2,792	1,042	2,205	--	978	--
Total softwoods	3,106,400	300,417	500,794	528,985	401,372	354,150	342,606	254,401	169,446	227,028	27,201
Hardwood											
Select white oaks	305,395	16,392	25,113	39,820	40,333	38,997	36,037	34,573	26,680	31,982	14,808
Select red oaks	70,172	620	4,315	5,230	7,427	7,263	8,287	9,958	5,865	14,931	6,276
Chestnut oak	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	45,358	2,443	4,738	4,462	5,035	4,140	6,652	4,936	1,940	7,462	3,550
Other red oaks	331,320	24,602	43,013	41,386	44,921	43,130	31,845	26,865	23,682	43,881	7,995
Hickory	42,028	3,295	5,708	5,971	4,754	3,418	2,878	4,144	4,086	7,774	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--
Soft maple	564,967	76,683	98,576	91,020	76,576	61,417	55,215	41,368	29,947	30,736	3,429
Beech	45,416	1,054	3,682	5,426	4,561	2,061	9,523	7,045	4,572	6,729	763
Sweetgum	691,040	69,810	87,443	98,090	111,446	108,926	72,601	53,380	34,263	51,428	3,653
Tupelo and blackgum	969,762	71,060	95,934	114,694	119,274	130,040	124,971	96,730	62,326	112,271	42,462
Ash	88,537	10,992	12,723	12,263	9,274	17,076	6,436	7,271	4,714	7,788	--
Cottonwood	28,221	2,591	5,427	2,231	940	3,494	4,728	3,252	2,359	3,199	--
Basswood	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	311,946	11,496	19,905	24,938	28,707	39,215	44,513	38,063	34,123	60,962	10,024
Bay and magnolia	85,893	15,552	22,647	29,726	7,139	6,092	1,842	970	426	1,499	--
Black cherry	5,401	2,884	1,205	--	360	952	--	--	--	--	--
Black walnut	1,626	--	--	--	492	--	524	--	--	610	--
Sycamore	16,284	2,961	2,675	a74	2,240	1,662	559	466	--	4,296	551
Black locust	--	--	--	--	--	--	--	--	--	--	--
Elm	50,916	2,033	3,511	8,043	9,531	7,040	7,525	4,097	1,211	7,925	--
Other eastern hardwoods	38,376	2,994	8,050	4,412	3,697	6,206	5,468	4,441	2,467	641	--
Total hardwoods	3,692,658	317,462	445,325	488,586	476,707	481,129	419,604	337,559	238,661	394,114	93,511
All species	6,799,058	617,879	946,119	1,017,571	878,079	835,279	762,210	591,960	408,107	621,142	120,712

Table 36--Volume of sawtimber on timberland, by species and diameter class, Northern Coastal Plain of North Carolina, 1990

