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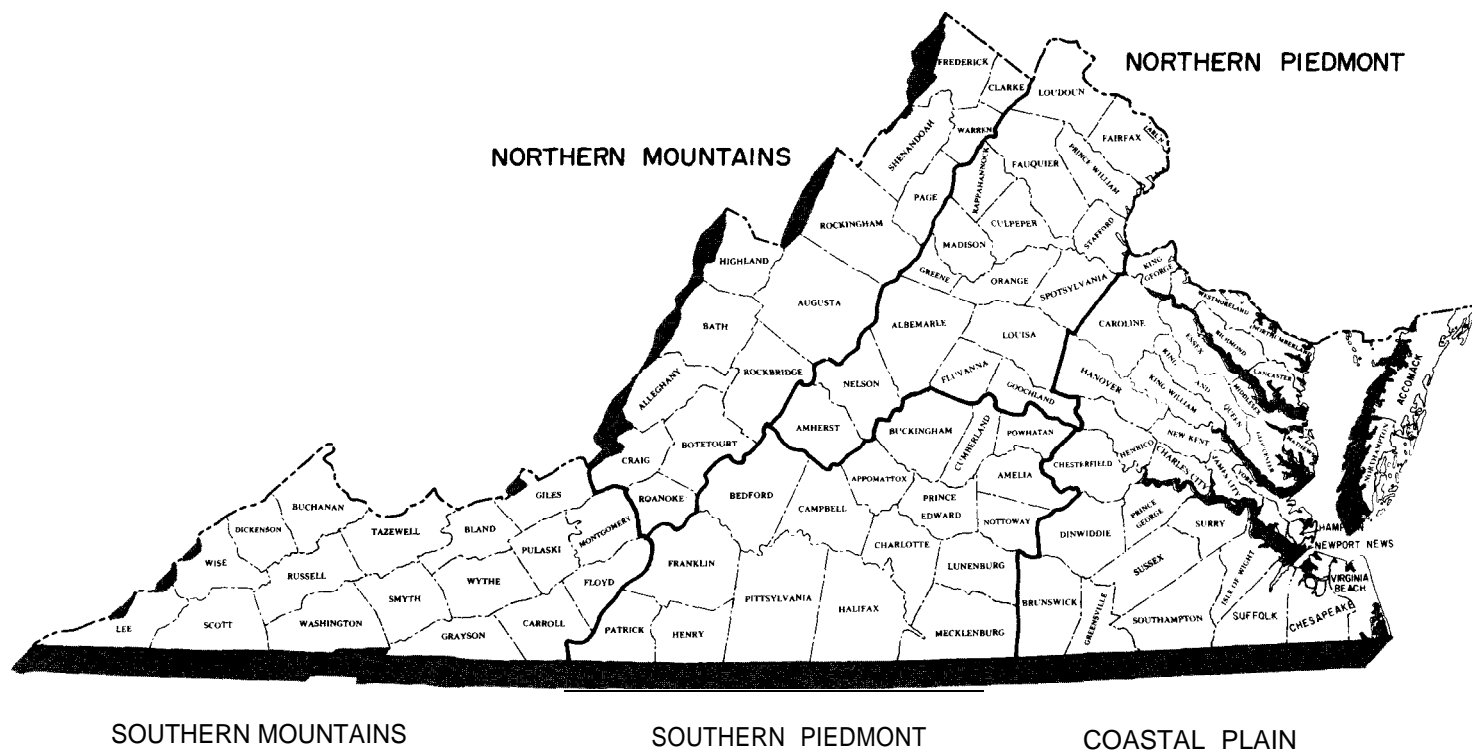


Southeastern Forest
Experiment Station

Resource Bulletin
SE-131

Forest Statistics for Virginia, 1992

Tony G. Johnson



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

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July 1992

Southeastern Forest Experiment Station
P.O. Box 2880
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Forest Statistics for Virginia, 1992

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Asheville, North Carolina

Foreword

This report highlights the principal findings of the sixth forest survey of Virginia. Field work began in October 1990 and was completed in January 1992. Five previous surveys, completed in 1940, 1957, 1966, 1977, and 1986, provide statistics for measuring changes and trends over the past 52 years. The primary emphasis in this report is on the changes and trends since 1986. Previously reported figures have been adjusted to provide the best estimate of change.

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

and use of the resources. This report deals only with the extent and condition of forest land, associated timber volumes, and rates of timber growth and removals.

Reports have been issued for the Coastal Plain, Southern Piedmont, Northern Piedmont, and the Northern Mountain survey units in Virginia as USDA Forest Service Resource Bulletins SE-122, SE-124, SE-127, and SE-128. A similar report for the Southern Mountains of Virginia, SE-130 is being released with this report. An **indepth** analytical report for the State should be available in late 1993.

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.



Noel D. Cost
Project Leader

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Trends in timberland area since 1986, as shown in this report, reflect a 0.9-percent upward adjustment in the acreage of timberland for 1986. The adjustments were confined to the Northern Piedmont and Mountain Survey Units. Revisions were necessary due to the incomplete and poor-quality aerial photography available for the 1986 survey and to the associated difficulties in photo interpretation of land use. For those desiring more information about these changes, please contact the FIA staff at:

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Since the fifth inventory of Virginia's forest resources was completed in 1986--

o area of timberland declined by about 122,000 acres, or less than 1 percent. Timberland currently occupies 15.4 million acres, or 61 percent of the total land area in the State of Virginia. Land use changes occurred on more than 610,000 acres of land. More than 366,000 acres of timberland were diverted to other land uses, while 244,000 acres were added to the timberland base. Tree planting and natural seeding on former agricultural land accounted for 92 percent of the additions; the remainder came from the reclassification of woodland and reserved forest land to timberland status. Timberland clearing for urban development accounted for 61 percent of the diversions, with clearing for agriculture accounting for 20 percent, and water for 1 percent. Almost 66,000 acres, or 18 percent, were reclassified as reserved timberland. Reductions in timberland were recorded in four of the five Survey Units, but more than half of the net loss occurred in the Coastal Plain.

• area of timberland owned by nonindustrial private forest (NIPF) landowners increased nearly 2 percent and currently totals 11.9 million acres. This ownership group controls 77 percent of the timberland in Virginia. Within the NIPF category, farmer-owned timberland declined 8 percent to 3.9 million acres. In contrast to farm timberland, that held by individuals who do not farm increased 4 percent to 6.5 million acres, and timberland held by corporations that do not manufacture forest products increased 20 percent to 1.5 million acres. Timberland owned or leased by forest industry dropped 16 percent to 1.6 million acres. Altogether, forest industry controls 10 percent of the timberland in Virginia, with holdings concentrated in the Coastal Plain and Southern Piedmont regions. Area of timberland in public ownership remained stable at 2.0 million acres and constitutes 13 percent of the timberland base. Nearly three-fourths of the publicly owned timberland is in the George Washington and Jefferson National Forests, which are contained primarily in the Northern and Southern Mountain Units of Virginia.

• area of timberland classified as a pine type declined less than 1 percent and now totals 3.4 million acres. Acreage in planted pine stands jumped more than 25 percent from 1.2 to 1.5 million acres and accounts for nearly 44 percent of all the pine stands in Virginia. Natural pine stands declined nearly 15 percent to 1.9 million acres. Acreage in loblolly pine forest type--the dominant pine type in the State--increased 12 percent to 2.0 million acres. In contrast, Virginia, shortleaf, pond, and pitch pine forest types all declined in acreage. Area of oak-pine forest types increased 14 percent to 1.9 million acres. With 10.2 million acres, hardwood forest types account for two-thirds of the timberland in Virginia. Within the hardwood types, oak-hickory forest type dropped 409,000 acres, or by 4 percent.

However, with 9.4 million acres, **oak-hickory** forest type accounts for 92 percent of the hardwood acreage and is the single largest forest type in the State.

