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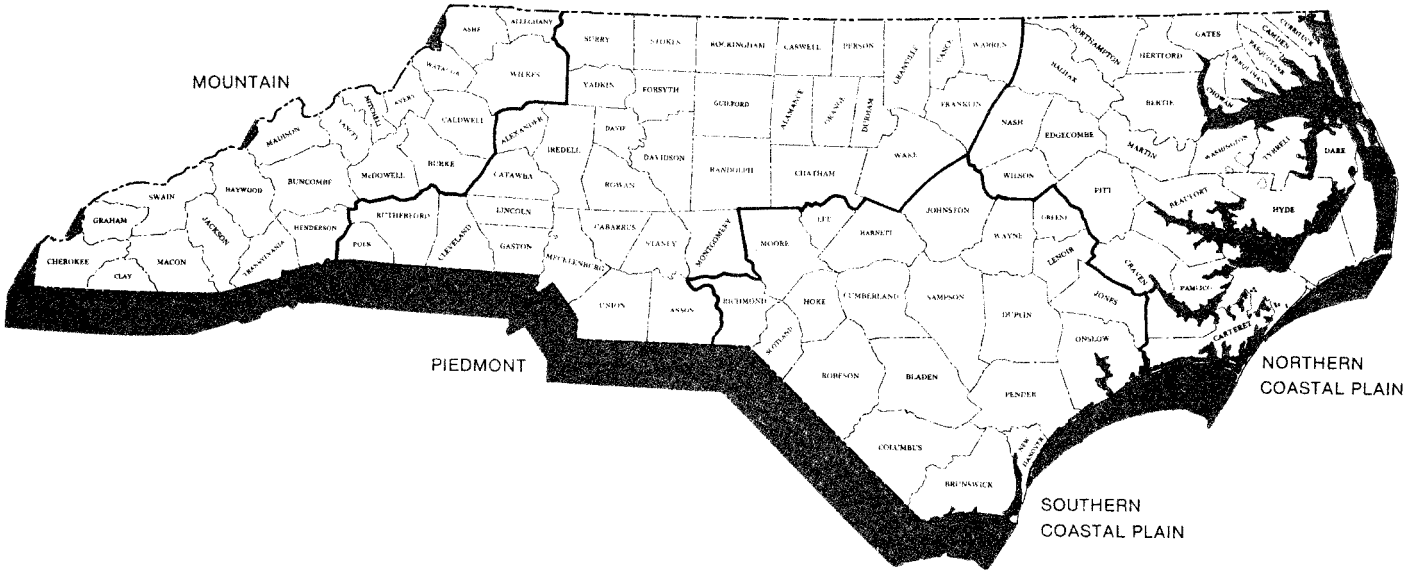
Forest Statistics for North Carolina, 1990

Tony G. Johnson



Forest Statistics for North Carolina, 1990

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Forest Inventory and Analysis
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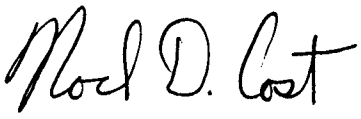
Foreword

This report highlights the principal findings of the sixth forest survey of North Carolina. Field work began in April 1989 and was completed in November 1990. Five previous surveys, completed in 1938, 1956, 1964, 1974, and 1984, provide statistics for measuring changes and trends over the past 52 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.

Reports for the survey units in North Carolina, USDA Forest Service Resource Bulletins SE-111 and SE-113 have been issued for the Southern Coastal Plain and Northern Coastal Plain. Resource Bulletins SE-117 and SE-118, which cover the Piedmont and Mountains, are being released with this report. An in-depth, analytical State report should be available in late 1992.

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

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Trends in timberland area since 1984, as shown in this report, reflect a 1.8-percent upward adjustment in the acreage of timberland for 1984. The adjustments were confined to the Piedmont and Mountain Survey Units. Revisions were necessary due to the incomplete and poor-quality aerial photography available for the 1984 survey and to the associated difficulties in photo interpretation of land use. For those desiring more information about these changes, please contact the FIA staff at:

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Since the fifth inventory of North Carolina's forest resources was completed in 1984--

- area of timberland declined almost 78,000 acres, or less than 1 percent. Timberland currently occupies 18.7 million acres, or 60 percent of the total land area in the State of North Carolina. Land use changes occurred on more than 680,000 acres of land. Nearly 379,000 acres of timberland were diverted to other land uses, while 301,000 acres were added to the timberland base. Almost all of the additions came from natural seeding and tree planting on former agricultural land. Timberland clearing for urban development accounted for 51 percent of the diversions, with clearing for agriculture accounting for 27 percent and water for 5 percent. Almost 66,000 acres, or 17 percent, were reclassified as reserved timberland.

- area of timberland owned by nonindustrial private forest (NIPF) landowners declined less than 1 percent and currently totals 14.3 million acres. This ownership group controls 76 percent of the timberland in North Carolina. Within the NIPF category, all of the acreage loss was confined to farmer-owned timberland which fell 11 percent, or nearly 600,000 acres. Although not as steep a decline as measured during the last remeasurement cycle (33 percent) this loss in farm woodland has continued since 1955. Over that period, farm ownership has fallen from 13.3 million acres to the current total of 5.0 million acres of timberland. In contrast to farm owners, timberland holdings of other individuals and corporate owners increased by 6 and 7 percent, respectively, to 7.5 and 1.8 million acres. Timberland owned or leased by forest industry declined 3 percent to 2.4 million acres. Altogether, forest industry controls 13 percent of the timberland in North Carolina; its holdings are concentrated in the Coastal Plain region. Area of timberland in public ownership increased 4 percent to 2.0 million acres. Publicly owned timberland now constitutes 11 percent of the timberland base.

- area of timberland classified as a pine type declined by more than 167,000 acres, or nearly 3 percent, and now totals 6.3 million acres. Acreage in planted pine jumped 29 percent from 1.6 to 2.1 million acres and now accounts for more than a third of all the pine stands in North Carolina. Natural pine stands declined 13 percent to 4.2 million acres. Acreage in loblolly pine forest type--the dominant pine type in the State--increased 8 percent to 3.7 million acres. In contrast, Virginia, longleaf, shortleaf, slash, and pond pine forest types all declined in acreage. Area of oak-pine increased 11 percent to 2.6 million acres. Hardwood forest types account for 53 percent of the timberland in North Carolina. Within this category, oak-hickory type dropped 184,000 acres, or almost 3 percent. However, at 6.9 million acres, oak-hickory remains the largest forest type in the State. Area in oak-gum-cypress type increased 8 percent to 2.5 million acres.

- nearly 295,000 acres were harvested annually and retained in timberland. The area harvested increased by 12 percent, or 31,000 acres per year, over that harvested between 1974 and 1984. Of the acres harvested, 78 percent were on NIPF land, 18 percent on land controlled by forest industry, and the remaining 4

percent on public land. Pine stands (both natural and planted) and hardwood stands each accounted for 44 percent of the total annual harvest. Oak-pine stands made up the remaining 12 percent of the annual harvested acreage. In addition to final harvests, some form of partial harvest or intermediate cutting occurred on 104,000 acres annually. This average is well above the 92,000-acre annual average during the last remeasurement cycle. Natural disturbances such as weather, fire, insects, and diseases damaged nearly 350,000 acres yearly.

• artificial and natural regeneration increased 56 percent from an average of 228,000 to 357,000 acres annually. Of the newly regenerated stands, approximately 38 percent resulted in pine forest types, 22 percent in oak-pine, and 40 percent in hardwood types. Newly planted and natural pine stands were established on more than 136,000 acres each year, exceeding the acres of pine stands harvested by 4 percent. The area of newly established hardwood stands exceeded the hardwood area harvested by 10 percent. By ownership, 78 percent of the total regeneration occurred on NIPF land, 18 percent on forest industry land, and the remaining 4 percent on public land. Artificially regenerated acreage jumped 39 percent from 74,000 to 103,000 acres yearly, accounting for 29 percent of the area regenerated. The rate of planting on NIPF land doubled; more than 57,000 acres, including nearly 14,000 acres of former nonforest land, were planted each year. Artificial regeneration on forest industry land increased 6 percent to 44,000 acres annually. Planted pine stands currently account for 48 percent of all forest industry timberland, as compared with 6 percent for NIPF land and 4 percent for publicly owned land.

• average basal area of live trees 5.0 inches d.b.h. and larger remained stable at 78 square feet per acre. Merchantable net volume per acre of softwoods and hardwoods currently averages 1,854 cubic feet per acre. Area in stands classed as fully stocked increased nearly 5 percent to 8.5 million acres, 45 percent of the timberland area in the State. The proportion of timberland classified as fully stocked was 29 percent in 1974 and 43 percent in 1984. Acreage in medium-stocked stands declined almost 4 percent to 7.8 million acres. Poorly stocked stands declined 6 percent to 2.4 million acres. Stands dominated by sawtimber-size trees remained unchanged at 9.1 million acres, nearly half of the State's total timberland area.

• volume of softwood growing stock increased 4 percent from 12.0 to 12.5 billion cubic feet. Volume of loblolly pine increased 9 percent to 6.5 billion cubic feet, about half the State's softwood inventory. Volume of Virginia pine and eastern white pine, important species in the Mountains and Piedmont of North Carolina, increased 7 and 13 percent, respectively, to 1.5 and 0.7 billion cubic feet. The largest decline in softwood volume occurred in shortleaf pine, which fell 13 percent to 1.3 billion cubic feet. Longleaf pine volume also fell, dropping 8 percent to 0.4 billion cubic feet. Volume of softwood growing stock increased or remained stable in all but the 6- and 14-inch diameter classes. Volume in each of these diameter classes dropped nearly 5 percent. Volume in the 8- and 10-inch diameter classes, which account for 37 percent of the softwood volume, increased 5 and 11 percent, respectively. Volume in trees 15.0 inches d.b.h. and larger increased 9 percent to 3.2 billion cubic feet. By ownership, 60 percent of the softwood volume increase occurred on forest industry land, where softwood volume rose almost 20 percent to 2.1 billion cubic feet. Softwood volume on public land increased 21 percent to 1.3 billion cubic feet, whereas softwood volume on NIPF land declined 1 percent to 9.1 billion cubic feet. Almost 73 percent of the softwood volume is on NIPF land. Pine plantations contain approximately 17 percent of the softwood growing-stock inventory. Volume of softwood sawtimber increased 7 percent from 41.2 to 44.0 billion board feet.

• volume of hardwood growing stock increased almost 5 percent from 19.3 to 20.2 billion cubic feet and accounted for 62 percent of the total growing-stock volume. Collectively, the inventory of oak species increased nearly 3 percent to 7.1 billion cubic feet and accounted for more than a third of the hardwood volume. The inventory of yellow-poplar, the single most dominant hardwood species, rose 8 percent to 3.3 billion cubic feet. Volume of sweetgum, tupelo and blackgum, and the maples increased 4, 3, and 11 percent, respectively. These five groups accounted for 84 percent of the total gain in hardwood volume. Hardwood volume increased in all but the 6- and 12-inch diameter classes. Volume in these diameter classes dropped 3 and 5 percent, respectively. Volume in trees 15.0 inches d.b.h. and larger increased 12 percent to 8.2 billion cubic feet. The relatively large trees account for approximately 41 percent of the hardwood volume. Hardwood volume on NIPF land was up 4 percent to 16.1 billion cubic feet. Almost 80 percent of the State's hardwood volume is in stands on NIPF land. Hardwood volume on public land increased 10 percent but declined nearly 4 percent on forest industry land. Volume of hardwood sawtimber was up 9 percent to 62.5 billion board feet.

• net annual growth of softwood growing stock increased 18 percent from 501 to 590 million cubic feet. Softwood net growth increased for all ownership categories, but was up most significantly on forest industry land. Softwood net growth increased 42 percent on forest industry land, 25 percent on public land, and 9 percent on NIPF land. Across all ownerships, softwood net growth exceeded removals by 15 percent. More than half of the surplus growth occurred on forest industry land, where growth exceeded removals by 68 percent. On public land, growth more than doubled removals. However, softwood removals exceeded growth by 4 percent on NIPF land. In contrast to softwoods, net annual growth of hardwood growing stock declined 9 percent from 627 to 570 million cubic feet. This decrease was recorded across all ownership categories, but approximately 80 percent of the decline occurred on NIPF timberland. Despite the decrease, hardwood growth exceeded removals by 33 percent. During the last remeasurement cycle, hardwood growth was double the rate of removals. Net annual growth for all species included 4.8 billion board feet of sawtimber. Net growth per acre for softwood and hardwood growing stock increased from 60 to 62 cubic feet per acre.

• annual removals of softwood growing stock increased 19 percent from 431 to 512 million cubic feet. By ownership, 76 percent of the softwood removals came from NIPF land, 20 percent from forest industry land, and the remaining 4 percent from public land. Softwood removals were up for all ownership categories. On NIPF land, softwood removals increased 12 percent to 389 million cubic feet. Softwood removals on forest industry and public land were up 46 and 40 percent, respectively. Softwoods accounted for 54 percent of total growing-stock removals and included 2.0 billion board feet of sawtimber. Hardwood removals jumped 36 percent from 315 to 428 million cubic feet annually. Hardwood removals increased on all ownerships. On NIPF land, hardwood removals increased 33 percent to 360 million cubic feet. This ownership category accounted for 84 percent of all hardwood removals. Hardwood removals included 1.5 billion board feet of sawtimber.

• annual mortality of softwood growing stock remained stable at 116 million cubic feet. Softwood mortality was down 1 percent on NIPF land and 19 percent on public land. In contrast, softwood mortality was up 38 percent on forest industry land. Softwood mortality reduced gross growth by 16 percent and included 303 million board feet of sawtimber. Annual mortality of hardwood growing stock doubled from 75 to 150 million cubic feet. Hardwood mortality increased on all ownership groups. More than three-fourths of the hardwood mortality occurred on NIPF land. Hardwood mortality reduced gross growth by 21 percent and included 411 million board feet of 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 128,322 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 9,612 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 5,692 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 required to construct volume equations.

4. Felled trees were measured at 108 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 5,429 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	0.90
Per billion cubic feet of growing stock	6.14
Per billion cubic feet of net annual growth	1.23
Per billion cubic feet of annual removals	3.56

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

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
		Sampling error[b]		
Alamance	2.70	9.84	9.54	39.42
Alexander	1.73	9.72	12.29	46.12
Alleghany	2.34	14.08	15.35	100.03
Anson	2.80	11.95	12.72	30.79
Ashe	2.40	8.88	10.15	63.88
Avery	2.50	8.57	11.53	71.21
Beaufort	1.22	7.17	7.65	17.72
Bertie	1.14	7.77	7.79	21.92
Bladen	1.84	9.44	8.82	22.93
Brunswick	1.28	10.25	7.20	20.53
Buncombe	1.77	7.11	7.69	73.37
Burke	1.47	11.75	11.11	44.28
Cabarrus	2.20	14.87	15.59	54.18
Caldwell	1.04	10.17	9.14	42.82
Camden	4.30	16.36	13.43	56.56
Carteret	3.06	14.81	14.47	34.44
Caswell	1.80	8.96	8.05	53.48
Catawba	2.46	14.24	13.38	63.42
Chatham	1.68	8.70	8.77	24.77
Cherokee	.87	8.12	9.11	42.36
Chowan	3.00	22.69	19.70	58.66
Clay	1.89	13.49	18.40	77.22
Cleveland	3.02	10.90	9.85	77.08
Columbus	1.35	6.92	6.75	19.33
Craven	1.17	8.48	8.85	20.22
Cumberland	2.57	10.21	10.46	37.53
Currituck	4.62	18.77	18.75	46.32
Dare	2.72	12.19	12.36	66.00
Davidson	1.75	9.70	10.15	42.11
Davie	2.18	14.45	11.89	71.72
Duplin	1.86	9.78	8.75	23.70
Durham	5.56	10.26	12.99	36.33
Edgecombe	1.87	15.20	14.34	22.33
Forsyth	2.21	9.36	9.61	56.43
Franklin	2.52	13.81	12.34	34.70
Gaston	2.59	12.73	12.38	61.11
Gates	1.41	11.94	11.92	34.44
Graham	.99	10.73	10.76	89.17
Granville	1.92	8.68	7.61	45.29
Greene	3.49	18.56	18.13	37.46
Guilford	3.43	10.29	8.79	31.84
Halifax	1.35	9.64	9.26	20.97
Harnett	1.96	11.89	12.41	32.22
Haywood	1.84	10.16	9.83	51.50
Henderson	1.88	8.53	11.13	43.65
Hertford	1.73	15.27	13.50	36.48
Hoke	3.56	12.29	13.40	45.69
Hyde	2.33	11.25	12.31	55.96
Iredell	1.81	14.53	12.14	41.60
Jackson	.79	6.98	8.05	57.39
Johnston	2.24	9.45	8.63	24.79
Jones	1.92	10.51	10.97	26.05

Continued

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

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
		Sampling error[b]		
Lee	3.44	16.30	15.55	37.77
Lenoir	3.09	15.02	12.62	54.58
Lincoln	3.31	15.33	14.14	56.48
Macon	1.03	7.63	8.97	57.21
Madison	1.59	9.33	9.67	54.15
Martin	1.71	11.91	11.79	22.97
McDowell	1.14	8.55	7.76	100.01
Mecklenburg	4.00	10.06	12.25	48.19
Mitchell	3.67	10.53	12.11	100.07
Montgomery	1.37	8.34	9.99	27.22
Moore	1.75	8.13	8.50	24.85
Nash	1.58	12.42	12.31	24.58
New Hanover	9.61	27.11	26.57	68.52
Northampton	1.47	9.13	9.69	33.40
Onslow	2.11	9.45	9.91	24.39
Orange	2.33	10.05	8.74	42.60
Pamlico	2.09	16.15	16.65	39.04
Pasquotank	7.82	27.13	24.01	49.06
Pender	1.06	7.32	7.43	23.61
Perquimans	4.03	17.72	21.57	31.91
Person	2.29	10.35	10.60	67.43
Pitt	1.72	13.10	10.46	21.01
Polk	1.58	11.50	9.79	69.03
Randolph	1.36	8.32	8.06	32.16
Richmond	1.83	9.90	11.78	27.58
Robeson	1.88	8.71	8.69	27.43
Rockingham	1.66	8.26	8.91	42.71
Rowan	1.85	10.14	10.03	35.55
Rutherford	1.90	9.70	10.18	40.77
Sampson	1.22	9.24	8.69	22.15
Scotland	3.77	16.30	18.16	39.82
Stanly	2.34	12.50	18.22	66.28
Stokes	1.17	9.55	7.98	49.43
Surry	1.58	8.85	8.51	41.74
Swain	1.92	16.44	15.33	100.13
Transylvania	.93	6.15	9.89	95.90
Tyrrell	1.53	11.24	15.48	50.32
Union	1.85	10.76	9.32	58.63
Vance	2.62	14.28	12.16	47.66
Wake	3.50	7.51	6.68	30.20
Warren	1.85	11.08	10.02	33.94
Washington	3.10	15.85	16.73	54.58
Watauga	2.30	6.87	9.43	73.22
Wayne	3.40	14.35	12.92	25.59
Wilkes	1.10	6.99	7.77	26.33
Wilson	2.46	15.73	15.98	31.24
Yadkin	2.41	13.42	14.14	61.66
Yancey	1.60	11.24	10.79	55.35
Total	.21	1.13	1.23	3.68

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

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

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

SE = Specified sampling error in table.

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

Definitions of Terms

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

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

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

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

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

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

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

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

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

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

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

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

Commercial forest land. (see: Timberland).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Palm, other 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 flood-plains (omitting tidal flats below mean high tide), streams, sloughs, estuaries, and canals less than one-eighth of a statute mile in width, and lakes, reservoirs, and ponds less than 40 acres in area.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Class 1. 165 or more cubic feet per acre.

Class 2. 120 to 164 cubic feet per acre.

Class 3. 85 to 119 cubic feet per acre.

Class 4. 50 to 84 cubic feet per acre.

Class 5. 20 to 49 cubic feet per acre.