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand board feet								
Softwood									
Longleaf pine	217,809	18,750	34,392	63,849	55,958	36,163	3,664	5,033	--
Slash pine	24,559	12,684	4,911	4,323	2,641	--		--	
Shortleaf pine	135,352	30,562	19,920	32,860	39,202	12,808	--	--	--
Loblolly pine	8,729,579	1,387,915	1,310,885	1,358,039	1,532,262	1,244,912	858,255	1,006,114	31,197
Pond pine	1,354,897	385,937	353,906	278,458	162,583	92,207	53,241	28,565	
Virginia pine	--	--	--	--	--	--	--	--	
Pitch pine	--	--	--	--	--	--		--	
Table Mountain pine	--	--	--	--	--	--		--	
Spruce pine	--	--	--	--	--	--			
Sand pine	--	--	--	--	--	--			
Eastern white pine	--	--	--	--	--	--			--
Eastern hemlock	--	--	--	--	--	--	--		
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	945,132	28,302	44,022	55,075	92,577	95,125	112,639	385,204	132,188
Pondcypress	126,516	7,473	6,855	13,006	22,522	18,922	19,557	24,341	13,840
Cedars	105,488	35,337	31,538	14,050	5,713	12,768	--	6,082	--
Total softwoods	11,639,332	1,906,960	1,806,429	1,819,660	1,913,458	1,512,905	1,047,356	1,455,339	177,225
Hardwood									
Select white oaks	1,028,987	--	138,332	156,843	161,484	167,939	134,357	178,020	92,012
Select red oaks	304,347		25,315	28,970	38,806	49,070	32,729	88,707	40,750
Chestnut oak	--	--	--	--	--	--	--	--	--
Other white oaks	164,020		18,088	17,392	30,794	24,853	9,797	41,567	21,529
Other red oaks	1,071,034	--	168,254	184,513	149,438	136,055	126,343	253,732	52,699
Hickory	128,030	--	16,235	13,935	13,132	20,405	21,274	43,049	--
Yellow birch	--		--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--
Soft maple	1,224,339		250,185	234,475	232,633	187,002	143,423	157,416	19,205
Beech	138,811		16,634	7,767	37,024	27,953	18,435	27,748	3,250
Sweetgum	2,014,869		399,081	464,184	350,157	279,183	190,390	307,674	24,200
Tupelo and blackgum	3,039,739	--	369,923	491,189	530,527	449,658	310,128	616,524	271,790
Ash	223,378		30,237	65,231	28,209	34,259	23,576	41,866	--
Cottonwood	87,060		3,164	14,601	21,869	16,313	12,689	18,424	--
Basswood			--	--	--	--	--	--	--
Yellow-poplar	1,342,338	--	103,401	172,126	218,489	203,938	195,951	378,022	70,411
Bay and magnolia	68) 354	--	22,435	23,295	7,789	4,472	1,953	8,410	--
Black cherry	5,094	--	1,246	3,848	--	--	--	--	--
Black walnut	6,310		1,606	--	2,011	--	--	2,693	--
Sycamore	44,341	--	6,947	6,194	2,444	2,191	--	23,336	3,229
Black locust	--		--	--	--	--	--	--	--
Elm	156,464		32,294	27,306	31,945	18,705	5,814	40,400	--
Other eastern hardwoods	99,843		12,718	25,277	23,637	21,664	13,002	3,545	--
Total hardwoods	11,147,358	--	1,616,095	1,937,146	1,880,388	1,643,660	1,239,861	2,231,133	599,075
All species	22,786,690	1,906,960	3,422,524	3,756,806	3,793,846	3,156,565	2,287,217	3,686,472	776,300

Table 37--Volume of sawtimber on timberland, by species, size class, and tree grade, Northern Coastal Plain of North Carolina, 1990

Species	All size classes					Trees 15.0 inches d.b.h. and larger				
	All grades	Tree grade				All grades	Tree grade			
		1	2	3	4		1	2	3	4
	Thousand board feet									
Softwood										
Yellow pines[a]	10,462,196	2,701,296	2,933,002	4,827,898	--	5,164,805	2,149,628	1,672,277	1,342,900	--
Eastern white pine[b]	--	--	--	--	--	--	--	--	--	--
Spruce and fir[b]	--	--	--	--	--	--	--	--	--	--
Cypress[c]	1,071,648	549,506	333,071	174,549	14,522	916,915	549,506	287,692	74,648	5,069
Other eastern softwoods[b]	105,488	15,943	24,789	62,934	1,822	24,563	15,943	6,082	2,538	--
Total	11,639,332	3,266,745	3,290,862	5,065,381	16,344	6,106,283	2,715,077	1,966,051	1,420,086	5,069
Hardwood[c]										
Select white and red oaks	1,333,334	257,238	413,670	431,721	230,705	983,874	257,238	370,423	223,377	132,836
Other white and red oaks	1,235,054	213,588	276,800	452,159	292,507	846,807	213,588	249,616	239,046	144,557
Hickory	128,030	10,368	41,730	43,530	32,402	97,860	10,368	39,002	29,712	18,778
Yellow birch	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--
Sweetgum	2,014,869	324,414	726,575	822,958	140,922	1,151,604	324,414	521,595	260,397	45,198
Ash, walnut, and black cherry	234,782	15,433	97,579	93,464	28,306	132,614	15,433	79,823	23,658	13,700
Yellow-poplar	1,342,338	348,664	451,984	434,246	107,444	1,066,811	348,664	368,771	282,147	67,229
Other eastern hardwoods	4,858,951	756,287	1,487,390	1,921,970	693,304	3,314,547	756,287	1,192,741	959,740	405,779
Total	11,147,358	1,925,992	3,495,728	4,200,048	1,525,590	7,594,117	1,925,992	2,821,971	2,018,077	828,077
All species	22,786,690	5,192,737	6,786,590	9,265,429	1,541,934	13,700,400	4,641,069	4,788,022	3,438,163	833,146