- more than 186,000 acres were harvested annually and retained in timberland. This average represents only a 1-percent increase over that harvested between 1977 and 1986. Of the acres harvested, 73 percent were on NIPF land, 21 percent on land controlled by forest industry, and the remaining 6 percent on public land. Hardwood stands accounted for 53 percent of the total annual harvest. Pine stands made up 34 percent and oak-pine stands made up the remaining 13 percent of the annually harvested acreage. In addition to final harvests, some form of partial harvest or intermediate cutting occurred on 66,000 acres annually. Natural disturbances such as insects, diseases, weather, and fire damaged 196,000 acres annually. This average represents a 34-percent increase over that measured during the previous remeasurement cycle.

- artificial and natural regeneration increased 16 percent from an average of 173,000 to 201,000 acres annually. Natural regeneration accounted for 61 percent of the new stands, or about 123,500 acres per year. About 73 percent of the total regeneration occurred on NIPF land, 22 percent on forest industry land, and the remaining 5 percent on public land. Thirty-four percent of the regenerated stands resulted in pine forest types, 23 percent in oak-pine, and 43 percent in hardwood types. Pine and oak-pine stands were established on more than 115,000 acres annually; the establishment rate for pine and oak-pine stands exceeded the harvest rate by 31 percent. Artificially regenerated acreage was up 5 percent to 78,000 acres yearly, accounting for 39 percent of the area regenerated. Artificial regeneration on NIPF land increased 21 percent to 44,000 acres annually. On forest industry land the rate of planting

declined 6 percent to 33,000 acres annually. Currently, planted pine stands occupy 43 percent of all forest industry timberland in the State, as compared with 6 percent of NIPF land, and 2 percent of public land.

- average basal area of live trees 5.0 inches d.b.h. and larger increased 3 percent from 78 to 80 square feet per acre. Merchantable net volume per acre of softwoods and hardwoods combined currently averages 1,850 cubic feet per acre and includes nearly 5,200 board feet of sawtimber. Stands dominated by sawtimber-size trees increased nearly 3 percent to 7.6 million acres, or roughly half of the State's total timberland area. Acreage in stands classed as fully stocked increased nearly 8 percent to 6.2 million acres, while acreage in medium-stocked stands declined by 5 percent to 6.9 million acres. Together, fully stocked and medium-stocked stands account for 85 percent of the total timberland area. Acreage in poorly stocked stands dropped 7 percent, and now accounts for 15 percent of the timberland area.

- volume of softwood growing stock increased 6 percent from 6.3 to 6.6 billion cubic feet. Softwood volume increased across all ownership categories. However, 89 percent of the softwood volume increase occurred on NIPF land, where softwood volume was up 8 percent to 4.8 billion cubic feet. Volume of softwood growing stock on forest industry land remained stable at 1.1 billion cubic feet, and was up by 5 percent to 0.7 billion cubic feet on public land. Volume of **loblolly** pine--the predominant softwood species in the State--increased nearly 18 percent to 3.0 billion cubic feet, or 45 percent of the softwood inventory. This species alone accounted for 82 percent of the increase in softwood growing-stock volume. Volume of eastern white pine, an important species in the mountain region, increased 13 percent to 0.7 billion cubic feet. The

largest declines in softwood inventory occurred in Virginia and shortleaf pines. Their volumes fell 5 and 12 percent, respectively, to 1.8 and 0.5 billion cubic feet. Volume of softwood growing stock increased across all diameter classes. Collectively, the 8-, 10-, and 12-inch diameter classes increased nearly 7 percent and make up 57 percent of the total softwood volume. Volume in trees 15.0 inches d.b.h. and larger increased more than 10 percent to 1.2 billion cubic feet. Pine plantations contain 22 percent of the softwood growing-stock inventory. Volume of softwood sawtimber increased nearly 8 percent from 18.4 to 19.9 billion board feet.

- volume of hardwood growing stock increased 6 percent from 18.7 to 19.8 billion cubic feet. Hardwood volume on NIPF land increased 6 percent to 15.6 billion cubic feet. This ownership category accounts for 79 percent of the State's hardwood inventory. Hardwood volume on publicly owned timberland was up 14 percent to 3.2 billion cubic feet. In contrast, hardwood volume declined by 13 percent on forest industry land to 1.0 billion cubic feet. Most of the major hardwood species registered significant gains in the State. The inventory of yellow-poplar, the most abundant single hardwood species, increased 11 percent to 3.5 billion cubic feet. This species accounted for 28 percent of the increase in hardwood volume. Collectively, the inventory of oak species increased 4 percent to 9.6 billion cubic feet; oaks account for almost half the hardwood volume. Volume of sweetgum and the maples increased 2 and 15 percent to 0.9 and 1.8 billion cubic feet, respectively. Hardwood growing-stock volume increased in all but the 6- and 8-inch diameter classes. Volume in each of these diameter classes dropped 2 percent. Volume in trees 15.0 inches d.b.h. and larger was up nearly 14 percent to

7.9 billion cubic feet. These size classes account for 40 percent of the hardwood growing-stock volume. Volume of hardwood sawtimber increased 11 percent to 60.4 billion board feet.

- net annual growth of softwood growing stock increased nearly 39 percent from 229 to 317 million cubic feet. Softwood net growth was up significantly for all ownership categories--by 43 percent on NIPF land, 32 percent on forest industry land, and 21 percent on public land. Across all ownerships, softwood net growth exceeded removals by 25 percent. More than two-thirds of the surplus growth occurred on NIPF land, where growth exceeded removals by 27 percent. In contrast to softwood growth, net annual growth of hardwood growing stock declined 7 percent from 573 to 531 million cubic feet. This decline in hardwood growth was recorded across all ownership categories. Despite the decline, hardwood growth exceeded removals by 53 percent. In comparison, during the last remeasurement cycle, hardwood growth was more than double removals. Net annual growth for all species included 3.3 billion board feet of sawtimber, up 5 percent since 1985. Net growth per acre for softwood and hardwood growing stock increased from 51 to 55 cubic feet per acre per year.

- annual removals of softwood growing stock increased almost 23 percent from 206 to 253 million cubic feet. Sixty-six percent of the softwood removals came from NIPF land, 28 percent from forest industry land, and the remaining 6 percent from public timberland. Softwood removals increased across all ownership categories. On NIPF land, softwood removals rose 20 percent to 168 million cubic feet, Softwood removals on forest industry land were up 16 percent to 70 million cubic feet, and more than doubled on public land to 16 million cubic

feet. Softwoods accounted for 42 percent of all growing-stock removals and included 843 million board feet of sawtimber. Hardwood growing-stock removals were up 27 percent from 274 to 346 million cubic feet annually. On NIPF timberland, hardwood removals increased 36 percent to 287 million cubic feet and accounted for 83 percent of the total hardwood removals. Hardwood removals were up 41 percent on public land, but fell nearly 18 percent on forest industry land. Hardwood removals included 1.2 billion board feet of sawtimber, up 26 percent since 1985.

. annual mortality of softwood growing stock dropped 24 percent from 72 to 55 million cubic feet. Softwood mortality was down 17 percent on NIPF land, 24 percent on public land, and 54 percent on forest industry land. Eighty-one percent of the softwood mortality occurred on NIPF timberland. Softwood mortality reduced gross growth by 15 percent and included 132 million board feet of sawtimber. Annual mortality of hardwood growing stock increased nearly 33 percent from 91 to 121 million cubic feet. Hardwood mortality was up 42 percent on NIPF land and 31 percent on public land, but it was down 37 percent on forest industry land. More than three-fourths of the hardwood mortality occurred on NIPF timberland. Hardwood mortality reduced gross growth by 19 percent and included 324 million board feet of sawtimber.

How the Inventory is Made

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

1. Initial estimates of forest and nonforest areas were based on the classification of 78,669 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 7,007 of the 16-point clusters was ground checked, and a linear regression was fitted to the data to develop the relationship between the photo and ground classification of the subsample. This procedure provides a means for adjusting the initial estimates of area for change in land use since date of photography and for photo misclassification.