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

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

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

Stand-size class. A classification of forest land based on the diameter class distribution of 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	60.6	61.0	68.2	60.0
8	68.5	68.1	76.0	68.4
10	73.4	73.1	81.4	73.4
12	76.7	76.7	85.2	76.4
14	79.0	79.4	88.2	78.4
16	80.7	81.6	90.4	79.8
18	81.9	83.3	92.3	80.8
20	82.9	84.8	93.8	81.5
22	83.7	86.0	95.1	82.1
24+	85.1	87.7	97.8	83.1
Average	75.2	73.7	87.4	75.2

Metric equivalents of units used in this report

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

County Tables

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

Table 1--Area, by county and land class, North Carolina, 1990

County	All land[a]	Forest land				Nonforest land[b]
		Total	Timberland	Woodland	Reserved timberland	
	Acres					
Alamance	277,210	126,888	126,888	--	--	150,322
Alexander	165,530	100,736	100,729	--	7	64,794
Alleghany	150,093	78,268	70,596	--	7,672	71,825
Anson	341,210	248,527	248,527	--	--	92,683
Ashe	272,742	168,408	166,423	--	1,985	104,334
Avery	158,125	118,865	114,418	50	4,397	39,260
Beaufort	528,704	325,201	323,964	--	1,237	203,503
Bertie	448,595	315,327	311,563	--	3,764	133,268
Bladen	562,509	419,234	416,315	--	2,919	143,275
Brunswick	550,714	407,162	407,162	--	--	143,552
Buncombe	421,971	273,614	266,786	1,220	5,608	148,357
Burke	322,848	254,733	235,508	73	19,152	68,115
Cabarrus	233,011	108,406	108,406	--	--	124,605
Caldwell	301,549	232,953	232,783	--	170	68,596
Camden	153,914	88,958	74,511	--	14,447	64,956
Carteret	336,365	174,135	157,678	4,858	11,599	162,230
Caswell	273,606	165,055	165,055	--	--	108,551
Catawba	253,222	115,396	115,396	--	--	137,826
Chatham	439,090	302,104	302,103	--	1	136,986
Cherokee	289,171	252,511	251,890	7	614	36,660
Chowan	116,192	53,678	53,678	--	--	62,514
Clay	136,902	110,096	103,253	512	6,331	26,806
Cleveland	299,642	138,801	138,801	--	--	160,841
Columbus	600,602	422,278	420,770	--	1,508	178,324
Craven	448,941	321,816	310,504	--	11,312	127,125
Cumberland	420,646	233,566	233,266	--	300	187,080
Currituck	163,578	64,343	63,038	1,305	--	99,235
Dare	250,106	161,637	142,212	18,635	790	88,469
Davidson	350,899	181,963	181,866	--	97	168,936
Davie	170,618	75,257	75,257	--	--	95,361
Duplin	524,301	291,037	291,037	--	--	233,264
Durham	186,538	90,169	89,242	--	927	96,369
Edgecombe	323,642	149,103	149,103	--	--	174,539
Forsyth	263,987	112,697	112,697	--	--	151,290
Franklin	316,403	191,027	191,027	--	--	125,376
Gaston	228,666	113,810	111,665	--	2,145	114,856
Gates	216,480	154,763	144,759	--	10,004	61,717
Graham	184,762	177,852	164,174	497	13,181	6,910
Granville	339,745	225,371	225,121	--	250	114,374
Greene	170,477	78,228	78,228	--	--	92,249
Guilford	416,493	164,955	164,815	--	140	251,538
Halifax	463,162	281,927	279,652	--	2,275	181,235
Harnett	384,710	224,014	221,237	--	2,777	160,696
Haywood	355,104	269,145	180,188	953	88,004	85,959
Henderson	239,610	150,863	150,188	29	646	88,747
Hertford	227,898	147,420	147,420	--	--	80,478
Hoke	250,342	162,983	162,933	--	50	87,359
Hyde	399,501	235,791	235,119	672	--	163,710
Iredell	367,437	162,688	161,551	--	1,137	204,749
Jackson	313,933	276,537	263,288	527	12,722	37,396
Johnston	509,062	239,997	239,997	--	--	269,065
Jones	300,806	228,676	221,076	--	7,600	72,130

Continued

Table 1--Area, by county and land class, North Carolina, 1990--Continued

County	All land[a]	Forest land				Nonforest land[b]
		Total	Timberland	Woodland	Reserved timberland	
			Acres			
Lee	165,939	108,109	108,109	--	--	57,830
Lenoir	257,485	125,530	125,530	--	--	131,955
Lincoln	190,886	90,834	90,826	--	8	100,052
Macon	330,611	279,286	269,638	2,619	7,029	51,325
Madison	288,838	211,345	211,293	52	--	77,493
Martin	294,886	175,218	175,218	--	--	119,668
McDowell	279,930	241,360	239,261	346	1,753	38,570
Mecklenburg	337,773	132,831	132,831	--	--	204,942
Mitchell	142,080	106,085	105,101	426	558	35,995
Montgomery	313,312	256,595	256,555	--	40	56,717
Moore	448,800	334,809	334,158	--	651	113,991
Nash	345,344	180,496	180,496	--	--	164,848
New Hanover	118,106	49,807	49,329	--	478	68,299
Northampton	344,525	211,383	211,383	--	--	133,142
Onslow	488,070	343,837	343,657	--	180	144,233
Orange	256,172	148,023	146,622	--	1,401	108,149
Pamlico	218,067	133,777	132,421	1,356	--	84,290
Pasquotank	145,920	49,813	49,813	--	--	96,107
Pender	559,885	459,507	459,450	--	57	100,378
Perquimans	157,696	76,070	76,070	--	--	81,626
Person	252,533	149,798	149,798	--	--	102,735
Pitt	420,173	208,306	208,306	--	--	211,867
Polk	152,512	118,359	118,359	--	--	34,153
Randolph	504,851	317,657	311,657	--	6,000	187,194
Richmond	305,402	237,353	237,353	--	--	68,049
Robeson	607,482	280,949	280,949	--	--	326,533
Rockingham	363,930	208,080	208,080	--	--	155,850
Rowan	332,173	150,498	150,498	--	--	181,675
Rutherford	363,277	267,970	267,970	--	--	95,307
Sampson	605,984	338,055	338,055	--	--	267,929
Scotland	204,371	123,144	123,144	--	--	81,227
Stanly	253,299	116,270	111,927	--	4,343	137,029
Stokes	289,305	189,671	183,554	--	6,117	99,634
Surry	345,178	194,039	189,185	--	4,854	151,139
Swain	336,627	313,179	101,754	451	210,974	23,448
Transylvania	242,099	213,003	203,070	2,596	7,337	29,096
Tyrrell	260,365	153,234	153,112	--	122	107,131
Union	409,139	178,026	178,026	--	--	231,113
Vance	159,226	102,275	102,275	--	--	56,951
Wake	537,133	252,304	246,464	--	5,840	284,829
Warren	273,344	195,445	195,445	--	--	77,899
Washington	212,243	92,723	87,254	4,741	728	119,520
Watauga	200,992	135,652	126,867	--	8,785	65,340
Wayne	354,368	145,303	144,623	--	680	209,065
Wilkes	481,414	358,199	341,422	--	16,777	123,215
Wilson	239,533	100,588	100,588	--	--	138,945
Yadkin	214,874	92,145	91,905	--	240	122,729
Yancey	200,704	161,640	157,117	884	3,639	39,064
Total	31,228,220	19,277,549	18,710,381	42,809	524,359	11,950,671

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

[b]Includes 167,925 acres of water according to Forest Survey standards of area classification, but defined by the Bureau of Census as land.

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

County	All ownerships	Ownership class							
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry[a]	Other private		
							Farmer	Corporate	Individual
					Acres				
Alamance	126,888	--	--	242	898	206	36,341	3,304	85,897
Alexander	100,729	--	--	7	20	7,049	38,313	4,257	51,083
Alleghany	70,596	--	--	32	80	575	16,449	--	53,460
Anson	248,527	--	5,759	206	365	41,633	47,406	25,526	127,632
Ashe	166,423	327	3	151	74	2,702	30,594	10,198	122,374
Avery	114,418	27,753	--	441	39	1,111	5,004	30,026	50,044
Beaufort	323,964	--	--	3,309	88	168,499	34,561	32,257	85,250
Bertie	311,563	--	--	8,349	203	114,086	104,675	38,296	45,954
Bladen	416,315	--	39	32,610	200	93,134	78,390	63,873	148,069
Brunswick	407,162	--	8,567	--	150	191,497	29,216	51,128	126,604
Buncombe	266,786	30,056	--	300	22,380	285	20,359	20,359	173,047
Burke	235,508	36,777	--	8,497	1,543	10,321	43,055	49,206	86,109
Cabarrus	108,406	--	60	919	705	--	11,858	19,763	75,101
Caldwell	232,783	49,268	--	229	828	14,320	9,890	19,781	138,467
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
Caswell	165,055	--	--	13,220	405	5,652	111,660	6,203	27,915
Catawba	115,396	--	--	75	1,211	945	22,633	18,106	72,426
Chatham	302,103	--	12,266	410	211	32,000	66,141	25,722	165,353
Cherokee	251,890	92,021	4,740	--	1,605	7,379	12,179	24,358	109,608
Chowan	53,678	--	20	181	200	11,555	18,253	5,215	18,254
Clay	103,253	58,602	171	--	2	681	4,380	8,759	30,658
Cleveland	138,801	--	--	--	668	6,032	73,003	10,429	48,669
Columbus	420,770	--	40	84	116	182,108	92,190	6,358	139,874
Craven	310,504	44,952	5,170	4,363	454	108,056	66,379	--	81,130
Cumberland	233,266	--	31,852	46	775	7,928	87,301	30,104	75,260
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
Davidson	181,866	956	--	191	1,110	3,562	41,202	14,983	119,862
Davie	75,257	--	--	214	100	221	40,030	8,006	26,686
Duplin	291,037	--	--	7,596	170	39,600	129,958	8,122	105,591
Durham	89,242	--	7,891	4,556	2,632	235	15,564	19,455	38,909
Edgecombe	149,103	--	--	173	221	9,631	68,175	8,181	62,722
Forsyth	112,697	--	--	--	652	220	10,822	18,036	82,967
Franklin	191,027	--	--	55	148	8,596	95,075	15,846	71,307
Gaston	111,665	--	--	300	803	--	26,015	29,266	55,281
Gates	144,759	--	11,841	3,765	--	49,004	43,718	--	36,431
Graham	164,174	97,793	2,005	--	--	28	12,065	8,044	44,239
Granville	225,121	--	5,716	6,934	25	6,874	147,327	--	58,245
Greene	78,228	--	--	20	21	349	37,478	5,766	34,594
Guilford	164,815	--	--	424	4,828	--	46,418	23,209	89,936
Halifax	279,652	--	27	2,047	342	43,904	136,110	13,889	83,333
Harnett	221,237	--	8,122	157	--	7,683	119,281	24,966	61,028
Haywood	180,188	39,419	--	130	6,675	6,281	16,654	22,206	88,823
Henderson	150,188	17,091	--	1,222	99	2,094	9,606	14,409	105,667
Hertford	147,420	--	220	377	446	33,869	63,856	9,122	39,530
Hoke	162,933	--	84,909	1,812	18	4,152	20,012	18,011	34,019
Hyde	235,119	--	8,260	14,205	--	31,748	26,314	98,676	55,916
Iredell	161,551	--	--	55	143	1,619	60,440	30,220	69,074
Jackson	263,288	63,307	17,426	352	1,881	3,980	29,390	19,594	127,358
Johnston	239,997	--	--	407	10	2,315	129,668	16,553	91,044
Jones	221,076	29,785	550	31,075	23	75,247	36,788	12,984	34,624

Continued

Table 2--Area of timberland, by county and ownership class, North Carolina, 1990--Continued

County	All ownerships	Ownership class							
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry[a]	Other private		
							Farmer	Corporate	Individual
					Acres				
Lee	108,109	--	--	--	208	7,432	37,676	6,279	56,514
Lenoir	125,530	--	--	355	400	11,756	59,335	5,651	48,033
Lincoln	90,826	--	--	22	110	680	33,339	10,002	46,673
Macon	269,638	140,303	--	6	23	522	7,155	21,464	100,165
Madison	211,293	50,568	--	14	1,439	412	98,751	--	60,109
Martin	175,218	--	--	725	38	62,948	76,816	9,912	24,779
McDowell	239,261	67,611	--	430	390	20,123	20,094	25,118	105,495
Mecklenburg	132,831	--	--	737	1,770	--	21,020	33,632	75,672
Mitchell	105,101	17,498	--	--	2,849	1,513	10,405	5,203	67,633
Montgomery	256,555	36,807	--	100	186	34,487	36,995	18,498	129,482
Moore	334,158	--	2,451	4,540	833	54,466	123,576	30,208	118,084
Nash	180,496	--	--	93	91	7,955	62,405	8,915	101,037
New Hanover	49,329	--	780	1,350	1,692	3,509	3,231	9,692	29,075
Northampton	211,383	--	--	376	322	29,224	107,092	11,899	62,470
Onslow	343,657	--	59,029	46,474	473	110,104	22,964	5,103	99,510
Orange	146,622	--	340	2,463	1,659	1,798	49,540	--	90,822
Pamlico	132,421	--	--	1,000	99	47,058	12,964	28,088	43,212
Pasquotank	49,813	--	3,831	185	123	3,666	23,338	4,668	14,002
Pender	459,450	--	20	62,398	150	232,742	39,170	13,057	111,913
Perquimans	76,070	--	600	--	61	22,730	24,953	5,545	22,181
Person	149,798	--	--	--	685	6,685	50,042	7,699	84,687
Pitt	208,306	--	10	36	430	21,966	80,541	21,684	83,639
Polk	118,359	--	--	4,929	560	12,926	7,996	31,982	59,966
Randolph	311,657	4,140	--	47	1,022	4,448	161,634	12,761	127,605
Richmond	237,353	--	2,488	28,284	1,486	40,028	58,408	20,316	86,343
Robeson	280,949	--	--	614	284	34,127	84,459	32,293	129,172
Rockingham	208,080	--	--	386	1,062	1,013	124,618	15,577	65,424
Rowan	150,498	--	100	3	645	616	45,569	12,428	91,137
Rutherford	267,970	--	--	15	583	28,842	59,633	51,682	127,215
Sampson	338,055	--	--	181	243	43,731	167,120	28,814	97,966
Scotland	123,144	--	3,227	18,467	925	10,548	46,204	9,727	34,046
Stanly	111,927	--	--	--	425	3,694	53,904	7,187	46,717
Stokes	183,554	--	--	242	97	865	64,359	7,151	110,840
Surry	189,185	--	--	220	657	578	69,939	14,724	103,067
Swain	101,754	20,877	28,810	--	705	119	6,832	13,665	30,746
Transylvania	203,070	76,916	--	--	1,122	--	5,954	41,677	77,401
Tyrrell	153,112	--	5,707	50	38	36,362	12,060	84,422	14,473
Union	178,026	--	--	10	1,577	2,298	104,485	6,966	62,690
Vance	102,275	--	8,998	16	308	3,417	76,106	--	13,430
Wake	246,464	--	11,286	2,650	1,885	2,012	66,831	42,209	119,591
Warren	195,445	--	770	28	210	33,321	76,530	4,028	80,558
Washington	87,254	--	1,000	361	61	41,366	15,563	15,563	13,340
Watauga	126,867	393	--	172	80	6,048	24,035	14,421	81,718
Wayne	144,623	--	485	596	259	3,247	68,528	32,774	38,734
Wilkes	341,422	--	2,279	6,986	964	23,620	55,922	9,320	242,331
Wilson	100,588	--	--	2	836	1,894	32,619	2,718	62,519
Yadkin	91,905	--	--	119	90	463	51,090	3,649	36,494
Yancey	157,117	35,051	--	34	26	1,962	26,097	15,658	78,289
Total	18,710,381	1,082,380	489,810	346,478	83,995	2,420,378	5,041,869	1,793,309	7,452,162

[a]Includes 168,261 acres of other private land under long-term lease.

Table 3--Area of timberland, by county and forest-type group, 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					
Alamance	126,888	--	--	--	33,036	6,850	77,091	6,607	3,304	--
Alexander	100,729	--	--	--	37,077	18,035	45,617	--	--	--
Alleghany	70,596	12,337	--	--	--	8,226	49,458	--	--	575
Anson	248,527	--	--	--	137,059	40,111	61,183	10,174	--	--
Ashe	166,423	--	--	--	5,099	10,348	120,382	--	--	30,594
Avery	114,418	5,445	--	--	--	6,939	84,531	--	--	17,503
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	--
Bladen	416,315	--	--	45,414	167,118	57,866	35,050	110,867	--	--
Brunswick	407,162	--	--	66,974	178,608	35,659	24,497	101,424	--	--
Buncombe	266,786	--	--	--	10,179	19,563	234,557	--	--	2,487
Burke	235,508	51,787	--	--	20,209	60,240	103,272	--	--	--
Cabarrus	108,406	--	--	--	40,446	8,610	51,384	4,013	3,953	--
Caldwell	232,783	34,406	--	--	15,663	39,508	143,206	--	--	--
Camden	74,511	--	--	--	8,673	2,744	26,015	37,079	--	--
Carteret	157,678	--	--	10,788	87,396	19,442	10,133	29,919	--	--
Caswell	165,055	--	--	--	62,092	31,625	55,830	9,305	6,203	--
Catawba	115,396	--	--	--	46,892	18,107	45,871	--	4,526	--
Chatham	302,103	--	--	--	106,542	58,794	122,676	10,416	3,675	--
Cherokee	251,890	24,358	--	--	34,129	46,440	143,282	--	--	3,681
Chowan	53,678	--	--	--	25,188	10,154	15,548	2,788	--	--
Clay	103,253	--	--	--	17,648	8,887	67,021	--	--	9,697
Cleveland	138,801	--	--	--	37,318	34,765	66,718	--	--	--
Columbus	420,770	--	--	25,400	166,783	31,789	46,471	150,327	--	--
Craven	310,504	--	--	5,181	121,961	65,301	23,169	94,892	--	--
Cumberland	233,266	--	--	22,657	83,728	48,867	27,870	50,144	--	--
Currituck	63,038	--	--	--	20,978	11,645	8,694	21,721	--	--
Dare	142,212	--	--	--	69,889	8,049	9	64,265	--	--
Davidson	181,866	--	--	--	33,718	27,175	113,481	3,746	3,746	--
Davie	75,257	--	--	--	26,686	--	35,229	5,337	8,005	--
Duplin	291,037	--	--	3,879	93,872	58,525	59,733	75,028	--	--
Durham	89,242	--	--	--	30,533	14,303	31,363	13,043	--	--
Edgecombe	149,103	--	--	--	40,428	16,362	35,672	48,460	8,181	--
Forsyth	112,697	--	--	--	28,857	18,253	58,372	7,215	--	--
Franklin	191,027	--	--	--	84,255	27,731	67,156	11,885	--	--
Gaston	111,665	--	--	--	36,070	23,567	48,777	--	3,251	--
Gates	144,759	--	--	--	57,052	21,667	16,811	49,229	--	--
Graham	164,174	9,914	--	--	5,753	5,752	131,250	--	--	11,505
Granville	225,121	--	--	--	84,541	17,131	109,745	10,278	3,426	--
Greene	78,228	--	--	--	17,319	8,649	23,083	29,177	--	--
Guilford	164,815	--	--	--	49,744	14,018	81,232	8,704	11,117	--
Halifax	279,652	--	--	--	103,600	46,860	77,193	49,221	2,778	--
Harnett	221,237	--	--	13,870	69,440	40,444	71,230	26,253	--	--
Haywood	180,188	7,083	3,942	--	--	18,987	136,848	--	--	13,328
Henderson	150,188	4,803	--	--	9,606	33,091	102,688	--	--	--
Hertford	147,420	--	--	--	62,426	31,557	31,556	21,881	--	--
Hoke	162,933	--	--	30,262	30,099	58,403	16,028	28,141	--	--
Hyde	235,119	--	--	--	133,084	26,096	9,868	66,071	--	--
Iredell	161,551	--	--	--	40,527	4,318	108,071	--	8,635	--
Jackson	263,288	--	--	--	10,173	9,797	228,246	--	--	15,072
Johnston	239,997	--	--	2,758	80,857	35,865	49,670	70,847	--	--
Jones	221,076	--	--	2,164	139,095	13,534	11,750	54,533	--	--

Continued

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

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					
Lee	108,109	--	--	--	20,157	20,324	61,349	6,279	--	--
Lenoir	125,530	--	--	355	27,202	14,262	14,127	66,759	2,825	--
Lincoln	90,826	--	--	--	30,707	10,002	43,450	3,334	3,333	--
Macon	269,638	4,127	--	--	4,127	33,842	219,289	--	--	8,253
Madison	211,293	8,588	--	--	14,207	18,499	155,794	--	--	14,205
Martin	175,218	--	--	--	61,938	34,690	21,085	55,027	2,478	--
McDowell	239,261	15,071	--	--	36,778	28,881	153,507	--	5,024	--
Mecklenburg	132,831	--	--	--	47,129	9,293	72,205	--	4,204	--
Mitchell	105,101	--	--	--	5,202	3,499	68,590	--	--	27,810
Montgomery	256,555	--	--	--	94,411	51,750	99,295	11,099	--	--
Moore	334,158	--	--	41,620	98,307	52,938	111,588	26,959	2,746	--
Nash	180,496	--	--	--	56,142	38,311	50,291	35,752	--	--
New Hanover	49,329	--	--	8,090	12,923	8,152	6,462	13,702	--	--
Northampton	211,383	--	--	--	63,938	36,698	69,112	37,176	4,459	--
Onslow	343,657	--	--	20,515	181,637	38,619	21,454	81,432	--	--
Orange	146,622	--	--	--	38,388	17,743	73,638	12,725	4,128	--
Pamlico	132,421	--	--	--	80,027	8,641	13,064	30,689	--	--
Pasquotank	49,813	--	--	--	6,501	916	14,920	22,808	4,668	--
Pender	459,450	--	--	31,343	236,046	56,659	14,920	116,751	3,731	--
Perquimans	76,070	--	--	--	28,206	11,691	13,993	22,180	--	--
Person	149,798	--	--	--	39,102	15,398	83,750	11,548	--	--
Pitt	208,306	--	--	3,097	62,461	34,073	42,106	63,471	3,098	--
Polk	118,359	--	--	--	34,496	35,191	48,672	--	--	--
Randolph	311,657	--	--	--	32,377	36,146	238,880	4,254	--	--
Richmond	237,353	--	--	32,126	89,342	38,797	64,389	12,699	--	--
Robeson	280,949	--	--	3,098	76,533	40,278	35,063	125,977	--	--
Rockingham	208,080	--	--	--	97,210	15,577	82,831	6,231	6,231	--
Rowan	150,498	--	--	--	33,760	24,856	79,354	8,385	4,143	--
Rutherford	267,970	3,975	--	--	97,976	54,881	99,211	3,976	7,951	--
Sampson	338,055	--	--	8,643	109,785	64,929	68,926	80,237	5,535	--
Scotland	123,144	--	--	22,525	45,959	19,545	30,251	4,864	--	--
Stanly	111,927	--	--	--	36,464	10,355	61,514	3,594	--	--
Stokes	183,554	--	--	--	50,435	17,878	111,665	--	3,576	--
Surry	189,185	3,681	--	--	29,448	33,129	115,565	3,681	3,681	--
Swain	101,754	--	--	--	19,747	3,416	78,591	--	--	--
Transylvania	203,070	11,908	--	--	--	41,678	149,484	--	--	--
Tyrrell	153,112	--	--	--	58,651	19,682	--	74,779	--	--
Union	178,026	--	--	--	33,654	29,440	101,001	6,966	6,965	--
Vance	102,275	--	--	--	39,202	11,203	47,393	4,477	--	--
Wake	246,464	--	--	--	92,598	21,351	100,859	28,139	3,517	--
Warren	195,445	--	--	--	64,077	28,196	93,301	--	9,871	--
Washington	87,254	--	--	--	31,001	6,882	6,730	42,641	--	--
Watauga	126,867	4,807	4,807	--	--	1,512	101,320	--	--	14,421
Wayne	144,623	--	--	2,979	32,149	22,236	63,423	23,836	--	--
Wilkes	341,422	25,581	--	--	65,243	63,937	186,661	--	--	--
Wilson	100,588	--	--	--	31,793	8,157	40,773	19,865	--	--
Yadkin	91,905	--	--	--	26,129	18,247	40,231	--	7,298	--
Yancey	157,117	5,253	4,381	--	4,382	14,819	103,025	--	--	25,257
Total	18,710,381	233,124	13,130	411,114	5,604,536	2,580,187	7,007,983	2,490,400	175,519	194,388