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

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

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

Table 38--Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class, Northern Coastal Plain of North Carolina, 1990

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15*0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
		Thousand cubic feet							
Softwood									
Longleaf pine	38,201	3,799	6,538	11,368	9,357	5,811	568	760	--
Slash pine	4,922	2,726	972	769	455	--	--	--	--
Shortleaf pine	25,748	6,581	3,970	6,138	6,936	2,123	--	--	--
Loblolly pine	1,564,048	301,256	261,289	248,595	262,990	202,987	134,333	148,374	4,224
Pond pine	262,305	83,040	70,779	51,729	28,491	15,342	8,521	4,403	--
Virginia pine	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	166,945	6,689	9,775	11,226	17,821	17,452	19,853	63,968	20,161
Pondcypress	23,452	1,806	1,546	2,634	4,387	3,464	3,466	4,073	2,076
Cedars	20,504	7,465	6,287	2,627	1,006	2,153	--	966	--
Total softwoods	2,106,125	413,362	361,156	335,086	331,443	249,332	166,741	222,544	26,461
Hardwood									
Select white oaks	193,767	--	28,890	32,049	31,657	31,557	24,726	30,499	14,389
Select red oaks	52,805	--	5,151	5,705	7,206	8,911	5,496	14,233	6,103
Chestnut oak	--	--	--	--	--	--	--	--	--
Other white oaks	29,637	--	3,642	3,432	5,857	4,498	1,778	7,031	3,399
Other red oaks	190,931	--	32,632	35,478	27,831	24,277	21,736	41,309	7,668
Hickory	23,563	--	3,395	2,823	2,524	3,754	3,773	7,294	--
Yellow birch	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--
Soft maple	242,651	--	52,340	48,795	46,805	36,337	26,929	28,228	3,217
Beech	30,052	--	3,279	1,643	8,088	6,160	4,071	6,105	706
Sweetgum	367,802	--	78,406	89,670	64,564	49,337	32,424	49,786	3,615
Tupelo and blackgum	589,397	--	84,769	106,167	108,440	86,874	57,141	105,252	40,754
Ash	44,269	--	6,482	13,777	5,649	6,599	4,376	7,386	--
Cottonwood	15,856	--	631	2,874	4,138	2,960	2,203	3,050	--
Bas swood	--	--	--	--	--	--	--	--	--
Yellow-poplar	228,559	--	20,024	32,495	39,451	35,156	32,362	59,148	9,923
Bay and magnolia	14,008	--	4,613	5,009	1,628	a93	398	1,467	--
Black cherry	1,042	--	264	778	--	--	--	--	--
Black walnut	1,330	--	324	--	446	--	--	560	--
Sycamore	8,074	--	1,396	1,259	475	412	--	4,008	524
Black locust	--	--	--	--	--	--	--	--	--
Elm	30,493	--	6,619	5,604	6,366	3,596	1,084	7,224	--
Other eastern hardwoods	18,633	--	2,503	4,880	4,740	3,911	2,057	542	--
Total hardwoods	2,082,869	--	335,360	392,438	365,865	305,232	220,554	373,122	90,298
All species	4,188,994	413,362	696,516	727,524	697,308	554,564	387,295	595,666	116,759

Table 39--Total volume of live trees on timberland, by species and diameter class, Northern Coastal Plain of North Carolina, 1990