2. Estimates of timber volume and forest classification were based on measurements recorded at 4,235 ground sample locations systematically distributed on timberland. The plot design at each location was based on a cluster of 10 points. In most cases, variable plots, established by using a basal-area factor of 37.5 square feet per acre, were systematically spaced within a single forest condition at 5 of the 10 cluster points. Trees less than 5 inches d.b.h. were tallied on a fixed-radius plot around each point center.

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

4. Felled trees were measured at 104 active cutting operations. These data will supplement the standing-tree volume data and be used to generate utilization factors for product and species groups. Forest biomass estimates were made from equations developed by the Utilization of Southern Timber Research Work Unit of the Southeastern Forest Experiment Station in Athens, GA.

5. Estimates of growth, removals, and mortality were determined from the remeasurement of 4,324 permanent sample plots established in the fifth survey.

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

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

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):

	<u>Percent</u>
Per million acres of timberland	0.93
Per billion cubic feet of growing stock.	5.72
Per billion cubic feet of net annual growth.	1.11
Per billion cubic feet of annual removals.	3.58

Sampling errors for county and unit **totals,^a** in terms of one standard error, Virginia, **1992**

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
<u>Sampling error^b</u>				
Accomack	3.84	11.24	11.68	64.65
Albemarle	1.91	7.61	9.46	37.32
Alleghany	1.05	6.85	7.49	79.66
Amelia	1.68	13.22	10.07	32.17
Amherst	1.58	7.67	9.35	31.62
Appomattox	2.62	14.17	16.91	40.24
Arlington	0.00	0.00	0.00	0.00
Augusta	2.16	8.61	8.61	42.67
Bath	1.13	6.46	6.68	47.25
Bedford	2.01	7.61	7.21	33.71
Bland	1.94	9.28	11.34	51.86
Botetourt	1.74	10.45	10.27	44.11
Brunswick	1.32	8.55	7.73	28.59
Buchanan	.83	8.13	7.74	45.24
Buckingham	1.03	10.75	11.30	33.71
Campbell	2.04	8.99	10.96	44.29
Caroline	1.75	9.79	8.71	27.74
Carroll	2.01	14.13	20.02	44.41
Charles City	2.51	15.41	12.21	47.22
Charlotte	1.61	10.77	10.51	51.21
Chesapeake	7.53	17.82	13.86	46.63
Chesterfield	2.08	8.51	8.29	21.88
Clarke	6.42	16.22	12.94	.00
Craig	1.64	9.04	9.14	84.99
Culpeper	4.33	11.21	11.44	73.87
Cumberland	1.54	15.68	16.52	40.08
Dickenson	1.22	10.80	10.30	38.80
Dinwiddie	1.38	9.63	8.59	27.05
Essex	3.14	16.57	14.20	41.07
Fairfax	6.66	13.52	13.10	56.41
Fauquier	3.15	8.97	8.69	34.87
Floyd	2.41	12.01	16.80	44.93
Fluvanna	2.24	12.46	14.93	58.55
Franklin	1.86	6.70	8.42	32.94
Frederick	3.32	9.26	10.85	73.90
Giles	2.14	9.82	8.75	54.98
Gloucester	3.07	11.94	11.07	43.73
Goochland	2.63	9.14	9.04	52.41
Grayson	1.92	11.34	12.40	58.47
Greene	3.52	10.15	10.11	.00
Greensville	2.80	14.01	11.98	34.34

Continued

Sampling errors for county and unit **totals,^a** in **terms of one**
standard error, Virginia, **1992--Continued**

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
		<u>Sampling error^b</u>		
Halifax	1.10	8.62	8.22	24.96
Hampton	20.18	.00	.00	.00
Hanover	2.54	8.33	7.58	39.11
Henrico	7.76	16.10	14.64	69.43
Henry	2.22	13.58	10.89	42.36
Highland	2.02	8.73	10.29	81.20
Isle of Wight	2.61	16.08	17.16	33.75
James City	4.00	11.79	16.53	100.11
King and Queen	1.61	10.70	10.45	36.14
King George	2.87	11.08	11.98	66.84
King William	2.60	13.58	14.95	28.70
Lancaster	3.09	18.44	21.34	69.30
Lee	2.76	12.28	10.26	65.73
Loudoun	2.34	12.99	14.72	73.65
Louisa	1.55	9.28	11.35	59.82
Lunenburg	1.53	10.58	9.55	31.53
Madison	3.47	11.68	13.58	78.67
Mathews	4.43	23.27	26.87	48.31
Mecklenburg	2.19	8.93	8.62	31.68
Middlesex	3.64	17.90	14.09	56.63
Montgomery	2.58	10.72	10.40	51.48
Nelson	1.46	9.24	9.52	45.33
New Kent	2.05	11.96	11.16	36.92
Newport News	22.90	50.34	51.90	108.31
Northampton	6.73	20.83	22.46	75.98
Northumberland	2.87	14.24	14.06	48.28
Nottoway	2.24	15.35	17.41	43.20
Orange	3.15	14.06	13.68	46.45
Page	3.73	11.76	12.78	.00
Patrick	1.40	8.04	7.93	34.76
Pittsylvania	1.10	7.02	7.24	40.03
Powhatan	1.50	11.72	12.69	50.66
Prince Edward	2.31	13.82	11.86	39.32
Prince George	2.28	13.10	11.43	38.48
Prince William	4.72	11.93	11.91	47.90
Pulaski	3.22	11.95	12.35	.00
Rappahannock	4.82	14.32	14.60	69.64
Richmond	2.69	14.68	17.45	60.74

Continued

Sampling errors for county and unit **totals,^a** in terms of one standard error, Virginia, **1992--Continued**

County	Timberland area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
<u>Sampling error^b</u>				
Roanoke	2.89	14.09	16.29	77.43
Rockbridge	1.92	7.81	9.69	45.50
Rockingham	2.38	8.08	8.45	53.20
Russell	2.16	11.91	10.62	60.25
Scott	2.26	6.05	8.47	57.17
Shenandoah	2.47	8.88	13.96	100.03
Smyth	2.05	11.04	11.11	65.75
Southampton	1.51	10.53	9.50	22.49
Spotsylvania	2.52	9.72	9.32	39.15
Stafford	2.49	9.91	10.85	83.98
Suffolk	3.39	15.02	12.64	38.53
Surry	2.03	12.90	12.45	33.68
Sussex	1.55	10.25	8.69	24.38
Tazewell	2.96	9.04	8.81	46.69
Virginia Beach	11.36	19.77	19.77	60.54
Warren	5.52	19.30	23.42	63.44
Washington	2.46	10.19	10.17	45.08
Westmoreland	3.43	11.54	13.37	45.17
Wise	3.30	11.50	10.11	32.80
Wythe	3.03	11.05	14.43	100.05
York	7.10	19.12	16.67	100.33
Total	.24	1.14	1.29	4.65

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

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

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

SE = Specified sampling error in table.

^b By random-sampling formula (in percent).

Definitions of Terms

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

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

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

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

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

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

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

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

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

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

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

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

Commercial forest land.(see: Timberland).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Gross growth. Annual increase in merchantable volume of trees in the absence of cutting and mortality. (Gross growth includes survivor growth, ingrowth,

growth on ingrowth, growth on removals prior to removal, and growth on mortality prior to death.)

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

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

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

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

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

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

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

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

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

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

Industrial wood. All roundwood products except fuelwood.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Roundwood chipped. Any timber cut primarily for pulpwood, delivered to non-pulpmills, 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 live trees in the stand.

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

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

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

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

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

Fully stocked. 100 percent or more stocking.

Medium stocked. 60 to 99 percent stocking.

Poorly stocked. Less than 60 percent stocking.

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

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

Timber products. Roundwood products and byproducts.

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

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

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

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

Unproductive forest land. (see: Woodland).