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

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
			Acres		
Alamance	126,888	70,726	36,340	19,822	--
Alexander	100,729	39,340	43,355	18,034	--
Alleghany	70,596	37,092	25,280	8,224	--
Anson	248,527	85,551	66,839	89,431	6,706
Ashe	166,423	122,927	43,496	--	--
Avery	114,418	104,410	--	10,008	--
Beaufort	323,964	137,552	109,978	73,112	3,322
Bertie	311,563	142,221	99,199	59,628	10,515
Bladen	416,315	139,008	97,668	165,671	13,968
Brunswick	407,162	111,616	154,326	132,868	8,352
Buncombe	266,786	217,312	35,796	13,678	--
Burke	235,508	91,417	89,895	54,196	--
Cabarrus	108,406	40,506	40,232	27,668	--
Caldwell	232,783	139,069	54,341	39,373	--
Camden	74,511	35,662	27,433	11,416	--
Carteret	157,678	66,756	38,621	43,861	8,440
Caswell	165,055	89,561	49,829	22,360	3,305
Catawba	115,396	41,345	37,763	36,288	--
Chatham	302,103	139,878	74,812	83,738	3,675
Cherokee	251,890	144,631	74,268	32,991	--
Chowan	53,678	20,767	10,431	22,480	--
Clay	103,253	71,103	18,755	13,395	--
Cleveland	138,801	63,242	42,024	33,535	--
Columbus	420,770	204,243	117,193	96,560	2,774
Craven	310,504	147,157	75,224	82,556	5,567
Cumberland	233,266	104,446	65,218	63,602	--
Currituck	63,038	36,764	4,975	21,299	--
Dare	142,212	66,889	53,983	18,721	2,619
Davidson	181,866	75,566	63,990	42,310	--
Davie	75,257	32,344	21,565	21,348	--
Duplin	291,037	103,771	73,502	113,764	--
Durham	89,242	57,450	27,901	3,891	--
Edgecombe	149,103	56,860	25,668	61,120	5,455
Forsyth	112,697	87,231	7,431	14,428	3,607
Franklin	191,027	71,506	48,211	71,310	--
Gaston	111,665	62,083	23,566	26,016	--
Gates	144,759	57,785	38,003	48,971	--
Graham	164,174	101,930	36,942	25,302	--
Granville	225,121	113,090	74,344	37,687	--
Greene	78,228	37,478	14,784	25,966	--
Guilford	164,815	84,071	46,419	34,325	--
Halifax	279,652	118,129	76,168	85,355	--
Harnett	221,237	90,212	45,368	85,657	--
Haywood	180,188	137,573	30,897	11,718	--
Henderson	150,188	114,473	26,109	9,606	--
Hertford	147,420	61,610	32,394	53,416	--
Hoke	162,933	80,620	30,129	52,184	--
Hyde	235,119	97,998	78,847	47,031	11,243
Iredell	161,551	64,899	43,227	53,425	--
Jackson	263,288	169,538	74,806	18,944	--
Johnston	239,997	116,721	57,946	65,330	--
Jones	221,076	74,127	81,303	65,646	--

Continued

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

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
			Acres		
Lee	108,109	36,023	37,716	34,370	--
Lenoir	125,530	54,932	28,483	42,115	--
Lincoln	90,826	46,697	20,112	24,017	--
Macon	269,638	190,124	67,135	12,379	--
Madison	211,293	155,383	37,411	18,499	--
Martin	175,218	87,483	25,276	59,981	2,478
McDowell	239,261	153,890	61,512	23,859	--
Mecklenburg	132,831	73,238	42,040	17,553	--
Mitchell	105,101	85,993	10,405	8,703	--
Montgomery	256,555	92,250	76,561	87,744	--
Moore	334,158	145,017	88,469	100,672	--
Nash	180,496	80,009	47,225	53,262	--
New Hanover	49,329	18,283	11,662	19,384	--
Northampton	211,383	91,090	53,379	66,914	--
Onslow	343,657	139,005	69,656	129,650	5,346
Orange	146,622	95,850	30,131	20,641	--
Pamlico	132,421	51,251	39,679	30,246	11,245
Pasquotank	49,813	36,728	--	13,085	--
Pender	459,450	178,217	130,709	148,659	1,865
Perquimans	76,070	30,566	19,675	25,829	--
Person	149,798	64,503	48,422	36,873	--
Pitt	208,306	92,486	32,396	72,725	10,699
Polk	118,359	61,457	33,609	23,293	--
Randolph	311,657	115,927	110,998	84,732	--
Richmond	237,353	81,389	64,879	86,649	4,436
Robeson	280,949	164,384	29,591	86,974	--
Rockingham	208,080	87,862	79,716	37,387	3,115
Rowan	150,498	96,026	29,614	24,858	--
Rutherford	267,970	107,163	78,095	82,712	--
Sampson	338,055	132,360	79,764	125,931	--
Scotland	123,144	54,609	14,343	54,192	--
Stanly	111,927	49,885	28,748	33,294	--
Stokes	183,554	89,765	61,609	32,180	--
Surry	189,185	84,663	85,539	18,983	--
Swain	101,754	51,704	37,999	12,051	--
Transylvania	203,070	134,632	62,484	5,954	--
Tyrrell	153,112	55,481	55,799	39,420	2,412
Union	178,026	59,612	71,233	47,181	--
Vance	102,275	52,963	25,788	23,524	--
Wake	246,464	163,534	49,732	33,198	--
Warren	195,445	90,668	46,968	50,859	6,950
Washington	87,254	34,763	18,896	26,926	6,669
Watauga	126,867	96,341	30,526	--	--
Wayne	144,623	72,522	21,450	47,671	2,980
Wilkes	341,422	211,223	92,919	37,280	--
Wilson	100,588	38,893	21,746	34,513	5,436
Yadkin	91,905	47,439	29,750	14,716	--
Yancey	157,117	104,637	32,441	20,039	--
Total	18,710,381	9,117,176	4,939,084	4,500,942	153,179

Table 5--Area of timberland, by county and site class, North Carolina, 1990

County	All classes	Site class (cubic feet per acre per year)				
		>164	120-164	85-119	50-84	20-49
				Acres		
Alamance	126,888	--	--	39,886	80,394	6,608
Alexander	100,729	--	9,521	47,853	33,834	9,521
Alleghany	70,596	12,338	--	24,705	29,441	4,112
Anson	248,527	6,706	3,647	95,359	124,583	18,232
Ashe	166,423	15,447	10,198	56,416	63,966	20,396
Avery	114,418	--	--	45,453	53,913	15,052
Beaufort	323,964	--	4,608	134,451	168,042	16,863
Bertie	311,563	--	10,364	155,893	140,200	5,106
Bladen	416,315	--	14,515	70,205	192,392	139,203
Brunswick	407,162	--	--	40,069	251,480	115,613
Buncombe	266,786	--	19,561	93,603	135,983	17,639
Burke	235,508	21,033	39,485	53,666	104,140	17,184
Cabarrus	108,406	--	--	16,789	75,806	15,811
Caldwell	232,783	19,762	14,818	54,417	128,969	14,817
Camden	74,511	--	2,744	16,902	54,865	--
Carteret	157,678	--	--	14,715	83,026	59,937
Caswell	165,055	15,507	18,812	42,631	75,456	12,649
Catawba	115,396	--	--	32,291	69,524	13,581
Chatham	302,103	--	7,348	102,810	184,597	7,348
Cherokee	251,890	34,127	9,770	72,690	131,622	3,681
Chowan	53,678	--	5,216	27,996	17,859	2,607
Clay	103,253	--	4,379	22,285	49,499	27,090
Cleveland	138,801	--	--	47,753	84,096	6,952
Columbus	420,770	--	6,035	169,540	233,694	11,501
Craven	310,504	--	9,256	121,343	136,208	43,697
Cumberland	233,266	--	3,010	62,508	88,710	79,038
Currituck	63,038	--	--	22,989	34,122	5,927
Dare	142,212	--	--	8,049	74,947	59,216
Davidson	181,866	--	3,746	56,835	110,047	11,238
Davie	75,257	--	2,669	40,128	32,460	--
Duplin	291,037	--	8,123	103,019	139,640	40,255
Durham	89,242	--	3,891	26,993	58,358	--
Edgecombe	149,103	--	22,037	50,385	76,681	--
Forsyth	112,697	7,434	3,607	61,759	39,897	--
Franklin	191,027	--	7,922	74,989	108,116	--
Gaston	111,665	6,504	3,252	42,574	49,580	9,755
Gates	144,759	--	2,429	53,051	81,026	8,253
Graham	164,174	15,526	24,130	62,384	56,381	5,753
Granville	225,121	--	3,426	58,246	146,318	17,131
Greene	78,228	--	2,883	14,415	57,677	3,253
Guilford	164,815	8,703	26,109	57,960	69,141	2,902
Halifax	279,652	--	19,442	112,382	145,219	2,609
Harnett	221,237	--	2,774	58,411	123,991	36,061
Haywood	180,188	3,141	15,044	51,432	101,077	9,494
Henderson	150,188	9,606	--	58,858	59,300	22,424
Hertford	147,420	--	--	28,515	118,905	--
Hoke	162,933	--	--	24,140	82,351	56,442
Hyde	235,119	--	3,290	21,790	100,480	109,559
Iredell	161,551	--	4,317	60,638	74,833	21,763
Jackson	263,288	9,797	24,492	77,327	107,540	44,132
Johnston	239,997	--	11,443	68,970	145,779	13,805
Jones	221,076	--	2,117	62,026	120,013	36,920

Continued

Table 5--Area of timberland, by county and site class, North Carolina, 1990--Continued

County	All classes	Site class (cubic feet per acre per year)				
		>164	120-164	85-119	50-84	20-49
				Acres		
Lee	108,109	--	6,280	29,744	62,458	9,627
Lenoir	125,530	2,826	2,825	47,906	60,318	11,655
Lincoln	90,826	3,334	3,334	40,137	44,021	--
Macon	269,638	--	26,689	69,312	107,878	65,759
Madison	211,293	17,175	28,411	55,815	94,362	15,530
Martin	175,218	--	12,390	62,188	100,640	--
McDowell	239,261	5,024	7,512	65,696	139,712	21,317
Mecklenburg	132,831	--	8,408	51,333	60,478	12,612
Mitchell	105,101	--	13,904	43,417	39,078	8,702
Montgomery	256,555	--	3,699	87,954	149,714	15,188
Moore	334,158	--	13,479	54,425	198,831	67,423
Nash	180,496	--	11,887	89,332	76,305	2,972
New Hanover	49,329	--	--	5,703	22,615	21,011
Northampton	211,383	--	7,435	85,123	115,850	2,975
Onslow	343,657	2,552	8,695	62,244	178,819	91,347
Orange	146,622	--	--	71,751	74,871	--
Pamlico	132,421	--	2,160	46,259	41,070	42,932
Pasquotank	49,813	--	--	33,794	16,019	--
Pender	459,450	--	5,616	68,201	217,429	168,204
Perquimans	76,070	--	8,387	30,833	34,077	2,773
Person	149,798	--	3,849	33,023	109,077	3,849
Pitt	208,306	--	12,391	105,039	90,866	10
Polk	118,359	3,998	7,996	43,745	43,422	19,198
Randolph	311,657	4,254	--	47,873	214,117	45,413
Richmond	237,353	2,539	--	73,751	96,723	64,340
Robeson	280,949	--	4,969	84,992	175,800	15,188
Rockingham	208,080	3,115	18,692	82,404	97,638	6,231
Rowan	150,498	--	8,285	54,599	87,614	--
Rutherford	267,970	7,951	7,951	71,504	137,225	43,339
Sampson	338,055	--	2,881	79,577	227,240	28,357
Scotland	123,144	--	2,432	22,669	53,062	44,981
Stanly	111,927	--	--	21,137	72,296	18,494
Stokes	183,554	10,728	21,452	47,688	96,535	7,151
Surry	189,185	3,681	7,362	37,467	125,951	14,724
Swain	101,754	--	19,199	17,081	53,423	12,051
Transylvania	203,070	17,862	10,987	33,883	111,487	28,851
Tyrrell	153,112	--	2,412	23,634	76,186	50,880
Union	178,026	--	--	35,229	114,934	27,863
Vance	102,275	--	--	45,928	50,731	5,616
Wake	246,464	--	14,069	98,091	130,787	3,517
Warren	195,445	--	4,028	76,161	115,256	--
Washington	87,254	--	2,223	32,805	40,110	12,116
Watauga	126,867	--	6,319	38,578	62,742	19,228
Wayne	144,623	--	8,938	57,094	69,652	8,939
Wilkes	341,422	46,603	37,280	124,192	120,672	12,675
Wilson	100,588	--	5,436	36,176	58,976	--
Yadkin	91,905	--	7,299	26,098	54,858	3,650
Yancey	157,117	--	13,983	56,575	82,178	4,381
Total	18,710,381	317,273	791,974	5,628,654	9,710,281	2,262,199

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

County	All classes	Stocking class (percent)[a]				
		>130	100-130	60-99	16.7-59	<16.7
			Acres			
Alamance	126,888	3,303	49,798	63,670	10,117	--
Alexander	100,729	--	27,563	64,652	8,514	--
Alleghany	70,596	--	8,225	54,146	8,225	--
Anson	248,527	24,939	123,721	68,196	24,965	6,706
Ashe	166,423	10,198	35,917	94,813	25,495	--
Avery	114,418	--	51,320	48,085	15,013	--
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
Bladen	416,315	25,237	154,080	140,966	76,258	19,774
Brunswick	407,162	32,359	153,594	146,132	56,463	18,614
Buncombe	266,786	5,389	57,051	146,668	57,678	--
Burke	235,508	7,694	75,226	112,005	40,583	--
Cabarrus	108,406	7,905	25,340	67,257	7,904	--
Caldwell	232,783	20,436	39,488	148,304	24,555	--
Camden	74,511	8,231	28,316	30,620	7,344	--
Carteret	157,678	14,323	38,303	80,847	13,800	10,405
Caswell	165,055	12,611	68,476	65,156	15,507	3,305
Catawba	115,396	9,053	51,344	45,871	9,128	--
Chatham	302,103	40,764	111,492	135,149	11,023	3,675
Cherokee	251,890	30,006	57,604	139,787	24,493	--
Chowan	53,678	5,235	28,569	14,460	5,414	--
Clay	103,253	4,508	22,155	50,054	26,536	--
Cleveland	138,801	--	40,793	84,103	13,905	--
Columbus	420,770	46,688	205,809	122,612	39,708	5,953
Craven	310,504	37,847	108,220	102,903	52,280	9,254
Cumberland	233,266	6,022	71,174	114,341	35,709	6,020
Currituck	63,038	5,310	37,171	11,436	9,121	--
Dare	142,212	24,086	45,861	56,229	10,734	5,302
Davidson	181,866	3,746	74,477	96,151	7,492	--
Davie	75,257	2,768	43,135	21,348	8,006	--
Duplin	291,037	14,711	129,644	114,023	32,659	--
Durham	89,242	13,950	46,803	28,254	235	--
Edgecombe	149,103	16,583	62,418	56,466	8,181	5,455
Forsyth	112,697	10,821	39,900	54,762	3,607	3,607
Franklin	191,027	27,393	83,245	72,465	7,924	--
Gaston	111,665	9,755	36,873	55,281	9,756	--
Gates	144,759	37,021	61,649	37,835	8,254	--
Graham	164,174	140	50,736	72,469	35,076	5,753
Granville	225,121	30,837	108,585	78,847	6,852	--
Greene	78,228	--	25,967	34,596	14,782	2,883
Guilford	164,815	19,821	72,953	54,635	14,505	2,901
Halifax	279,652	24,999	144,683	93,666	16,304	--
Harnett	221,237	13,870	90,055	75,538	41,774	--
Haywood	180,188	8,823	45,942	98,659	25,130	16,644
Henderson	150,188	6,025	68,276	66,812	9,075	--
Hertford	147,420	15,997	69,657	43,523	18,243	--
Hoke	162,933	--	44,193	50,480	62,257	6,003
Hyde	235,119	33,125	81,909	60,864	47,978	11,243
Iredell	161,551	4,317	47,665	75,032	30,220	4,317
Jackson	263,288	352	99,690	107,435	55,811	--
Johnston	239,997	24,829	88,284	104,803	22,081	--
Jones	221,076	24,445	96,861	64,551	33,055	2,164

Continued

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

County	All classes	Stocking class (percent)[a]				
		>130	100-130	60-99	16.7-59	<16.7
			Acres			
Lee	108,109	12,558	42,133	43,791	9,627	--
Lenoir	125,530	14,528	42,382	51,932	16,688	--
Lincoln	90,826	3,333	46,697	37,462	3,334	--
Macon	269,638	29,724	95,997	108,976	34,941	--
Madison	211,293	25,761	71,156	90,258	24,118	--
Martin	175,218	18,842	86,718	54,293	12,887	2,478
McDowell	239,261	14,194	80,299	117,155	23,857	3,756
Mecklenburg	132,831	16,816	46,244	56,422	13,349	--
Mitchell	105,101	19,105	42,577	43,419	--	--
Montgomery	256,555	20,140	95,536	109,772	31,107	--
Moore	334,158	33,515	88,384	158,820	39,708	13,731
Nash	180,496	17,830	62,178	82,658	17,830	--
New Hanover	49,329	1,692	16,432	15,052	12,922	3,231
Northampton	211,383	16,353	92,195	84,987	17,848	--
Onslow	343,657	13,919	137,802	133,925	47,790	10,221
Orange	146,622	12,384	64,726	63,586	5,926	--
Pamlico	132,421	26,811	43,460	37,942	10,803	13,405
Pasquotank	49,813	9,334	12,169	18,059	10,251	--
Pender	459,450	39,963	192,925	165,905	58,792	1,865
Perquimans	76,070	8,456	31,235	33,607	2,772	--
Person	149,798	9,928	66,047	66,125	7,698	--
Pitt	208,306	27,880	73,582	72,983	23,162	10,699
Polk	118,359	3,207	51,277	55,880	7,995	--
Randolph	311,657	4,253	103,919	160,949	42,536	--
Richmond	237,353	27,434	75,702	72,164	53,181	8,872
Robeson	280,949	29,454	108,523	102,410	35,062	5,500
Rockingham	208,080	22,575	88,928	84,116	9,346	3,115
Rowan	150,498	4,787	74,569	66,997	4,145	--
Rutherford	267,970	23,602	94,249	114,340	35,779	--
Sampson	338,055	11,542	98,639	165,930	61,944	--
Scotland	123,144	5,647	26,506	52,092	28,102	10,797
Stanly	111,927	3,594	36,462	53,903	17,968	--
Stokes	183,554	18,605	50,436	103,786	10,727	--
Surry	189,185	7,361	63,375	92,682	25,767	--
Swain	101,754	3,417	14,802	61,122	22,413	--
Transylvania	203,070	11,908	59,990	121,555	9,617	--
Tyrrell	153,112	17,654	62,433	26,426	39,363	7,236
Union	178,026	6,966	57,704	99,414	13,942	--
Vance	102,275	15,680	58,287	27,169	1,139	--
Wake	246,464	17,587	110,428	114,932	3,517	--
Warren	195,445	36,251	90,828	50,438	10,978	6,950
Washington	87,254	6,881	48,999	19,049	4,656	7,669
Watauga	126,867	4,807	36,753	85,307	--	--
Wayne	144,623	8,938	44,169	64,698	23,838	2,980
Wilkes	341,422	34,901	91,557	183,648	31,316	--
Wilson	100,588	10,873	46,223	29,902	8,154	5,436
Yadkin	91,905	7,300	22,358	51,179	11,068	--
Yancey	157,117	5,219	59,306	77,772	14,820	--
Total	18,710,381	1,551,634	6,975,626	7,786,670	2,114,695	281,756

[a]See stocking standards on page 14 .