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand cubic feet												
Softwood													
Longleaf pine	54,233	311	274	2,879	4,553	5,641	8,144	13,496	10,814	6,625	641	855	--
Slash pine	8,275	--	--	--	1,682	3,945	1,220	902	526	--	--	--	--
Shortleaf pine	39,886	523	773	328	6,221	9,257	4,969	7,333	8,067	2,415	--	--	--
Loblolly pine	2,950,890	44,195	115,435	356,961	485,435	456,077	332,969	298,033	305,568	231,765	152,092	167,603	4,757
Pond pine	502,472	4,833	19,355	49,915	92,405	119,075	89,051	61,891	33,548	17,620	9,741	5,038	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	244,831	626	3,695	3,498	7,940	11,901	14,652	15,726	23,219	23,811	26,731	82,705	30,327
Pondcypress	43,744	22	338	1,566	4,956	2,906	2,263	3,599	5,889	5,842	4,515	5,866	5,982
Cedars	60,427	3,076	6,741	11,477	11,155	11,680	8,162	3,246	1,208	2,552	--	1,130	--
Total softwoods	3,904,758	53,586	146,611	426,624	614,347	620,482	461,430	404,226	388,839	290,630	193,720	263,197	41,066
Hardwood													
Select white oaks	421,806	9,306	19,039	25,277	34,713	51,763	50,971	49,503	44,621	43,273	32,885	40,024	20,431
Select red oaks	93,871	2,142	2,622	827	5,545	6,541	9,224	8,974	10,212	12,286	8,336	18,326	8,836
Chestnut oak	13	13	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	70,221	2,460	3,319	3,616	7,483	6,597	7,359	5,952	8,869	6,170	2,392	9,189	6,815
Other red oaks	493,167	21,280	30,924	40,501	59,597	55,300	56,920	53,595	40,158	33,654	29,904	56,812	14,522
Hickory	60,879	3,145	3,625	4,938	7,756	7,469	6,284	4,151	3,699	5,004	4,925	9,883	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	18	18	--	--	--	--	--	--	--	--	--	--	--
Soft maple	1,064,274	112,582	148,259	130,341	136,566	125,798	104,886	80,146	72,854	55,211	39,465	48,186	9,980
Beech	71,090	1,497	2,254	2,516	5,186	7,432	5,699	3,193	12,812	9,326	6,147	12,540	2,488
Sweetgum	1,024,276	71,659	98,092	110,048	111,625	119,132	132,061	126,213	87,023	63,094	39,625	61,171	4,533
Tupelo and blackgum	1,481,057	46,960	77,394	114,106	130,564	149,641	155,294	166,457	164,238	125,619	88,016	165,026	97,742
Ash	161,020	14,588	20,568	19,162	18,158	18,326	15,544	22,325	8,626	8,295	5,913	9,286	229
Cottonwood	39,202	475	3,672	3,905	6,759	2,654	1,105	4,064	6,025	3,760	3,062	3,721	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	386,333	10,338	14,532	16,137	23,759	28,816	34,113	44,819	50,596	42,761	38,325	69,811	12,326
Bay and magnolia	182,145	26,682	32,988	29,364	31,650	38,109	9,257	8,184	2,518	1,143	505	1,745	--
Black cherry	20,717	6,238	4,809	4,685	2,472	482	426	1,121	--	--	--	484	--
Black walnut	2,207	--	277	--	--	--	592	--	621	--	--	717	--
Sycamore	24,237	460	2,653	4,167	3,280	1,029	2,624	2,346	648	548	--	5,540	942
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	72,983	2,105	5,291	5,477	4,682	10,290	11,356	8,302	8,853	4,797	2,040	9,699	91
Other eastern hardwoods	323,405	67,636	78,574	64,706	50,914	22,270	11,636	10,304	7,014	5,715	2,948	1,688	--
Total hardwoods	5,992,921	399,584	548,892	579,773	640,709	651,649	615,351	599,649	529,387	420,656	304,488	523,848	178,935
All species	9,897,679	453,170	695,503	1,006,397	1,255,056	1,272,131	1,076,781	1,003,875	918,226	711,286	498,208	787,045	220,001

Table 40--Green weight of forest biomass on timberland, by species and diameter class, Northern Coastal Plain of North Carolina, 1990

