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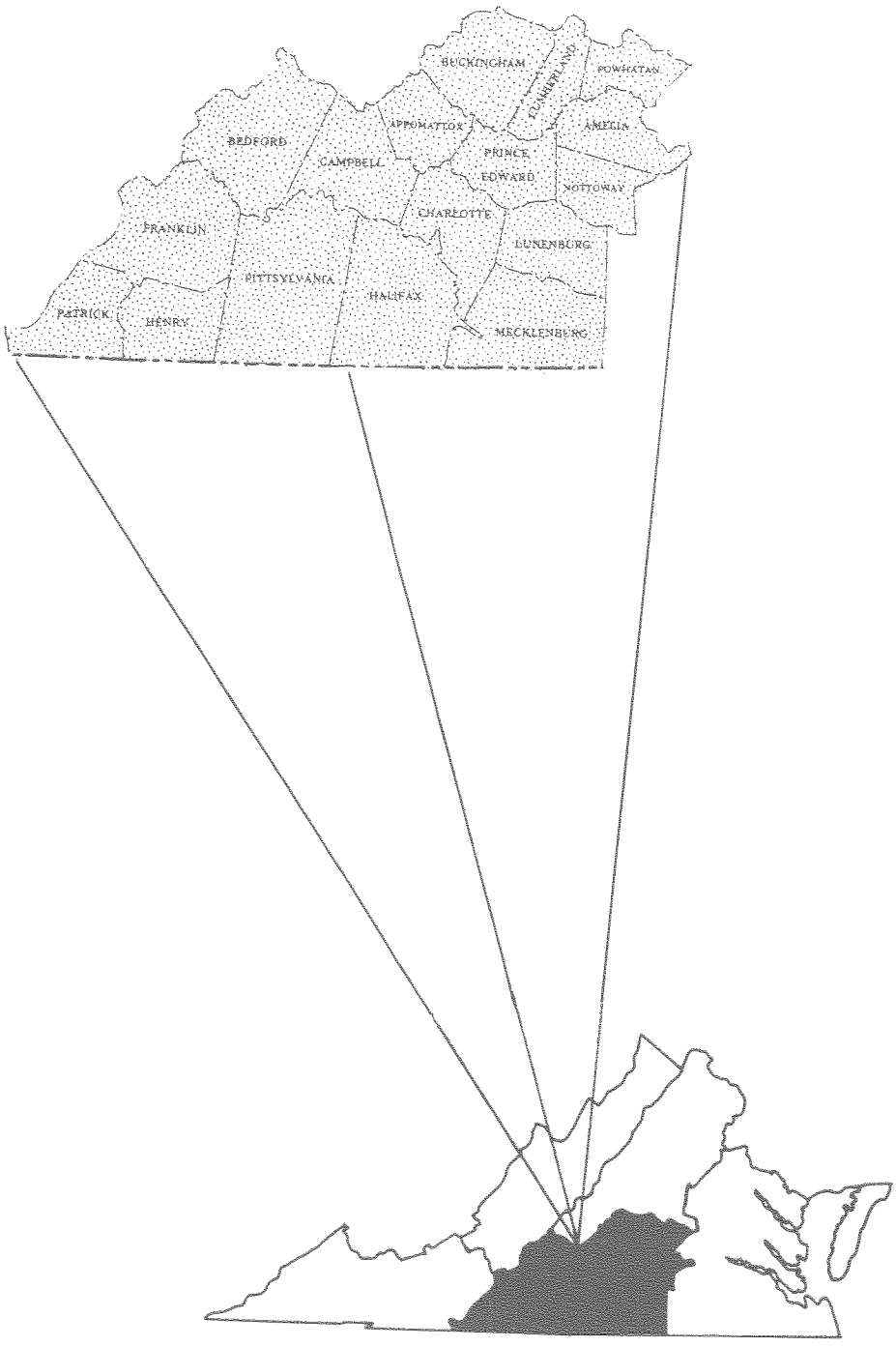
Forest Statistics for the Southern Piedmont of Virginia, 1985

Mark J. Brown



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Southeastern Forest Experiment Station
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Forest Statistics for the Southern Piedmont of Virginia, 1985

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Foreword

This report highlights the principal findings of the fifth forest survey in the Southern Piedmont of Virginia. Fieldwork began in March 1985 and was completed in July 1985. Four previous surveys, completed in 1940, 1957, 1965, and 1976, provide statistics for measuring changes and trends over the past 45 years. The primary emphasis in this report is on the changes and trends since 1976. 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 lands, associated timber volumes, and rates of timber growth and removals.

The 17-county area covered by this report is one of five survey units in Virginia. A similar report, USDA Forest Service Resource Bulletin SE-80, has been issued for the Coastal Plain of Virginia. Comparable reports for the other three units will be issued as the Statewide inventory progresses. When completed, the inventory will provide updated statistics on the timber resource for all of Virginia.

The Southeastern Station gratefully acknowledges the cooperation and assistance provided by the Virginia Division of Forestry 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.

Joe P. McClure

JOE P. MCCLURE
Project Leader

Contents

Page

Since 1976 in the Southern Piedmont of Virginia..... 1
How the Inventory Is Made..... 3
Reliability of the Data..... 3
Definitions of Terms..... 5

County Tables*

1. Area, by county and land class.. 14

2. Area of timberland, by county and ownership class..... 15

3. Area of timberland, by county and forest-type group..... 16

4. Area of timberland, by county and stand-size class..... 17

5. Area of timberland, by county and site class..... 18

6. Area of timberland, by county and stocking classes of growing-stock trees..... 19

7. Volume of growing stock and sawtimber on timberland, by county and species group..... 20

8. Net annual growth of growing stock and sawtimber on timberland, by county and species group..... 21

9. Annual removals of growing stock and sawtimber on timberland, by county and species group..... 22

Unit Tables*

10. Area of timberland, by forest type and ownership class..... 23

11. Area of timberland, by ownership and stocking classes of growing-stock trees..... 24

12. Area of timberland, by forest type and stand-size class..... 25

13. Area of timberland, by stand-age and broad management classes, all ownerships..... 26

Page

14. Area of timberland, by stand-age and broad management classes, public ownerships..... 26

15. Area of timberland, by stand-age and broad management classes, forest industry..... 27

16. Area of timberland, by stand-age and broad management classes, other private ownerships..... 27

17. Area of timberland, by broad management and stand-volume classes 28

18. Volume of growing stock on timberland, by broad management class, species group, and stand-age class.. 29

19. Net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class..... 30

20. Annual removals of growing stock on timberland, by broad management class, species group, and stand-age class..... 31

21. Merchantable volume of live trees and growing stock on timberland, by forest-type group and species group..... 32

22. Area of timberland treated or disturbed annually, by treatment or disturbance and ownership class..... 33

23. Area of timberland treated or disturbed annually and retained in commercial forest land, by treatment or disturbance and broad management class..... 34

24. Area of timberland regenerated annually, by type of regeneration and broad management class..... 35

25. Area of timberland, by treatment opportunity and broad management class..... 36

26. Area of timberland, by treatment opportunity and ownership class..... 36

Page

27. Merchantable volume of live trees and growing stock on timberland, by ownership class and species group..... 37

28. Volume of sawtimber on timberland, by ownership class and species group..... 37

29. Net annual growth and removals of growing stock on timberland, by ownership class and species group... 38

30. Net annual growth and removals of sawtimber on timberland, by ownership class and species group... 38

31. Volume of timber on timberland, by class and species group..... 39

32. Number of live trees on timberland, by species and diameter class 40

33. Number of growing-stock trees on timberland, by species and diameter class..... 41

34. Merchantable volume of live trees on timberland, by species and diameter class..... 42

35. Volume of growing stock on timberland, by species and diameter class..... 43

36. Volume of sawtimber on timberland, by species and diameter class 44

37. Volume of sawtimber on timberland, by species, size class, and log grade..... 45

Page

38. Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class..... 46

39. Total volume of live trees on timberland, by species and diameter class..... 47

40. Green weight of forest biomass on timberland, by species and diameter class..... 48

41. Net annual growth and removals of live timber and growing stock on timberland, by species..... 49

42. Net annual growth and removals of sawtimber on timberland, by species..... 50

43. Annual removals of growing stock on timberland, by species and diameter class..... 51

44. Mortality of live timber, growing stock, and sawtimber on timberland, by species..... 52

45. Change in number of live trees on timberland, by species group, survey completion date, and diameter class..... 53

46. Land area, by class, major forest type, and survey completion date..... 54

47. Volume of sawtimber, growing stock, and live timber on timberland, by species group, survey completion date, and diameter class 55

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

Since 1976 in the Southern Piedmont of Virginia

• area of timberland has remained at nearly 3.8 million acres. Land use shifts did occur, however, with 87,000 acres of timberland diverted to other uses. Of the diverted acreage, 59 percent went to agriculture and 25 percent to urban and other uses. The remaining 16 percent involved changes to reserved timberland and new water areas. Offsetting the diverted acreage were additions to timberland totaling 92,000 acres, which reverted from agricultural land uses. Timberland accounts for 68 percent of the total land area in the 17 counties that make up the Southern Piedmont of Virginia.

• area of nonindustrial private forest (NIPF) has declined only 2 percent, from almost 3.1 to 3.0 million acres. In the NIPF grouping, farmer-owned timberland decreased 32 percent from nearly 2.0 to less than 1.4 million acres, while that owned by other individuals increased 49 percent from about 1.0 to almost 1.5 million acres. The area owned by corporations other than forest industry increased from 100,000 to 169,000 acres. Public timberland rose 5 percent to 152,000 acres. Acreage controlled by forest industry increased 10 percent to 638,000 acres.

• almost 64,000 acres were harvested annually and retained in timberland. Upland hardwood types accounted for 53 percent of the average annual harvest, and pine and oak-pine types represented 42 percent. The remaining 5 percent of the harvest occurred in lowland hardwood types. More than 71 percent of the annual harvest occurred on NIPF land. In addition to the final harvests, thinning, selective cutting, or other stand improvement took place on 18,000 acres each year. More than 22,000 acres were damaged annually by natural agents such as insects, diseases, and weather. One-third of these damaged acres were natural pine stands and another third were upland hardwood stands. Oak-pine stands, lowland hardwood stands, and pine plantations accounted for the remaining third.

• more than 57,000 acres of timberland were regenerated annually. About 63 percent of the regenerated area was classified as a pine or oak-pine type. The area artificially regenerated each year averaged 28,000 acres, or almost one-half the total regeneration. Hardwoods dominated the stocking on 36 percent of the artificially regenerated area, causing these stands to be classed as an oak-pine or hardwood forest type. About 52 percent of the artificial regeneration was on forest industry land, 41 percent on NIPF land, and the remainder on public land. Natural regeneration occurred on more than 29,000 acres, 86 percent of which was NIPF land.

• average basal area of live trees 5.0 inches d.b.h. and larger increased from 63 to 70 square feet per acre. Simultaneously, the number of saplings per acre declined from 703 to 636. The total number of softwood saplings decreased an average of 17 percent. The total number of hardwood saplings decreased 7 percent. For both hardwoods and softwoods, tree numbers increased in all diameter classes 6 inches and larger. Average net volume per acre of all trees increased 14 percent to 1,427 cubic feet.

• volume of softwood growing stock has increased from more than 1.4 to about 1.6 billion cubic feet, or by 12 percent. Softwood volume increased throughout all diameter classes. Virginia pine gained more than 12 percent in volume and remains the predominant softwood species in the region. Loblolly pine, with a 95 percent increase in volume, has replaced shortleaf as the second most abundant species. Shortleaf pine volume decreased by 24 percent, a common trend in the Southeast. Total volume of softwood sawtimber increased from nearly 3.1 to more than 3.6 billion board feet, or by 19 percent.

• volume of hardwood growing stock has increased from almost 3.0 to more than 3.4 billion cubic feet, or by 16 percent. Hardwood volume increases occurred in all diameter classes. Collectively, oaks are the most prevalent hardwoods in this survey unit, accounting for 43 percent of the hardwood growing-stock volume. However, yellow-poplar is the most abundant individual species and accounts for

21 percent of the total hardwood volume. Volume of maple increased 54 percent, moving this species ahead of hickory as the next most common hardwood species. Hardwood sawtimber increased 24 percent, from 7.4 to 9.2 billion board feet.