Table 7--Volume of growing stock and sawtimber on timberland, by county and species group, 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				
Alamance	234,225	62,236	684	83,633	87,672	729,762	160,616	1,042	273,452	294,652
Alexander	154,903	70,947	5,276	38,977	39,703	351,289	135,045	23,305	89,275	103,664
Alleghany	122,338	2,145	22,768	32,136	65,289	400,176	5,175	75,147	100,660	219,194
Anson	371,770	231,551	911	77,509	61,799	1,116,830	802,327	--	174,850	139,653
Ashe	313,647	10,044	14,095	105,736	183,772	1,004,786	19,942	59,859	354,610	570,375
Avery	256,289	--	18,167	99,250	138,872	855,534	--	92,612	297,159	465,763
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
Bladen	484,002	226,585	21,292	157,620	78,505	1,501,779	764,126	94,899	370,562	272,192
Brunswick	485,974	253,558	62,413	115,379	54,624	1,313,852	650,419	219,617	295,509	148,307
Buncombe	557,173	27,978	16,819	158,017	354,359	2,071,922	96,249	83,236	621,914	1,270,523
Burke	356,151	76,421	111,103	74,116	94,511	1,085,748	187,311	466,702	175,523	256,212
Cabarrus	154,772	67,324	5,101	32,266	50,081	421,451	172,192	12,452	94,726	142,081
Caldwell	436,648	35,934	100,499	111,344	188,871	1,528,876	112,492	500,716	338,581	577,087
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
Caswell	307,217	131,248	1,587	88,038	86,344	900,631	387,200	3,757	267,023	242,651
Catawba	176,675	58,660	10,795	26,897	80,323	481,203	95,173	45,358	74,290	266,382
Chatham	523,853	242,722	6,661	144,349	130,121	1,639,166	761,484	2,990	453,405	421,287
Cherokee	464,942	82,423	81,174	78,241	223,104	1,533,373	289,790	382,474	187,941	673,168
Chowan	92,866	50,457	1,376	33,921	7,112	359,074	199,864	6,815	120,224	32,171
Clay	170,718	56,316	3,064	25,352	85,986	561,177	190,630	15,744	84,217	270,586
Cleveland	209,031	60,709	1,044	57,161	90,117	667,021	175,856	2,332	188,553	300,280
Columbus	798,361	376,392	24,557	293,691	103,721	2,549,688	1,283,832	112,532	860,454	292,870
Craven	518,176	279,221	9,658	174,559	54,738	1,780,707	1,005,790	47,494	536,099	191,324
Cumberland	324,289	196,314	14,161	71,944	41,870	1,117,974	828,373	57,744	157,023	74,834
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
Davidson	292,528	71,725	2,196	101,936	116,671	821,659	138,913	2,410	311,845	368,491
Davie	134,186	26,458	2,773	48,738	56,217	447,022	82,211	4,619	185,857	174,335
Duplin	433,728	163,941	6,850	186,616	76,321	1,523,798	630,759	35,682	599,356	258,001
Durham	239,346	111,518	1,293	70,073	56,462	815,229	382,506	4,575	233,738	194,410
Edgecombe	237,071	80,826	5,512	88,807	61,926	777,023	272,627	25,894	286,513	191,989
Forsyth	267,846	66,788	689	95,553	104,816	820,467	186,667	1,677	270,319	361,804
Franklin	323,427	179,572	447	68,287	75,121	1,000,826	585,670	--	209,379	205,777
Gaston	217,690	87,063	262	66,820	63,545	759,712	332,687	--	216,463	210,562
Gates	311,410	106,925	19,020	155,354	30,111	938,067	352,705	90,914	415,188	79,260
Graham	370,765	25,472	51,035	125,304	168,954	1,288,099	116,856	275,868	334,701	560,674
Granville	484,745	193,005	2,006	159,133	130,601	1,499,043	615,723	--	490,830	392,490
Greene	99,140	32,358	5,345	25,464	35,973	343,322	131,774	31,244	77,836	102,468
Guilford	357,586	125,833	979	156,532	74,242	1,197,153	373,659	--	600,995	222,499
Halifax	513,416	203,384	3,233	188,301	118,498	1,826,719	807,962	17,528	635,834	365,395
Harnett	294,455	138,560	428	70,993	84,474	997,347	497,510	2,324	254,969	242,544
Haywood	427,522	15,743	64,872	130,147	216,760	1,527,866	58,237	264,991	542,994	661,644
Henderson	357,134	39,041	46,747	94,036	177,310	1,236,532	97,107	223,571	323,708	592,146
Hertford	251,946	96,940	6,201	96,222	52,583	867,333	380,206	31,486	282,269	173,372
Hoke	168,322	109,531	1,219	40,806	16,766	636,242	472,514	5,437	113,045	45,246
Hyde	401,119	241,497	13,109	133,390	13,123	1,287,454	854,892	65,032	306,519	61,011
Iredell	209,054	67,560	2,270	61,773	77,451	682,019	231,566	8,135	198,699	243,619
Jackson	525,134	9,942	35,770	132,340	347,082	1,685,810	47,525	171,310	419,081	1,047,894
Johnston	430,471	160,080	1,111	144,896	124,384	1,595,694	696,117	5,971	484,917	408,689
Jones	312,303	176,233	14,380	71,470	50,220	1,002,301	553,434	68,430	223,143	157,294

Continued

Table 7--Volume of growing stock and sawtimber on timberland, by county and species group, North Carolina, 1990--Continued

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				
Lee	196,707	67,761	1,080	61,965	65,901	604,414	283,564	--	144,752	176,098
Lenoir	204,656	47,148	12,478	82,938	62,092	752,174	214,256	62,478	252,127	223,313
Lincoln	159,910	51,912	671	51,077	56,250	556,500	149,200	--	205,674	201,626
Macon	585,870	33,432	28,533	153,291	370,614	2,062,502	144,473	153,975	553,331	1,210,723
Madison	496,189	37,002	62,885	170,947	225,355	1,820,450	122,404	293,098	631,201	773,747
Martin	355,772	87,689	30,943	196,506	40,634	1,191,795	318,320	161,775	577,533	134,167
McDowell	509,219	74,381	34,738	115,231	284,869	1,672,979	169,882	170,991	320,670	1,011,436
Mecklenburg	261,415	91,250	6,444	92,617	71,104	783,941	236,989	7,640	308,305	231,007
Mitchell	294,564	4,871	16,220	113,326	160,147	1,026,042	13,849	68,265	408,601	535,327
Montgomery	389,321	180,845	638	89,146	118,692	1,106,151	591,068	--	206,242	308,841
Moore	488,055	282,851	10,027	86,705	108,472	1,500,340	962,545	43,976	208,457	285,362
Nash	340,828	157,441	7,320	100,828	75,239	1,331,708	684,363	36,892	333,518	276,935
New Hanover	49,328	18,823	4,291	15,458	10,756	150,590	69,232	21,636	30,559	29,163
Northampton	351,848	144,284	2,786	112,041	92,737	1,188,485	518,430	14,895	354,046	301,114
Onslow	457,801	249,681	5,834	141,386	60,900	1,515,272	898,583	24,163	372,289	220,237
Orange	351,178	111,194	934	134,226	104,824	1,255,945	452,931	--	450,590	352,424
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
Pender	589,286	340,097	27,725	143,911	77,553	1,846,173	1,063,479	130,274	400,535	251,885
Perquimans	120,869	37,391	7,706	53,579	22,193	315,384	94,395	33,816	119,006	68,167
Person	244,350	77,437	3,542	69,407	93,964	682,405	201,373	9,713	184,411	286,908
Pitt	379,827	129,805	26,298	175,985	47,739	1,466,853	449,738	143,133	699,452	174,530
Polk	195,286	66,265	1,753	38,920	88,348	548,825	134,456	10,051	122,159	282,159
Randolph	449,466	53,450	2,933	130,368	262,715	1,281,626	107,551	12,333	367,830	793,912
Richmond	298,601	191,882	526	74,261	31,932	907,949	640,768	--	193,422	73,759
Robeson	524,105	153,604	28,516	272,581	69,404	1,840,946	700,925	130,258	806,240	203,523
Rockingham	408,179	206,438	--	82,411	119,330	947,367	415,157	--	202,964	329,246
Rowan	288,990	87,188	3,863	86,383	111,556	913,763	296,260	8,022	269,797	339,684
Rutherford	418,831	189,344	3,616	65,460	160,411	1,132,368	507,911	7,849	150,710	465,898
Sampson	384,801	166,302	6,300	151,711	60,488	1,303,355	602,753	24,421	501,739	174,442
Scotland	147,815	102,877	6,550	30,100	8,288	583,673	437,750	24,999	101,167	19,757
Stanly	151,592	57,407	542	36,391	57,252	446,167	148,730	2,084	117,521	177,832
Stokes	362,758	116,364	1,179	109,755	135,460	1,002,009	307,054	6,088	287,999	400,868
Surry	314,256	72,409	12,022	82,301	147,524	823,450	200,284	44,562	184,848	393,756
Swain	200,233	33,228	599	73,352	93,054	659,782	86,294	2,056	274,452	296,980
Transylvania	467,269	13,885	46,853	126,725	279,806	1,563,391	52,091	192,124	381,672	937,504
Tyrrell	272,983	107,160	25,031	129,091	11,701	740,485	373,724	57,166	272,649	36,946
Union	248,758	75,690	3,137	48,144	121,787	693,876	247,023	3,781	130,050	313,022
Vance	201,048	91,083	--	62,264	47,701	657,462	327,993	--	187,325	142,144
Wake	569,338	223,622	--	207,186	138,530	2,148,367	899,406	--	763,579	485,382
Warren	412,448	169,380	436	152,342	90,290	1,300,156	569,635	--	464,027	266,494
Washington	161,285	39,147	17,004	92,048	13,086	512,140	153,274	59,439	259,723	39,704
Watauga	262,437	--	20,277	97,601	144,559	802,939	--	71,426	266,856	464,657
Wayne	234,091	110,342	--	65,458	58,291	954,292	545,433	--	222,544	186,315
Wilkes	719,734	171,892	105,186	194,403	248,253	2,317,185	495,803	496,525	547,874	776,983
Wilson	184,180	55,159	2,525	67,329	59,167	671,199	231,791	12,183	243,175	184,050
Yadkin	178,359	57,712	2,398	41,846	76,403	568,377	164,597	2,173	125,010	276,597
Yancey	378,669	7,125	42,298	98,809	230,437	1,357,040	16,715	197,221	331,975	811,129
Total	32,742,331	11,003,642	1,526,729	10,322,126	9,889,834	106,589,312	37,290,280	6,758,080	31,283,483	31,257,469

[a]Factors for converting to cords are shown on page 14 .

Table 8—Average net annual growth of growing stock and sawtimber on timberland, by county and species group, 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				
Alamance	6,898	1,903	22	2,493	2,480	30,013	9,600	111	9,740	10,562
Alexander	5,517	2,920	206	1,323	1,068	16,417	5,997	1,270	5,718	3,432
Alleghany	3,379	37	1,049	861	1,432	15,969	182	4,555	5,149	6,083
Anson	16,166	10,606	16	3,074	2,470	59,225	41,175	—	10,581	7,469
Ashe	7,045	309	519	2,747	3,470	31,707	591	3,010	11,835	16,271
Avery	5,159	—	445	2,403	2,311	22,799	—	2,979	9,867	9,953
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
Bladen	22,817	14,676	405	5,126	2,610	83,777	60,457	1,749	12,939	8,632
Brunswick	24,339	18,039	1,407	3,046	1,847	88,414	67,544	6,342	8,388	6,140
Buncombe	11,779	689	636	3,646	6,808	59,664	3,639	3,520	18,394	34,111
Burke	10,877	2,549	3,855	2,443	2,030	55,430	17,109	21,382	7,147	9,792
Cabarrus	5,837	2,774	152	1,428	1,483	19,229	9,740	364	2,955	6,170
Caldwell	8,762	724	2,482	2,184	3,372	49,563	2,959	17,345	10,889	18,370
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
Caswell	9,537	3,359	17	3,307	2,854	40,744	16,124	170	13,836	10,614
Catawba	5,926	2,565	445	895	2,021	28,000	13,245	1,892	4,316	8,547
Chatham	17,866	9,032	318	5,016	3,500	75,947	44,910	1,867	14,897	14,273
Cherokee	13,585	1,760	3,354	2,925	5,546	61,996	14,218	17,132	8,085	22,561
Chowan	5,221	3,721	9	1,318	173	22,280	15,722	54	5,646	858
Clay	4,137	1,452	153	924	1,608	24,833	12,194	1,108	5,386	6,145
Cleveland	5,785	1,849	102	1,553	2,281	23,119	7,955	12	6,185	8,967
Columbus	35,536	23,430	439	7,817	3,850	160,261	111,637	2,781	27,594	18,249
Craven	26,990	18,071	196	6,919	1,804	105,753	69,183	1,213	25,508	9,849
Cumberland	14,117	8,751	338	2,748	2,280	52,951	36,778	1,412	6,768	7,993
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
Davidson	11,433	4,690	109	3,371	3,263	38,909	12,199	155	12,743	13,812
Davie	4,898	1,087	133	1,783	1,895	16,354	4,049	241	6,411	5,653
Duplin	17,320	9,182	192	5,567	2,379	72,778	40,832	1,049	20,183	10,714
Durham	8,414	4,540	20	2,395	1,459	37,615	19,657	68	10,700	7,190
Edgecombe	10,775	5,436	139	2,786	2,414	40,023	16,377	721	13,243	9,682
Forsyth	7,872	1,836	5	3,454	2,577	35,896	9,602	25	14,569	11,700
Franklin	12,892	7,441	7	2,970	2,474	51,767	33,398	—	9,972	8,397
Gaston	5,803	2,043	—	2,118	1,642	25,850	9,776	—	9,131	6,943
Gates	13,144	7,366	501	4,327	950	43,712	21,567	1,937	15,963	4,245
Graham	7,601	279	1,217	3,107	2,998	40,275	1,824	6,833	16,402	15,216
Granville	15,187	6,914	42	4,635	3,596	63,374	28,327	—	19,361	15,686
Greene	3,770	1,700	124	772	1,174	19,549	10,003	776	3,548	5,222
Guilford	11,205	3,642	229	4,883	2,451	44,658	16,226	—	19,478	8,954
Halifax	24,009	13,470	45	6,565	3,929	75,839	38,103	263	21,207	16,266
Harnett	14,939	9,933	4	1,952	3,050	55,656	34,235	22	10,415	10,984
Haywood	8,285	160	1,504	2,498	4,123	46,486	1,351	9,598	14,418	21,119
Henderson	7,766	659	1,427	2,137	3,543	39,525	5,299	9,812	9,375	15,039
Hertford	11,035	6,525	115	2,911	1,484	36,041	18,290	647	11,454	5,650
Hoke	7,142	5,100	55	1,124	863	30,688	22,607	331	5,120	2,630
Hyde	16,134	10,173	274	5,357	330	73,553	51,792	1,413	18,551	1,797
Iredell	8,570	3,087	46	2,411	3,026	34,646	12,326	316	9,326	12,678
Jackson	10,182	124	749	3,130	6,179	49,592	731	4,896	12,792	31,173
Johnston	17,594	8,563	28	4,646	4,357	78,281	38,495	166	19,938	19,682
Jones	19,616	15,264	404	2,396	1,552	65,987	49,476	2,169	7,248	7,094

Continued

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

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				
Lee	8,660	4,124	26	2,350	2,160	31,913	12,862	384	8,755	9,912
Lenoir	7,622	2,284	300	2,784	2,254	30,947	9,953	1,639	9,718	9,637
Lincoln	5,258	2,173	108	1,413	1,564	26,234	8,968	120	9,589	7,557
Macon	10,929	288	509	3,725	6,407	56,227	2,124	3,253	18,590	32,260
Madison	10,627	760	1,921	4,081	3,865	54,121	3,439	12,296	21,208	17,178
Martin	15,047	6,231	1,173	5,995	1,648	56,896	19,672	3,744	25,377	8,103
McDowell	11,092	2,223	1,208	2,651	5,010	50,002	5,625	6,349	14,605	23,423
Mecklenburg	8,140	2,939	265	2,843	2,093	34,838	11,697	926	11,345	10,870
Mitchell	4,925	114	391	2,141	2,279	24,995	642	2,239	12,070	10,044
Montgomery	15,680	8,988	34	3,283	3,375	72,584	45,835	104	9,733	16,912
Moore	23,158	15,696	295	3,363	3,804	101,255	71,354	1,724	9,451	18,726
Nash	13,282	6,647	220	3,916	2,499	56,342	28,434	1,183	16,646	10,079
New Hanover	1,925	1,014	133	486	292	7,402	4,570	658	1,144	1,030
Northampton	16,249	8,894	74	4,320	2,961	59,231	28,471	421	17,091	13,248
Onslow	20,553	13,597	125	5,073	1,758	78,329	54,918	352	15,177	7,882
Orange	9,650	3,214	38	3,652	2,746	43,809	15,822	--	14,836	13,151
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
Pender	29,739	22,195	543	4,701	2,300	104,622	76,557	2,763	14,225	11,077
Perquimans	6,114	3,476	207	1,493	938	24,282	14,343	966	5,163	3,810
Person	8,282	2,840	89	2,394	2,959	34,266	13,353	155	7,378	13,380
Pitt	16,452	9,341	403	5,087	1,621	70,829	36,084	2,249	25,175	7,321
Polk	6,882	3,020	29	1,166	2,667	22,345	9,083	186	3,652	9,424
Randolph	15,099	2,428	98	4,830	7,743	54,205	6,236	427	16,774	30,768
Richmond	15,838	11,611	42	2,850	1,335	59,720	50,889	89	5,728	3,014
Robeson	17,385	7,873	602	6,203	2,707	74,329	36,618	3,717	23,194	10,800
Rockingham	13,982	7,349	--	2,901	3,732	58,946	31,592	--	10,302	17,052
Rowan	9,952	3,015	119	3,609	3,209	40,361	11,533	303	12,673	15,852
Rutherford	13,517	7,220	197	2,419	3,681	53,576	32,603	1,506	6,609	12,858
Sampson	18,955	11,331	166	4,829	2,629	75,974	44,633	783	21,565	8,993
Scotland	7,199	6,018	97	706	378	30,179	23,973	381	3,102	2,723
Stanly	5,455	2,406	58	1,227	1,764	14,905	6,010	119	3,002	5,774
Stokes	13,404	4,290	44	5,505	3,565	49,106	15,061	278	18,021	15,746
Surry	9,802	2,235	585	2,906	4,076	42,566	10,795	2,303	11,022	18,446
Swain	3,796	520	104	1,461	1,711	18,415	2,785	251	9,023	6,356
Transylvania	8,201	238	1,731	2,441	3,791	33,664	1,516	8,483	7,652	16,013
Tyrrell	9,737	5,277	776	3,334	350	36,297	21,600	2,544	10,348	1,805
Union	7,948	1,943	107	1,940	3,958	29,232	7,971	1,058	4,779	15,424
Vance	6,812	3,242	--	1,756	1,814	28,379	13,957	--	7,230	7,192
Wake	17,655	8,048	11	5,983	3,613	81,565	39,858	--	26,416	15,291
Warren	14,803	6,013	50	5,270	3,470	56,897	27,450	--	17,867	11,580
Washington	6,618	2,962	764	2,644	248	27,740	12,318	3,054	11,476	892
Watauga	5,049	--	676	1,975	2,398	25,096	--	2,547	11,642	10,907
Wayne	8,904	4,355	--	2,388	2,161	43,767	24,702	--	8,805	10,260
Wilkes	15,705	3,237	2,922	5,018	4,528	90,571	19,557	21,057	24,289	25,668
Wilson	7,158	2,765	75	2,144	2,174	37,105	14,242	406	12,417	10,040
Yadkin	5,782	1,889	196	1,562	2,135	21,227	6,976	162	5,004	9,085
Yancey	6,553	61	671	2,138	3,683	29,695	158	3,626	11,683	14,228
Total	1,159,579	545,975	43,844	317,474	252,286	4,784,762	2,234,101	234,826	1,221,607	1,094,228