Species	All classes	Diameter class (inches at breast height) 1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
						Hundred thousand pounds							
Softwood													
Longleaf pine	42,804	263	230	2,143	3,542	4,436	6,413	10,702	8,617	5,267	515	676	--
Slash pine	6,517	--	--	--	1,322	3,091	947	737	420	--	--	--	--
Shortleaf pine	27,975	299	472	188	4,206	*6,527*	3,577	5,254	*5,724*	1,728	--	--	--
Loblol ly pine	2,116,399	21,870	*67,904*	253,458	358,291	335,066	243,816	217,165	219,646	166,444	109,458	119,899	3,382
Pond pine	352,522	2,602	10,855	34,408	64,835	84,820	63,953	44,313	23,952	12,391	6,842	3,551	--
Virginia pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Pitch pine	--	--	--	--	--				--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Spruce pine	--	--	--	--	--				--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	--	--	--	--	--				--	--	--	--	--
Eastern hemlock	--	--	--	--	--				--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	192,859	332	2,323	1,590	4,893	8,197	10,719	*12,070*	17,937	19,005	21,494	*67,935*	26,364
Pondcypress	30,975	7	211	*677*	2,723	1,831	1 ,498	2,535	4,242	4,334	3,393	4,563	4,961
Cedars	44,650	2,190	4,312	*7,887*	8,073	8,918	6,573	2,656	987	2,107	--	947	--
Total softwoods	2,814,701	27,563	86,307	300,351	447,885	452,886	337,496	295,432	281,525	211,276	141,702	197,571	34,707
Hardwood													
Select white oaks	346,323	7,388	14,217	17,475	27,19	42,462	41,727	41,560	37,541	36,196	27,555	34,542	17,941
Select red oaks	80,805	1,814	*2,007*	645	4,320	5,230	*7,744*	*7,676*	*8,857*	10,459	7,482	16,423	8,148
Chestnut oak	12	12	--	--	--	--	--	--	--	--	--	--	--
Other white oaks	58,286	1,751	2,310	2,633	6,086	5,300	6,093	*4,976*	7,622	5,219	2,059	8,114	6,123
Other red oaks	403,654	17,995	23,396	28,464	47,633	45,040	46,449	44,544	33,890	29,012	25,507	48,774	12,950
Hickory	50,543	2,693	3,199	3,693	6,109	5,980	5,070	3,381	3,248	4,268	*4,279*	8,623	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	12	12	--	--	--	--	--	--	--	--	--	--	--
Soft maple	768,421	85 247	104,981	90,675	100,761	91,383	76,282	58,367	52,538	39,607	27 *969*	33,889	6,722
Beech	58,128	1 ,170	1,863	1,385	3,930	5,995	4,574	2,683	10,851	7,804	4 988	10,721	2,164
Sweetgum	733,896	47 ,904	65,058	*71,698*	78,920	85,056	96,590	93,691	65,214	48,069	30 ,297	47,762	3,637
Tupelo and blackgum	1,046,889	31 ,860	52,441	55,907	78,266	96,686	105,412	118,366	121,696	96,282	69 046	134,081	86,846
Ash	100,765	9 033	12,911	14,016	12,471	11,719	9,546	13,322	4,848	4,657	3 227	4,888	127
Cottonwood	26,890	328	2,505	2,142	4,384	1,785	761	2,865	4,327	2,726	2 290	2,777	--
Basswood	--	--	--	--	--	--	--	--	--	--	--	--	--
Yellow-poplar	275,401	7 ,637	9,564	9,792	16,174	20,126	24,118	31,997	36,448	30,989	27 ,972	51,267	9,317
Bay and magnolia	110,587	16,431	20,306	15,569	19,084	23,846	5,911	5,394	1,678	*777*	352	1,239	--
Black cherry	12,482	2,971	3,212	2,811	1,690	333	304	780	--	--	--	381	--
Black walnut	1,919	--	230	--	--	--	495	--	545	--	--	649	--
Sycamore	16,407	317	1,839	1,898	2,032	717	1,809	1,691	511	422	--	4,402	*769*
Black locust	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm	46,608	1,532	3,681	2,946	2,949	6,373	7,140	5,299	5,713	3,078	1,372	6,451'	74
Other eastern hardwoods	240,051	52,435	63,246	43,776	35,437	15,584	8,044	7,870	5,833	4,472	2,100	1,254	--
Total hardwoods	4,378,079	288,530	386,966	365,525	447,965	463,615	448,069	444,462	401,360	324,037	236,495	416,237	154.818
All species	7,192,780	316,093	473,273	665,876	895,850	916,501	785,565	739,894	**682,885**	535,313	378,197	613,808	189,525

Table 41--Average net annual growth and removals of live timber and growing stock on timberland, by species, Northern Coastal Plain of North Carolina, 1984-1989

Species	Live timber[a]		Growing stock	
	Net annual growth	Annual timber removals	Net annual growth	Annual timber removals
	Thousand cubic feet			
Softwood				
Yellow pines	171,674	146,228	171,516	145,824
Eastern white pine	--	--	--	--
Spruce and fir	--	--	--	--
Cypress	4,905	4,585	4,881	4,257
Other eastern softwoods	1,819	1,698	1,818	1,576
Total softwoods	178,398	152,511	178,215	151,657
Hardwood				
Select white and red oaks	12,204	19,205	12,158	18,706
Other white and red oaks	13,092	19,293	13,009	18,758
Hickory	948	2,386	941	2,301
Yellow birch	--	--	--	--
Hard maple		--	--	--
Sweetgum				
Ash, walnut, and black cherry	23,674	26,384	23,576	25,359
	3,290	4,325	3,168	4,043
Yellow-poplar	15,172	16,878	15,140	16,687
Tupelo and blackgum	17,940	22,691	17,800	21,159
Bay and magnolia	5,172	1,097	5,082	954
Other eastern hardwoods	31,125	29,525	30,019	24,781
Total hardwoods	122,617	141,784	120,893	132,748
All species	301,015	294,295	299,108	284,405

[a]Merchantable portion only.