In 1984

• net annual growth of growing stock totaled 200 million cubic feet, down almost 7 percent since the 1976 survey. Net growth of growing stock averaged 53 cubic feet per acre, down 7 percent from the 57 cubic feet measured previously. Across all ownerships, net annual growth of softwood growing stock was down 10 percent. On NIPF land, softwood growth was down 22 percent. On areas controlled by forest industry, softwood growth was up 37 percent. Net annual growth of hardwood growing stock declined 5 percent across all ownerships. The total net annual growth of growing stock for all species includes 692 million board feet of sawtimber, up nearly 7 percent from 1976. Softwood sawtimber growth increased 5 percent and hardwood sawtimber growth increased 7 percent.

• annual removals of growing stock totaled 143 million cubic feet, up 8 percent since 1976. Softwood removals increased nearly 7 percent to 61 million cubic feet annually. Softwood growth still exceeds removals, but by only 9 percent as compared to nearly 30 percent in 1976. On NIPF land, softwood removals decreased 5 percent from the previous survey. Currently, growth exceeds removals on these ownerships by only 5 percent compared to 28 percent in the last survey. On forest industry land, softwood removals increased 76 percent, yet growth still exceeds removals by 21 percent. A 56 percent excess existed in 1976. For hardwoods, across all ownerships, removals increased more than 9 percent and hardwood growth exceeds removals by 63 percent. The annual removals of growing stock included 414 million board feet of sawtimber, up 7 percent.

• annual mortality of growing stock totaled nearly 33 million cubic feet, an increase of only 2 percent from the previous survey. Softwoods made up 56 percent of the annual mortality. Insects, weather, and suppression each caused about one-fourth of the softwood mortality, with disease claiming most of the remaining softwood mortality. Hardwoods accounted for 44 percent of the total annual mortality, an increase of 17 percent from the last survey. Disease, suppression, and weather were the leading causes of hardwood mortality at 35 percent, 23 percent, and 18 percent, respectively. Annual mortality of growing stock included 60 million board feet of sawtimber, down 3 percent since 1976. For hardwoods and softwoods combined, mortality reduced gross growth by 14 percent.

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 15,745 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 1,533 of the 16-point clusters was ground checked, and a linear regression was fitted to the data to develop the relationship between the photo and ground classification of the subsample. This procedure provides a means for adjusting the initial estimates of area for change in land use since date of photography and for photo misclassifications.

2. Estimates of timber volume and forest classifications were based on measurements recorded at 1,008 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 Unit, and similar measurements taken throughout the Southeast, were used to compute the volume of individual tally trees. A mirror caliper and sectional aluminum poles were used to obtain the additional measurements on these standing trees required to construct volume equations.

4. Felled trees were measured at 33 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 using 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 970 permanent sample plots established in the fourth 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	0.75
Per billion cubic feet of growing stock	5.52
Per billion cubic feet of net annual growth	1.08
Per billion cubic feet of annual removals	2.86

Sampling errors for county and unit totals,[a] in terms of one standard error, Southern Piedmont of Virginia, 1985

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
	Sampling error[b]			
Amelia	1.73	12.93	12.29	35.32
Appomattox	1.89	14.09	15.62	32.85
Bedford	1.69	7.21	7.25	36.86
Buckingham	1.20	10.67	10.52	21.45
Campbell	1.81	9.46	8.79	34.19
Charlotte	1.64	11.16	12.76	28.17
Cumberland	2.08	16.73	13.44	40.72
Franklin	1.62	7.36	7.41	23.94
Halifax	1.03	8.22	7.78	23.41
Henry	1.89	13.68	11.88	45.53
Lunenburg	1.37	9.88	10.28	30.18
Mecklenburg	1.81	8.58	8.02	30.75
Nottoway	2.22	12.74	12.81	39.13
Patrick	1.22	8.44	9.10	30.88
Pittsylvania	1.04	7.66	6.21	23.82
Powhatan	2.02	10.92	10.31	35.94
Prince Edward	1.68	14.06	11.38	35.67
Total	.38	2.46	2.41	7.56

[a]Sampling error of breakdowns of county and State 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., inclusive.

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 himself 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 non-forest use.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hardwoods. Angiosperms; dicotyledonous trees (including all palm species which are monocotyledonous), usually broad-leaf 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.

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

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

- Sawtimber stands. Stands at least 16.7 percent stocked with growing-stock trees, with half or more of total stocking in sawtimber and poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.
- Poletimber stands. Stands at least 16.7 percent stocked with growing-stock trees of which half or more of total stocking is in poletimber and sawtimber trees, and with poletimber stocking exceeding that of sawtimber.
- Sapling-seedling stands. Stands at least 16.7 percent stocked with growing-stock trees of which more than half of total stocking is saplings and seedlings.

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

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

- Fully stocked. 100 percent or more stocking.
- Medium stocked. 60 to 99 percent stocking.
- Poorly stocked. Less than 60 percent stocking.

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

Timberland. Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover,

not currently developed for nonforest use, capable of producing 20 cubic feet of industrial wood per acre per year and not withdrawn from timber utilization by legislative action.

Timber products. Roundwood products and byproducts.

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

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

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

Unproductive forest land. (see: Woodland).

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

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

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

Stocking Standard

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

Conversion Factors

Cubic feet of wood per average cord (excluding bark)

D.b.h. class	All species	Pine	Other softwood	Hardwood
6	60.5	61.0	68.2	60.0
8	68.4	68.1	76.0	68.4
10	73.3	73.1	81.4	73.4
12	76.5	76.7	85.2	76.4
14	78.7	79.4	88.2	78.4
16	80.1	81.6	90.4	79.8
18	81.2	83.3	92.3	80.8
20	82.0	84.8	93.8	81.5
22	82.4	86.0	95.1	82.1
24+	83.4	87.6	96.3	83.0
Average	73.1	70.3	82.1	74.1

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 = 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

TABLES

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 4.

Table 1.--Area, by county and land class, Southern Piedmont of Virginia, 1985

County	All land[a]	Forest land				Nonforest land[b]
		Total	Timberland	Woodland	Reserved timberland	
	Acres					
Amelia	228,410	167,507	167,378	--	129	60,903
Appomattox	215,078	155,856	155,176	--	680	59,222
Bedford	482,618	287,093	281,061	--	6,032	195,525
Buckingham	373,401	299,235	299,235	--	--	74,166
Campbell	355,040	208,415	208,415	--	--	146,625
Charlotte	304,960	214,857	214,857	--	--	90,103
Cumberland	191,712	135,560	135,560	--	--	56,152
Franklin	437,248	286,692	282,572	--	4,120	150,556
Halifax	525,818	348,892	347,578	--	1,314	176,926
Henry	251,712	178,116	175,769	--	2,347	73,596
Lunenburg	276,627	208,183	208,183	--	--	68,444
Mecklenburg	394,330	262,562	259,926	--	2,636	131,768
Nottoway	202,502	140,994	140,994	--	--	61,508
Patrick	307,885	225,130	217,454	--	7,676	82,755
Pittsylvania	647,731	400,638	400,638	--	--	247,093
Powhatan	167,162	127,998	127,998	--	--	39,164
Prince Edward	226,253	160,816	160,816	--	--	65,437
Total	5,588,487	3,808,544	3,783,610	--	24,934	1,779,943

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

[b]Includes 26,074 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, Southern Piedmont of Virginia, 1985

County	All ownerships	Ownership class							
		National Forest	Miscellaneous Federal	State	County and municipal	Forest industry[a]	Other private		
							Farmer	Corporate	Individual
	Acres								
Amelia	167,378	--	--	1,503	467	48,993	61,845	3,638	50,932
Appomattox	155,176	--	--	9,916	290	40,411	33,459	8,365	62,735
Bedford	281,061	18,012	--	25	1,953	33,683	69,205	13,182	145,001
Buckingham	299,235	--	--	12,825	115	89,468	28,118	17,574	151,135
Campbell	208,415	--	--	25	614	36,945	51,992	22,282	96,557
Charlotte	214,857	--	1,835	--	344	55,418	85,005	8,501	63,754
Cumberland	135,560	--	--	16,066	7	29,497	35,213	11,738	43,039
Franklin	282,572	--	2,555	158	328	14,324	94,717	11,366	159,124
Halifax	347,578	--	10,218	25	220	41,326	215,452	7,303	73,034
Henry	175,769	--	893	412	566	21,885	24,002	16,001	112,010
Lunenburg	208,183	--	--	--	505	53,695	56,565	6,285	91,133
Mecklenburg	259,926	--	23,680	269	242	27,840	118,797	4,243	84,855
Nottoway	140,994	--	14,489	336	488	24,543	48,371	4,397	48,370
Patrick	217,454	--	1,948	5,927	4,425	19,340	72,868	7,287	105,659
Pittsylvania	400,638	--	--	1,715	1,369	58,254	263,053	19,062	57,185
Powhatan	127,998	--	--	6,853	275	19,050	19,581	--	82,239
Prince Edward	160,816	--	--	9,621	851	23,806	57,517	7,669	61,352
Total	3,783,610	18,012	55,618	65,676	13,059	638,478	1,335,760	168,893	1,488,114

[a]Includes 17,376 acres of other private land under long-term lease.

Table 3.--Area of timberland, by county and forest-type group, Southern Piedmont of Virginia, 1985

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									
Amelia	167,378	--	--	--	67,276	18,143	81,959	--	--	--
Appomattox	155,176	--	--	--	50,118	8,223	92,652	--	4,183	--
Bedford	281,061	--	--	--	38,105	20,686	222,270	--	--	--
Buckingham	299,235	--	--	--	95,794	35,215	152,972	3,515	11,739	--
Campbell	208,415	--	--	--	65,422	11,533	127,746	--	3,714	--
Charlotte	214,857	--	--	--	89,392	23,158	99,229	--	3,078	--
Cumberland	135,560	--	--	--	56,769	15,199	56,218	--	7,374	--
Franklin	282,572	--	--	--	33,175	36,654	212,743	--	--	--
Halifax	347,578	--	--	--	126,346	34,258	160,023	--	26,951	--
Henry	175,769	8,001	--	--	59,748	26,686	73,332	--	8,002	--
Lunenburg	208,183	--	--	--	73,155	21,997	95,986	3,143	13,902	--
Mecklenburg	259,926	--	--	--	47,426	37,718	174,782	--	--	--
Nottoway	140,994	--	--	--	71,751	11,210	49,238	--	8,795	--
Patrick	217,454	974	--	--	16,699	28,468	167,669	--	3,644	--
Pittsylvania	400,638	--	--	--	102,520	19,062	252,367	3,812	22,877	--
Powhatan	127,998	--	--	--	30,123	--	86,868	--	11,007	--
Prince Edward	160,816	--	--	--	56,894	25,123	66,868	--	11,931	--
Total	3,783,610	8,975	--	--	1,080,713	373,333	2,172,922	10,470	137,197	--

Table 4.--Area of timberland, by county and stand-size class, Southern Piedmont of Virginia, 1985

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
	Acres				
Amelia	167,378	69,076	39,769	58,533	--
Appomattox	155,176	42,177	54,095	58,904	--
Bedford	281,061	152,605	81,405	47,051	--
Buckingham	299,235	65,037	113,983	116,700	3,515
Campbell	208,415	75,781	102,532	30,102	--
Charlotte	214,857	77,075	79,149	58,633	--
Cumberland	135,560	45,272	35,423	52,188	2,677
Franklin	282,572	153,664	90,005	35,115	3,788
Halifax	347,578	108,737	141,551	93,639	3,651
Henry	175,769	72,511	51,419	51,839	--
Lunenburg	208,183	77,633	82,083	48,467	--
Mecklenburg	259,926	89,686	104,347	65,893	--
Nottoway	140,994	56,871	55,808	28,315	--
Patrick	217,454	84,482	101,282	31,690	--
Pittsylvania	400,638	142,971	167,693	73,122	16,852
Powhatan	127,998	53,595	47,730	26,673	--
Prince Edward	160,816	42,179	61,152	50,674	6,811
Total	3,783,610	1,409,352	1,409,426	927,538	37,294

Table 5.--Area of timberland, by county and site class, Southern Piedmont of Virginia, 1985