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

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

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

Stocking Standard

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

Conversion factors

Cubic feet of wood per **average** cord
(excluding bark)

D.b.h. class	All species	Pine	Other softwood	Hardwood
6	60.6	61.0	68.2	60.0
8	68.5	68.1	76.0	68.4
10	73.5	73.1	81.4	73.4
12	76.7	76.7	85.2	76.4
14	78.8	79.4	88.2	78.4
16	80.4	81.6	90.4	79.8
18	81.4	83.3	92.4	80.8
20	82.3	84.8	93.3	81.5
22	82.8	86.0	95.1	82.1
24+	83.9	87.7	97.8	83.0
Average	74.9	72.0	85.0	75.3

Metric equivalents of units used in this report

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

County Tables

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

Table 1--Area, by county and land class, Virginia, 1992

County	All land ^a	Forest land			Nonforest land ^b	
		Total	Timberland	Woodland		Reserved timberland
Acres						
Accomack	304,435	96,630	94,507	2,123	--	207,805
Albemarle	470,829	293,436	278,205	--	15,231	177,393
Alleghany	290,317	254,026	249,199	1,010	3,817	36,291
Amelia	228,410	169,531	169,355	—	176	58,879
Amherst	306,246	226,454	224,549	--	1,905	79,792
Appomattox	215,078	153,357	151,559	--	1,798	61,721
Arlington	16,614	—	—	--	--	16,614
Augusta	643,097	346,217	291,118	13,736	41,363	296,880
Bath	343,651	306,266	287,742	4,874	13,650	37,385
Bedford	482,618	288,607	276,133	--	12,474	194,011
Bland	229,446	179,477	173,503	394	5,580	49,969
Botetourt	348,550	253,975	250,882	58	3,035	94,575
Brunswick	360,460	290,950	290,950	--	--	69,510
Buchanan	322,355	290,585	290,585	—	--	31,770
Buckingham	373,401	301,661	300,672	--	989	71,740
Campbell	355,040	205,236	205,236	--	—	149,804
Caroline	342,695	261,702	261,702	--	--	80,993
Carroll	308,777	184,058	182,605	--	1,453	124,719
Charles City	116,128	85,042	84,737	--	305	31,086
Charlotte	304,960	209,194	209,194	—	--	95,766
Chesapeake	270,655	101,569	59,974	--	41,595	169,086
Chesterfield	304,448	189,813	187,487	--	2,326	114,635
Clarke	114,138	39,987	37,876	--	2,111	74,151
Craig	211,085	179,276	162,684	13	16,579	31,809
Culpeper	244,480	114,304	114,304	--	--	130,176
Cumberland	191,712	133,642	131,624	--	2,018	58,070
Dickenson	212,077	175,390	171,650	--	3,740	36,687
Dinwiddie	337,213	244,769	244,049	--	720	92,444
Essex	168,051	98,013	98,013	--	--	70,038
Fairfax	266,592	92,614	68,538	--	24,076	173,978
Fauquier	416,570	175,188	174,154	--	1,034	241,382
Floyd	243,981	143,873	141,181	--	2,692	100,108
Fluvanna	185,510	137,348	137,348	--	--	48,162
Franklin	437,248	284,099	279,964	--	4,135	153,149
Frederick	271,532	129,262	128,921	341	--	142,270
Giles	231,654	176,775	167,121	--	9,654	54,879
Gloucester	144,122	94,613	94,613	--	--	49,509
Goochland	180,032	130,505	130,505	--	—	49,527
Grayson	287,582	175,828	164,742	--	11,086	111,754
Greene	100,371	68,858	53,599	--	15,259	31,513
Greensville	193,779	135,286	135,286	--	--	58,493
Halifax	525,818	352,976	351,662	--	1,314	172,842
Hampton	32,832	4,342	4,342	--	--	28,490
Hanover	299,155	178,376	178,181	--	195	120,779
Henrico	169,210	59,637	59,429	--	208	109,573
Henry	251,712	179,127	176,780	--	2,347	72,585
Highland	266,112	196,294	196,003	291	--	69,818
Isle of Wight	204,454	114,511	114,161	--	350	89,943
James City	101,293	64,973	60,221	--	4,752	36,320
King and Queen	202,982	152,722	152,722	--	--	50,260
King George	115,245	72,837	70,130	--	2,707	42,408
King William	177,766	111,822	111,822	--	--	65,944

Continued

Table 1--Area, by county and land class, Virginia, 1992--Continued

County	All land ^a	Forest land				Nonforest land ^b
		Total	Timberland	Woodland	Reserved timberland	
Acres						
Lancaster	85,043	52,501	52,501	--	--	32,542
Lee	279,974	157,865	150,024	315	7,526	122,109
Loudoun	333,498	118,338	117,248	--	1,090	215,160
Louisa	317,805	228,537	228,537	--	--	89,268
Lunenburg	276,627	209,807	209,807	--	--	66,820
Madison	205,913	120,511	88,259	--	32,252	85,402
Mathews	55,776	34,787	34,787	--	--	20,989
Mecklenburg	394,330	265,852	263,242	--	2,610	128,478
Middlesex	85,728	49,882	49,882	--	--	35,846
Montgomery	254,074	145,464	145,281	183	--	108,610
Nelson	303,590	233,316	231,868	--	1,448	70,274
New Kent	136,256	98,183	98,183	--	--	38,073
Newport News	41,792	7,934	7,934	--	--	33,858
Northampton	144,602	30,967	30,351	616	--	113,635
Nor thumberland	118,106	67,886	67,886	--	--	50,220
Nottoway	202,502	137,331	137,331	--	--	65,171
Orange	218,822	125,848	125,448	--	400	92,974
Page	200,346	121,531	81,722	2,644	37,165	78,815
Patrick	307,885	220,534	212,148	--	8,386	87,351
Pittsylvania	647,731	405,446	405,446	--	--	242,285
Powhatan	167,162	132,471	132,471	--	--	34,691
Prince Edward	226,253	166,832	165,647	--	1,185	59,421
Prince George	178,537	118,271	117,291	--	980	60,266
Prince William	223,591	114,923	94,125	--	20,798	108,668
Pulaski	203,661	118,971	118,624	--	347	84,690
Rappahannock	170,970	103,499	71,760	--	31,739	67,471
Richmond	123,335	76,279	76,279	--	--	47,056
Roanoke	197,472	110,833	107,085	--	3,748	86,639
Rockbridge	389,382	253,650	241,345	2,211	10,094	135,732
Rockingham	557,376	306,177	253,579	11,210	41,388	251,199
Russell	306,560	174,359	174,359	--	--	132,201
Scott	342,668	237,082	235,375	122	1,585	105,586
Shenandoah	327,833	191,246	184,362	6,884	--	136,587
Smyth	289,325	177,224	172,279	90	4,855	112,101
Southampton	388,307	240,553	240,492	--	61	147,754
Spotsylvania	262,471	175,636	169,148	--	6,488	86,835
Stafford	173,510	118,956	118,956	--	—	54,554
Suffolk	261,869	143,645	111,147	--	32,498	118,224
Surry	180,058	124,151	122,880	--	1,271	55,907
Sussex	314,490	250,668	250,649	--	19	63,822
Tazewell	332,832	213,914	207,871	--	6,043	118,918
Virginia Beach	163,795	40,727	36,581	--	4,146	123,068
Warren	139,053	78,281	64,311	108	13,862	60,772
Washington	367,366	189,483	189,398	--	85	177,883
Westmoreland	145,049	75,785	74,248	--	1,537	69,264
Wise	263,417	178,535	178,114	121	300	84,882
Wythe	297,312	144,321	140,921	--	3,400	152,991
York	83,277	32,849	28,849	--	4,000	50,428
Total	25,409,849	16,026,874	15,447,550	47,344	531,980	9,382,975