Table 9--Average annual removals of growing stock and sawtimber on timberland, by county and species group, 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				
Alamance	6,715	4,556	56	393	1,710	24,225	15,875	--	1,502	6,848
Alexander	5,474	1,562	199	2,064	1,649	18,743	4,742	1,051	6,194	6,756
Alleghany	2,481	--	2,481	--	--	10,840	--	10,840	--	--
Anson	13,883	11,792	--	858	1,233	49,640	44,838	--	2,926	1,876
Ashe	3,951	--	2,055	--	1,896	20,034	--	12,088	--	7,946
Avery	4,871	--	--	3,194	1,677	14,473	--	--	12,284	2,189
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
Bladen	19,912	14,922	--	3,730	1,260	62,128	49,277	--	11,380	1,471
Brunswick	21,478	16,625	813	2,667	1,373	66,448	59,538	2,788	2,294	1,828
Buncombe	2,712	--	--	440	2,272	8,073	--	--	698	7,375
Burke	8,484	4,770	1,036	1,129	1,549	32,801	19,123	5,942	4,309	3,427
Cabarrus	3,373	176	137	795	2,265	10,687	--	258	2,544	7,885
Caldwell	10,389	2,192	2,989	1,738	3,470	44,124	9,987	15,996	6,191	11,950
Camden	4,414	129	286	3,000	999	18,733	658	1,506	12,069	4,500
Carteret	10,264	9,143	--	1,040	81	32,504	30,152	--	1,916	436
Caswell	4,511	3,789	--	410	312	17,532	15,898	--	1,142	492
Catawba	1,969	1,716	64	189	--	3,394	3,394	--	--	--
Chatham	24,728	14,737	256	3,782	5,953	95,262	62,573	354	11,388	20,947
Cherokee	5,146	3,049	590	114	1,393	19,478	10,546	3,503	--	5,429
Chowan	3,914	573	--	2,660	681	14,780	2,590	--	9,861	2,329
Clay	2,427	1,864	--	213	350	8,744	6,653	--	740	1,351
Cleveland	1,347	760	--	259	328	5,029	2,475	--	1,519	1,035
Columbus	23,216	12,585	480	5,871	4,280	77,070	38,787	1,788	19,681	16,814
Craven	19,920	14,012	--	4,572	1,336	63,131	40,554	--	16,738	5,839
Cumberland	8,326	6,342	--	1,095	889	28,482	24,745	--	848	2,889
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	--
Davidson	7,498	3,055	77	1,354	3,012	23,263	3,858	--	4,795	14,610
Davie	2,791	169	35	1,821	766	12,646	738	--	8,513	3,395
Duplin	20,576	10,483	289	4,649	5,155	81,808	48,614	1,410	16,616	15,168
Durham	6,824	4,994	--	1,264	566	21,858	18,073	--	2,732	1,053
Edgecombe	22,405	7,043	944	9,016	5,402	92,019	34,323	5,226	35,404	17,066
Forsyth	4,366	1,605	182	2,127	452	18,321	5,774	536	10,258	1,753
Franklin	13,946	5,390	--	4,759	3,797	49,632	22,623	--	14,422	12,587
Gaston	3,974	2,189	56	544	1,185	17,954	10,743	--	2,025	5,186
Gates	9,253	7,310	--	1,125	818	36,555	32,462	--	3,590	503
Graham	1,700	--	--	276	1,424	3,884	--	--	528	3,356
Granville	4,471	2,167	--	660	1,644	11,351	4,642	--	1,949	4,760
Greene	7,769	3,645	123	2,713	1,288	31,274	15,953	334	9,988	4,999
Guilford	9,288	2,520	135	2,269	4,364	35,202	6,021	322	9,760	19,099
Halifax	25,859	10,287	--	9,222	6,350	114,947	51,485	--	36,480	26,982
Harnett	13,037	7,260	--	3,355	2,422	53,089	32,829	--	13,253	7,007
Haywood	5,785	--	--	3,072	2,713	22,693	--	--	12,024	10,669
Henderson	7,741	--	818	872	6,051	32,155	--	3,811	3,255	25,089
Hertford	9,187	1,322	514	5,125	2,226	29,792	5,326	2,523	15,953	5,990
Hoke	3,076	1,952	--	869	255	10,629	7,398	--	2,967	264
Hyde	2,528	2,053	--	475	--	7,540	6,531	--	1,009	--
Iredell	8,679	2,482	626	4,441	1,130	28,085	7,935	2,234	12,519	5,397
Jackson	3,810	127	--	1,784	1,899	13,533	--	--	7,180	6,353
Johnston	23,023	9,790	--	9,236	3,997	104,758	49,788	--	39,689	15,281
Jones	11,826	6,850	613	2,692	1,671	40,057	23,223	3,054	10,245	3,535

Continued

Table 9--Average annual removals of growing stock and sawtimber on timberland, by county and species group, North Carolina, 1984-1989--Continued

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				
Lee	6,448	3,957	--	1,047	1,444	23,750	16,689	--	1,989	5,072
Lenoir	7,003	3,186	1,517	549	1,751	30,290	13,258	8,380	2,896	5,756
Lincoln	9,534	5,731	--	1,194	2,609	42,154	27,069	--	3,275	11,810
Macon	4,263	--	--	1,716	2,547	13,588	--	--	6,026	7,562
Madison	2,707	157	476	776	1,298	9,528	--	1,617	3,824	4,087
Martin	21,121	14,771	--	5,537	813	82,291	59,863	--	20,083	2,345
McDowell	1,696	453	--	--	1,243	5,794	1,535	--	--	4,259
Mecklenburg	5,376	2,690	--	1,698	988	20,400	12,049	--	4,482	3,869
Mitchell	1,482	--	--	1,318	164	6,799	--	--	5,868	931
Montgomery	19,341	8,478	215	4,228	6,420	73,010	36,733	--	14,123	22,154
Moore	16,426	10,363	104	3,857	2,102	66,061	50,815	--	11,451	3,795
Nash	20,034	8,983	--	6,565	4,486	74,458	38,658	--	20,617	15,183
New Hanover	1,011	1,011	--	--	--	4,689	4,689	--	--	--
Northampton	12,756	2,943	1,002	4,913	3,898	48,953	14,877	4,589	14,741	14,746
Onslow	11,937	9,659	--	1,654	624	35,446	29,423	--	4,858	1,165
Orange	10,818	5,861	110	3,277	1,570	40,319	25,043	--	12,011	3,265
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
Pender	16,675	12,685	--	2,523	1,467	56,458	46,101	--	6,307	4,050
Perquimans	6,541	3,446	--	1,408	1,687	17,745	7,690	--	4,076	5,979
Person	4,502	1,721	--	1,730	1,051	15,542	8,056	--	4,517	2,969
Pitt	19,003	12,289	591	3,562	2,561	67,542	44,697	3,109	11,892	7,844
Polk	1,676	1,081	--	280	315	2,679	364	--	1,135	1,180
Randolph	13,234	2,715	175	4,601	5,743	48,548	6,490	440	20,206	21,412
Richmond	9,015	8,067	--	386	562	30,571	28,761	--	520	1,290
Robeson	17,379	10,102	137	5,822	1,318	71,365	44,070	679	21,547	5,069
Rockingham	6,894	892	--	3,425	2,577	24,429	3,854	--	11,895	8,680
Rowan	6,692	5,053	77	1,001	561	25,278	20,265	--	2,873	2,140
Rutherford	7,502	1,850	--	647	5,005	19,340	3,116	--	1,981	14,243
Sampson	19,288	14,047	--	2,396	2,845	74,259	64,314	--	6,447	3,498
Scotland	3,970	3,853	117	--	--	15,721	14,994	727	--	--
Stanly	4,665	2,781	--	621	1,263	16,001	9,287	--	1,832	4,882
Stokes	8,775	5,419	--	2,049	1,307	27,180	15,344	--	7,598	4,238
Surry	5,883	2,962	1,576	322	1,023	14,963	5,046	3,900	1,330	4,687
Swain	1,623	--	--	--	1,623	7,802	--	--	--	7,802
Transylvania	1,980	--	--	468	1,512	7,763	--	--	473	7,290
Tyrrell	5,639	3,850	445	1,155	189	24,963	20,514	2,286	1,380	783
Union	4,810	1,573	82	950	2,205	16,121	7,396	363	666	7,696
Vance	5,971	4,208	--	581	1,182	22,446	17,704	--	2,340	2,402
Wake	17,428	11,292	--	2,326	3,810	59,693	40,851	--	5,515	13,327
Warren	9,650	5,784	--	2,167	1,699	26,943	17,139	--	4,564	5,240
Washington	2,906	506	96	1,216	1,088	8,269	2,147	472	2,726	2,924
Watauga	6,088	--	--	4,526	1,562	27,424	--	--	20,585	6,839
Wayne	17,470	13,670	--	2,656	1,144	82,712	72,308	--	8,336	2,068
Wilkes	23,192	6,636	4,814	9,560	2,182	94,523	25,435	24,557	36,109	8,422
Wilson	11,002	5,111	--	4,446	1,445	44,228	24,629	--	17,042	2,557
Yadkin	2,915	2,547	--	368	--	7,662	6,132	--	1,530	--
Yancey	4,323	--	--	2,250	2,073	19,846	--	--	11,093	8,753
Total	939,620	482,423	29,343	237,869	189,985	3,475,729	1,881,859	133,299	810,939	649,632

Table 10--Area of timberland, by forest type and ownership class, 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	233,124	23,674	2,894	10,495	--	196,061
Spruce-fir	13,130	8,323	--	--	--	4,807
Longleaf pine	255,202	12,281	95,715	16,117	4,109	126,980
Slash pine	155,912	--	6,689	70,260	26,601	52,362
Loblolly pine	3,716,402	37,706	125,771	1,136,028	120,657	2,296,240
Shortleaf pine	409,017	7,116	8,233	13,450	--	380,218
Virginia pine	760,481	10,163	5,145	19,634	3,724	721,815
Sand pine	--	--	--	--	--	--
Eastern redcedar	32,397	--	--	--	--	32,397
Pond pine	620,615	34,483	163,192	100,601	2,941	319,398
Spruce pine	--	--	--	--	--	--
Pitch pine	54,512	23,159	9,499	3,588	--	18,266
Table Mountain pine	11,112	11,112	--	--	--	--
Total	6,261,904	168,017	417,138	1,370,173	158,032	4,148,544
Hardwood types						
Oak-pine	2,580,187	143,980	135,753	190,705	3,448	2,106,301
Oak-hickory	6,344,558	598,946	149,548	203,681	4,936	5,387,447
Chestnut oak	523,508	92,591	9,443	31,588	--	389,886
Southern scrub oak	139,917	--	10,753	11,018	--	118,146
Oak-gum-cypress	2,490,400	17,179	190,522	430,456	1,845	1,850,398
Elm-ash-cottonwood	175,519	--	2,414	12,684	--	160,421
Maple-beech-birch	194,388	61,667	4,712	1,812	--	126,197
Total	12,448,477	914,363	503,145	881,944	10,229	10,138,796
All types	18,710,381	1,082,380	920,283	2,252,117	168,261	14,287,340

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

Ownership class	All classes	Stocking class (percent)[a]				
		>130	100-130	60-99	16.7-59	<16.7
	Acres					
National forest	1,082,380	38,749	349,476	516,168	165,538	12,449
Other public	920,283	63,240	270,413	360,648	215,294	10,688
Forest industry	2,252,117	286,192	1,039,408	689,480	169,220	67,817
Forest industry-leased	168,261	29,031	91,048	35,831	10,946	1,405
Other private	14,287,340	1,134,422	5,225,281	6,184,543	1,553,697	189,397
All ownerships	18,710,381	1,551,634	6,975,626	7,786,670	2,114,695	281,756

[a]See stocking standards on page 14.

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

Forest type	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
			Acres		
Softwood types					
White pine-hemlock	233,124	176,827	41,089	15,208	--
Spruce-fir	13,130	3,942	4,807	4,381	--
Longleaf pine	255,202	157,657	44,755	52,790	--
Slash pine	155,912	27,166	109,760	18,986	--
Loblolly pine	3,716,402	1,406,463	1,157,262	1,115,345	37,332
Shortleaf pine	409,017	233,067	152,085	20,560	3,305
Virginia pine	760,481	307,355	298,971	150,548	3,607
Sand pine	--	--	--	--	--
Eastern redcedar	32,397	--	11,044	21,353	--
Pond pine	620,615	234,016	219,223	145,340	22,036
Spruce pine	--	--	--	--	--
Pitch pine	54,512	35,732	18,780	--	--
Table Mountain pine	11,112	3,677	3,678	3,757	--
Total	6,261,904	2,585,902	2,061,454	1,548,268	66,280
Hardwood types					
Oak-pine	2,580,187	1,090,362	569,254	908,554	12,017
Oak-hickory	6,344,558	3,469,222	1,556,865	1,287,632	30,839
Chestnut oak	523,508	340,131	151,188	32,189	--
Southern scrub oak	139,917	5,726	21,608	110,043	2,540
Oak-gum-cypress	2,490,400	1,371,026	505,529	576,017	37,828
Elm-ash-cottonwood	175,519	101,900	40,408	29,536	3,675
Maple-beech-birch	194,388	152,907	32,778	8,703	--
Total	12,448,477	6,531,274	2,877,630	2,952,674	86,899
All types	18,710,381	9,117,176	4,939,084	4,500,942	153,179

Table 13--Area of timberland, by stand-age and broad management classes, all ownerships, 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	2,785,119	760,911	370,059	573,139	805,802	275,208
11-20	1,926,571	648,141	412,252	250,118	466,661	149,399
21-30	1,510,046	519,392	464,855	152,197	256,140	117,462
31-40	1,762,566	144,103	801,573	177,936	474,049	164,905
41-50	1,964,648	--	719,526	278,321	715,294	251,507
51-60	2,202,090	3,942	554,590	305,448	1,020,975	317,135
61-70	1,732,580	--	276,821	245,297	935,569	274,893
71-80	1,188,259	--	146,583	107,471	690,022	244,183
81+	1,495,659	--	95,655	153,267	879,886	366,851
No manageable stand	2,142,843	22,034	321,467	336,993	957,973	504,376
All classes	18,710,381	2,098,523	4,163,381	2,580,187	7,202,371	2,665,919

Table 14--Area of timberland, by stand-age and broad management classes, public ownerships, 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	105,793	16,820	10,124	16,610	57,156	5,083
11-20	114,518	19,965	41,491	17,009	29,437	6,616
21-30	78,796	30,200	13,699	12,461	16,002	6,434
31-40	126,617	16,619	71,423	3,456	32,818	2,301
41-50	159,022	--	90,104	7,277	47,818	13,823
51-60	211,124	3,942	77,176	24,197	72,395	33,414
61-70	278,156	--	55,522	33,534	147,063	42,037
71-80	218,814	--	27,482	27,187	126,460	37,685
81+	343,865	--	33,795	47,639	244,974	17,457
No manageable stand	365,958	--	76,793	90,363	153,537	45,265
All classes	2,002,663	87,546	497,609	279,733	927,660	210,115

Table 15--Area of timberland, by stand-age and broad management classes, forest industry,[a] 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	520,284	351,946	9,701	68,452	52,735	37,450
11-20	520,380	386,209	51,365	27,396	36,079	19,331
21-30	434,286	352,914	51,782	4,299	10,339	14,952
31-40	155,376	55,751	56,937	12,160	17,481	13,047
41-50	120,947	--	52,962	23,430	5,273	39,282
51-60	128,397	--	48,795	8,661	29,488	41,453
61-70	97,335	--	18,359	16,036	23,048	39,892
71-80	82,489	--	11,140	2,496	21,596	47,257
81+	129,471	--	15,949	9,519	6,111	97,892
No manageable stand	231,413	13,130	51,265	21,704	50,885	94,429
All classes	2,420,378	1,159,950	368,255	194,153	253,035	444,985

[a]Includes 168,261 acres of other private land under long-term lease.

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

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
		Acres				
0-10	2,159,042	392,145	350,234	488,077	695,911	232,675
11-20	1,291,673	241,967	319,396	205,713	401,145	123,452
21-30	996,964	136,278	399,374	135,437	229,799	96,076
31-40	1,480,573	71,733	673,213	162,320	423,750	149,557
41-50	1,684,679	--	576,460	247,614	662,203	198,402
51-60	1,862,569	--	428,619	272,590	919,092	242,268
61-70	1,357,089	--	202,940	195,727	765,458	192,964
71-80	886,956	--	107,961	77,788	541,966	159,241
81+	1,022,323	--	45,911	96,109	628,801	251,502
No manageable stand	1,545,472	8,904	193,409	224,926	753,551	364,682
All classes	14,287,340	851,027	3,297,517	2,106,301	6,021,676	2,010,819

[a]Excludes 168,261 acres of other private land under long-term lease to forest industry.

Table 17--Area of timberland, by broad management and stand-volume classes, North 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	2,098,523	891,847	251,536	279,421	234,855	440,864
Natural pine	4,163,381	758,867	439,060	525,858	541,399	1,898,197
Oak-pine	2,580,187	793,371	370,583	344,249	304,589	767,395
Upland hardwood	7,202,371	1,240,570	794,278	1,085,989	1,142,341	2,939,193
Lowland hardwood	2,665,919	605,221	287,550	262,100	254,772	1,256,276
All classes	18,710,381	4,289,876	2,143,007	2,497,617	2,477,956	7,301,925

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

Broad management class and species group	All classes	No manageable stand	Stand-age class (years)								
			0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+
			Thousand cubic feet								
Pine plantation											
Softwood	2,127,048	2,921	35,806	701,267	1,010,594	362,555	--	13,905	--	--	--
Hardwood	126,317	--	5,176	33,526	51,697	27,490	--	8,428	--	--	--
Total	2,253,365	2,921	40,982	734,793	1,062,291	390,045	--	22,333	--	--	--
Natural pine											
Softwood	7,121,014	116,697	62,051	292,751	720,158	1,725,471	1,617,834	1,345,300	654,742	385,662	200,348
Hardwood	1,159,627	7,085	12,869	37,142	86,055	210,559	249,820	259,863	148,100	81,510	66,624
Total	8,280,641	123,782	74,920	329,893	806,213	1,936,030	1,867,654	1,605,163	802,842	467,172	266,972
Oak-pine											
Softwood	1,742,456	117,085	47,135	89,087	97,875	153,626	269,438	335,030	292,877	114,866	225,437
Hardwood	1,874,733	61,176	62,762	76,084	81,763	137,432	345,518	403,648	298,358	154,298	253,694
Total	3,617,189	178,261	109,897	165,171	179,638	291,058	614,956	738,678	591,235	269,164	479,131
Upland hardwood											
Softwood	824,721	59,324	25,294	37,927	31,283	69,545	86,204	159,572	139,506	112,173	103,893
Hardwood	12,267,760	571,850	210,503	264,025	313,777	741,136	1,493,960	2,352,191	2,269,919	1,806,311	2,244,088
Total	13,092,481	631,174	235,797	301,952	345,060	810,681	1,580,164	2,511,763	2,409,425	1,918,484	2,347,981
Lowland hardwood											
Softwood	715,132	43,249	8,194	15,480	18,725	35,192	69,963	83,789	91,562	112,074	236,904
Hardwood	4,783,523	228,079	50,214	80,742	129,621	262,754	520,440	833,404	843,050	658,624	1,176,595
Total	5,498,655	271,328	58,408	96,222	148,346	297,946	590,403	917,193	934,612	770,698	1,413,499
All types											
Softwood	12,530,371	339,276	178,480	1,136,512	1,878,635	2,346,389	2,043,439	1,937,596	1,178,687	724,775	766,582
Hardwood	20,211,960	868,190	341,524	491,519	662,913	1,379,371	2,609,738	3,857,534	3,559,427	2,700,743	3,741,001
Total	32,742,331	1,207,466	520,004	1,628,031	2,541,548	3,725,760	4,653,177	5,795,130	4,738,114	3,425,518	4,507,583

Table 19--Average net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class, 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	223,726	337	19,310	107,836	78,737	17,329	--	177	--	--	--
Hardwood	9,137	--	299	3,373	4,323	980	--	162	--	--	--
Total	232,863	337	19,609	111,209	83,060	18,309	--	339	--	--	--
Natural pine											
Softwood	261,294	4,480	4,364	33,190	45,100	67,615	47,624	34,273	14,875	7,060	2,713
Hardwood	51,399	218	578	3,097	5,854	11,148	11,835	9,632	5,096	2,603	1,338
Total	312,693	4,698	4,942	36,287	50,954	78,763	59,459	43,905	19,971	9,663	4,051
Oak-pine											
Softwood	59,461	4,515	3,544	7,597	5,765	6,639	8,789	9,450	6,886	2,405	3,871
Hardwood	59,370	1,931	2,633	3,375	4,072	6,169	11,824	11,913	8,066	3,687	5,700
Total	118,831	6,446	6,177	10,972	9,837	12,808	20,613	21,363	14,952	6,092	9,571
Upland hardwood											
Softwood	25,633	2,497	1,989	2,900	1,496	2,567	2,393	3,976	3,237	2,392	2,186
Hardwood	314,806	17,599	10,436	17,692	15,481	27,171	45,605	58,828	48,716	34,867	38,411
Total	340,439	20,096	12,425	20,592	16,977	29,738	47,998	62,804	51,953	37,259	40,597
Lowland hardwood											
Softwood	19,705	1,326	436	1,013	827	1,401	2,514	2,257	2,276	2,656	4,999
Hardwood	135,048	7,883	1,980	6,074	6,915	10,718	18,658	23,622	20,794	15,020	23,384
Total	154,753	9,209	2,416	7,087	7,742	12,119	21,172	25,879	23,070	17,676	28,383
All types											
Softwood	589,819	13,155	29,643	152,536	131,925	95,551	61,320	50,133	27,274	14,513	13,769
Hardwood	569,760	27,631	15,926	33,611	36,645	56,186	87,922	104,157	82,672	56,177	68,833
Total	1,159,579	40,786	45,569	186,147	168,570	151,737	149,242	154,290	109,946	70,690	82,602

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

Table 20--Average annual removals of growing stock on timberland, by broad management class, species group, and stand-age class, North 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	78,396	275	319	40,727	36,057	--	--	1,018	--	--	--
Hardwood	1,317	--	--	872	445	--	--	--	--	--	--
Total	79,713	275	319	41,599	36,502	--	--	1,018	--	--	--
Natural pine											
Softwood	327,966	3,006	2,399	15,136	51,323	69,556	70,084	61,296	30,639	13,106	11,421
Hardwood	40,499	--	--	533	4,536	7,045	7,066	9,712	6,786	2,773	2,048
Total	368,465	3,006	2,399	15,669	55,859	76,601	77,150	71,008	37,425	15,879	13,469
Oak-pine											
Softwood	63,745	3,821	1,773	2,623	4,901	8,711	10,203	13,615	11,147	5,102	1,849
Hardwood	43,733	2,031	1,389	1,077	2,672	4,813	5,455	10,968	9,163	5,699	466
Total	107,478	5,852	3,162	3,700	7,573	13,524	15,658	24,583	20,310	10,801	2,315
Upland hardwood											
Softwood	23,992	1,809	942	827	1,846	2,326	5,153	5,169	2,945	2,205	770
Hardwood	224,637	7,438	5,236	2,935	13,217	21,441	34,194	57,988	29,809	24,219	28,160
Total	248,629	9,247	6,178	3,762	15,063	23,767	39,347	63,157	32,754	26,424	28,930
Lowland hardwood											
Softwood	17,667	1,797	--	513	465	211	1,908	1,694	2,342	5,286	3,451
Hardwood	117,668	2,947	558	628	2,948	6,332	19,767	24,556	24,119	14,219	21,594
Total	135,335	4,744	558	1,141	3,413	6,543	21,675	26,250	26,461	19,505	25,045
All types											
Softwood	511,766	10,708	5,433	59,826	94,592	80,804	87,348	82,792	47,073	25,699	17,491
Hardwood	427,854	12,416	7,183	6,045	23,818	39,631	66,482	103,224	69,877	46,910	52,268
Total	939,620	23,124	12,616	65,871	118,410	120,435	153,830	186,016	116,950	72,609	69,759

[a]Classifications before timber removals.