County	All classes	Site class (cubic feet per acre per year)				
		> 164	120-164	85-119	50-84	20-49
	Acres					
Amelia	167,378	--	3,638	39,972	123,768	--
Appomattox	155,176	4,182	--	46,790	87,616	16,588
Bedford	281,061	--	9,887	75,244	158,110	37,820
Buckingham	299,235	--	3,515	53,790	199,684	42,246
Campbell	208,415	--	7,427	68,329	117,804	14,855
Charlotte	214,857	4,251	--	25,409	152,365	32,832
Cumberland	135,560	--	10,503	34,760	82,471	7,826
Franklin	282,572	3,789	11,367	84,979	142,612	39,825
Halifax	347,578	--	7,304	75,843	250,474	13,957
Henry	175,769	8,001	7,426	48,889	100,027	11,426
Lunenburg	208,183	--	--	38,566	163,333	6,284
Mecklenburg	259,926	--	--	47,130	187,860	24,936
Nottoway	140,994	--	--	31,703	96,097	13,194
Patrick	217,454	3,643	10,510	50,883	117,925	34,493
Pittsylvania	400,638	3,812	35,111	95,379	230,422	35,914
Powhatan	127,998	--	--	44,532	80,291	3,175
Prince Edward	160,816	--	--	45,154	111,828	3,834
Total	3,783,610	27,678	106,688	907,352	2,402,687	339,205

Table 6.--Area of timberland, by county and stocking class of growing-stock trees, Southern Piedmont of Virginia, 1985

County	All classes	Stocking class (percent)[a]				
		> 130	100-130	60-99	16.7-59	< 16.7
	Acres					
Amelia	167,378	14,397	94,376	47,224	11,381	--
Appomattox	155,176	--	63,095	62,804	29,277	--
Bedford	281,061	9,887	89,990	147,316	33,868	--
Buckingham	299,235	8,224	123,535	145,192	18,769	3,515
Campbell	208,415	3,714	62,016	101,834	40,851	--
Charlotte	214,857	14,658	70,646	106,393	23,160	--
Cumberland	135,560	6,590	79,794	38,674	7,825	2,677
Franklin	282,572	11,366	102,234	150,029	15,155	3,788
Halifax	347,578	25,562	125,477	147,677	45,211	3,651
Henry	175,769	16,894	67,267	70,843	20,765	--
Lunenburg	208,183	10,761	98,298	82,077	17,047	--
Mecklenburg	259,926	8,485	110,436	117,968	23,037	--
Nottoway	140,994	9,283	78,994	35,129	17,588	--
Patrick	217,454	9,831	33,155	115,623	58,845	--
Pittsylvania	400,638	16,053	148,940	173,045	45,748	16,852
Powhatan	127,998	--	68,053	56,028	3,917	--
Prince Edward	160,816	7,670	60,729	67,294	18,312	6,811
Total	3,783,610	173,375	1,477,035	1,665,150	430,756	37,294

[a]See stocking standards on page 12.

Table 7.--Volume of growing stock and sawtimber on timberland, by county and species group, Southern Piedmont of Virginia, 1985

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				
Amelia	264,608	100,405	1,789	54,924	107,490	775,427	243,274	5,249	200,196	326,708
Appomattox	174,116	53,862	972	27,951	91,331	378,520	94,244	--	62,064	222,212
Bedford	438,766	91,098	5,082	139,814	202,772	1,245,562	241,965	19,724	430,831	553,042
Buckingham	266,265	88,310	426	45,052	132,477	581,620	141,064	1,732	119,672	319,152
Campbell	253,744	78,783	--	52,441	122,520	567,208	129,849	--	151,243	286,116
Charlotte	282,756	126,220	3,126	65,928	87,482	723,932	235,594	3,946	206,680	277,712
Cumberland	142,905	63,878	776	33,974	44,277	326,548	124,258	--	77,479	124,811
Franklin	433,614	67,686	25,851	164,636	175,441	1,141,752	144,655	100,568	444,899	451,630
Halifax	449,831	159,696	2,865	136,468	150,802	1,106,880	364,696	--	342,233	399,951
Henry	202,095	89,859	15,256	37,992	58,988	482,296	198,720	57,858	86,526	139,192
Lunenburg	279,966	95,484	1,216	85,063	98,203	808,835	306,349	--	240,373	262,113
Mecklenburg	372,207	93,126	1,965	113,139	163,977	971,212	230,310	2,522	301,148	437,232
Nottoway	215,107	114,003	--	39,703	61,401	599,833	329,008	--	111,627	159,198
Patrick	284,301	41,944	15,908	107,871	118,578	689,393	64,046	56,024	251,312	318,011
Pittsylvania	573,497	173,501	2,252	181,071	216,673	1,424,278	421,611	8,934	489,318	504,415
Powhatan	207,028	29,132	854	68,029	109,013	547,423	64,532	--	196,207	286,684
Prince Edward	196,735	55,205	921	52,408	88,201	457,183	76,702	1,861	125,059	253,561
Total	5,037,541	1,522,192	79,259	1,406,464	2,029,626	12,827,902	3,410,877	258,418	3,836,867	5,321,740

[a]Factors for converting to cords are shown on page 12.

Table 8.--Net annual growth of growing stock and sawtimber on timberland, by county and species group, Southern Piedmont of Virginia, 1984

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				
Amelia	13,081	6,701	35	2,357	3,988	40,211	18,570	128	6,649	14,864
Appomattox	7,229	3,212	33	1,118	2,866	25,313	6,155	422	4,036	14,700
Bedford	16,456	2,792	127	6,869	6,668	61,876	10,291	651	23,504	27,430
Buckingham	11,944	5,064	14	2,050	4,816	36,123	10,880	79	7,270	17,894
Campbell	9,617	2,907	13	2,372	4,325	34,975	10,313	--	6,386	18,276
Charlotte	11,300	5,757	165	2,383	2,995	34,715	12,107	450	10,664	11,494
Cumberland	5,946	2,431	16	1,661	1,838	16,892	7,977	137	4,235	4,543
Franklin	16,559	2,445	759	7,654	5,701	64,960	7,161	4,769	30,979	22,051
Halifax	17,213	5,926	111	5,643	5,533	53,692	17,076	43	17,959	18,614
Henry	7,829	3,029	514	2,148	2,138	26,039	10,019	2,482	4,789	8,749
Lunenburg	10,693	3,814	65	3,336	3,478	42,769	12,396	--	16,372	14,001
Mecklenburg	14,384	3,624	166	4,504	6,090	54,097	14,314	121	15,221	24,441
Nottoway	9,335	5,450	16	1,730	2,139	33,207	15,783	--	9,561	7,863
Patrick	11,527	1,812	483	5,326	3,906	34,539	4,748	2,484	16,155	11,152
Pittsylvania	20,805	5,378	49	7,461	7,917	77,540	18,155	141	31,088	28,156
Powhatan	8,961	1,845	22	3,475	3,619	31,125	4,169	--	11,715	15,241
Prince Edward	7,355	1,873	68	2,179	3,235	24,230	4,549	90	9,693	9,898
Total	200,234	64,060	2,656	62,266	71,252	692,303	184,663	11,997	226,276	269,367

Table 9.--Annual removals of growing stock and sawtimber on timberland, by county and species group, Southern Piedmont of Virginia, 1984

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				
Amelia	8,720	3,496	75	1,998	3,151	28,598	9,080	--	8,998	10,520
Appomattox	6,772	3,530	--	574	2,668	16,978	7,174	--	2,209	7,595
Bedford	6,022	2,802	--	1,776	1,444	14,070	1,020	--	9,212	3,838
Buckingham	14,309	3,757	116	1,984	8,452	43,240	8,137	638	8,091	26,374
Campbell	6,143	2,129	--	879	3,135	18,092	5,255	--	3,266	9,571
Charlotte	15,422	6,685	--	1,701	7,036	43,715	17,544	--	5,315	20,856
Cumberland	4,586	1,946	--	1,279	1,361	8,884	5,869	--	1,441	1,574
Franklin	11,254	2,430	1,911	2,209	4,704	39,318	5,836	9,589	8,701	15,192
Halifax	14,112	7,249	178	2,427	4,258	40,068	18,172	--	9,349	12,547
Henry	5,277	3,732	--	1,027	518	12,140	7,508	--	2,533	2,099
Lunenburg	7,691	2,163	89	1,470	3,969	17,443	1,863	--	3,990	11,590
Mecklenburg	6,245	2,711	--	1,585	1,949	21,830	10,238	--	7,009	4,583
Nottoway	4,970	2,388	--	929	1,653	16,315	7,833	--	3,259	5,223
Patrick	4,880	1,071	789	1,459	1,561	17,728	2,369	4,167	6,532	4,660
Pittsylvania	16,015	7,738	322	5,920	2,035	50,080	21,354	1,265	20,715	6,746
Powhatan	3,958	1,965	--	598	1,395	8,598	1,177	--	2,312	5,109
Prince Edward	6,841	1,939	--	1,350	3,552	17,282	4,526	--	3,755	9,001
Total	143,217	57,731	3,480	29,165	52,841	414,379	134,955	15,659	106,687	157,078

Table 10.--Area of timberland, by forest type and ownership class, Southern Piedmont of Virginia, 1985

Forest type	All ownerships	Ownership class				
		National Forest	Other public	Forest industry	Forest industry-leased	Other private
	Acres					
Softwood types:						
White pine-hemlock	8,975	--	974	--	--	8,001
Spruce-fir	--	--	--	--	--	--
Longleaf pine	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--
Loblolly pine	450,622	--	18,656	223,629	8,543	199,794
Shortleaf pine	122,588	--	5,801	4,105	--	112,682
Virginia pine	484,553	--	29,627	67,262	--	387,664
Sand pine	--	--	--	--	--	--
Eastern redcedar	22,950	--	4,098	--	--	18,852
Pond pine	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--
Pitch pine	--	--	--	--	--	--
Table Mountain pine	--	--	--	--	--	--
Total	1,089,688	--	59,156	294,996	8,543	726,993
Hardwood types:						
Oak-pine	373,333	--	10,168	78,951	--	284,214
Oak-hickory	2,081,121	18,012	61,397	209,005	8,833	1,783,874
Chestnut oak	91,801	--	3,206	10,298	--	78,297
Southern scrub oak	--	--	--	--	--	--
Oak-gum-cypress	10,470	--	--	--	--	10,470
Elm-ash-cottonwood	137,197	--	426	27,852	--	108,919
Maple-beech-birch	--	--	--	--	--	--
Total	2,693,922	18,012	75,197	326,106	8,833	2,265,774
All types	3,783,610	18,012	134,353	621,102	17,376	2,992,767

Table 11.--Area of timberland, by ownership and stocking classes of growing-stock trees, Southern Piedmont of Virginia, 1985

Ownership class	All classes	Stocking class (percent)[a]				
		> 130	100-130	60-99	16.7-59	< 16.7
	Acres					
National Forest	18,012	--	18,012	--	--	--
Other public	134,353	8,525	72,349	47,539	3,263	2,677
Forest industry	621,102	26,795	310,398	237,485	34,220	12,204
Forest industry-leased	17,376	2,003	14,035	--	1,338	--
Other private	2,992,767	136,052	1,062,241	1,380,126	391,935	22,413
All ownerships	3,783,610	173,375	1,477,035	1,665,150	430,756	37,294

[a]See stocking standards on page 12.