Table 42--Average net annual growth and removals of sawtimber on timberland, by species, Northern Coastal Plain of North Carolina, 1984-1989

Species	Net annual growth	Annual timber removals
	Thousand board feet	
Softwood		
Yellow pines	645,959	580,866
Eastern white pine	--	--
Spruce and fir	--	--
Cypress	23,506	20,600
Other eastern softwoods	5,624	5,727
Total softwoods	675,089	607,193
Hardwood		
Select white and red oaks	59,079	69,272
Other white and red oaks	54,852	63,593
Hickory	4,316	8,534
Yellow birch	--	--
Hard maple	--	--
Sweetgum		
Ash, walnut, and black cherry	83,770	80,395
	9,409	11,638
Yellow-poplar	77,084	73,857
Tupelo and blackgum	88,128	73,496
Bay and magnolia	13,864	2,133
Other eastern hardwoods	84,963	69,122
Total hardwoods	475,465	452,040
All species	1,150,554	1,059,233

Table 43--Average annual removals of growing stock on timberland, by species and diameter class, Northern Coastal Plain of North Carolina, 1984-1989

Species	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger
	Thousand cubic feet										
Softwood											
Yellow pines	145,824	11,561	22,413	21,577	20,196	18,322	18,123	15,221	8,537	9,483	391
Eastern white pine	--	--	--	--	--	--	--	--	--	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	a-	--
Cypress	4,257	55	224	335	101	339	596	417	707	1,352	131
Other eastern softwoods	1,576	257	162	209	171	466	69	169	73	--	--
Total softwoods	151,657	11,873	22,799	22,121	20,468	19,127	18,788	15,807	9,317	10,835	522
Hardwood											
Select white and red oaks	18,706	928	1,779	1,418	2,736	2,185	1,602	1,676	1,687	4,194	501
Other white and red oaks	18,758	1,488	2,418	1,640	2,300	1,772	1,616	2,573	1,199	2,890	862
Hickory	2,301	--	302	152	425	171	105	409	242	495	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--
Sweetgum	25,359	2,537	2,829	3,225	2,968	3,588	3,398	2,540	2,054	1,598	622
Ash, walnut, and black cherry	4,043	405	374	554	461	563	1,002	230	76	378	--
Yellow-poplar	16,687	549	661	1,167	1,796	2,270	2,182	2,423	2,078	3,033	528
Tupelo and blackgum	21,159	724	1,516	2,215	3,137	3,363	3,002	2,128	2,404	2,297	373
Bay and magnolia	954	354	93	--	188	--	--	--	143	176	--
Other eastern hardwoods	24,781	1,772	2,427	3,837	4,166	2,403	3,449	1,832	1,756	2,901	238
Total hardwoods	132,748	8,757	12,399	14,208	18,177	16,315	16,356	13,811	11,639	17,962	3,124
All species	284,405	20,630	35,198	36,329	38,645	35,442	35,144	29,618	20,956	28,797	3,646

Table 44--Average annual mortality of live timber, growing stock, and sawtimber on timberland, by species, Northern Coastal Plain of North Carolina, 1984-1989

Species	Live timber[a]	Growing stock	Sawtimber
	Thousand cubic feet		Thousand board feet
Softwood			
Yellow pines	18,458	18,236	48,786
Eastern white pine	--	--	--
Spruce and fir	--	--	--
Cypress	246	138	656
Other eastern softwoods	370	370	1,050
Total softwoods	19,074	18,744	50,492
Hardwood			
Select white and red oaks	1,954	1,652	5,418
Other white and red oaks	4,621	3,800	9,564
Hickory	322	322	959
Yellow birch	--	--	--
Hard maple	--	--	--
Sweetgum	4,257	3,721	8,464
Ash, walnut, and black cherry	1,426	867	977
Yellow-poplar	1,516	1,516	4,472
Tupelo and blackgum	4,220	2,308	3,609
Bay and magnolia	1,469	707	1,453
Other eastern hardwoods	12,686	7,837	21,220
Total hardwoods	32,471	22,730	56,136
All species	51,545	41,474	106,628

[a] Merchantable portion only.