Table 21--Merchantable volume of live trees and growing stock on timberland, by forest-type and species groups, 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	687,685	53,668	473,585	53,774	106,658	655,404	51,849	468,596	48,275	86,684
Spruce-fir	19,435	--	15,735	--	3,700	16,048	--	15,119	--	929
Longleaf-slash pine	534,732	518,989	--	6,960	8,783	529,424	518,183	--	6,325	4,916
Loblolly-shortleaf pine	9,471,061	8,157,717	61,212	800,110	452,022	9,333,130	8,135,820	58,495	763,623	375,192
Oak-pine	3,816,116	1,479,215	274,169	969,774	1,092,958	3,617,189	1,474,831	267,625	917,955	956,778
Oak-hickory	13,591,214	588,436	219,931	5,031,239	7,751,608	12,622,295	586,198	213,105	4,784,809	7,038,183
Oak-gum-cypress	5,697,719	234,428	498,407	3,830,201	1,134,683	5,186,742	233,371	475,682	3,499,436	978,253
Elm-ash-cottonwood	344,308	3,390	2,689	208,646	129,583	311,913	3,390	2,689	188,757	117,077
Maple-beech-birch	518,724	--	25,418	123,307	369,999	470,186	--	25,418	112,946	331,822
All types	34,680,994	11,035,843	1,571,146	11,024,011	11,049,994	32,742,331	11,003,642	1,526,729	10,322,126	9,889,834

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

Treatment or disturbance	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
			Acres[a]		
Final harvest	294,986	12,452	52,546	1,460	228,528
Partial harvest[b]	52,912	2,446	2,775	232	47,459
Commercial thinning	51,116	2,881	24,155	8,016	16,064
Other stand improvement	11,316	1,935	2,225	--	7,156
Site preparation	96,809	3,958	41,627	1,729	49,495
Artificial regeneration[c]	103,218	1,397	42,677	1,729	57,415
Natural regeneration[c]	253,289	12,278	19,530	288	221,193
Other treatment	79,400	4,784	4,668	--	69,948
Natural disturbance	349,955	20,406	21,097	2,748	305,704

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

[b]Includes high grading and some selective cutting.

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

Table 23--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and broad management class, North 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	294,986	13,564	117,217	35,273	84,844	44,088
Partial harvest[c]	52,912	--	15,282	15,160	15,175	7,295
Commercial thinning	51,116	38,493	10,385	2,238	--	--
Other stand improvement	11,316	1,461	5,193	2,211	2,046	405
Site preparation	96,809	9,048	38,280	8,365	24,489	16,627
Other treatment	79,400	1,372	17,242	13,861	39,419	7,506
Natural disturbance	349,955	14,392	106,573	46,915	148,143	33,932

[a]Classification before treatment or disturbance.

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

[c]Includes high grading and some selective cutting.

Table 24--Area of timberland regenerated annually, by type of regeneration and broad management class, North 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	61,996	49,197	--	12,456	--	343
Natural regeneration following harvest	147,995	--	14,545	38,334	68,225	26,891
Other artificial regeneration on forest land	27,661	24,558	--	2,448	655	--
Other natural regeneration on forest land	78,650	--	22,108	17,694	27,442	11,406
Artificial regeneration on nonforest land	13,561	12,723	--	433	--	405
Natural reversion of nonforest land	26,644	--	13,234	6,637	5,656	1,117
Total	356,507	86,478	49,887	78,002	101,978	40,162

[a]Classification after regeneration.

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

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
Salvage	128,047	4,144	40,710	18,824	62,801	1,568
Harvest	1,381,316	--	283,411	185,164	576,971	335,770
Commercial thinning	916,138	361,245	476,796	18,287	27,351	32,459
Other stand improvement	1,162,387	56,392	256,488	238,922	454,027	156,558
Stand conversion	122,651	2,357	14,242	18,860	70,967	16,225
Regeneration	1,772,169	22,034	309,585	315,637	676,986	447,927
Stands in relatively good condition	10,346,601	1,639,179	2,603,306	1,546,737	3,265,209	1,292,170
Adverse sites[a]	2,881,072	13,172	178,843	237,756	2,068,059	383,242
All classes	18,710,381	2,098,523	4,163,381	2,580,187	7,202,371	2,665,919

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

Table 27--Merchantable volume of live trees and growing stock on timberland, by ownership class and species group, North 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	2,680,484	365,839	187,912	576,784	1,549,949	2,458,606	364,410	181,152	542,641	1,370,403
Other public	1,651,463	716,211	46,762	522,893	365,597	1,536,185	713,557	41,442	484,468	296,718
Forest industry	3,457,118	1,700,563	193,067	1,076,721	486,767	3,317,304	1,696,718	187,758	994,781	438,047
Forest industry-leased	227,971	207,518	549	16,526	3,378	227,404	207,518	549	15,959	3,378
Other private	26,663,958	8,045,712	1,142,856	8,831,087	8,644,303	25,202,832	8,021,439	1,115,828	8,284,277	7,781,288
All ownerships	34,680,994	11,035,843	1,571,146	11,024,011	11,049,994	32,742,331	11,003,642	1,526,729	10,322,126	9,889,834

Table 28--Volume of sawtimber on timberland, by ownership class and species group, 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	2,672,853	836,395	200,822	566,273	1,069,363	6,129,059	658,034	704,500	1,066,220	3,700,305
Other public	2,502,965	1,667,056	47,000	460,374	328,535	2,476,612	974,423	126,599	761,570	614,020
Forest industry	4,613,597	3,089,362	243,322	919,503	361,410	4,452,659	1,110,388	571,886	1,786,605	983,780
Forest industry-leased	436,535	423,720	1,758	8,779	2,278	44,373	28,077	--	14,048	2,248
Other private	36,246,474	17,371,534	1,433,928	9,022,805	8,418,207	47,014,185	11,131,291	3,428,265	16,677,306	15,777,323
All ownerships	46,472,424	23,388,067	1,926,830	10,977,734	10,179,793	60,116,888	13,902,213	4,831,250	20,305,749	21,077,676

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

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

Table 29--Average net annual growth and removals of growing stock on timberland, by ownership class and species group, North 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	50,245	10,450	4,313	12,625	22,857	25,171	4,994	471	4,728	14,978
Other public	50,123	27,846	1,239	14,363	6,675	23,079	13,862	1,658	4,295	3,264
Forest industry	199,825	148,287	4,891	33,602	13,045	132,857	89,269	3,522	26,006	14,060
Forest industry-leased	17,967	16,899	26	855	187	8,921	8,677	71	94	79
Other private	841,419	342,493	33,375	256,029	209,522	749,592	365,621	23,621	202,746	157,604
All ownerships	1,159,579	545,975	43,844	317,474	252,286	939,620	482,423	29,343	237,869	189,985

Table 30--Average net annual growth and removals of sawtimber on timberland, by ownership class and species group, 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	235,955	45,956	25,505	53,068	111,426	90,326	19,614	2,921	13,850	53,941
Other public	211,403	123,860	3,876	50,658	33,009	78,528	46,862	4,866	16,267	10,533
Forest industry	689,381	524,609	25,259	91,670	47,843	407,520	250,098	17,186	91,234	49,002
Forest industry-leased	77,722	76,247	61	1,134	280	15,977	15,977	--	--	--
Other private	3,570,301	1,463,429	180,125	1,025,077	901,670	2,883,378	1,549,308	108,326	689,588	536,156
All ownerships	4,784,762	2,234,101	234,826	1,221,607	1,094,228	3,475,729	1,881,859	133,299	810,939	649,632

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

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
			Thousand cubic feet		
Sawtimber trees					
Saw-log portion	19,978,723	6,990,001	1,195,977	5,770,758	6,021,987
Upper-stem portion[a]	2,968,861	775,055	98,762	1,044,437	1,050,607
Total	22,947,584	7,765,056	1,294,739	6,815,195	7,072,594
Poletimber trees	9,794,747	3,238,586	231,990	3,506,931	2,817,240
All growing-stock trees	32,742,331	11,003,642	1,526,729	10,322,126	9,889,834
Rough trees					
Sawtimber size	549,620	10,677	12,371	200,053	326,519
Poletimber size	1,004,603	19,813	7,279	285,929	691,582
Total	1,554,223	30,490	19,650	485,982	1,018,101
Rotten trees					
Sawtimber size	349,765	1,711	24,493	192,421	131,140
Poletimber size	34,675	--	274	23,482	10,919
Total	384,440	1,711	24,767	215,903	142,059
Salvable dead trees					
Sawtimber size	31,362	12,479	1,422	5,510	11,951
Poletimber size	22,385	10,708	546	4,707	6,424
Total	53,747	23,187	1,968	10,217	18,375
Total, all timber	34,734,741	11,059,030	1,573,114	11,034,228	11,068,369

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

Table 32--Number of live trees on timberland, by species and diameter class, 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	71,350	26,123	12,405	9,577	6,128	6,642	4,521	3,316	1,809	583	163	83	--
Slash pine	50,230	4,707	11,420	16,560	12,320	4,040	802	349	32	--	--	--	--
Shortleaf pine	205,825	38,366	47,246	37,678	36,634	24,716	12,943	5,178	2,274	610	104	76	--
Loblolly pine	1,541,656	571,532	329,588	262,301	174,863	94,674	48,934	27,454	16,479	8,331	4,288	3,138	74
Pond pine	195,855	60,984	46,602	30,271	25,117	17,004	8,548	4,530	1,852	603	244	100	--
Virginia pine	425,560	155,302	100,417	66,574	52,001	32,579	13,162	4,464	894	127	40	--	--
Pitch pine	26,325	5,390	6,127	2,764	3,937	3,334	2,662	1,039	654	230	88	100	--
Table Mountain pine	6,561	1,411	2,025	1,832	438	326	96	388	28	--	17	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	147,250	73,969	31,347	13,337	9,360	6,068	3,782	3,113	2,135	1,491	1,099	1,397	152
Eastern hemlock	74,811	44,008	14,476	7,808	2,649	1,695	1,239	804	658	621	288	479	86
Spruce and fir	8,636	4,827	1,110	985	716	567	263	34	105	23	--	--	6
Baldcypress	16,650	3,333	2,719	1,467	1,627	1,323	1,331	1,214	869	767	606	1,135	259
Pondcypress	11,438	4,483	828	906	1,300	1,636	757	557	307	201	210	208	45
Cedars	189,291	123,123	41,661	13,989	5,699	3,094	965	413	120	109	72	34	12
Total softwoods	2,971,438	1,117,558	647,971	466,049	332,789	197,698	100,005	52,853	28,216	13,696	7,219	6,750	634
Hardwood													
Select white oaks	396,185	188,724	74,261	40,308	29,763	20,651	15,197	11,312	6,807	3,942	2,197	2,674	349
Select red oaks	115,933	48,950	20,075	12,453	8,469	5,648	5,644	4,513	3,547	2,295	1,768	2,190	381
Chestnut oak	161,434	50,067	29,602	20,962	19,530	13,863	9,056	6,775	4,430	2,765	1,931	2,164	289
Other white oaks	103,162	56,274	16,882	11,207	7,359	4,281	3,075	1,935	1,106	535	169	303	36
Other red oaks	761,956	460,309	115,279	60,410	42,055	29,225	20,761	14,254	8,237	5,171	2,946	2,993	316
Hickory	326,800	187,891	58,428	30,091	18,404	12,956	7,054	5,424	3,026	1,646	938	909	33
Yellow birch	18,119	9,457	2,624	2,181	1,622	887	198	366	350	157	68	169	40
Hard maple	70,937	44,549	13,337	4,568	3,739	1,759	938	417	708	487	202	206	27
Soft maple	2,145,356	1,535,379	344,952	121,627	64,449	32,549	20,345	11,510	6,557	4,078	1,883	1,890	137
Beech	107,941	66,389	19,518	6,967	3,957	3,833	2,184	1,577	1,439	909	476	617	75
Sweetgum	1,390,751	952,825	239,352	91,156	43,415	26,403	15,867	10,128	5,464	2,921	1,579	1,571	70
Tupelo and blackgum	816,535	524,749	127,145	59,836	35,523	23,606	16,503	10,806	7,306	4,482	2,641	3,153	785
Ash	271,294	180,088	43,996	21,949	9,101	6,262	3,814	2,684	1,326	877	691	484	22
Cottonwood	6,214	1,460	2,059	1,182	893	178	55	112	136	59	46	34	--
Basswood	21,794	13,014	2,599	872	1,466	959	1,170	706	550	153	187	118	--
Yellow-poplar	533,723	274,340	87,189	47,011	34,425	26,085	21,260	16,087	11,626	7,042	4,095	4,190	373
Bay and magnolia	408,510	322,278	52,848	18,231	8,101	4,662	1,253	741	215	93	49	39	--
Black cherry	204,860	159,797	28,055	9,304	4,567	1,835	581	318	119	137	80	67	--
Black walnut	8,890	3,637	1,493	897	886	688	741	211	244	68	--	25	--
Sycamore	12,466	3,715	2,866	1,851	1,137	908	605	287	485	234	107	227	44
Black locust	58,638	33,568	4,433	5,673	3,710	3,927	2,875	2,079	1,177	575	274	342	5
Elm	141,212	94,411	25,909	9,108	5,311	2,521	1,621	1,054	739	189	153	178	18
Other eastern hardwoods	2,944,902	2,161,923	541,742	148,932	53,542	20,890	8,876	4,368	2,238	1,119	456	765	51
Total hardwoods	11,027,612	7,373,794	1,854,644	726,776	401,424	244,576	159,673	107,664	67,832	39,934	22,936	25,308	3,051
All species	13,999,050	8,491,352	2,502,615	1,192,825	734,213	442,274	259,678	160,517	96,048	53,630	30,155	32,058	3,685

Table 33--Number of growing-stock trees on timberland, by species and diameter class, 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	68,421	23,740	12,166	9,475	5,989	6,599	4,521	3,300	1,809	583	163	76	--
Slash pine	49,293	4,364	11,088	16,298	12,320	4,040	802	349	32	--	--	--	--
Shortleaf pine	199,753	35,325	45,725	36,361	36,463	24,716	12,943	5,156	2,274	610	104	76	--
Loblolly pine	1,507,869	546,886	322,566	260,964	174,451	94,414	48,873	27,419	16,479	8,331	4,288	3,124	74
Pond pine	165,064	38,099	40,269	29,458	24,448	16,968	8,548	4,530	1,797	603	244	100	--
Virginia pine	411,491	147,530	95,901	65,537	51,621	32,336	13,064	4,441	894	127	40	--	--
Pitch pine	23,456	4,837	4,692	2,019	3,801	3,334	2,662	1,039	654	230	88	100	--
Table Mountain pine	6,561	1,411	2,025	1,832	438	326	96	388	28	--	17	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	140,760	69,838	29,708	12,746	9,360	6,068	3,782	3,071	2,111	1,444	1,083	1,397	152
Eastern hemlock	68,090	38,889	13,304	7,566	2,649	1,695	1,142	804	634	597	288	439	83
Spruce and fir	8,516	4,827	1,110	985	619	567	263	34	105	--	--	--	6
Baldcypress	15,395	2,686	2,719	1,376	1,462	1,244	1,310	1,182	854	732	545	1,087	198
Pondcypress	11,298	4,483	828	906	1,300	1,584	757	557	307	153	210	197	16
Cedars	164,587	103,882	37,866	13,192	5,207	2,961	851	382	56	84	72	34	--
Total softwoods	2,840,554	1,026,797	619,967	458,715	330,128	196,852	99,614	52,652	28,034	13,494	7,142	6,630	529
Hardwood													
Select white oaks	335,955	143,463	64,332	37,782	28,787	20,328	14,864	10,955	6,735	3,816	2,113	2,498	282
Select red oaks	99,087	36,673	17,206	12,078	8,027	5,508	5,453	4,449	3,444	2,142	1,716	2,113	278
Chestnut oak	125,770	28,057	23,263	18,468	18,304	12,885	8,310	6,289	4,055	2,446	1,679	1,776	238
Other white oaks	81,807	39,528	14,113	10,413	7,022	4,088	2,890	1,784	1,011	470	169	290	29
Other red oaks	634,500	358,810	98,926	56,530	39,892	28,031	19,842	13,879	7,827	4,977	2,812	2,745	229
Hickory	247,624	122,775	49,752	27,157	16,980	12,677	6,888	5,120	2,960	1,582	868	835	30
Yellow birch	13,051	6,047	2,063	1,760	1,540	738	198	160	248	115	68	114	--
Hard maple	49,170	26,603	10,424	4,160	3,411	1,712	900	417	687	470	202	157	27
Soft maple	1,308,593	833,885	255,139	98,615	54,299	27,373	17,270	10,144	5,598	3,397	1,542	1,275	56
Beech	75,528	40,444	14,725	6,365	3,683	3,649	2,068	1,416	1,359	785	449	517	68
Sweetgum	1,121,652	724,298	208,797	85,046	41,500	25,646	15,357	9,921	5,285	2,748	1,537	1,461	56
Tupelo and blackgum	474,764	235,600	94,418	50,736	32,089	21,350	15,193	10,022	6,690	3,888	2,072	2,323	383
Ash	148,959	81,768	27,652	17,357	7,996	5,411	3,272	2,323	1,218	866	633	447	16
Cottonwood	5,846	1,276	1,900	1,182	893	178	55	112	120	59	37	34	--
Basswood	15,560	7,116	2,599	872	1,243	899	1,170	706	521	153	187	94	--
Yellow-poplar	481,652	236,891	78,105	44,257	33,310	25,438	20,784	15,962	11,537	6,956	4,029	4,054	329
Bay and magnolia	222,984	163,640	32,903	13,403	6,887	4,189	1,087	607	149	70	20	29	--
Black cherry	122,448	92,967	18,752	5,522	2,904	1,195	541	225	87	125	69	61	--
Black walnut	6,999	2,174	1,493	721	796	688	689	142	244	33	--	19	--
Sycamore	11,111	3,022	2,652	1,688	959	908	605	242	468	218	96	211	42
Black locust	42,596	23,569	3,631	4,615	2,204	2,878	2,159	1,751	924	467	194	199	5
Elm	92,703	52,723	20,992	7,829	5,105	2,353	1,532	1,004	681	175	143	152	14
Other eastern hardwoods	179,437	91,439	34,281	21,360	13,600	7,908	4,409	2,904	1,606	1,006	343	556	25
Total hardwoods	5,897,796	3,352,768	1,078,118	527,916	331,431	216,030	145,536	100,534	63,454	36,964	20,978	21,960	2,107
All species	8,738,350	4,379,565	1,698,085	986,631	661,559	412,882	245,150	153,186	91,488	50,458	28,120	28,590	2,636

Table 34--Merchantable volume of live trees on timberland, by species and diameter class, 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	419,873	26,372	42,421	77,945	82,218	85,466	63,292	27,343	8,412	6,404	--
Slash pine	182,964	44,015	72,174	43,065	14,208	8,676	826	--	--	--	--
Shortleaf pine	1,292,917	109,907	265,074	333,686	274,690	160,271	99,201	34,145	8,018	7,925	--
Loblolly pine	6,552,082	668,520	1,093,602	1,140,104	970,059	831,955	707,497	481,102	317,659	326,324	15,260
Pond pine	802,651	79,059	151,742	189,077	148,246	113,956	66,246	30,001	15,373	8,951	--
Virginia pine	1,554,740	236,255	427,732	447,315	272,601	128,277	33,919	6,042	2,599	--	--
Pitch pine	203,568	8,129	23,531	38,936	51,801	30,019	25,472	10,932	6,088	8,660	--
Table Mountain pine	27,048	6,070	3,796	3,946	1,741	9,653	945	--	897	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	721,815	41,424	59,523	67,786	70,505	84,774	79,145	76,500	72,356	137,711	32,091
Eastern hemlock	223,865	17,991	13,669	15,476	20,567	18,944	24,264	30,254	18,540	44,558	19,602
Spruce and fir	21,015	2,935	3,404	5,054	4,689	712	2,749	304	--	--	1,168
Baldcypress	339,768	4,689	11,717	16,666	24,269	31,577	33,529	36,596	35,669	103,085	41,971
Pondcypress	117,609	2,942	8,809	19,392	14,070	14,420	11,247	8,419	11,697	18,479	8,134
Cedars	147,074	38,059	34,381	33,882	15,730	9,501	3,790	4,858	3,776	2,181	916
Total softwoods	12,606,989	1,286,367	2,211,575	2,432,330	1,965,394	1,528,201	1,152,122	746,496	501,084	664,278	119,142
Hardwood											
Select white oaks	2,116,274	112,553	188,814	251,158	301,855	321,805	270,325	207,427	144,800	254,680	62,857
Select red oaks	1,070,892	38,065	57,552	70,509	110,277	128,363	141,001	119,122	122,231	215,336	68,436
Chestnut oak	1,286,859	52,995	124,969	156,635	163,591	169,537	157,198	129,631	108,795	177,437	46,071
Other white oaks	319,794	29,656	41,219	45,528	49,185	45,626	37,398	23,410	9,848	28,399	9,525
Other red oaks	2,636,180	167,651	260,348	336,959	382,267	383,603	311,615	261,920	190,878	280,028	60,911
Hickory	994,294	72,653	111,621	156,726	137,453	150,224	120,325	88,982	63,564	87,282	5,464
Yellow birch	87,373	6,666	10,758	11,616	3,405	8,969	13,484	7,500	4,748	14,939	5,288
Hard maple	180,831	14,371	24,600	20,966	17,258	12,445	26,900	25,520	13,405	17,631	7,735
Soft maple	2,466,865	363,871	413,735	369,549	363,135	292,047	220,465	179,284	104,719	143,018	17,042
Beech	381,132	22,675	25,760	45,449	40,399	44,235	54,847	44,947	31,160	58,180	13,480
Sweetgum	2,106,181	227,357	277,113	328,269	315,803	299,803	226,170	155,603	111,236	152,427	12,400
Tupelo and blackgum	2,130,649	166,940	223,835	264,599	300,469	279,157	246,195	193,541	130,647	222,278	102,988
Ash	531,228	55,620	61,439	76,711	74,826	69,826	50,682	45,687	46,165	46,950	3,322
Cottonwood	28,922	2,591	5,427	2,231	940	3,494	5,185	3,252	2,603	3,199	--
Basswood	134,727	3,001	11,763	13,908	25,685	23,000	24,616	7,721	14,130	10,903	--
Yellow-poplar	3,315,641	151,136	246,932	334,976	444,123	494,269	489,564	384,935	285,701	417,714	66,291
Bay and magnolia	209,232	51,372	51,664	51,646	20,774	17,933	6,850	3,762	2,212	3,019	--
Black cherry	111,551	26,601	26,033	18,957	9,553	8,073	3,908	7,000	5,009	6,417	--
Black walnut	53,949	2,929	6,501	8,874	14,234	6,569	9,978	2,838	--	2,026	--
Sycamore	106,913	6,501	7,284	12,498	10,811	7,265	17,928	10,527	6,046	19,042	9,011
Black locust	282,082	14,686	21,012	44,225	46,967	51,430	38,038	24,304	14,900	25,168	1,352
Elm	211,513	20,941	33,513	30,835	31,570	28,353	28,120	9,481	9,614	16,723	2,363
Other eastern hardwoods	1,310,923	339,039	284,332	217,165	141,298	108,385	73,467	53,616	26,225	60,451	6,945
Total hardwoods	22,074,005	1,949,870	2,516,224	2,869,989	3,005,878	2,954,411	2,574,259	1,990,010	1,448,636	2,263,247	501,481
All species	34,680,994	3,236,237	4,727,799	5,302,319	4,971,272	4,482,612	3,726,381	2,736,506	1,949,720	2,927,525	620,623