Table 12.--Area of timberland, by forest type and stand-size class, Southern Piedmont of Virginia, 1985

Forest type	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
	Acres				
Softwood types:					
White pine-hemlock	8,975	8,975	--	--	--
Spruce-fir	--	--	--	--	--
Longleaf pine	--	--	--	--	--
Slash pine	--	--	--	--	--
Loblolly pine	450,622	63,534	191,326	191,148	4,614
Shortleaf pine	122,588	60,527	45,332	16,729	--
Virginia pine	484,553	128,043	235,267	116,629	4,614
Sand pine	--	--	--	--	--
Eastern redcedar	22,950	1,835	220	20,895	--
Pond pine	--	--	--	--	--
Spruce pine	--	--	--	--	--
Pitch pine	--	--	--	--	--
Table Mountain pine	--	--	--	--	--
Total	1,089,688	262,914	472,145	345,401	9,228
Hardwood types:					
Oak-pine	373,333	93,696	105,361	174,276	--
Oak-hickory	2,081,121	911,903	744,856	403,623	20,739
Chestnut oak	91,801	53,648	34,341	3,812	--
Southern scrub oak	--	--	--	--	--
Oak-gum-cypress	10,470	6,658	--	--	3,812
Elm-ash-cottonwood	137,197	80,533	52,723	426	3,515
Maple-beech-birch	--	--	--	--	--
Total	2,693,922	1,146,438	937,281	582,137	28,066
All types	3,783,610	1,409,352	1,409,426	927,538	37,294

Table 13.--Area of timberland, by stand-age and broad management classes, all ownerships, Southern Piedmont of Virginia, 1985

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
00-10	508,317	161,774	43,544	119,064	180,284	3,651
11-20	519,786	160,753	123,404	47,341	187,862	426
21-30	325,280	59,315	119,043	27,501	108,121	11,300
31-40	459,987	15,237	167,169	35,923	230,858	10,800
41-50	494,117	--	110,250	25,914	328,086	29,867
51-60	427,193	--	67,914	35,463	303,483	20,333
61-70	273,440	--	11,688	23,114	231,471	7,167
71-80	147,174	--	8,292	3,652	131,314	3,916
81+	150,916	--	3,652	10,449	132,341	4,474
No manageable stand	477,400	--	37,653	44,912	339,102	55,733
All classes	3,783,610	397,079	692,609	373,333	2,172,922	147,667

Table 14.--Area of timberland, by stand-age and broad management classes, public ownerships, Southern Piedmont of Virginia, 1985

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
00-10	21,290	15,870	--	3,376	2,044	--
11-20	18,971	307	14,714	--	3,524	426
21-30	11,840	--	11,598	--	242	--
31-40	25,602	344	9,738	1,822	13,698	--
41-50	17,146	--	6,249	--	10,897	--
51-60	6,058	--	--	2,415	3,643	--
61-70	12,131	--	336	--	11,795	--
71-80	5,593	--	--	--	5,593	--
81+	26,948	--	--	2,555	24,393	--
No manageable stand	6,786	--	--	--	6,786	--
All classes	152,365	16,521	42,635	10,168	82,615	426

Table 15.--Area of timberland, by stand-age and broad management classes, forest industry,[a] Southern Piedmont of Virginia, 1985

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
00-10	159,117	91,947	3,078	42,401	21,691	--
11-20	124,273	88,351	3,424	6,503	25,995	--
21-30	71,811	39,668	20,543	4,105	7,495	--
31-40	49,755	4,210	11,734	4,709	25,927	3,175
41-50	38,273	--	7,040	6,905	9,167	15,161
51-60	51,630	--	12,064	6,694	27,830	5,042
61-70	56,213	--	8,210	7,634	40,369	--
71-80	32,503	--	4,042	--	28,461	--
81+	15,218	--	--	--	10,744	4,474
No manageable stand	39,685	--	9,228	--	30,457	--
All classes	638,478	224,176	79,363	78,951	228,136	27,852

[a]Includes 17,376 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] Southern Piedmont of Virginia, 1985

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
			Acres			
00-10	327,910	53,957	40,466	73,287	156,549	3,651
11-20	376,542	72,095	105,266	40,838	158,343	--
21-30	241,629	19,647	86,902	23,396	100,384	11,300
31-40	384,630	10,683	145,697	29,392	191,233	7,625
41-50	438,698	--	96,961	19,009	308,022	14,706
51-60	369,505	--	55,850	26,354	272,010	15,291
61-70	205,096	--	3,142	15,480	179,307	7,167
71-80	109,078	--	4,250	3,652	97,260	3,916
81+	108,750	--	3,652	7,894	97,204	--
No manageable stand	430,929	--	28,425	44,912	301,859	55,733
All classes	2,992,767	156,382	570,611	284,214	1,862,171	119,389

[a]Excludes 17,376 acres of other private land under long-term lease to forest industry.

Table 17.--Area of timberland, by broad management and stand-volume classes, Southern Piedmont of Virginia, 1985

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	397,079	217,064	59,686	54,619	25,000	40,710
Natural pine	692,609	149,886	95,990	101,657	114,910	230,166
Oak-pine	373,333	154,739	60,208	40,400	58,557	59,429
Upland hardwood	2,172,922	450,258	317,456	462,479	376,867	565,862
Lowland hardwood	147,667	22,793	33,024	34,267	18,673	38,910
All classes	3,783,610	994,740	566,364	693,422	594,007	935,077

Table 18.--Volume of growing stock on timberland, by broad management class, species group, and stand-age class, Southern Piedmont of Virginia, 1985

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	265,103	--	3,411	117,946	110,219	33,527	--	--	--	--	--
Hardwood	8,470	--	1,751	4,435	925	1,359	--	--	--	--	--
Total	273,573	--	5,162	122,381	111,144	34,886	--	--	--	--	--
Natural pine:											
Softwood	986,101	4,165	872	68,948	126,495	330,816	252,199	166,573	17,006	12,863	6,164
Hardwood	137,934	2,666	227	11,934	20,443	34,959	28,070	19,538	8,464	8,114	3,519
Total	1,124,035	6,831	1,099	80,882	146,938	365,775	280,269	186,111	25,470	20,977	9,683
Oak-pine:											
Softwood	168,353	12,075	6,165	13,609	16,478	24,907	21,959	41,111	21,031	3,684	7,334
Hardwood	195,280	10,946	3,027	14,482	19,491	28,524	25,427	52,724	21,715	6,221	12,723
Total	363,633	23,021	9,192	28,091	35,969	53,431	47,386	93,835	42,746	9,905	20,057
Upland hardwood:											
Softwood	179,284	9,697	4,800	14,774	11,015	31,922	33,051	30,443	23,008	12,000	8,574
Hardwood	2,903,548	173,456	29,230	97,857	110,105	306,792	621,245	583,710	450,509	245,687	284,957
Total	3,082,832	183,153	34,030	112,631	121,120	338,714	654,296	614,153	473,517	257,687	293,531
Lowland hardwood:											
Softwood	2,610	390	--	--	1,414	--	--	806	--	--	--
Hardwood	190,858	35,688	3,963	2,022	9,855	17,183	49,945	43,013	8,451	12,618	8,120
Total	193,468	36,078	3,963	2,022	11,269	17,183	49,945	43,819	8,451	12,618	8,120
All types:											
Softwood	1,601,451	26,327	15,248	215,277	265,621	421,172	307,209	238,933	61,045	28,547	22,072
Hardwood	3,436,090	222,756	38,198	130,730	160,819	388,817	724,687	698,985	489,139	272,640	309,319
Total	5,037,541	249,083	53,446	346,007	426,440	809,989	1,031,896	937,918	550,184	301,187	331,391

Table 19.--Net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class, Southern Piedmont of Virginia, 1984

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	23,231	--	1,161	14,553	6,254	1,263	--	--	--	--	--
Hardwood	1,008	--	84	722	89	113	--	--	--	--	--
Total	24,239	--	1,245	15,275	6,343	1,376	--	--	--	--	--
Natural pine:											
Softwood	32,919	221	96	4,769	7,340	10,506	6,202	3,274	246	172	93
Hardwood	7,604	85	6	651	1,237	1,735	1,717	1,233	518	248	174
Total	40,523	306	102	5,420	8,577	12,241	7,919	4,507	764	420	267
Oak-pine:											
Softwood	5,390	434	126	1,459	816	891	442	710	394	37	81
Hardwood	7,925	368	122	869	810	1,276	1,227	1,933	733	189	398
Total	13,315	802	248	2,328	1,626	2,167	1,669	2,643	1,127	226	479
Upland hardwood:											
Softwood	5,116	184	256	687	474	1,106	789	846	403	216	155
Hardwood	110,562	7,525	1,407	5,922	5,469	13,888	24,482	21,060	14,930	7,619	8,260
Total	115,678	7,709	1,663	6,609	5,943	14,994	25,271	21,906	15,333	7,835	8,415
Lowland hardwood:											
Softwood	60	7	--	--	49	--	--	4	--	--	--
Hardwood	6,419	1,232	165	165	556	871	1,449	1,351	194	296	140
Total	6,479	1,239	165	165	605	871	1,449	1,355	194	296	140
All types:											
Softwood	66,716	846	1,639	21,468	14,933	13,766	7,433	4,834	1,043	425	329
Hardwood	133,518	9,210	1,784	8,329	8,161	17,883	28,875	25,577	16,375	8,352	8,972
Total	200,234	10,056	3,423	29,797	23,094	31,649	36,308	30,411	17,418	8,777	9,301

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

Table 20.--Annual removals of growing stock on timberland, by broad management class, species group, and stand-age class, Southern Piedmont of Virginia, 1984

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	4,685	315	218	1,993	2,159	--	--	--	--	--	--
Hardwood	118	118	--	--	--	--	--	--	--	--	--
Total	4,803	433	218	1,993	2,159	--	--	--	--	--	--
Natural pine:											
Softwood	45,252	741	208	1,960	10,139	13,846	7,616	2,419	7,355	968	--
Hardwood	5,706	575	302	141	713	1,180	400	140	2,142	113	--
Total	50,958	1,316	510	2,101	10,852	15,026	8,016	2,559	9,497	1,081	--
Oak-pine:											
Softwood	4,581	--	--	1,167	1,191	1,010	267	--	946	--	--
Hardwood	4,540	382	--	320	2,113	575	798	--	352	--	--
Total	9,121	382	--	1,487	3,304	1,585	1,065	--	1,298	--	--
Upland hardwood:											
Softwood	6,562	368	167	--	429	1,196	1,406	480	2,225	--	291
Hardwood	65,002	4,867	321	220	3,423	4,193	19,885	16,574	8,278	2,748	4,493
Total	71,564	5,235	488	220	3,852	5,389	21,291	17,054	10,503	2,748	4,784
Lowland hardwood:											
Softwood	131	--	--	--	--	--	131	--	--	--	--
Hardwood	6,640	615	--	--	503	146	2,047	2,164	--	1,165	--
Total	6,771	615	--	--	503	146	2,178	2,164	--	1,165	--
All types:											
Softwood	61,211	1,424	593	5,120	13,918	16,052	9,420	2,899	10,526	968	291
Hardwood	82,006	6,557	623	681	6,752	6,094	23,130	18,878	10,772	4,026	4,493
Total	143,217	7,981	1,216	5,801	20,670	22,146	32,550	21,777	21,298	4,994	4,784

[a]Classification before timber removals occurred.

Table 21.--Merchantable volume of live trees and growing stock on timberland, by forest-type group, and species group, Southern Piedmont of Virginia, 1985

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	27,754	2,990	16,717	580	7,467	26,069	2,990	16,717	580	5,782
Spruce-fir	--	--	--	--	--	--	--	--	--	--
Longleaf-slash pine	--	--	--	--	--	--	--	--	--	--
Loblolly-shortleaf pine	1,402,188	1,234,986	9,548	80,377	77,277	1,371,539	1,222,749	8,748	76,472	63,570
Oak-pine	381,764	149,694	20,384	86,396	125,290	363,633	147,969	20,384	79,831	115,449
Oak-hickory	3,370,912	148,911	34,617	1,228,251	1,959,133	3,082,832	145,874	33,410	1,139,242	1,764,306
Oak-gum-cypress	6,995	--	--	2,389	4,606	5,718	--	--	1,938	3,780
Elm-ash-cottonwood	209,711	2,610	--	119,578	87,523	187,750	2,610	--	108,401	76,739
Maple-beech-birch	--	--	--	--	--	--	--	--	--	--
All types	5,399,324	1,539,191	81,266	1,517,571	2,261,296	5,037,541	1,522,192	79,259	1,406,464	2,029,626

Table 22.--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and ownership class, Southern Piedmont of Virginia, 1976 to 1985

Treatment or disturbance	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
			Acres[a]		
Final harvest	63,953	1,854	16,568	--	45,531
Selective cutting and high grading	8,870	--	506	--	8,364
Commercial thinning	7,383	533	874	591	5,385
Other stand improvement	2,035	12	1,179	--	844
Site preparation	25,701	1,555	13,241	--	10,905
Artificial regeneration[b]	27,934	2,066	14,493	--	11,375
Natural regeneration[b]	29,221	479	3,549	--	25,193
Other treatment	10,346	288	--	--	10,058
Natural disturbance	22,025	750	6,015	--	15,260

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

[b]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, Southern Piedmont of Virginia, 1976 to 1985

Treatment or disturbance	All classes	Broad management class[a]				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres[b]					
Final harvest	63,953	338	20,248	6,080	33,943	3,344
Selective cutting and high grading	8,870	--	388	1,688	6,794	--
Commercial thinning	7,383	3,463	2,578	--	1,342	--
Other stand improvement	2,035	673	12	--	1,350	--
Site preparation	25,701	338	8,105	3,347	13,911	--
Other treatment	10,346	--	1,251	2,000	7,095	--
Natural disturbance	22,025	506	7,523	3,230	8,204	2,562

[a]Classification before treatment or disturbance.