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

Species group and year	All classes	Diameter class (inches at breast height)							
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0 and larger
	Thousand trees								
Yellow pine									
1984	624,675	217,755	153,860	111,113	64,954	31,582	18,874	12,048	14,489
1990	638,536	229,344	126,753	114,672	78,510	43,711	19,725	11,265	14,556
Change	+13,861	+11,589	-27,107	+3,559	+13,556	+12,129	+851	-783	+67
Other softwood									
1984	39,431	18,012	7,682	4,072	3,109	1,879	1,032	1,044	2,601
1990	29,756	11,218	6,635	3,175	2,489	1,749	1,130	702	2,658
Change	-9,675	-6,794	-1,047	-897	-620	-130	+98	-342	+57
Hardwood									
1984	2,653,113	1,841,444	437,475	161,085	83,138	48,168	31,420	20,038	30,345
1990	2,420,774	1,676,258	399,354	145,671	78,944	45,320	27,233	18,513	29,481
Change	-232,339	-165,185	-38,121	-15,414	-4,194	-2,848	-4,187	-1,525	-864

Table 46--Land area, by land use class, major forest type, and survey completion date, Northern Coastal Plain of North Carolina

Land use class	Survey completion date			Change 1984-1990
	1974	1984	1990	
	Acres			
Forest land				
Timberland:				
Pine and oak-pine types	2,238,979	1,951,370	2,094,875	+143,505
Hardwood types	1,871,400	1,809,967	1,672,987	-136,980
Total	4,110,379	3,761,337	3,767,862	+6,525
Reserved timberland	1,756	28,072	56,278	+28,206
Woodland	34,172	31,567	31,567	- -
Total forest land	4,146,307	3,820,976	3,855,707	+34,731
Nonforest land				
Cropland	1,814,616	2,071,927	1,965,137	-106,790
Pasture and range	91,656	77,896	79,807	+1,911
Other	582,110	691,110	708,086	+16,976
Total	2,488,382	2,840,933	2,753,030	-87,903
All land[a]	6,634,689	6,661,909	6,608,737	-53,172

[a]Excludes all water areas.

Table 47--Volume[a] of sawtimber, growing stock, and live timber on timberland, by species group, survey completion date, and diameter class, Northern Coastal Plain of North Carolina

Species group and year	All classes	Diameter class (inches at breast height) 5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0 and larger
					SAWTIMBER (in thousand board feet)					
Softwood										
1974	11,517,550	--	--	1,543,901	2,053,144	2,409,759	2,194,140	1,503,876	833,591	979,139
1984	11,213,210	--	--	1,470,584	1,804,933	2,063,052	1,943,450	1,582,875	965,713	1,382,603
1990	11,639,332	--	--	1,906,960	1,806,429	1,819,660	1,913,458	1,512,905	1,047,356	1,632,564
Hardwood										
1974	9,245,813	--	--	--	1,654,395	1,792,732	1,606,232	1,333,482	923,975	1,934,997
1984	11,000,584	--	--	--	1,755,535	1,979,777	1,925,224	1,598,634	1,214,220	2,527,194
1990	11,147,358	--	--	--	1,616,095	1,937,146	1,880,388	1,643,660	1,239,861	2,830,208
					GROWING **STOCK** (in thousand cubic feet)					
Softwood										
1974	2,943,042	247,058	381,916	430,455	461,906	476,574	397,972	257,192	136,654	153,315
1984	2,939,964	288,095	429,805	409,993	406,079	408,011	352,513	270,681	158,304	216,483
1990	3,106,400	300,417	500,794	528,985	401,372	354,150	342,606	254,401	169,446	254,229
Hardwood										
1974	3,458,898	347,578	461,830	510,917	504,881	458,651	367,963	280,564	183,232	343,282
1984	3,767,244	328,939	432,385	497,059	535,786	506,501	441,081	336,343	240,792	448,358
1990	3,692,658	317,462	445,325	488,586	476,707	481,129	419,604	337,559	238,661	487,625
					LIVE **TIMBER**[b] (in thousand cubic feet)					
Softwood										
1974	2,969,318	251,102	385,287	432,541	465,983	479,654	400,484	257,957	136,654	159,656
1984	2,968,196	291,822	434,120	411,907	409,804	410,705	354,680	271,476	158,304	225,378
1990	3,127,158	302,633	503,899	530,905	401,775	355,052	342,870	256,437	170,756	262,831
Hardwood										
1974	3,865,787	442,429	539,003	566,247	545,347	484,531	392,417	294,139	197,761	403,913
1984	4,199,106	418,830	505,269	550,784	578,807	535,104	470,385	352,586	259,819	527,522
1990	4,047,418	393,929	501,920	529,697	507,893	499,470	440,252	350,306	252,933	571,018

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

[b] Merchantable volume.