Table 35--Volume of growing stock on timberland, by species and diameter class, 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	'418,255	26,148	41,955	77,616	82,218	85,232	63,292	27,343	8,412	6,039	--
Slash pine	182,616	43,667	72,174	43,065	14,208	8,676	826	--	--	--	--
Shortleaf pine	1,289,131	107,515	264,146	333,686	274,690	159,805	99,201	34,145	8,018	7,925	--
Loblolly pine	6,541,621	665,819	1,091,003	1,138,473	968,721	831,020	707,497	481,102	317,659	325,067	15,260
Pond pine	796,778	77,533	148,897	188,744	148,246	113,956	65,077	30,001	15,373	8,951	--
Virginia pine	1,546,314	233,681	426,211	445,184	270,921	127,757	33,919	6,042	2,599	--	--
Pitch pine	201,879	6,954	23,017	38,936	51,801	30,019	25,472	10,932	6,088	8,660	--
Table Mountain pine	27,048	6,070	3,796	3,946	1,741	9,653	945	--	897	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	716,907	39,530	59,523	67,786	70,505	84,131	78,630	75,277	71,723	137,711	32,091
Eastern hemlock	217,147	17,321	13,669	15,476	19,400	18,944	23,484	29,699	18,540	41,937	18,677
Spruce and fir	20,399	2,935	3,092	5,054	4,689	712	2,749	--	--	--	1,168
Baldcypress	325,016	4,429	11,098	16,200	23,866	31,097	33,293	35,438	33,571	100,378	35,646
Pondcypress	110,861	2,942	8,809	19,125	14,070	14,420	11,247	7,541	11,697	17,646	3,364
Cedars	136,399	36,222	32,420	32,755	14,172	8,826	1,992	4,055	3,776	2,181	--
Total softwoods	12,530,371	1,270,766	2,199,810	2,426,046	1,959,248	1,524,248	1,147,624	741,575	498,353	656,495	106,206
Hardwood											
Select white oaks	2,065,313	107,445	184,667	248,647	297,681	315,352	268,384	203,014	141,881	243,802	54,440
Select red oaks	1,031,527	37,007	55,825	69,178	107,493	126,617	138,162	113,421	119,555	209,482	54,787
Chestnut oak	1,195,775	48,233	120,124	148,795	154,531	160,516	147,367	119,679	99,843	155,703	40,984
Other white oaks	303,495	26,837	40,042	44,216	47,240	43,915	35,064	21,427	9,848	27,621	7,285
Other red oaks	2,541,242	157,298	252,175	326,445	370,748	377,432	302,613	256,372	185,434	264,862	47,863
Hickory	960,843	67,597	104,370	153,942	135,079	144,090	118,795	86,568	61,277	84,002	5,123
Yellow birch	67,884	6,195	10,163	10,788	3,405	4,249	9,921	6,071	4,748	12,344	--
Hard maple	173,114	13,542	22,232	20,409	16,894	12,445	26,621	24,766	13,405	15,065	7,735
Soft maple	2,158,616	307,393	363,754	324,785	324,054	268,537	198,536	159,112	92,377	110,389	9,679
Beech	355,366	20,844	24,276	44,081	39,334	40,569	52,712	40,706	30,009	50,503	12,332
Sweetgum	2,051,008	215,404	267,893	322,564	310,262	295,964	221,636	150,475	109,653	146,145	11,012
Tupelo and blackgum	1,936,774	146,845	208,772	248,534	284,571	267,144	234,215	178,541	114,153	186,694	67,305
Ash	487,671	45,984	55,841	68,520	68,492	64,498	48,396	45,449	43,556	44,051	2,884
Cottonwood	28,221	2,591	5,427	2,231	940	3,494	4,728	3,252	2,359	3,199	--
Basswood	129,950	3,001	10,238	13,296	25,685	23,000	23,563	7,721	14,130	9,316	--
Yellow-poplar	3,271,174	145,412	242,457	331,462	435,947	492,320	487,767	381,572	282,594	409,718	61,925
Bay and magnolia	178,460	39,329	44,915	48,085	19,297	15,875	4,809	2,973	836	2,341	--
Black cherry	85,439	17,928	18,064	13,396	9,320	6,308	3,376	6,541	4,503	6,003	--
Black walnut	48,826	2,597	5,960	8,874	13,781	4,590	9,978	1,691	--	1,355	--
Sycamore	102,994	6,000	6,611	12,498	10,811	6,910	17,618	9,960	5,762	18,012	8,812
Black locust	230,870	12,469	14,035	33,532	38,655	46,386	32,160	21,732	11,589	18,960	1,352
Elm	199,504	17,764	32,576	28,572	29,925	28,000	26,714	9,044	9,101	15,466	2,342
Other eastern hardwoods	607,894	65,889	96,471	100,829	82,070	79,392	58,616	49,459	21,448	49,218	4,502
Total hardwoods	20,211,960	1,513,604	2,186,888	2,623,679	2,826,215	2,827,603	2,471,751	1,899,546	1,378,061	2,084,251	400,362
All species	32,742,331	2,784,370	4,386,698	5,049,725	4,785,463	4,351,851	3,619,375	2,641,121	1,876,414	2,740,746	506,568

Table 36--Volume of sawtimber on timberland, by species and diameter class, 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	1,793,342	315,427	395,557	456,767	365,347	166,546	53,300	40,398	--
Slash pine	270,105	155,957	64,524	44,993	4,631	--	--	--	--
Shortleaf pine	4,167,790	1,245,794	1,247,398	818,991	552,519	201,947	49,684	51,457	--
Loblolly pine	23,943,787	4,081,659	4,365,304	4,295,646	3,995,982	2,902,825	2,008,970	2,181,304	112,097
Pond pine	2,667,162	713,536	677,925	584,535	361,731	177,020	94,858	57,557	--
Virginia pine	3,568,463	1,602,711	1,147,850	600,386	170,839	32,122	14,555	--	--
Pitch pine	794,926	130,768	220,527	147,947	138,444	63,618	37,316	56,306	--
Table Mountain pine	84,705	15,610	8,182	50,073	5,289	--	5,551	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	3,331,076	240,370	306,537	415,439	422,032	428,807	426,547	872,036	219,308
Eastern hemlock	986,462	54,585	81,684	89,804	120,579	160,171	104,888	251,814	122,937
Spruce and fir	65,985	18,436	21,564	3,553	14,657	--	--	--	7,775
Baldcypress	1,604,890	49,483	90,572	136,723	160,034	181,698	180,618	579,579	226,183
Pondcypress	462,283	61,407	55,050	64,804	54,166	39,339	63,191	102,329	21,997
Cedars	307,384	126,310	65,427	45,082	10,947	23,499	22,598	13,521	--
Total softwoods	44,048,360	8,812,053	8,748,101	7,754,743	6,377,197	4,377,592	3,062,076	4,206,301	710,297
Hardwood									
Select white oaks	6,821,314	--	1,021,737	1,258,803	1,191,096	972,958	715,198	1,331,778	329,744
Select red oaks	3,898,541	--	358,952	487,077	585,591	514,435	569,902	1,073,860	308,724
Chestnut oak	3,809,505	--	510,752	614,634	625,332	544,590	478,777	803,725	231,695
Other white oaks	878,484	--	169,633	185,998	164,273	107,392	51,131	155,763	44,294
Other red oaks	8,249,323	--	1,320,231	1,551,717	1,377,740	1,254,087	958,382	1,484,312	302,854
Hickory	2,816,851	--	464,338	583,895	534,443	422,541	315,455	465,375	30,804
Yellow birch	185,726	--	11,723	17,013	42,345	27,557	22,988	64,100	--
Hard maple	519,218	--	62,456	50,722	114,823	111,977	63,072	74,184	41,984
Soft maple	4,709,172	--	1,062,110	1,023,367	838,857	721,861	442,608	565,987	54,382
Beech	1,048,210	--	143,613	154,254	205,362	161,941	121,313	209,354	52,373
Sweetgum	5,788,275	--	1,107,192	1,265,966	1,068,700	786,185	608,892	877,415	73,925
Tupelo and blackgum	5,808,648	--	909,246	1,026,326	1,008,597	839,279	570,826	1,025,745	428,629
Ash	1,364,053	--	220,836	248,894	210,710	213,137	217,024	236,224	17,228
Cottonwood	87,060	--	3,164	14,601	21,869	16,313	12,689	18,424	--
Basswood	433,420	--	87,341	90,294	102,758	35,673	69,202	48,152	--
Yellow-poplar	12,724,590	--	1,569,682	2,140,484	2,393,682	2,041,086	1,616,886	2,533,773	428,997
Bay and magnolia	174,629	--	62,965	61,492	20,167	13,333	3,841	12,831	--
Black cherry	163,919	--	31,567	25,635	15,484	32,993	23,732	34,508	--
Black walnut	113,964	--	46,497	16,686	38,214	6,769	--	5,798	--
Sycamore	362,716	--	34,489	26,179	75,591	46,529	28,585	97,462	53,881
Black locust	640,573	--	136,532	170,447	121,813	84,014	45,556	76,540	5,671
Elm	500,369	--	102,368	108,394	113,576	41,044	43,397	78,582	13,008
Other eastern hardwoods	1,442,392	--	283,411	313,814	250,490	225,331	99,290	246,371	23,685
Total hardwoods	62,540,952	--	9,720,835	11,436,692	11,121,513	9,221,025	7,078,746	11,520,263	2,441,878
All species	106,589,312	8,812,053	18,468,936	19,191,435	17,498,710	13,598,617	10,140,822	15,726,564	3,152,175

Table 37--Volume of sawtimber on timberland, by species, size class, and tree grade, 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]	37,290,280	7,358,524	8,582,018	21,349,738	--	13,902,213	5,021,315	3,897,717	4,983,181	--
Eastern white pine[b]	3,331,076	478,202	1,171,795	1,668,514	12,565	2,368,730	473,545	885,433	1,001,604	8,148
Spruce and fir[b]	65,985	--	17,465	48,520	--	22,432	--	13,127	9,305	--
Cypress[c]	2,067,173	926,937	632,985	442,355	64,896	1,609,134	926,937	520,278	143,500	18,419
Other eastern softwoods[b]	1,293,846	273,068	325,243	624,359	71,176	830,954	273,068	248,092	254,092	55,702
Total	44,048,360	9,036,731	10,729,506	24,133,486	148,637	18,733,463	6,694,865	5,564,647	6,391,682	82,269
Hardwood[c]										
Select white and red oaks	10,719,855	1,903,795	3,839,509	4,150,173	826,378	7,593,286	1,903,795	3,246,481	1,964,293	478,717
Other white and red oaks	12,937,312	1,525,286	3,910,390	5,950,980	1,550,656	8,584,347	1,525,286	3,285,692	3,006,643	766,726
Hickory	2,816,851	267,260	928,910	1,266,419	354,262	1,768,618	267,260	725,150	603,333	172,875
Yellow birch	185,726	26,491	89,280	52,451	17,504	156,990	26,491	78,217	37,226	15,056
Hard maple	519,218	48,727	159,470	226,019	85,002	406,040	48,727	147,288	145,331	64,694
Sweetgum	5,788,275	1,021,532	2,010,740	2,387,002	369,001	3,415,117	1,021,532	1,486,465	749,219	157,901
Ash, walnut, and black cherry	1,641,936	308,628	594,973	660,041	78,294	1,051,821	308,628	486,292	218,974	37,927
Yellow-poplar	12,724,590	3,103,682	4,694,389	4,222,915	703,604	9,014,424	3,103,682	3,605,049	1,898,416	407,277
Other eastern hardwoods	15,207,189	1,795,409	3,997,489	7,199,223	2,215,068	9,392,782	1,795,409	3,118,740	3,202,520	1,276,113
Total	62,540,952	10,000,810	20,225,150	26,115,223	6,199,769	41,383,425	10,000,810	16,179,374	11,825,955	3,377,286
All species	106,589,312	19,037,541	30,954,656	50,248,709	6,348,406	60,116,888	16,695,675	21,744,021	18,217,637	3,459,555

[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-1, published by the Northeastern Forest Experiment Station, Radnor, PA, 1971.

Table 38--Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class, 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	322,917	64,150	75,192	81,093	61,390	26,812	8,300	5,980	--
Slash pine	55,542	33,709	12,812	8,221	800	--	--	--	--
Shortleaf pine	816,099	268,488	249,588	152,034	96,552	33,653	7,937	7,847	--
Loblolly pine	4,352,215	884,721	869,980	786,640	686,226	473,279	314,449	321,813	15,107
Pond pine	514,787	153,508	135,517	108,694	63,399	29,587	15,221	8,861	--
Virginia pine	757,208	355,482	242,082	119,061	32,249	5,812	2,522	--	--
Pitch pine	155,006	31,411	46,399	28,032	24,269	10,533	5,907	8,455	--
Table Mountain pine	16,227	3,405	1,638	9,363	933	--	888	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	575,076	53,153	62,536	78,075	74,519	72,171	69,236	133,956	31,430
Eastern hemlock	173,338	12,207	17,060	17,421	22,064	28,195	17,747	40,465	18,179
Spruce and fir	12,550	3,893	4,239	663	2,608	--	--	--	1,147
Baldcypress	286,351	11,728	20,120	27,946	30,760	33,265	31,820	96,185	34,527
Pondcypress	89,962	14,986	12,344	13,290	10,554	7,188	11,223	17,087	3,290
Cedars	58,700	25,907	12,801	8,249	1,923	3,960	3,707	2,153	--
Total softwoods	8,185,978	1,916,748	1,762,308	1,438,782	1,108,246	724,455	488,957	642,802	103,680
Hardwood									
Select white oaks	1,309,151	--	214,037	259,191	235,459	184,634	131,589	231,479	52,762
Select red oaks	736,950	--	76,213	100,854	116,482	98,480	105,654	188,866	50,401
Chestnut oak	755,476	--	111,952	131,668	128,348	107,521	91,419	145,534	39,034
Other white oaks	163,276	--	34,080	36,574	30,957	19,492	9,092	26,099	6,982
Other red oaks	1,538,483	--	265,298	309,771	264,591	231,884	171,228	249,721	45,990
Hickory	537,575	--	97,249	118,465	103,570	78,170	56,372	78,853	4,896
Yellow birch	35,829	--	2,412	3,509	8,560	5,419	4,356	11,573	--
Hard maple	101,956	--	11,929	10,223	23,189	22,391	12,423	14,259	7,542
Soft maple	937,304	--	222,222	213,012	168,499	139,958	83,088	101,440	9,085
Beech	226,124	--	28,343	33,010	44,912	35,703	26,785	45,982	11,389
Sweetgum	1,054,007	--	217,370	244,267	197,083	139,025	103,751	141,612	10,899
Tupelo and blackgum	1,126,930	--	201,535	217,525	203,176	160,430	104,655	175,020	64,589
Ash	268,111	--	47,272	52,397	42,329	41,172	40,383	41,757	2,801
Cottonwood	15,856	--	631	2,874	4,138	2,960	2,203	3,050	--
Basswood	86,774	--	18,490	18,902	20,660	6,959	13,028	8,735	--
Yellow-poplar	2,220,124	--	304,275	405,191	432,247	352,197	267,656	397,249	61,309
Bay and magnolia	36,264	--	13,154	13,091	4,230	2,731	782	2,276	--
Black cherry	30,446	--	6,695	5,170	2,941	5,905	4,123	5,612	--
Black walnut	24,641	--	9,778	3,683	8,467	1,484	--	1,229	--
Sycamore	66,290	--	6,961	5,309	14,812	8,771	5,210	16,777	8,450
Black locust	138,090	--	27,441	36,780	26,926	18,679	10,132	16,903	1,229
Elm	98,185	--	21,013	22,249	22,614	7,917	8,128	14,087	2,177
Other eastern hardwoods	284,903	--	55,875	64,123	50,645	44,309	19,573	46,011	4,367
Total hardwoods	11,792,745	--	1,994,225	2,307,838	2,154,835	1,716,191	1,271,630	1,964,124	383,902
All species	19,978,723	1,916,748	3,756,533	3,746,620	3,263,081	2,440,646	1,760,587	2,606,926	487,582

Table 39--Total volume of live trees on timberland, by species and diameter class, 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	504,580	5,916	13,498	36,070	50,842	90,152	93,530	96,384	71,031	30,604	9,383	7,170	--
Slash pine	238,395	1,319	13,160	60,074	87,110	49,888	16,147	9,771	926	--	--	--	--
Shortleaf pine	1,588,579	10,285	57,140	150,791	319,708	387,160	313,752	181,614	111,866	38,394	8,994	8,875	--
Loblolly pine	8,202,791	125,924	335,877	948,320	1,334,238	1,329,775	1,110,019	942,815	797,481	540,388	356,054	364,891	17,009
Pond pine	1,005,132	12,288	46,295	106,018	182,874	220,290	170,398	130,091	75,331	34,018	17,400	10,129	--
Virginia pine	2,036,155	36,283	143,428	311,717	512,151	522,109	314,587	147,232	38,790	6,898	2,960	--	--
Pitch pine	244,720	1,294	6,527	10,287	28,144	45,413	59,879	34,550	29,236	12,530	6,965	9,895	--
Table Mountain pine	34,783	449	2,616	7,701	4,429	4,540	1,987	10,975	1,072	--	1,014	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	904,473	19,381	38,191	55,695	72,154	80,056	82,254	98,333	91,532	88,319	83,352	158,314	36,892
Eastern hemlock	293,389	12,037	17,811	25,678	16,786	18,231	23,911	21,804	27,859	34,634	21,168	51,119	22,351
Spruce and fir	27,967	1,335	1,105	4,019	4,226	6,050	5,494	829	3,188	378	--	--	1,343
Baldcypress	419,604	893	4,770	7,243	15,111	20,655	29,624	38,231	40,383	44,012	42,906	123,650	52,126
Pondcypress	154,795	820	1,245	4,803	12,179	25,454	18,067	18,268	14,165	10,735	14,633	23,288	11,138
Cedars	265,070	28,770	49,232	55,079	43,006	40,839	18,585	11,266	4,523	5,634	4,415	2,531	1,190
Total softwoods	15,920,433	256,994	730,895	1,783,495	2,682,958	2,840,612	2,258,234	1,742,163	1,307,383	846,544	569,244	759,862	142,049
Hardwood													
Select white oaks	2,819,826	45,158	100,941	166,068	247,408	318,298	377,508	400,102	334,594	256,487	178,633	315,490	79,139
Select red oaks	1,378,266	12,843	31,364	53,336	73,692	88,260	136,914	158,696	174,115	147,001	150,622	265,490	85,933
Chestnut oak	1,644,813	11,861	38,958	75,456	159,455	194,602	201,080	207,300	191,440	157,766	132,811	217,374	56,710
Other white oaks	452,877	13,800	24,830	44,756	55,098	58,602	62,478	57,594	46,894	29,455	12,219	35,111	12,040
Other red oaks	3,605,537	102,304	158,258	258,294	344,991	427,790	477,296	475,053	384,614	322,146	234,246	344,782	75,763
Hickory	1,358,969	37,641	70,164	113,384	147,269	196,654	169,009	182,987	145,717	107,391	76,665	105,509	6,579
Yellow birch	117,327	2,368	4,469	9,314	13,774	14,486	4,187	11,111	16,553	9,313	5,777	18,708	7,267
Hard maple	252,171	10,480	18,699	20,303	31,203	25,779	20,943	14,990	32,329	30,594	16,062	21,460	9,329
Soft maple	3,992,285	365,043	546,104	518,065	522,535	452,814	438,909	350,910	264,461	214,542	125,445	172,392	21,065
Beech	521,191	14,682	23,203	34,403	34,160	57,759	50,744	54,898	68,027	55,773	38,511	72,275	16,756
Sweetgum	3,026,834	204,358	293,538	337,783	344,129	388,216	366,251	343,957	258,122	177,140	126,230	172,910	14,200
Tupelo and blackgum	3,006,364	131,722	172,850	246,418	288,905	330,243	369,881	342,183	302,916	238,988	162,887	281,299	138,072
Ash	739,832	47,471	58,168	80,114	75,326	90,737	87,088	80,573	58,080	52,138	52,661	53,619	3,857
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	163,495	3,382	4,463	3,821	13,972	16,112	29,571	26,367	28,143	8,888	16,150	12,626	--
Yellow-poplar	3,985,421	65,903	124,994	201,340	293,925	386,610	505,459	558,870	551,503	432,773	320,665	468,514	74,865
Bay and magnolia	414,995	76,073	70,626	75,334	65,126	62,597	24,976	21,355	8,235	4,478	2,614	3,581	--
Black cherry	229,610	53,119	38,170	36,257	32,174	22,769	11,353	9,542	4,661	8,212	5,860	7,493	--
Black walnut	68,894	747	2,765	3,958	8,107	10,736	17,113	7,813	11,821	3,420	--	2,414	--
Sycamore	131,619	1,033	4,261	8,832	8,923	14,764	12,663	8,543	20,839	12,220	7,025	22,059	10,457
Black locust	362,212	7,612	6,234	20,326	26,675	54,539	57,569	62,546	46,217	29,594	18,139	31,145	1,616
Elm	312,629	20,236	33,142	30,772	42,092	37,271	37,586	33,563	33,059	11,105	11,257	19,705	2,841
Other eastern hardwoods	2,855,419	496,402	636,412	503,964	369,644	272,153	174,818	132,024	89,569	64,876	32,098	74,319	9,140
Total hardwoods	31,479,788	1,724,713	2,466,285	2,846,203	3,205,342	3,524,445	3,634,501	3,545,041	3,077,934	2,378,060	1,729,639	2,721,996	625,629
All species	47,400,221	1,981,707	3,197,180	4,629,698	5,888,300	6,365,057	5,892,735	5,287,204	4,385,317	3,224,604	2,298,883	3,481,858	767,678