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

Table 24.--Area of timberland regenerated annually, by type of regeneration and broad management class, Southern Piedmont of Virginia, 1976 to 1985

Type of regeneration	All classes	Broad management class[a]				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres					
Artificial regeneration following harvest	20,883	12,292	--	6,514	2,077	--
Natural regeneration following harvest	21,169	--	1,980	3,574	15,218	397
Other artificial regeneration on forest land	5,831	4,318	--	1,513	--	--
Other natural regeneration on forest land	4,087	--	1,198	412	2,477	--
Artificial regeneration on nonforest land	1,220	1,220	--	--	--	--
Natural reversion of nonforest land	3,965	--	1,580	1,201	1,184	--
Total	57,155	17,830	4,758	13,214	20,956	397

[a]Classification after regeneration.

Table 25.--Area of timberland, by treatment opportunity and broad management classes, Southern Piedmont of Virginia, 1985

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
	Acres					
Salvage	3,644	--	--	--	3,644	--
Harvest	293,338	--	28,115	21,735	230,878	12,610
Commercial thinning	199,085	97,805	93,309	--	7,971	--
Other stand improvement	408,656	33,923	77,506	53,287	236,637	7,303
Stand conversion	75,300	--	3,295	--	72,005	--
Regeneration	430,380	--	37,653	37,626	302,883	52,218
Stands in relatively good condition	2,225,336	265,351	452,731	253,399	1,190,706	63,149
Adverse sites[a]	147,871	--	--	7,286	128,198	12,387
All classes	3,783,610	397,079	692,609	373,333	2,172,922	147,667

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

Table 26.--Area of timberland, by treatment opportunity and ownership classes, Southern Piedmont of Virginia, 1985

Treatment opportunity class	All ownerships	Ownership class			
		Public	Forest industry	Forest industry-leased	Other private
	Acres				
Salvage	3,644	--	--	--	3,644
Harvest	293,338	25,235	58,676	--	209,427
Commercial thinning	199,085	5,029	75,157	2,988	115,911
Other stand improvement	408,656	14,581	36,626	--	357,449
Stand conversion	75,300	--	23,515	--	51,785
Regeneration	430,380	6,786	38,347	1,338	383,909
Stands in relatively good condition	2,225,336	93,756	373,153	13,050	1,745,377
Adverse sites[a]	147,871	6,978	15,628	--	125,265
All classes	3,783,610	152,365	621,102	17,376	2,992,767

[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, Southern Piedmont of Virginia, 1985

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	27,426	--	401	--	27,025	24,786	--	401	--	24,385
Other public	315,021	92,078	6,083	93,070	123,790	286,474	91,701	5,718	83,188	105,867
Forest industry	693,461	306,639	3,948	173,935	208,939	662,912	303,556	3,948	166,210	189,198
Forest industry-leased	21,639	15,250	--	2,660	3,729	21,639	15,250	--	2,660	3,729
Other private	4,341,777	1,125,224	70,834	1,247,906	1,897,813	4,041,730	1,111,685	69,192	1,154,406	1,706,447
All ownerships	5,399,324	1,539,191	81,266	1,517,571	2,261,296	5,037,541	1,522,192	79,259	1,406,464	2,029,626

Table 28.--Volume of sawtimber on timberland, by ownership class and species group, Southern Piedmont of Virginia, 1985

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	27,152	--	1,462	--	25,690	67,797	--	--	--	67,797
Other public	359,111	145,312	5,443	106,833	101,523	403,213	63,929	6,382	125,244	207,658
Forest industry	974,157	506,215	5,886	236,669	225,387	606,457	83,829	4,273	292,781	225,574
Forest industry-leased	10,891	7,767	--	3,124	--	--	--	--	--	--
Other private	5,911,359	2,308,242	95,540	1,511,630	1,995,947	4,467,765	295,583	139,432	1,560,586	2,472,164
All ownerships	7,282,670	2,967,536	108,331	1,858,256	2,348,547	5,545,232	443,341	150,087	1,978,611	2,973,193

[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.--Net annual growth and removals of growing stock on timberland, by ownership class and species group, Southern Piedmont of Virginia, 1984

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	752	--	12	--	740	--	--	--	--	--
Other public	10,795	3,315	182	3,416	3,882	5,339	3,527	--	855	957
Forest industry	33,691	18,537	99	7,955	7,100	37,436	15,449	116	6,140	15,731
Forest industy-leased	1,183	844	--	128	211	518	518	--	--	--
Other private	153,813	41,364	2,363	50,767	59,319	99,924	38,237	3,364	22,170	36,153
All ownerships	200,234	64,060	2,656	62,266	71,252	143,217	57,731	3,480	29,165	52,841

Table 30.--Net annual growth and removals of sawtimber on timberland, by ownership class and species group, Southern Piedmont of Virginia, 1984

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	3,040	--	62	--	2,978	--	--	--	--	--
Other public	35,718	8,954	692	10,542	15,530	17,485	12,082	--	3,259	2,144
Forest industry	87,943	39,949	786	23,316	23,892	103,421	36,501	638	22,440	43,842
Forest industry-leased	4,857	3,771	--	662	424	546	546	--	--	--
Other private	560,745	131,989	10,457	191,756	226,543	292,927	85,826	15,021	80,988	111,092
All ownerships	692,303	184,663	11,997	226,276	269,367	414,379	134,955	15,659	106,687	157,078

Table 31.--Volume of timber on timberland, by class and species group, Southern Piedmont of Virginia, 1985

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
			Thousand cubic feet		
Sawtimber trees:					
Saw-log portion	2,245,658	653,816	47,082	655,540	889,220
Upper-stem portion[a]	766,805	161,012	5,969	215,093	384,731
Total	3,012,463	814,828	53,051	870,633	1,273,951
Poletimber trees	2,025,078	707,364	26,208	535,831	755,675
All growing-stock trees	5,037,541	1,522,192	79,259	1,406,464	2,029,626
Rough trees:					
Sawtimber size	116,194	8,262	711	47,511	59,710
Poletimber size	213,780	8,737	1,296	51,125	152,622
Total	329,974	16,999	2,007	98,636	212,332
Rotten trees:					
Sawtimber size	28,337	--	--	10,882	17,455
Poletimber size	3,472	--	--	1,589	1,883
Total	31,809	--	--	12,471	19,338
Salvable dead trees:					
Sawtimber size	4,701	2,680	30	488	1,503
Poletimber size	6,120	3,744	134	958	1,284
Total	10,821	6,424	164	1,446	2,787
Total, all timber	5,410,145	1,545,615	81,430	1,519,017	2,264,083

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

Table 32.--Number of live trees on timberland, by species and diameter class, Coastal Plain of Virginia, 1985

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	--	--	--	--	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	86,002	23,033	22,828	15,106	11,943	7,682	3,381	1,327	551	95	47	9	--
Loblolly pine	170,978	46,672	46,957	42,596	22,396	7,912	2,424	1,238	478	223	56	26	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	327,486	139,056	82,038	51,657	29,364	17,257	6,237	1,556	276	35	--	10	--
Pitch pine	2,404	267	214	338	668	467	226	160	43	--	11	10	--
Table Mountain pine	33	--	--	--	--	--	33	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	19,248	9,649	4,280	1,234	1,731	1,229	292	264	223	175	91	80	--
Eastern hemlock	1,632	832	642	--	79	42	--	24	--	--	13	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	97,385	71,358	20,594	3,726	1,173	385	75	54	20	--	--	--	--
Total softwoods	705,168	290,867	177,553	114,657	67,354	34,974	12,668	4,623	1,591	528	218	135	--
Hardwood:													
Select white oaks	168,974	78,804	35,569	18,679	14,055	9,296	5,824	3,118	1,970	835	353	431	40
Select red oaks	50,667	30,280	9,303	3,027	2,128	2,052	1,255	908	645	533	322	196	18
Chestnut oak	83,897	37,211	14,324	11,094	8,620	5,161	3,279	1,896	1,238	567	267	197	43
Other white oaks	14,701	6,082	3,497	1,834	1,552	755	346	354	169	65	15	30	2
Other red oaks	146,958	84,185	26,115	11,945	9,311	5,531	3,649	2,930	1,513	906	416	414	43
Hickory	154,750	96,836	28,763	11,145	7,532	4,697	2,773	1,511	703	448	179	143	20
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	2,092	952	726	201	107	--	81	25	--	--	--	--	--
Soft maple	403,629	305,081	53,580	20,851	11,435	5,188	3,934	1,680	860	479	234	278	29
Beech	28,122	18,934	3,592	1,341	1,141	1,028	635	623	262	226	158	172	10
Sweetgum	184,461	124,677	33,426	13,109	5,139	3,435	2,612	1,068	468	263	121	135	8
Tupelo and blackgum	139,416	113,316	15,400	4,443	3,135	1,731	686	405	214	16	--	70	--
Ash	33,014	17,451	6,160	4,708	1,778	1,339	848	419	161	28	66	52	4
Cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	555	--	214	146	68	--	72	23	18	--	14	--	--
Yellow-poplar	199,209	103,284	38,556	19,712	10,240	9,754	7,037	5,694	2,625	1,231	588	459	29
Bay and magnolia	2,777	1,553	233	451	219	246	33	24	18	--	--	--	--
Black cherry	39,412	32,415	5,682	568	324	132	227	51	--	--	13	--	--
Black walnut	2,862	704	670	583	334	273	110	161	--	18	--	9	--
Sycamore	7,014	2,076	1,506	1,045	726	321	284	381	306	231	11	117	10
Black locust	20,179	8,315	3,512	3,616	1,316	1,862	902	330	161	84	13	40	28
Elm	26,157	15,586	6,163	2,576	625	667	287	83	81	50	39	--	--
Other eastern hardwoods	621,481	481,223	96,797	27,098	9,984	3,457	1,606	701	416	125	54	20	--
Total hardwoods	2,330,327	1,558,965	383,788	158,172	89,769	56,925	36,480	22,385	11,828	6,105	2,863	2,763	284
All species	3,035,495	1,849,832	561,341	272,829	157,123	91,899	49,148	27,008	13,419	6,633	3,081	2,898	284

Table 33.--Number of growing-stock trees on timberland, by species and diameter class, Southern Piedmont of Virginia, 1985