^aFrom U.S. Bureau of the Census, 1980.^bIncludes 129,437 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, Virginia, 1992

county	All ownerships	Ownership class							
		National forest	Miscellaneous Federal	State	County and municipal	Forest industry ^a	Other private		
							Farmer	Corporate	Individual
					Acres				
Accomack	94,507	--	1,412	185	236	9,315	26,890	13,445	43,024
Albemarle	278,205	--	35	849	2,152	10,127	83,299	49,222	132,521
Al leglhany	249,199	140,535	2,000	125	215	13,427	13,271	17,695	61,931
Amelia	169,355	--	--	1,270	518	42,332	45,540	3,795	75,900
Amherst	224,549	57,589	--	50	1,075	16,326	47,571	16,990	84,948
Appomattox	151,559	--	--	8,768	318	37,709	29,334	8,381	67,049
Arlington	--	--	--	--	--	--	--	--	--
Augusta	291,118	148,670	--	11,969	420	--	35,016	20,009	75,034
Bath	287,742	156,860	--	9,735	94	440	38,907	31,126	50,580
Bedford	276,133	13,298	--	1,540	2,104	22,989	97,069	25,885	113,248
Bland	173,503	65,730	--	660	--	4,473	66,414	6,038	30,188
Botetourt	250,882	76,065	--	10	6,899	39,216	39,939	22,188	66,565
Brunswick	290,950	--	5,326	644	380	80,335	52,376	13,094	130,795
Buchanan	290,585	--	--	46	204	3,452	14,839	79,140	192,904
Buckingham	300,672	--	--	12,493	126	79,168	30,383	18,990	159,512
Campbell	205,236	--	--	25	691	24,523	57,446	15,319	107,232
Caroline	261,702	--	55,565	879	276	20,144	52,811	15,843	116,184
Carroll	182,605	4,038	--	1,346	470	7,437	96,751	4,838	67,725
Charles City	84,737	--	--	4,750	261	15,438	5,844	5,844	52,600
Charlotte	209,194	--	1,835	--	11	41,610	91,156	16,574	58,008
Chesapeake	59,974	--	1,533	190	1,947	6,125	10,564	21,128	18,487
Chesterfield	187,487	--	863	5,652	1,155	15,814	20,873	59,637	83,493
Clarke	37,876	--	--	86	198	--	4,699	--	32,893
Craig	162,684	97,617	--	33	8	397	32,315	--	32,314
Culpeper	114,304	--	10	343	476	7,647	40,464	12,450	52,914
Cumberland	131,624	--	--	14,022	112	27,988	36,614	12,205	40,683
Dickenson	171,650	8,082	6,197	--	--	408	13,454	89,693	53,816
Dinwiddie	244,049	--	8,676	680	330	64,864	58,448	11,690	99,361
Essex	98,013	--	109	--	385	16,023	28,210	9,403	43,883
Fairfax	68,538	--	7,838	2,813	1,974	--	--	26,312	29,601
Fauquier	174,154	--	3,933	7,866	975	1,855	65,260	21,753	72,512
Floyd	141,181	--	--	70	46	3,891	55,886	5,081	76,207
Fluvanna	137,348	--	--	900	90	18,089	35,043	21,902	61,324
Franklin	279,964	--	2,748	158	471	14,056	77,215	15,443	169,873
Frederick	128,921	4,297	--	43	227	337	44,006	16,002	64,009
Giles	167,121	52,408	--	361	353	5,545	29,578	4,930	73,946
Gloucester	94,613	--	--	80	271	7,886	10,162	10,162	66,052
Goochland	130,505	--	--	10	185	13,063	27,588	3,448	86,211
Grayson	164,742	22,897	--	--	321	3,932	54,054	14,742	68,796
Greene	53,599	--	--	1,051	76	490	11,139	7,426	33,417
Greensville	135,286	--	--	--	143	50,708	30,490	--	53,945
Halifax	351,662	--	10,218	25	255	31,059	180,895	25,842	103,368
Hampton	4,342	--	280	44	50	--	--	3,968	--
Hanover	178,181	--	--	1,103	276	15,246	40,389	17,310	103,857
Henrico	59,429	--	20	2,264	818	128	8,430	19,670	28,099
Henry	176,780	--	688	432	620	20,199	31,762	27,792	95,287
Highland	196,003	57,432	--	13,994	20	7,249	31,583	4,512	81,213
Isle of Wight	114,161	--	60	10	925	28,033	58,712	2,936	23,485
James City	60,221	--	1,248	750	1,150	6,766	6,708	10,061	33,538
King and Queen	152,722	--	--	320	334	55,245	30,430	8,299	58,094
King George	70,130	--	1,401	223	309	698	7,788	15,577	44,134
King William	111,822	--	425	317	47	27,586	27,816	7,586	48,045

Continued

Table I--Area of timberland, by county and ownership class, Virginia, 1992--Continued

county	All ownerships	Ownership class							
		National forest	Miscellaneous Federal	state	County and municipal	Forest industry ^a	Other private		
							Farmer	Corporate	Individual
					Acres				
Lancaster	52,501	--	--	--	461	7,695	8,869	8,869	26,607
Lee	150,024	11,229	--	200	30	1,380	45,728	18,291	73,166
Loudoun	117,248	--	5,979	83	1,785	--	12,623	33,662	63,116
Louisa	228,537	--	--	244	551	21,054	46,975	23,487	136,226
Lunenburg	209,807	--	--	--	600	52,726	60,676	6,387	89,418
Madison	88,259	--	--	7,485	200	345	48,137	4,011	28,081
Mathews	34,787	--	--	--	15	7,122	2,765	2,765	22,120
Mecklenburg	263,242	--	23,680	237	337	17,249	106,435	17,739	97,565
Middlesex	49,082	--	--	--	35	4,774	12,019	--	33,054
Montgomery	145,281	18,865	800	2,358	459	3,766	20,701	10,351	87,981
Nelson	231,868	15,507	--	976	111	24,873	48,613	16,204	125,584
New Kent	98,183	--	--	611	210	24,112	18,313	7,848	47,089
Newport News	7,934	--	3,467	5	2,228	--	--	2,234	--
Northampton	30,351	--	10	125	60	150	5,001	2,501	22,504
Northumberland	67,886	--	--	--	210	11,069	26,956	8,087	21,564
Notoway	137,331	--	14,683	297	421	24,959	50,594	8,432	37,945
Orange	125,448	--	--	20	194	12,523	45,789	10,567	56,355
Page	81,722	26,803	--	90	246	348	23,728	--	30,507
Patrick	212,148	--	1,948	5,279	4,254	18,664	52,001	7,429	122,573
Pittsylvania	405,446	--	--	1,715	1,382	47,457	230,302	26,428	98,162
Powhatan	132,471	--	--	6,853	70	14,642	15,297	--	95,609
Prince Edward	165,647	--	--	8,692	945	15,182	56,331	12,071	72,426
Prince George	117,291	--	3,166	176	185	29,606	33,153	10,201	40,804
Prince William	94,125	--	12,674	801	4,291	--	8,038	24,113	44,208
Pulaski	118,624	19,039	1,404	10	2,405	1,049	5,920	29,599	59,198
Rappahannock	71,760	--	--	--	--	150	30,690	3,410	37,510
Richmond	76,279	--	--	80	30	15,581	25,966	2,885	31,737
Roanoke	107,085	3,069	53	7,628	5,882	1,892	24,600	9,840	54,121
Rockbridge	241,345	54,576	--	23,086	1,732	6,804	31,942	13,689	109,516
Rockingham	253,579	124,722	--	212	223	509	18,950	28,425	80,538
Russell	174,359	--	--	5,718	265	155	62,482	48,063	57,676
Scott	235,375	32,580	--	--	174	510	95,737	5,319	01,055
Shenandoah	184,362	67,209	--	53	273	167	17,948	17,948	80,764
Smyth	172,279	67,941	--	10,000	269	528	51,448	--	42,093
Southampton	240,492	--	19	1,700	150	62,012	113,141	11,038	52,432
Spotsylvania	169,148	--	--	--	2,522	28,381	25,135	12,568	00,542
Stafford	118,956	--	21,973	120	1,303	307	6,569	26,277	62,407
Suffolk	111,147	--	189	167	2,557	32,664	45,342	8,637	21,591
Surry	122,880	--	--	1,697	90	35,292	51,481	--	34,320
Sussex	250,649	--	--	133	190	94,760	65,501	5,458	04,607
Tazewell	207,871	3,191	--	4,641	176	1,661	39,640	73,618	84,944
Virginia Beach	36,581	--	1,877	650	743	--	3,506	7,013	22,792
Warren	64,311	5,117	1,738	285	677	550	18,648	9,324	27,972
Washington	189,398	19,481	74	9,283	104	--	51,760	5,176	103,520
Westmoreland	74,248	--	--	--	125	5,163	15,324	5,108	48,528
Wise	178,114	42,830	a43	15	3,814	150	8,997	71,979	49,486
Wythe	140,921	50,449	109	150	1,924	6,994	45,164	--	36,131
York	28,849	--	14,173	305	6,612	--	--	1,108	6,651
Total	15,447,550	1,468,126	221,279	211,364	82,517	1,554,763	3,870,366	1,549,535	6,489,600