Thompson, Michael T. 1990. Forest statistics for the Northern Coastal Plain of North Carolina, 1990. Resour. Bull. SE-113. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station. 52 pp.

Since 1984, area of timberland in the Northern Coastal Plain of North Carolina has remained stable at 3.8 million acres. Nonindustrial private owners control two-thirds of the region's timberland. Volume of softwood growing stock increased by 6 percent to 3.1 billion cubic feet, while hardwood growing-stock volume dropped 2 percent to 3.7 billion cubic feet. Net annual growth of softwoods was up 38 percent to 178 million cubic feet. Hardwood growth was down 14 percent to 121 million cubic feet. Softwood removals increased 17 percent from 129 to 152 million cubic feet. Hardwood removals increased by 57 percent to 133 million cubic feet. Mortality of softwood growing stock was down 30 percent to 19 million cubic feet, whereas mortality of hardwood growing stock increased by 72 percent to 23 million cubic feet.

KEYWORDS: Timberland, land-use trends, timberland ownership, timber volume, timber growth, timber removals.

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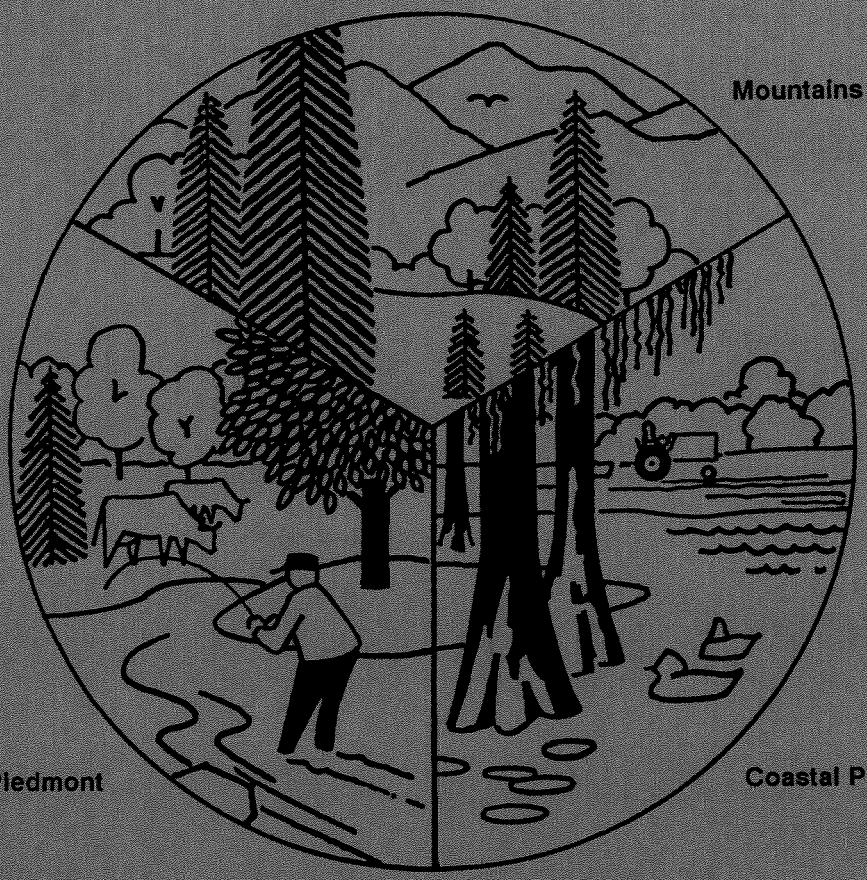
The Forest Service, U.S. Department of Agriculture, is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives—as directed by Congress—to provide increasingly greater service to a growing Nation.



Southeastern Forest Experiment Station

Established 1921

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

RESEARCH MISSION:

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

RESEARCH LOCATIONS:

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

EXPERIMENTAL FORESTS:

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