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	--	--	--	--	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	80,186	18,367	22,150	14,753	11,943	7,563	3,381	1,327	551	95	47	9	--
Loblolly pine	164,125	41,472	45,795	42,249	22,281	7,912	2,424	1,209	478	223	56	26	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	304,449	123,717	76,788	50,237	28,739	17,036	6,159	1,497	231	35	--	10	--
Pitch pine	1,992	--	214	338	576	467	226	107	43	--	11	10	--
Table Mountain pine	33	--	--	--	--	--	33	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	17,980	8,799	4,054	1,117	1,656	1,229	292	264	223	175	91	80	--
Eastern hemlock	1,632	832	642	--	79	42	--	24	--	--	13	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	79,034	56,233	17,969	3,209	1,173	340	36	54	20	--	--	--	--
Total softwoods	649,431	249,420	167,612	111,903	66,447	34,589	12,551	4,482	1,546	528	218	135	--
Hardwood:													
Select white oaks	140,328	56,278	32,125	18,253	12,677	8,803	5,631	3,065	1,952	799	339	384	22
Select red oaks	43,100	24,758	7,938	2,535	2,035	2,008	1,222	908	645	533	310	190	18
Chestnut oak	67,623	24,977	13,451	9,554	7,772	4,797	3,198	1,772	1,152	535	214	188	13
Other white oaks	11,625	3,812	3,030	1,638	1,446	755	346	327	169	65	15	20	2
Other red oaks	123,258	64,767	23,049	11,418	9,053	5,324	3,541	2,874	1,492	890	416	398	36
Hickory	115,094	64,198	24,274	9,664	6,799	4,545	2,687	1,488	703	420	164	132	20
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	1,557	730	470	201	107	--	49	--	--	--	--	--	--
Soft maple	228,768	159,225	33,171	16,393	9,708	4,577	2,876	1,303	777	358	193	181	6
Beech	21,844	13,879	2,870	1,341	975	928	565	599	262	193	130	92	10
Sweetgum	131,464	82,839	24,139	11,771	4,927	3,336	2,458	1,039	468	249	121	109	8
Tupelo and blackgum	63,638	44,844	10,006	3,367	2,664	1,407	656	405	214	16	--	59	--
Ash	17,392	6,030	4,438	3,190	1,375	930	769	395	161	28	28	44	4
Cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	127	--	--	--	--	--	72	23	18	--	14	--	--
Yellow-poplar	175,757	85,740	35,383	18,204	9,513	9,654	6,888	5,595	2,583	1,182	573	427	15
Bay and magnolia	1,745	885	--	451	219	148	--	24	18	--	--	--	--
Black cherry	23,171	17,892	4,345	462	179	81	148	51	--	--	13	--	--
Black walnut	1,630	256	448	327	252	105	110	105	--	18	--	9	--
Sycamore	5,697	1,202	1,506	761	726	321	245	354	243	201	11	117	10
Black locust	10,197	2,748	1,678	2,357	1,188	1,350	514	284	62	16	--	--	--
Elm	15,962	7,652	4,631	2,024	556	614	252	83	61	50	39	--	--
Other eastern hardwoods	17,263	6,066	3,976	1,796	2,376	1,431	729	450	269	96	54	20	--
Total hardwoods	1,217,240	668,778	230,928	115,707	74,547	51,114	32,956	21,144	11,249	5,649	2,634	2,370	164
All species	1,866,671	918,198	398,540	227,610	140,994	85,703	45,507	25,626	12,795	6,177	2,852	2,505	164

Table 34.--Merchantable volume of live trees on timberland, by species and diameter class, Southern Piedmont of Virginia, 1985

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	--	--	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	352,204	38,102	83,595	96,774	65,278	38,571	20,931	4,856	3,294	803	--
Loblolly pine	403,448	94,480	119,818	81,608	41,456	32,298	17,496	10,965	3,147	2,180	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	761,857	163,418	211,682	216,474	116,653	41,543	9,902	1,454	--	731	--
Pitch pine	20,902	1,287	3,719	5,444	3,841	3,449	1,524	--	819	819	--
Table Mountain pine	780	--	--	--	780	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	58,745	3,270	9,134	11,253	4,042	5,583	7,449	7,788	4,707	5,519	--
Eastern hemlock	1,786	--	348	401	--	463	--	--	574	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--
Cedars	20,735	8,542	6,210	3,163	758	1,285	777	--	--	--	--
Total softwoods	1,620,457	309,099	434,506	415,117	232,808	123,192	58,079	25,063	12,541	10,052	--
Hardwood:											
Select white oaks	590,766	46,143	85,678	101,811	106,490	83,901	70,843	38,339	19,610	32,474	5,477
Select red oaks	176,959	8,781	12,491	22,731	22,235	22,757	23,186	24,660	19,015	18,148	2,955
Chestnut oak	307,899	26,818	46,415	49,272	50,961	42,216	37,221	21,892	13,089	14,268	5,747
Other white oaks	43,466	4,069	7,919	7,563	5,398	7,593	5,162	2,614	934	1,582	632
Other red oaks	422,785	29,904	52,373	56,330	59,494	72,199	50,609	39,005	22,262	33,523	7,086
Hickory	288,161	25,154	44,199	53,604	52,521	39,572	25,281	21,575	10,916	12,170	3,169
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	1,787	425	496	--	697	169	--	--	--	--	--
Soft maple	341,042	55,151	63,615	50,503	57,958	35,881	26,234	17,957	10,987	19,198	3,558
Beech	86,092	4,077	6,423	9,853	11,165	14,269	8,991	10,263	7,702	11,703	1,646
Sweetgum	227,511	28,370	30,205	40,334	49,501	27,845	18,519	13,082	6,881	11,168	1,606
Tupelo and blackgum	75,359	9,132	16,939	17,437	11,154	9,319	6,316	761	--	4,301	--
Ash	81,711	12,455	11,931	15,373	16,348	10,622	5,747	1,425	2,964	4,031	815
Cottonwood	--	--	--	--	--	--	--	--	--	--	--
Basswood	4,417	268	326	--	1,489	758	805	--	771	--	--
Yellow-poplar	752,267	55,195	64,117	112,617	133,734	156,312	96,317	57,774	34,617	37,939	3,645
Bay and magnolia	6,877	1,250	1,546	2,584	567	404	526	--	--	--	--
Black cherry	10,326	1,480	2,161	1,092	4,021	1,078	--	--	494	--	--
Black walnut	12,071	1,278	1,763	2,336	1,984	3,479	--	636	--	595	--
Sycamore	61,043	4,577	5,729	4,114	5,480	10,260	10,538	10,448	645	8,022	1,230
Black locust	59,575	6,353	6,353	16,027	13,496	7,477	3,687	2,477	380	1,883	1,442
Elm	30,972	5,064	3,662	7,714	6,065	1,986	2,247	2,021	2,213	--	--
Other eastern hardwoods	197,781	59,340	46,677	31,128	23,567	14,944	12,594	5,359	2,916	1,256	--
Total hardwoods	3,778,867	385,284	511,018	602,423	634,325	563,041	404,823	270,288	156,396	212,261	39,008
All species	5,399,324	694,383	945,524	1,017,540	867,133	686,233	462,902	295,351	168,937	222,313	39,008

Table 35.--Volume of growing stock on timberland, by species and diameter class, Southern Piedmont of Virginia, 1985

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	--	--	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	349,860	37,040	83,595	95,492	65,278	38,571	20,931	4,856	3,294	803	--
Loblolly pine	401,874	93,580	119,505	81,608	41,456	31,937	17,496	10,965	3,147	2,180	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	750,075	160,592	208,392	214,374	115,421	40,300	8,811	1,454	--	731	--
Pitch pine	19,603	1,287	3,373	5,444	3,841	2,496	1,524	--	819	819	--
Table Mountain pine	780	--	--	--	780	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	58,249	3,040	8,868	11,253	4,042	5,583	7,449	7,788	4,707	5,519	--
Eastern hemlock	1,786	--	348	401	--	463	--	--	574	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--
Cedars	19,224	7,742	6,210	2,817	393	1,285	777	--	--	--	--
Total softwoods	1,601,451	303,281	430,291	411,389	231,211	120,635	56,988	25,063	12,541	10,052	--
Hardwood:											
Select white oaks	571,531	45,335	80,591	97,980	104,561	83,115	70,094	36,872	19,350	29,942	3,691
Select red oaks	173,872	7,733	12,138	22,194	21,988	22,757	23,186	24,660	18,786	17,475	2,955
Chestnut oak	286,420	23,290	42,103	46,556	49,927	39,992	35,425	21,442	11,574	13,994	2,117
Other white oaks	41,949	3,832	7,728	7,563	5,398	6,958	5,162	2,614	934	1,128	632
Other red oaks	414,355	28,849	51,362	54,377	58,168	71,264	50,378	38,778	22,262	32,842	6,075
Hickory	276,999	22,505	40,773	52,384	51,164	39,178	25,281	20,512	10,186	11,847	3,169
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	1,454	425	496	--	533	--	--	--	--	--	--
Soft maple	282,211	44,832	53,906	46,019	44,852	29,721	24,241	14,906	9,865	13,154	715
Beech	76,799	4,077	5,688	9,109	10,288	13,478	8,991	8,906	7,105	7,511	1,646
Sweetgum	217,951	25,590	28,764	39,322	47,749	27,419	18,519	12,475	6,881	9,626	1,606
Tupelo and blackgum	67,550	7,094	14,487	14,807	10,914	9,319	6,316	761	--	3,852	--
Ash	68,555	8,620	9,742	11,827	15,139	10,149	5,747	1,425	1,667	3,424	815
Cottonwood	--	--	--	--	--	--	--	--	--	--	--
Basswood	3,823	--	--	--	1,489	758	805	--	771	--	--
Yellow-poplar	735,269	51,831	61,159	111,492	131,834	154,212	95,530	56,909	34,162	35,778	2,362
Bay and magnolia	5,291	1,250	1,546	1,565	--	404	526	--	--	--	--
Black cherry	6,526	1,112	973	538	2,331	1,078	--	--	494	--	--
Black walnut	8,404	536	1,385	1,056	1,984	2,212	--	636	--	595	--
Sycamore	55,811	3,605	5,729	4,114	4,848	9,545	8,805	9,268	645	8,022	1,230
Black locust	39,382	4,642	5,629	12,409	7,870	6,319	1,680	833	--	--	--
Elm	28,129	3,889	3,449	6,941	5,611	1,986	2,019	2,021	2,213	--	--
Other eastern hardwoods	73,809	5,769	14,000	14,789	12,003	10,305	8,652	4,119	2,916	1,256	--
Total hardwoods	3,436,090	294,816	441,648	555,042	588,651	540,169	391,357	257,137	149,811	190,446	27,013
All species	5,037,541	598,097	871,939	966,431	819,862	660,804	448,345	282,200	162,352	200,498	27,013

Table 36.--Volume of sawtimber on timberland, by species and diameter class, Southern Piedmont of Virginia, 1985

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	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--
Shortleaf pine	1,018,706	355,840	293,603	198,742	116,055	28,836	20,288	5,342	--
Loblolly pine	826,624	280,373	184,231	163,261	98,414	65,835	19,686	14,824	--
Pond pine	--	--	--	--	--	--	--	--	--
Virginia pine	1,496,655	769,643	485,213	186,412	43,808	7,516	--	4,063	--
Pitch pine	65,176	17,978	16,232	12,292	8,276	--	5,130	5,268	--
Table Mountain pine	3,716	--	3,716	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	227,236	40,257	17,486	27,019	39,039	42,975	27,056	33,404	--
Eastern hemlock	6,914	1,462	--	2,253	--	--	3,199	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--
Cedars	24,268	11,196	1,891	6,767	4,414	--	--	--	--
Total softwoods	3,669,295	1,476,749	1,002,372	596,746	310,006	145,162	75,359	62,901	--
Hardwood:									
Select white oaks	1,443,853	--	355,007	330,287	306,882	174,061	96,374	159,487	21,755
Select red oaks	559,647	--	73,065	86,827	96,918	109,559	87,950	89,161	16,167
Chestnut oak	702,526	--	164,363	152,407	149,629	97,276	55,371	71,312	12,168
Other white oaks	100,822	--	18,891	29,278	23,935	13,163	4,932	6,290	4,333
Other red oaks	1,225,211	--	197,855	285,763	224,139	186,418	112,975	181,283	36,778
Hickory	685,753	--	176,585	158,565	112,951	100,144	52,260	65,709	19,539
Yellow birch	--	--	--	--	--	--	--	--	--
Hard maple	1,695	--	1,695	--	--	--	--	--	--
Soft maple	547,169	--	145,036	112,705	102,376	68,218	47,281	67,559	3,994
Beech	226,467	--	37,816	51,062	35,179	35,521	28,748	31,120	7,021
Sweetgum	549,505	--	170,747	115,758	89,337	66,310	38,292	57,961	11,100
Tupelo and blackgum	119,972	--	35,039	34,891	26,597	3,467	--	19,978	--
Ash	151,012	--	49,056	38,811	24,690	6,768	8,270	18,502	4,915
Cottonwood	--	--	--	--	--	--	--	--	--
Basswood	15,073	--	4,934	3,046	3,482	--	3,611	--	--
Yellow-poplar	2,338,118	--	470,883	667,158	466,814	303,574	194,180	219,311	16,198
Bay and magnolia	4,010	--	--	1,621	2,389	--	--	--	--
Black cherry	14,826	--	8,163	4,273	--	--	2,390	--	--
Black walnut	19,653	--	6,581	8,002	--	2,502	--	2,568	--
Sycamore	184,721	--	15,815	36,489	37,153	42,859	3,236	41,812	7,357
Black locust	59,978	--	27,671	22,933	6,214	3,160	--	--	--
Elm	55,284	--	19,431	7,550	8,590	9,124	10,589	--	--
Other eastern hardwoods	153,312	--	41,210	39,534	35,615	18,081	13,015	5,857	--
Total hardwoods	9,158,607	--	2,019,843	2,186,960	1,752,890	1,240,205	759,474	1,037,910	161,325
All species	12,827,902	1,476,749	3,022,215	2,783,706	2,062,896	1,385,367	834,833	1,100,811	161,325