^aIncludes 17,366 acres of other private land under long-term lease.

Table 3--Area of timberland, by county and forest-type group, Virginia, 1992

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										
Accomack	94,507	--	--	--	45,037	24,617	16,134	8,719	--	--
Albemarle	278,205	--	--	--	44,238	37,864	192,316	3,787	--	--
Alleghany	249,199	4,846	--	--	17,049	40,435	178,021	--	--	8,848
Amelia	169,355	--	--	--	74,384	17,146	70,235	7,590	--	--
Amherst	224,549	13,793	--	--	22,146	38,462	150,148	--	--	--
Appomattox	151,559	--	--	--	46,668	14,793	90,098	--	--	--
Arlington	--	--	--	--	--	--	--	--	--	--
Augusta	291,118	--	--	--	14,504	46,375	230,239	--	--	--
Bath	287,742	7,782	--	--	12,263	49,642	218,055	--	--	--
Bedford	276,133	--	--	--	56,199	14,132	205,802	--	--	--
Bland	173,503	6,038	--	--	4,108	28,258	135,099	--	--	--
Botetourt	250,882	8,911	--	--	26,736	27,593	183,204	--	4,438	--
Brunswick	290,950	--	--	--	131,809	45,968	97,459	5,238	10,476	--
Buchanan	290,585	--	--	--	--	9,892	255,962	--	--	24,731
Buckingham	300,672	--	--	--	98,351	37,407	149,121	--	15,793	--
Campbell	205,236	--	--	--	57,800	10,725	132,881	--	3,830	--
Caroline	261,702	--	--	--	94,944	33,976	113,672	10,561	8,549	--
Carroll	182,605	33,861	--	--	5,308	55,812	87,624	--	--	--
Charles City	84,737	--	--	--	30,710	21,942	24,034	8,051	--	--
Charlotte	209,194	--	--	--	85,074	39,136	82,384	--	2,600	--
Chesapeake	59,974	--	--	--	13,205	15,995	14,161	16,613	--	--
Chesterfield	187,487	--	--	--	61,234	35,436	83,990	6,827	--	--
Clarke	37,876	--	--	--	--	--	37,876	--	--	--
Craig	162,684	9,498	--	--	23,875	37,990	91,321	--	--	--
Culpeper	114,304	--	--	--	20,106	9,814	78,159	3,113	3,112	--
Cumberland	131,624	--	--	--	48,457	16,272	61,298	--	5,597	--
Dickenson	171,650	--	--	--	4,485	8,969	144,741	--	--	13,455
Dinwiddie	244,049	--	--	--	86,500	69,487	84,130	3,932	--	--
Essex	98,013	--	--	--	34,230	17,117	40,012	3,519	3,135	--
Fairfax	68,538	--	--	--	9,867	1,974	48,859	--	7,838	--
Fauquier	174,154	--	--	--	31,475	18,128	119,950	--	4,601	--
Floyd	141,181	29,292	--	--	15,288	20,392	76,209	--	--	--
Fluvanna	137,348	--	--	--	38,430	38,059	51,198	4,381	5,280	--
Franklin	279,964	2,748	--	--	31,045	15,441	230,730	--	--	--
Frederick	128,921	4,000	--	--	4,001	24,004	96,916	--	--	--
Giles	167,121	--	--	--	4,929	10,221	141,758	--	--	10,213
Gloucester	94,613	--	--	--	31,888	5,081	50,022	7,622	--	--
Goochland	130,505	--	--	--	34,122	24,138	65,339	3,448	3,45a	--
Grayson	164,742	41,278	--	--	3,816	5,235	106,780	--	--	7,633
Greene	53,599	--	--	--	11,705	3,713	38,181	--	--	--
Greensville	135,286	--	--	--	30,469	16,255	40,929	25,642	13,991	--
Halifax	351,662	--	--	--	117,900	36,918	172,651	9,428	14,765	--
Hampton	4,342	--	--	--	--	--	374	3,968	--	--
Hanover	178,181	--	--	--	58,191	34,620	60,765	23,080	1,525	--
Henrico	59,429	--	--	--	11,592	11,240	30,977	5,620	--	--
Henry	176,780	7,941	--	--	55,891	33,251	71,756	--	7,941	--
Highland	196,003	13,536	--	--	4,418	35,718	124,379	--	--	17,952
Isle of Wight	114,161	--	--	--	21,685	31,092	45,773	12,675	2,936	--
James City	60,221	--	--	--	14,048	6,708	39,465	--	--	--
King and Queen	152,722	--	--	--	58,740	33,511	45,952	14,519	--	--
King George	70,130	--	--	--	5,890	2,596	61,421	223	--	--
King William	111,822	--	--	--	49,849	10,391	43,996	7,586	--	--

Continued

Table 3--Area of timberland, by county and forest-type group, Virginia, 1992--Continued