Table 40--Green weight of forest biomass on timberland, by species and diameter class, 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	398,901	4,787	11,584	26,179	39,063	70,479	74,320	77,300	57,175	24,576	7,655	5,783	--
Slash pine	186,176	1,011	12,206	45,068	67,887	38,971	12,604	7,677	752	--	--	--	--
Shortleaf pine	1,095,444	5,835	34,637	89,983	217,570	272,713	224,010	130,204	80,161	27,587	6,417	6,327	--
Loblolly pine	5,885,883	62,179	198,020	672,210	979,518	974,236	813,066	688,900	576,196	390,295	256,742	262,370	12,151
Pond pine	707,323	6,718	26,055	73,479	129,844	157,600	122,574	93,623	54,041	24,010	12,297	7,082	--
Virginia pine	1,511,743	31,348	116,430	236,516	373,256	380,770	229,846	107,877	28,481	5,051	2,168	--	--
Pitch pine	163,835	1,021	5,934	6,789	18,842	30,431	39,596	22,723	19,209	8,327	4,499	6,464	--
Table Mountain pine	21,968	385	2,375	4,113	2,608	2,811	1,262	7,055	697	--	662	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	555,249	8,096	17,339	35,414	48,444	53,233	53,985	63,589	58,196	54,388	50,387	92,291	19,887
Eastern hemlock	213,074	7,205	11,322	20,002	14,408	15,830	18,965	17,192	20,515	24,742	14,773	34,297	13,823
Spruce and fir	20,274	796	714	2,754	3,221	4,426	4,084	628	2,450	329	--	--	872
Baldcypress	329,840	476	3,002	3,418	9,238	14,143	21,782	29,386	31,347	35,041	34,687	101,912	45,408
Pondcypress	107,219	318	778	2,175	6,688	15,736	12,034	12,821	10,200	7,980	11,044	18,116	9,329
Cedars	188,267	17,789	31,463	39,386	31,609	30,302	14,529	8,426	3,451	4,706	3,673	2,111	822
Total softwoods	11,385,196	147,964	471,859	1,257,486	1,942,196	2,061,681	1,642,657	1,267,401	942,871	607,032	405,004	536,753	102,292
Hardwood													
Select white oaks	2,289,190	35,706	74,674	117,779	195,404	254,987	305,907	328,356	276,752	213,555	149,751	267,513	68,806
Select red oaks	1,116,181	10,832	23,359	38,886	59,477	72,196	111,964	130,103	142,274	119,852	121,719	215,475	70,044
Chestnut oak	1,288,507	10,806	30,578	53,485	119,350	149,178	154,918	163,389	151,611	125,274	106,765	176,498	46,655
Other white oaks	364,467	10,021	17,044	31,038	43,141	46,795	51,232	48,317	39,671	24,922	10,590	30,934	10,762
Other red oaks	2,992,614	84,010	119,439	188,902	281,789	356,857	400,805	402,984	326,270	273,313	199,562	293,117	65,566
Hickory	1,096,967	32,737	61,417	80,150	112,426	152,683	134,686	149,736	120,589	90,168	64,976	91,408	5,991
Yellow birch	90,664	1,952	3,669	6,599	10,122	10,574	3,300	8,886	12,789	7,211	4,544	15,030	5,988
Hard maple	207,970	8,757	15,628	14,518	24,554	20,896	17,308	12,461	27,263	25,799	13,732	18,629	8,425
Soft maple	2,898,510	276,730	387,194	360,050	389,601	332,004	321,197	257,259	193,139	155,453	89,871	121,541	14,471
Beech	416,223	12,029	19,588	19,992	25,371	45,211	40,626	44,826	55,799	46,107	31,827	60,951	13,896
Sweetgum	2,167,889	136,394	194,825	217,562	243,870	278,900	268,353	255,937	194,192	134,902	96,543	134,927	11,484
Tupelo and blackgum	2,078,769	93,372	120,080	126,041	174,860	211,567	246,520	238,391	219,466	178,262	125,430	224,251	120,529
Ash	458,307	28,952	36,689	59,339	52,166	57,829	52,937	48,818	33,797	29,273	28,720	27,877	1,910
Cottonwood	26,890	328	2,505	2,142	4,384	1,785	761	2,865	4,327	2,726	2,290	2,777	--
Basswood	108,450	2,280	3,052	2,233	8,631	10,546	19,408	17,492	19,031	6,133	10,974	8,670	--
Yellow-poplar	2,813,072	48,681	83,041	121,801	198,622	267,559	355,068	397,282	395,423	313,066	233,619	342,873	56,037
Bay and magnolia	251,338	46,577	43,233	40,532	39,682	39,070	15,673	13,856	5,374	3,051	1,824	2,466	--
Black cherry	141,593	25,432	25,508	21,217	20,993	15,290	7,724	6,586	3,274	5,861	4,200	5,508	--
Black walnut	57,866	613	2,254	3,149	6,569	9,038	14,353	6,530	10,108	3,028	--	2,224	--
Sycamore	94,961	701	2,946	4,288	5,567	9,703	8,917	6,101	15,530	9,428	5,471	17,713	8,596
Black locust	349,350	6,285	5,172	17,342	25,102	51,378	56,014	61,184	46,293	29,434	18,196	31,320	1,630
Elm	202,327	14,760	23,217	18,175	26,060	22,957	23,768	21,672	21,660	7,342	7,537	13,157	2,022
Other eastern hardwoods	2,225,151	414,437	534,229	355,052	273,445	195,535	130,348	101,646	70,523	52,212	26,877	62,858	7,989
Total hardwoods	23,737,256	1,302,392	1,829,341	1,900,272	2,341,186	2,612,538	2,741,787	2,724,677	2,385,155	1,856,372	1,355,018	2,167,717	520,801
All species	35,122,452	1,450,356	2,301,200	3,157,758	4,283,382	4,674,219	4,384,444	3,992,078	3,328,026	2,463,404	1,760,022	2,704,470	623,093

Table 41--Average net annual growth and removals of live timber and growing stock on timberland, by species, 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	546,874	483,555	545,975	482,423
Eastern white pine	23,089	16,627	22,993	16,627
Spruce and fir	637	--	631	--
Cypress	9,358	8,192	9,302	7,864
Other eastern softwoods	11,038	4,974	10,918	4,852
Total softwoods	590,996	513,348	589,819	511,766
Hardwood				
Select white and red oaks	83,814	70,470	83,453	67,810
Other white and red oaks	108,348	89,033	107,204	85,623
Hickory	20,359	17,097	20,154	16,194
Yellow birch	1,047	105	1,025	105
Hard maple	3,811	454	3,759	429
Sweetgum	70,833	63,916	70,051	61,703
Ash, walnut, and black cherry	19,786	12,144	18,967	10,730
Yellow-poplar	106,814	82,026	106,302	81,039
Tupelo and blackgum	32,929	35,989	32,193	33,264
Bay and magnolia	8,884	2,579	8,314	1,990
Other eastern hardwoods	129,701	87,134	118,338	68,967
Total hardwoods	586,326	460,947	569,760	427,854
All species	1,177,322	974,295	1,159,579	939,620

[a]Merchantable portion only.

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

Species	Net annual growth	Annual timber removals
	Thousand board feet	
Softwood		
Yellow pines	2,234,101	1,881,859
Eastern white pine	140,296	81,621
Spruce and fir	2,508	--
Cypress	47,496	38,691
Other eastern softwoods	44,526	12,987
Total softwoods	2,468,927	2,015,158
Hardwood		
Select white and red oaks	389,945	247,284
Other white and red oaks	473,953	287,162
Hickory	83,706	58,689
Yellow birch	2,828	431
Hard maple	12,799	979
Sweetgum	242,031	190,818
Ash, walnut, and black cherry	65,043	29,487
Yellow-poplar	533,925	352,287
Tupelo and blackgum	143,375	109,219
Bay and magnolia	21,416	3,769
Other eastern hardwoods	346,814	180,446
Total hardwoods	2,315,835	1,460,571
All species	4,784,762	3,475,729

Table 43—Average annual removals of growing stock on timberland, by species and diameter class, 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	482,423	37,656	67,882	83,928	85,618	74,197	57,594	36,347	20,721	18,089	391
Eastern white pine	16,627	680	1,138	688	1,292	2,116	2,098	2,126	3,257	3,058	174
Spruce and fir	—	--	--	--	--	--	--	--	--	--	--
Cypress	7,864	113	408	537	209	718	1,008	618	1,040	2,969	244
Other eastern softwoods	4,852	1,163	967	1,011	171	585	69	508	261	117	--
Total softwoods	511,766	39,612	70,395	86,164	87,290	77,616	60,769	39,599	25,279	24,233	809
Hardwood											
Select white and red oaks	67,810	2,963	4,867	6,134	9,314	8,379	8,077	8,157	4,576	11,971	3,372
Other white and red oaks	85,623	5,585	9,207	9,210	11,513	10,395	9,434	9,124	5,774	12,311	3,070
Hickory	16,194	806	829	1,446	2,985	1,947	2,803	2,012	1,851	1,515	--
Yellow birch	105	--	--	--	--	105	--	--	--	--	--
Hard maple	429	--	78	116	--	116	119	--	--	--	--
Sweetgum	61,703	5,645	6,999	8,820	9,170	7,827	6,977	6,258	5,007	4,378	622
Ash, walnut, and black cherry	10,730	945	1,265	1,751	1,157	1,119	1,619	1,165	565	1,018	126
Yellow-poplar	81,039	2,287	4,034	4,559	11,344	11,214	13,628	12,745	7,558	12,670	1,000
Tupelo and blackgum	33,264	1,947	2,359	3,626	5,704	5,603	4,536	3,330	3,085	2,701	373
Bay and magnolia	1,990	608	221	260	188	109	192	93	143	176	--
Other eastern hardwoods	68,967	6,655	8,426	10,066	11,002	6,685	9,336	5,811	3,563	7,036	387
Total hardwoods	427,854	27,441	38,285	45,988	62,377	53,499	56,721	48,695	32,122	53,776	8,950
All species	939,620	67,053	108,680	132,152	149,667	131,115	117,490	88,294	57,401	78,009	9,759

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

Species	Live timber[a]	Growing stock	Sawtimber
	Thousand cubic feet		Thousand board feet
Softwood			
Yellow pines	108,725	107,345	268,561
Eastern white pine	4,479	4,479	22,311
Spruce and fir	647	647	2,263
Cypress	948	781	3,253
Other eastern softwoods	3,672	3,204	6,847
Total softwoods	118,471	116,456	303,235
Hardwood			
Select white and red oaks	19,305	16,686	53,108
Other white and red oaks	63,071	52,975	160,101
Hickory	12,758	11,235	36,784
Yellow birch	745	537	367
Hard maple	1,293	787	2,764
Sweetgum	10,747	9,370	23,385
Ash, walnut, and black cherry	7,947	6,435	14,983
Yellow-poplar	12,679	12,024	29,750
Tupelo and blackgum	10,665	7,209	15,988
Bay and magnolia	2,545	1,292	3,241
Other eastern hardwoods	53,677	31,150	70,886
Total hardwoods	195,432	149,700	411,357
All species	313,903	266,156	714,592

[a]Merchantable portion only.

Table 45--Change in number of live trees on timberland, by species group, survey completion date, and diameter class, 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	2,594,058	866,282	639,240	448,472	298,152	165,597	88,250	47,491	40,574
1990	2,523,362	863,815	555,830	427,557	311,438	183,315	91,668	46,718	43,021
Change	-70,696	-2,467	-83,410	-20,915	+13,286	+17,718	+3,418	-773	+2,447
Other softwood									
1984	462,832	275,084	85,970	39,614	22,126	12,456	8,655	6,197	12,730
1990	448,076	253,743	92,141	38,492	21,351	14,383	8,337	6,135	13,494
Change	-14,756	-21,341	+6,171	-1,122	-775	+1,927	-318	-62	+764
Hardwood									
1984	11,538,550	7,750,733	1,948,395	771,072	409,332	242,864	165,807	103,120	147,227
1990	11,027,612	7,373,794	1,854,644	726,776	401,424	244,576	159,673	107,664	159,061
Change	-510,938	-376,939	-93,751	-44,296	-7,908	+1,712	-6,134	+4,544	+11,834

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

Land use class	Survey completion date			Change 1984-1990
	1974	1984	1990	
		Acres		
Forest land				
Timberland:				
Pine and oak-pine types	9,388,453	8,747,404	8,842,091	94,687
Hardwood types	10,156,382	10,040,724	9,868,290	-172,434
Total	19,544,835	18,788,128	18,710,381	-77,747
Reserved timberland	433,792	459,778	524,359	64,581
Woodland	46,230	42,809	42,809	--
Total forest land	20,024,857	19,290,715	19,277,549	-13,166
Nonforest land				
Cropland	6,402,053	6,628,765	6,459,619	-169,146
Pasture and range	1,808,363	1,607,180	1,559,632	-47,548
Other	2,819,840	3,456,260	3,763,495	307,235
Total	11,030,256	11,692,205	11,782,746	90,541
All land[a]	31,055,113	30,982,920	31,060,295	77,375

[a]Excludes all water areas.

Table 47--Volume[a] of sawtimber, growing stock, and live timber on timberland, by species group, survey completion date, and diameter class, North 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	37,368,917	--	--	7,762,312	8,138,081	7,508,463	5,590,600	3,562,021	2,064,040	2,743,400
1984	41,235,660	--	--	7,867,905	8,518,344	7,998,728	6,018,305	4,325,654	2,692,790	3,813,934
1990	44,048,360	--	--	8,812,053	8,748,101	7,754,743	6,377,197	4,377,592	3,062,076	4,916,598
Hardwood										
1974	46,459,930	--	--	--	8,910,580	9,505,996	8,239,454	6,519,151	4,272,325	9,012,424
1984	57,298,760	--	--	--	10,064,111	10,965,431	10,418,384	8,341,707	5,827,859	11,681,268
1990	62,540,952	--	--	--	9,720,835	11,436,692	11,121,513	9,221,025	7,078,746	13,962,141
					GROWING STOCK (in thousand cubic feet)					
Softwood										
1974	11,305,180	1,391,510	2,010,867	2,164,005	1,840,770	1,495,615	1,018,996	610,631	340,777	432,009
1984	12,041,407	1,330,473	2,106,014	2,192,454	1,929,315	1,595,961	1,098,841	743,423	444,280	600,646
1990	12,530,371	1,270,766	2,199,810	2,426,046	1,959,248	1,524,248	1,147,624	741,575	498,353	762,701
Hardwood										
1974	17,001,790	1,609,400	2,184,581	2,538,069	2,621,776	2,373,848	1,847,891	1,358,248	839,949	1,628,028
1984	19,345,235	1,561,178	2,181,746	2,574,411	2,960,259	2,737,657	2,337,840	1,739,158	1,145,515	2,107,471
1990	20,211,960	1,513,604	2,186,888	2,623,679	2,826,215	2,827,603	2,471,751	1,899,546	1,378,061	2,484,613
					LIVE TIMBER[b] (in thousand cubic feet)					
Softwood										
1974	11,388,987	1,411,937	2,023,806	2,172,531	1,850,008	1,501,788	1,024,852	612,195	343,169	448,701
1984	12,133,325	1,348,993	2,120,765	2,200,967	1,939,067	1,602,344	1,105,045	745,477	447,699	622,968
1990	12,606,989	1,286,367	2,211,575	2,432,330	1,965,394	1,528,201	1,152,122	746,496	501,084	783,420
Hardwood										
1974	18,825,326	2,120,672	2,535,686	2,797,444	2,793,867	2,493,944	1,941,666	1,419,210	887,239	1,835,598
1984	21,325,529	2,057,070	2,534,688	2,839,325	3,156,172	2,876,001	2,456,331	1,817,076	1,209,996	2,378,870
1990	22,074,005	1,949,870	2,516,224	2,869,989	3,005,878	2,954,411	2,574,259	1,990,010	1,448,636	2,764,728

[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.

Johnson, Tony G. 1991. Forest statistics for North Carolina, 1990. Resour. Bull. SE-120. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station. 63 pp.

Since 1984, area of timberland in North Carolina declined almost 78,000 acres to 18.7 million acres. Nonindustrial private forest landowners control 76 percent of the State's timberland. Area classified as a pine type declined 3 percent to 6.3 million acres. Nearly 295,000 acres were harvested annually, while 357,000 per year were regenerated both by artificial and natural means. Volume of softwood growing stock increased 4 percent to 12.5 billion cubic feet. Volume of hardwood growing stock increased almost 5 percent to 20.2 billion cubic feet. Net annual growth of softwoods increased 18 percent to 590 million cubic feet. In contrast, hardwood growth was down 9 percent to 570 million cubic feet. Annual removals of softwood growing stock increased 19 percent to 512 million cubic feet; hardwood removals jumped 36 percent to 428 million cubic feet. Annual mortality of softwood growing stock remained stable at 116 million cubic feet, whereas hardwood mortality doubled to 150 million cubic feet.

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

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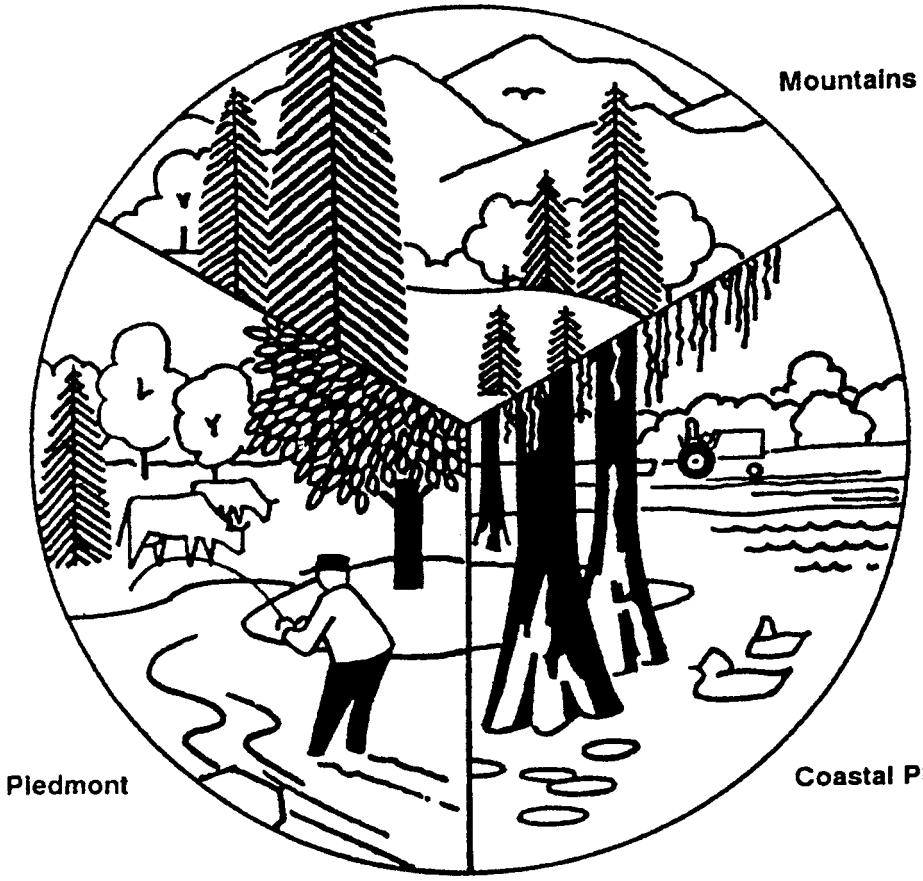

Southeastern Forest Experiment Station

Established 1921

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

RESEARCH MISSION:

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

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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