Table 37.--Volume of sawtimber on timberland, by species, size class, and log grade, Southern Piedmont of Virginia, 1985

Species	All size classes					Trees 15.0 inches d.b.h. and larger				
	All grades	Log grade				All grades	Log grade			
		1	2	3	4		1	2	3	4
	Thousand board feet									
Softwood:										
Yellow pines[a]	3,410,877	533,798	490,823	2,386,256	(b)	443,341	88,668	75,368	279,305	(b)
Eastern white pine[c]	227,236	15,672	13,905	112,933	84,726	142,474	15,672	7,124	56,990	62,688
Spruce and fir[c]	--	--	--	--	--	--	--	--	--	--
Cypress[c]	--	--	--	--	--	--	--	--	--	--
Other eastern softwoods[c]	31,182	352	325	25,163	5,342	7,613	352	288	4,631	2,342
Total	3,669,295	549,822	505,053	2,524,352	90,068	593,428	104,692	82,780	340,926	65,030
Hardwood:[d]										
Select white and red oaks	2,003,500	435,441	427,205	794,967	345,887	1,158,314	435,441	261,596	326,687	134,590
Other white and red oaks	2,028,559	232,969	350,406	911,509	533,675	1,180,002	232,969	243,743	427,832	275,458
Hickory	685,753	66,614	114,154	272,910	232,075	350,603	66,614	80,639	108,687	94,663
Yellow birch	--	--	--	--	--	--	--	--	--	--
Hard maple	1,695	--	237	1,034	424	--	--	--	--	--
Sweetgum	549,505	76,270	115,161	261,323	96,751	263,000	76,270	57,860	89,420	39,450
Ash, walnut, and black cherry	185,491	27,536	32,946	107,968	17,041	70,605	27,536	13,415	18,357	11,297
Yellow-poplar	2,338,118	336,022	464,522	930,904	606,670	1,200,077	336,022	180,012	396,025	288,018
Other eastern hardwoods	1,365,986	102,088	286,034	672,827	305,037	729,203	102,088	196,885	284,389	145,841
Total	9,158,607	1,276,940	1,790,665	3,953,442	2,137,560	4,951,804	1,276,940	1,034,150	1,651,397	989,317
All species	12,827,902	1,826,762	2,295,718	6,477,794	2,227,628	5,545,232	1,381,632	1,116,930	1,992,323	1,054,347

[a]Based on "Southern Pine Log Grades for Yard and Structural Lumber," Research Paper SE-39, published by the Southeastern Forest Experiment Station, Asheville, NC, 1968.

[b]Not applicable.

[c]Based on "Sawlog Grades for Eastern White Pine," Research Paper NE-205, published by the Northeastern Forest Experiment Station, Broomall, PA, 1971.

[d]Based on "A Guide to Hardwood Log Grading (revised)," General Technical Report NE-1, published by the Northeastern Forest Experiment Station, Broomall, PA, 1973.

Table 38.--Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class, Southern Piedmont of Virginia, 1985

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	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--
Shortleaf pine	192,509	74,651	55,373	34,858	19,184	4,580	3,092	771	--
Loblolly pine	153,975	58,818	34,748	28,639	16,268	10,414	2,995	2,093	--
Pond pine	--	--	--	--	--	--	--	--	--
Virginia pine	294,713	161,460	91,513	32,702	7,242	1,194	--	602	--
Pitch pine	11,918	3,771	3,061	2,156	1,368	--	782	780	--
Table Mountain pine	701	--	701	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	41,042	8,734	3,566	5,121	6,966	7,288	4,311	5,056	--
Eastern hemlock	1,254	317	--	427	--	--	510	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--
Cedars	4,786	2,429	377	1,234	746	--	--	--	--
Total softwoods	700,898	310,180	189,339	105,137	51,774	23,476	11,690	9,302	--
Hardwood:									
Select white oaks	243,259	--	66,391	57,673	50,361	27,414	14,726	23,574	3,120
Select red oaks	90,920	--	13,664	15,159	15,906	17,255	13,439	13,178	2,319
Chestnut oak	117,974	--	30,740	26,613	24,552	15,321	8,463	10,540	1,745
Other white oaks	16,935	--	3,531	5,112	3,928	2,074	754	929	607
Other red oaks	202,367	--	36,999	49,897	36,783	29,362	17,262	26,791	5,273
Hickory	115,519	--	33,025	27,685	18,536	15,773	7,986	9,712	2,802
Yellow birch	--	--	--	--	--	--	--	--	--
Hard maple	317	--	317	--	--	--	--	--	--
Soft maple	93,518	--	27,283	19,933	17,115	10,950	7,406	10,261	570
Beech	37,354	--	7,073	8,915	5,773	5,594	4,392	4,600	1,007
Sweetgum	94,512	--	32,120	20,477	14,938	10,642	5,998	8,796	1,541
Tupelo and blackgum	20,868	--	6,590	6,205	4,447	556	--	3,070	--
Ash	25,774	--	9,176	6,778	4,051	1,066	1,264	2,734	705
Cottonwood	--	--	--	--	--	--	--	--	--
Basswood	2,615	--	929	539	582	--	565	--	--
Yellow-poplar	399,224	--	88,578	118,032	78,051	48,732	30,408	33,160	2,263
Bay and magnolia	686	--	--	287	399	--	--	--	--
Black cherry	2,666	--	1,536	756	--	--	374	--	--
Black walnut	3,402	--	1,231	1,397	--	394	--	380	--
Sycamore	30,433	--	2,976	6,456	6,213	6,879	507	6,353	1,049
Black locust	10,694	--	5,173	4,004	1,019	498	--	--	--
Elm	9,549	--	3,654	1,336	1,436	1,464	1,659	--	--
Other eastern hardwoods	26,174	--	7,711	6,905	5,856	2,847	1,989	866	--
Total hardwoods	1,544,760	--	378,697	384,159	289,946	196,821	117,192	154,944	23,001
All species	2,245,658	310,180	568,036	489,296	341,720	220,297	128,882	164,246	23,001

Table 39.--Total volume of live trees on timberland, by species and diameter class, Southern Piedmont of Virginia, 1985

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	--	--	--	--	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	450,478	4,867	28,130	51,735	100,703	112,580	74,828	43,838	23,702	5,485	3,709	901	--
Loblolly pine	555,544	9,380	48,531	132,818	146,835	95,674	47,554	36,695	19,749	12,334	3,535	2,439	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	1,068,959	34,804	111,307	216,928	255,016	253,894	135,258	47,880	11,369	1,667	--	836	--
Pitch pine	24,929	40	198	1,596	4,486	6,426	4,496	4,019	1,770	--	950	948	--
Table Mountain pine	891	--	--	--	--	--	891	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	76,375	2,368	4,680	4,380	11,093	13,273	4,713	6,476	8,615	8,994	5,427	6,356	--
Eastern hemlock	2,988	203	692	--	428	471	--	535	--	--	659	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	68,505	14,774	25,322	13,107	7,994	3,915	919	1,545	929	--	--	--	--
Total softwoods	2,248,669	66,436	218,860	420,564	526,555	486,233	268,659	140,988	66,134	28,480	14,280	11,480	--
Hardwood:													
Select white oaks	817,076	17,267	45,697	69,020	112,302	129,225	133,247	104,087	87,581	47,297	24,222	40,155	6,976
Select red oaks	245,591	8,215	13,972	12,308	16,213	28,808	27,981	28,444	28,939	30,737	23,733	22,553	3,688
Chestnut oak	414,214	7,144	19,505	38,020	59,804	61,621	63,013	51,928	45,627	26,879	16,055	17,430	7,188
Other white oaks	63,000	1,552	4,735	6,076	10,657	9,763	6,867	9,578	6,495	3,270	1,166	2,056	785
Other red oaks	593,837	19,399	37,558	44,735	69,323	71,362	74,216	89,384	62,526	47,977	27,432	41,169	8,756
Hickory	421,055	19,477	34,655	39,410	58,368	67,413	64,810	48,352	30,735	26,103	13,189	14,711	3,832
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	3,690	226	898	680	655	--	943	288	--	--	--	--	--
Soft maple	582,153	68,509	83,051	80,036	81,083	62,130	70,592	43,340	31,465	21,596	13,169	22,887	4,295
Beech	118,837	5,392	4,785	5,952	8,421	12,496	13,902	17,643	11,064	12,668	9,590	14,921	2,003
Sweetgum	338,711	26,682	36,454	42,116	37,528	47,820	57,490	32,108	21,152	14,949	7,835	12,751	1,826
Tupelo and blackgum	128,987	18,883	16,686	13,233	21,178	21,064	13,322	11,032	7,491	892	--	5,206	--
Ash	110,158	3,813	7,804	17,433	14,562	18,195	18,985	12,228	6,589	1,624	3,410	4,591	924
Cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	5,444	--	310	356	385	--	1,721	869	921	--	882	--	--
Yellow-poplar	951,200	24,128	53,764	74,359	76,759	130,574	153,066	177,697	109,176	65,399	39,103	42,854	4,321
Bay and magnolia	9,153	232	195	1,873	1,928	3,124	675	508	618	--	--	--	--
Black cherry	31,132	10,359	8,141	2,092	2,672	1,309	4,731	1,257	--	--	571	--	--
Black walnut	16,072	231	962	1,776	2,224	2,857	2,394	4,163	--	756	--	709	--
Sycamore	76,445	749	3,271	6,055	6,965	4,933	6,450	12,001	12,358	12,154	749	9,337	1,423
Black locust	85,601	1,717	4,498	9,495	8,449	20,922	17,350	9,513	4,844	3,246	533	2,554	2,480
Elm	50,956	3,470	8,873	7,419	4,622	9,352	7,216	2,348	2,700	2,369	2,587	--	--
Other eastern hardwoods	484,804	102,830	113,031	91,188	62,305	39,770	29,847	18,634	15,455	6,604	3,568	1,572	--
Total hardwoods	5,548,116	340,275	498,845	563,632	656,403	742,738	768,818	675,402	485,736	324,520	187,794	255,456	48,497
All species	7,796,785	406,711	717,705	984,196	1,182,958	1,228,971	1,037,477	816,390	551,870	353,000	202,074	266,936	48,497

Table 40.--Green weight of forest biomass on timberland, by species and diameter class, Southern Piedmont of Virginia, 1985