county	All type groups	Forest-type group								
		White pine-hemlock	Spruce-fir	Longleaf-slash	Loblolly-shortleaf	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch
		Acres								
Lancaster	52,501	--	--	--	13,999	7,000	31,041	461	--	--
Lee	150,024	--	--	--	9,145	--	140,879	--	--	--
Loudoun	117,248	--	--	--	16,832	5,993	90,216	--	4,207	--
Louisa	228,537	--	--	--	49,066	16,558	157,972	--	4,941	--
Lunenburg	209,807	--	--	--	101,612	10,781	80,246	10,780	6,388	--
Madison	88,259	--	--	--	8,368	16,246	63,645	--	--	--
Mathews	34,787	--	--	--	20,947	5,545	5,530	2,765	--	--
Mecklenburg	263,242	--	--	--	66,038	29,572	163,197	--	4,435	--
Middlesex	49,882	--	--	--	13,788	18,030	18,029	35	--	--
Montgomery	145,281	10,809	--	--	25,730	7,533	100,409	--	800	--
Nelson	231,868	--	--	--	31,895	12,153	183,769	--	4,051	--
New Kent	98,183	--	--	--	31,040	20,290	42,045	4,808	--	--
Newport News	7,934	--	--	--	2,228	1,117	4,589	--	--	--
Northampton	30,351	--	--	--	12,502	7,712	7,626	2,511	--	--
Northumberland	67,886	--	--	--	15,467	5,391	41,428	5,600	--	--
Nottoway	137,331	--	--	--	54,813	24,477	45,393	8,432	4,216	--
Orange	125,448	--	--	--	25,961	21,134	71,309	--	7,044	--
Page	81,722	--	--	--	10,170	3,390	68,162	--	--	--
Patrick	212,148	974	--	--	16,450	20,191	170,818	--	3,715	--
Pittsylvania	405,446	--	--	--	96,610	45,303	244,655	3,775	15,103	--
Powhatan	132,471	--	--	--	26,770	9,935	88,118	7,648	--	--
Prince Edward	165,647	--	--	--	53,990	41,275	57,837	4,024	8,521	--
Prince George	117,291	--	--	--	47,649	17,852	44,139	5,101	2,550	--
Prince William	94,125	--	--	--	19,244	4,019	66,843	4,019	--	--
Pulaski	118,624	--	--	--	5,920	12,898	98,402	--	1,404	--
Rappahannock	71,760	--	--	--	150	6,820	64,790	--	--	--
Richmond	76,279	--	--	--	23,112	2,885	44,512	2,005	2,005	--
Roanoke	107,085	--	--	--	19,681	25,603	61,801	--	--	--
Rockbridge	241,345	--	--	--	18,222	36,531	177,466	--	4,563	4,563
Rockingham	253,579	4,157	--	--	14,212	32,002	189,576	--	9,475	4,157
Russell	174,359	--	--	--	14,419	--	145,521	--	4,807	9,612
Scott	235,375	--	--	--	5,319	11,148	218,908	--	--	--
Shenandoah	184,362	8,440	--	--	4,487	22,434	144,514	--	4,487	--
Smyth	172,279	--	--	--	7,177	17,235	143,190	--	--	4,677
Southampton	240,492	--	--	--	107,723	34,024	43,690	47,239	7,816	--
Spotsylvania	169,148	--	--	--	54,554	20,947	72,701	16,757	4,189	--
Stafford	118,956	--	--	--	17,862	13,138	87,956	--	--	--
Suffolk	111,147	--	--	--	43,585	14,576	33,365	15,302	4,319	--
Surry	122,880	--	--	--	44,554	13,516	52,078	12,732	--	--
Sussex	250,649	--	--	--	133,425	40,850	43,622	30,045	2,707	--
Tazewell	207,871	--	--	--	--	--	190,882	--	--	16,989
Virginia Beach	36,581	--	--	--	11,292	5,632	8,766	10,891	--	--
Warren	64,311	--	--	--	--	4,662	50,325	--	9,324	--
Washington	189,398	--	--	--	--	15,528	168,694	--	--	5,176
Westmoreland	74,248	--	--	--	23,874	7,662	42,712	--	--	--
Wise	178,114	4,499	--	--	--	--	159,275	--	843	13,497
Wythe	140,921	4,517	--	--	4,204	22,154	109,937	--	109	--
York	28,449	--	--	--	7,086	5,524	15,934	305	--	--
Total	15,447,550	216,920	--	--	3,135,831	1,941,207	9,377,068	392,257	242,764	141,503

Table 4--Area of timberland, by county and stand-size class,
Virginia, 1992

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling- seedling	
Acres					
Accomack	94,507	53,339	23,065	18,103	--
Albemarle	278,205	171,264	74,496	32,445	--
Al leghany	249,199	138,726	90,274	20,199	--
Amelia	169,355	58,892	56,144	46,729	7,590
Amherst	224,549	139,892	38,714	42,545	3,398
Appomattox	151,559	43,558	52,191	55,810	--
Arlington	--	--	--	--	--
Augusta	291,118	131,763	100,788	58,567	--
Bath	287,742	170,791	92,331	24,620	--
Bedford	276,133	155,161	70,650	50,322	--
Bland	173,503	86,953	80,512	6,038	--
Botetourt	250,882	130,356	62,226	58,300	--
Brunswick	290,950	83,786	117,178	89,986	--
Buchanan	290,585	171,624	69,247	49,714	--
Buckingham	300,672	77,188	96,549	126,935	--
Campbell	205,236	74,226	85,816	45,194	--
Caroline	261,702	112,808	78,086	70,808	--
Carroll	182,605	98,099	28,694	50,974	4,838
Charles City	84,737	44,606	21,566	13,437	5,128
Charlotte	209,194	65,056	75,157	68,981	--
Chesapeake	59,974	35,249	14,161	10,564	--
Chesterfield	187,487	79,985	63,465	44,037	--
Clarke	37,876	32,979	4,699	198	--
Craig	162,684	85,507	67,680	9,497	--
Culpeper	114,304	62,737	25,243	26,324	--
Cumberland	131,624	36,992	46,813	43,751	4,068
Dickenson	171,650	108,866	31,393	26,906	4,485
Dinwiddie	244,049	83,654	73,190	87,205	--
Essex	98,013	40,994	24,231	32,788	--
Fairfax	68,538	50,119	15,130	3,289	--
Fauquier	174,154	106,731	51,067	16,356	--
Floyd	141,181	96,600	29,340	15,241	--
Fluvanna	137,348	42,529	50,733	44,086	--
Franklin	279,964	154,140	93,131	32,693	--
Frederick	128,921	76,351	40,342	12,228	--
Giles	167,121	72,824	74,267	20,030	--
Gloucester	94,613	43,536	33,025	18,052	--
Goochland	130,505	72,055	41,390	17,060	--
Grayson	164,742	109,820	28,386	26,536	--
Greene	53,599	41,970	7,426	4,203	--
Greensville	135,286	42,281	35,019	53,377	4,609
Halifax	351,662	122,223	123,966	101,782	3,691
Hampton	4,342	4,298	44	---	--
Hanover	178,181	78,221	68,318	27,654	3,988
Henrico	59,429	22,363	25,289	11,777	--
Henry	176,780	61,526	51,730	59,553	3,971
Highland	196,003	120,732	61,809	8,950	4,512
Isle of Wight	114,161	46,765	21,086	46,310	--
James City	60,221	45,598	7,341	7,282	--
King and Queen	152,722	68,765	45,250	38,707	--
King George	70,130	51,259	12,981	5,890	--
King William	111,822	30,999	46,523	29,014	5,286

Continued

Table 4--Area of timberland, by county and stand-size class,
Virginia, 1992--Continued

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling- seedling	
		Acres			
Lancaster	52,501	34,067	11,434	7,000	--
Lee	150,024	70,002	56,957	23,065	--
Loudoun	117,248	73,385	22,823	21,040	--
Louisa	228,537	103,025	80,274	45,238	--
Lunenburg	209,807	83,245	64,277	54,697	7,588
Madison	88,259	71,867	12,035	4,357	—
Mathews	34,787	18,197	2,765	13,825	--
Mecklenburg	263,242	117,530	70,318	66,525	8,869
Middlesex	49,882	25,665	12,198	12,019	—
Montgomery	145,281	82,067	47,688	15,526	--
Nelson	231,868	143,965	39,006	48,897	—
New Kent	98,183	48,857	24,227	25,099	—
Newport News	7,934	7,929	5	—	--
Northampton	30,351	12,723	12,627	5,001	--
Northumberland	67,886	27,164	18,160	22,562	--
Nottoway	137,331	48,000	46,314	43,017	--
Orange	125,448	49,330	54,792	21,326	--
Page	81,722	50,417	31,059	246	—
Patrick	212,148	87,948	89,179	35,021	—
Pittsylvania	405,446	164,113	149,187	92,146	--
Powhatan	132,471	56,950	40,528	34,993	--
Prince Edward	165,647	42,767	61,473	57,384	4,023
Prince George	117,291	53,697	26,712	36,882	--
Prince William	94,125	58,534	24,113	11,478	--
Pulaski	118,624	35,662	65,202	17,760	--
Rappahannock	71,760	54,560	17,050	150	--
Richmond	76,279	35,230	26,047	15,002	--
Roanoke	107,085	60,932	43,084	3,069	--
Rockbridge	241,345	132,371	79,879	29,095	—
Rockingham	253,579	187,519	48,627	17,433	--
Russell	174,359	106,159	33,645	34,555	--
Scott	235,375	161,825	64,158	9,392	--
Shenandoah	184,362	106,525	69,124	8,713	--
Smyth	172,279	112,154	26,413	24,182	9,530
Southampton	240,492	96,894	68,514	72,174	2,910
Spotsylvania	169,148	57,611	85,951	25,586	--
Stafford	118,956	77,932	19,705	21,319	--
Suffolk	111,147	35,819	30,665	42,106	2,557
Surry	122,880	55,356	42,844	19,744	4,936
Sussex	250,649	79,255	81,705	81,567	8,122
Tazewell	207,871	109,278	81,604	16,989	—
Virginia Beach	36,581	22,184	8,765	5,632	—
Warren	64,311	42,698	16,274	5,339	--
Washington	189,398	116,380	50,996	22,022	—
Westmoreland	74,248	39,198	24,709	10,341	—
Wise	178,114	98,416	57,620	22,078	--
Wythe	140,921	83,933	38,923	18,065	--
York	28,849	23,326	2,217	3,306	—
Total	15,447,550	7,599,417	4,710,024	3,034,010	104,099