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	--	--	--	--	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	308,464	2,703	16,917	31,521	68,797	79,340	53,382	31,468	17,069	3,973	2,644	650	--
Loblolly pine	401,415	4,654	28,811	95,946	110,472	71,037	35,344	27,174	14,532	9,046	2,604	1,795	--
Pond pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia pine	807,514	29,892	90,024	163,337	191,968	187,952	99,376	34,888	8,270	1,212	--	595	--
Pitch pine	16,620	26	183	1,040	3,029	4,251	2,989	2,736	1,162	--	602	602	--
Table Mountain pine	557	--	--	--	--	--	557	--	--	--	--	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	49,963	989	2,233	2,761	7,815	9,464	3,379	4,518	5,680	5,752	3,441	3,931	--
Eastern hemlock	2,338	128	445	--	390	414	--	464	--	--	497	--	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--	--	--
Baldcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Pondcypress	--	--	--	--	--	--	--	--	--	--	--	--	--
Cedars	44,473	9,066	15,091	8,968	5,920	2,967	757	1,074	630	--	--	--	--
Total softwoods	1,631,344	47,458	153,704	303,573	388,391	355,425	195,784	102,322	47,343	19,983	9,788	7,573	--
Hardwood:													
Select white oaks	652,101	13,433	32,982	46,764	88,002	104,078	108,663	85,371	72,546	39,430	20,384	34,383	6,065
Select red oaks	195,555	5,794	9,722	8,959	12,998	23,509	22,813	23,307	23,510	24,742	19,005	18,215	2,981
Chestnut oak	324,425	6,599	15,245	26,299	45,253	48,486	50,017	41,239	36,661	21,553	12,890	14,111	6,072
Other white oaks	50,101	1,125	3,249	4,449	8,294	7,747	5,547	8,024	5,420	2,753	947	1,794	752
Other red oaks	499,261	15,772	27,433	33,570	56,137	61,162	64,230	76,780	53,807	41,630	24,199	36,572	7,969
Hickory	335,832	17,225	30,072	26,476	43,839	52,248	51,628	39,435	25,451	21,972	11,152	12,796	3,538
Yellow birch	--	--	--	--	--	--	--	--	--	--	--	--	--
Hard maple	3,040	194	759	437	543	--	859	248	--	--	--	--	--
Soft maple	424,796	52,675	57,476	52,155	60,874	47,491	54,106	32,472	23,194	15,822	9,465	16,142	2,924
Beech	96,007	3,338	3,093	3,637	6,524	10,493	11,386	14,967	9,378	10,457	8,171	12,825	1,738
Sweetgum	240,290	17,503	24,489	26,715	26,505	34,084	42,189	23,875	15,846	11,443	6,085	10,054	1,502
Tupelo and blackgum	87,148	15,316	12,278	7,029	13,046	13,504	8,835	7,466	5,203	617	--	3,854	--
Ash	69,632	2,288	4,993	11,882	9,924	11,850	11,683	7,399	3,817	899	1,984	2,473	440
Cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--
Basswood	3,674	--	213	215	297	--	1,117	582	627	--	623	--	--
Yellow-poplar	663,347	17,405	36,404	42,963	51,741	90,999	108,299	126,551	78,693	47,235	28,459	31,394	3,204
Bay and magnolia	5,649	135	123	977	1,189	2,025	442	337	421	--	--	--	--
Black cherry	17,844	4,773	5,159	1,172	1,624	860	3,026	831	--	--	399	--	--
Black walnut	14,551	199	799	1,502	2,012	2,726	2,060	3,863	--	697	--	693	--
Sycamore	52,943	517	2,175	2,810	4,231	3,139	4,476	8,562	8,958	9,041	576	7,234	1,224
Black locust	78,691	1,432	3,743	7,450	7,601	19,702	16,282	8,990	4,752	3,175	533	2,554	2,477
Elm	32,713	2,514	6,141	4,344	2,872	5,687	4,475	1,517	1,818	1,601	1,744	--	--
Other eastern hardwoods	363,060	84,927	89,893	55,142	44,197	29,416	21,634	14,778	13,177	5,290	3,183	1,423	--
Total hardwoods	4,210,660	263,164	366,441	364,947	487,703	569,206	593,767	526,594	383,279	258,357	149,799	206,517	40,886
All species	5,842,004	310,622	520,145	668,520	876,094	924,631	789,551	628,916	430,622	278,340	159,587	214,090	40,886

Table 41.--Net annual growth and removals of live timber and growing stock on timberland, by species, Southern Piedmont of Virginia, 1984

Species	Live timber[a]		Growing stock	
	Net annual growth	Annual timber removals	Net annual growth	Annual timber removals
	- - - - - Thousand cubic feet - - - - -			
Softwood:				
Yellow pines	64,138	58,792	64,060	57,731
Eastern white pine	1,771	2,816	1,770	2,816
Spruce and fir	--	--	--	--
Cypress	--	--	--	--
Other eastern softwoods	897	766	886	664
Total softwoods	66,806	62,374	66,716	61,211
Hardwood:				
Select white and red oaks	27,922	21,615	27,563	20,928
Other white and red oaks	27,078	23,806	26,422	21,735
Hickory	8,922	6,497	8,681	6,367
Yellow birch	--	--	--	--
Hard maple	158	--	129	--
Sweetgum	9,180	3,946	8,887	3,655
Ash, walnut, and black cherry	3,004	1,292	2,650	1,071
Yellow-poplar	35,263	18,878	34,786	18,135
Tupelo and blackgum	1,722	883	1,620	698
Bay and magnolia	261	--	231	--
Other eastern hardwoods	26,436	13,467	22,549	9,417
Total hardwoods	139,946	90,384	133,518	82,006
All species	206,752	152,758	200,234	143,217

[a] Merchantable portion only.

Table 42.--Net annual growth and removals of sawtimber on timberland, by species, Southern Piedmont of Virginia, 1984

Species	Net annual growth	Annual timber removals
	Thousand board feet	
Softwood:		
Yellow pines	184,663	134,955
Eastern white pine	10,102	14,394
Spruce and fir	--	--
Cypress	--	--
Other eastern softwoods	1,895	1,265
Total softwoods	196,660	150,614
Hardwood:		
Select white and red oaks	109,111	63,685
Other white and red oaks	96,708	62,563
Hickory	30,721	19,162
Yellow birch	--	--
Hard maple	169	--
Sweetgum	27,167	10,634
Ash, walnut, and black cherry	9,052	2,997
Yellow-poplar	151,474	74,158
Tupelo and blackgum	6,312	2,510
Bay and magnolia	599	--
Other eastern hardwoods	64,330	28,056
Total hardwoods	495,643	263,765
All species	692,303	414,379

Table 43.--Annual removals of growing stock on timberland, by species and diameter class, Southern Piedmont of Virginia, 1984

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	57,731	12,348	14,858	14,365	9,462	3,601	2,762	335	--	--	--
Eastern white pine	2,816	111	--	231	330	920	267	158	455	344	--
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Cypress	--	--	--	--	--	--	--	--	--	--	--
Other eastern softwoods	664	146	267	137	--	114	--	--	--	--	--
Total softwoods	61,211	12,605	15,125	14,733	9,792	4,635	3,029	493	455	344	--
Hardwood:											
Select white and red oaks	20,928	1,160	2,556	2,562	3,466	3,903	2,571	2,425	1,320	753	212
Other white and red oaks	21,735	1,752	2,378	3,280	4,420	3,756	1,229	1,905	1,806	1,018	191
Hickory	6,367	533	433	997	1,625	1,028	400	507	844	--	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	--	--	--	--	--	--	--	--	--	--	--
Sweetgum	3,655	620	431	429	447	538	329	496	261	104	--
Ash, walnut, and black cherry	1,071	117	109	80	501	--	264	--	--	--	--
Yellow-poplar	18,135	1,057	1,050	1,462	2,632	2,525	4,079	1,590	1,907	1,641	192
Tupelo and blackgum	698	63	--	--	113	281	241	--	--	--	--
Bay and magnolia	--	--	--	--	--	--	--	--	--	--	--
Other eastern hardwoods	9,417	175	1,321	1,367	1,381	1,347	1,332	738	841	746	169
Total hardwoods	82,006	5,477	8,278	10,177	14,585	13,378	10,445	7,661	6,979	4,262	764
All species	143,217	18,082	23,403	24,910	24,377	18,013	13,474	8,154	7,434	4,606	764

Table 44.--Mortality of live timber, growing stock, and sawtimber on timberland, by species, Southern Piedmont of Virginia, 1984

Species	Live timber[a]	Growing stock	Sawtimber
	Thousand cubic feet		Thousand board feet
Softwood:			
Yellow pines	18,669	17,796	30,297
Eastern white pine	--	--	--
Spruce and fir	--	--	--
Cypress	--	--	--
Other eastern softwoods	495	454	437
Total softwoods	19,164	18,250	30,734
Hardwood:			
Select white and red oaks	2,222	1,706	4,263
Other white and red oaks	4,265	3,190	7,365
Hickory	1,759	1,321	4,256
Yellow birch	--	--	--
Hard maple	--	--	--
Sweetgum	1,171	989	942
Ash, walnut, and black cherry	1,261	537	1,555
Yellow-poplar	1,629	1,629	2,393
Tupelo and blackgum	584	416	583
Bay and magnolia	90	--	--
Other eastern hardwoods	8,474	4,517	8,053
Total hardwoods	21,455	14,305	29,410
All species	40,619	32,555	60,144

[a]Merchantable portion only.

Table 45.--Change in number of live trees on timberland, by species group, survey completion date, and diameter class, Southern Piedmont of Virginia, 1985

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:									
1976	658,276	274,723	172,974	106,726	60,221	28,350	10,109	3,725	1,448
1985	586,903	209,028	152,037	109,697	64,371	33,318	12,301	4,281	1,870
Change	-71,373	-65,695	-20,937	+2,971	+4,150	+4,968	+2,192	+556	+422
Other softwood:									
1976	130,541	94,546	24,117	6,758	2,560	982	671	468	439
1985	118,265	81,839	25,516	4,960	2,983	1,656	367	342	602
Change	-12,276	-12,707	+1,399	-1,798	+423	+674	-304	-126	+163
Hardwood:									
1976	2,453,323	1,678,750	412,954	153,217	86,371	52,769	32,207	18,731	18,324
1985	2,330,327	1,558,965	383,788	158,172	89,769	56,925	36,480	22,385	23,843
Change	-122,996	-119,785	-29,166	+4,955	+3,398	+4,156	+4,273	+3,654	+5,519

Table 46.--Land area, by class, major forest type, and survey completion date, Southern Piedmont of Virginia

Land use class	Survey completion date			Change 1976-1985
	1965	1976	1985	
	- - - - - - - - - Acres - - - - - - - - -			
Forest land:				
Timberland:				
Pine and oak-pine types	1,609,600	1,520,338	1,463,021	-57,317
Hardwood types	2,180,263	2,258,054	2,320,589	+62,535
Total	3,789,863	3,778,392	3,783,610	+5,218
Reserved timberland	19,500	18,039	24,934	+6,895
Woodland	910	--	--	--
Total forest land	3,810,273	3,796,431	3,808,544	+12,113
Nonforest land:				
Cropland	862,299	790,551	782,219	-8,332
Pasture and range	648,295	645,284	565,097	-80,187
Other	273,876	345,696	406,553	+60,857
Total	1,784,470	1,781,531	1,753,869	-27,662
All land[a]	5,594,743	5,577,962	5,562,413	-15,549

[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, Southern Piedmont of Virginia

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										
1965	2,363,450	--	--	969,720	675,618	379,009	168,635	106,677	36,300	27,491
1976	3,081,183	--	--	1,238,252	852,885	541,350	238,419	114,653	54,622	41,002
1985	3,669,295	--	--	1,476,749	1,002,372	596,746	310,006	145,162	75,359	62,901
Hardwood										
1965	5,262,288	--	--	--	1,381,626	1,256,113	935,883	654,896	396,236	637,534
1976	7,373,825	--	--	--	1,782,936	1,830,375	1,386,837	940,524	564,651	868,502
1985	9,158,607	--	--	--	2,019,843	2,186,960	1,752,890	1,240,205	759,474	1,199,235
					GROWING STOCK (in thousand cubic feet)					
Softwood										
1965	1,176,541	267,220	346,887	270,117	155,852	76,614	30,999	18,418	6,041	4,393
1976	1,431,841	300,160	401,326	344,917	196,744	109,430	43,827	19,795	9,090	6,552
1985	1,601,451	303,281	430,291	411,389	231,211	120,635	56,988	25,063	12,541	10,052
Hardwood										
1965	2,309,178	278,572	363,719	415,482	402,689	310,228	208,949	135,786	78,153	115,600
1976	2,970,152	285,799	424,594	514,558	519,655	452,056	309,631	195,008	111,371	157,480
1985	3,436,090	294,816	441,648	555,042	588,651	540,169	391,357	257,137	149,811	217,459
					LIVE TIMBER[b] (in thousand cubic feet)					
Softwood										
1965	1,191,089	272,781	350,009	272,666	156,965	78,244	31,572	18,418	6,041	4,393
1976	1,449,507	306,407	404,937	348,171	198,136	111,743	44,676	19,795	9,090	6,552
1985	1,620,457	309,099	434,506	415,117	232,808	123,192	58,079	25,063	12,541	10,052
Hardwood										
1965	2,567,510	364,397	420,986	450,793	434,020	323,278	216,162	142,726	81,563	133,585
1976	3,278,333	373,850	491,451	558,296	560,080	471,085	320,359	204,970	116,253	181,989
1985	3,778,867	385,284	511,018	602,423	634,325	563,041	404,823	270,288	156,396	251,269

[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.

Brown, Mark J.
Forest statistics for the Southern Piedmont of Virginia, 1985. Resour. Bull. SE-81. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station; 1985. 55 pp.

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

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