Table 5--Area of timberland, by county and site class, Virginia. 1992

County	All classes	Site class (cubic feet per acre per year)				
		>164	120-164	85-119	50-84	20-49
Acres						
Accomack	94,507	--	5,378	32,869	42,399	13,861
Albemarle	278,205	--	3,786	83,335	168,368	22,716
Alleghany	249,199	--	4,846	9,270	112,509	122,574
Amelia	169,355	--	7,590	59,980	101,785	—
Amherst	224,549	--	6,796	55,171	112,244	50,338
Appomattox	151,559	--	318	43,241	99,619	8,381
Arlington	—	---	--	--	—	—
Augusta	291,118	--	--	3,626	150,334	137,158
Bath	287,742	---	--	21,021	145,026	121,695
Bedford	276,133	--	6,471	84,781	141,866	43,015
Bland	173,503	6,038	14,253	24,150	100,246	28,816
Botetourt	250,882	4,474	8,875	44,451	109,471	83,611
Brunswick	290,950	--	2,976	61,603	220,777	5,594
Buchanan	290,585	—	14,839	103,871	148,637	23,238
Buckingham	300,672	--	11,520	50,476	210,889	27,787
Campbell	205,236	--	11,490	44,428	122,511	26,807
Caroline	261,702	---	4,655	72,076	179,690	5,281
Carroll	182,605	14,512	10,145	40,047	108,226	9,675
Charles City	84,737	—	—	24,866	59,871	---
Charlotte	209,194	4,144	11	23,316	158,404	23,319
Chesapeake	59,974	---	14,048	15,919	22,084	7,923
Chesterfield	187,487	—	2,982	31,355	134,742	18,408
Clarke	37,876	--	4,699	9,398	18,994	4,785
Craig	162,684	--	---	14,115	91,147	57,422
Culpeper	114,304	—	3,113	34,246	70,720	6,225
Cumberland	131,624	--	6,873	25,938	98,813	---
Dickenson	171,650	--	4,485	49,331	90,516	27,318
Dinwiddie	244,049	--	--	57,796	165,090	21,163
Essex	98,013	--	5,423	35,923	56,282	385
Fairfax	68,538	3,289	---	11,127	52,148	1,974
Fauquier	174,154	--	7,251	25,993	126,408	14,502
Floyd	141,181	19,132	46	25,472	86,371	10,160
Fluvanna	137,348	--	3,015	13,141	99,202	21,990
Franklin	279,964	—	10,470	77,215	144,303	47,976
Frederick	128,921	---	4,001	8,000	68,873	48,047
Giles	167,121	4,929	—	31,788	102,973	27,431
Gloucester	94,613	--	--	30,831	63,782	---
Goochland	130,505	---	—	20,327	103,281	6,897
Grayson	164,742	24,570	16,708	14,742	99,671	9,051
Greene	53,599	---	3,713	18,565	23,819	7,502
Greensville	135,286	--	---	35,183	90,802	9,301
Halifax	351,662	—	---	69,297	274,981	7,384
Hampton	4,342	—	—	330	4,012	—
Hanover	178,181	—	5,770	54,976	105,895	11,540
Henrico	59,429	—	---	10,822	45,797	2,810
Henry	176,780	7,941	3,971	66,670	94,228	3,970
Highland	196,003	--	4,418	17,859	108,140	65,586
Isle of Wight	114,161	—	5,871	22,347	83,008	2,935
James City	60,221	--	3,354	28,653	28,214	---
King and Queen	152,722	--	3,453	27,290	116,446	5,533
King George	70,130	---	10,384	26,271	30,655	2,820
King William	111,822	--	---	28,046	81,200	2,576

Continued

Table 5--Area of timberland, by county and site class, Virginia, 1992--Continued

County	All classes	Site class (cubic feet per acre per year)				
		7164	120-164	85-119	50-84	20-49
Acres						
Lancaster	52,501	--	4,435	8,869	38,736	461
Lee	150,024	--	--	27,438	113,441	9,145
Loudoun	117,248	--	--	25,329	85,926	5,993
Louisa	228,537	--	--	27,316	180,516	20,705
Lunenburg	209,807	--	3,193	31,146	169,082	6,386
Madison	88,259	--	8,022	26,565	40,659	13,013
Mathews	34,787	--	--	14,636	17,386	2,765
Mecklenburg	263,242	--	--	36,218	204,850	22,174
Middlesex	49,882	--	--	21,034	28,813	35
Montgomery	145,281	--	10,809	18,684	91,459	24,329
Nelson	231,868	4,051	4,051	91,670	115,779	16,317
New Kent	98,183	--	--	24,464	73,509	210
Newport News	7,934	--	--	5,078	2,856	--
Northampton	30,351	--	150	7,571	17,629	5,001
Northumberland	67,886	--	--	22,560	39,725	5,601
Nottoway	137,331	--	421	33,706	90,555	12,649
Orange	125,448	--	--	24,655	97,251	3,542
Page	81,722	--	--	3,390	43,241	35,091
Patrick	212,148	3,714	6,381	50,854	118,276	32,923
Pittsylvania	405,446	7,550	40,213	121,667	215,369	20,647
Powhatan	132,471	--	--	49,232	78,358	4,881
Prince Edward	165,647	--	--	34,719	118,857	12,071
Prince George	117,291	--	2,550	23,278	81,261	10,202
Prince William	94,125	--	4,019	7,989	70,061	12,056
Pulaski	118,624	--	--	7,334	78,091	33,199
Rappahannock	71,760	--	3,410	6,820	47,890	13,640
Richmond	76,279	2,885	--	21,927	51,467	--
Roanoke	107,085	4,920	4,920	6,812	58,950	31,483
Rockbridge	241,345	4,548	--	41,053	136,391	59,353
Rockingham	253,579	--	4,157	18,369	91,057	139,996
Russell	174,359	--	--	19,225	121,335	33,799
Scott	235,375	510	15,955	71,968	141,623	5,319
Shenandoah	184,362	--	4,487	8,440	94,884	76,551
Smyth	172,279	528	--	33,414	114,277	24,060
Southampton	240,492	2,759	5,519	93,807	132,888	5,519
Spotsylvania	169,148	8,380	4,189	39,821	109,416	7,342
Stafford	118,956	8,777	13,139	42,877	50,878	3,285
Suffolk	111,147	--	4,318	24,211	80,459	2,159
Surry	122,880	--	--	21,910	100,970	--
Sussex	250,649	--	8,188	73,384	152,724	16,353
Tazewell	207,871	--	11,326	56,629	121,332	18,584
Virginia Beach	36,581	--	--	5,383	16,801	14,397
Warren	64,311	--	--	9,324	45,378	9,609
Washington	189,398	--	10,352	51,760	113,765	13,521
Westmoreland	74,248	--	2,554	26,430	40,156	5,108
Wise	178,114	--	--	36,401	141,563	150
Wythe	140,921	6,994	4,517	4,313	79,883	45,214
York	28,849	--	--	16,154	11,282	1,413
Total	15,447,550	144,645	419,272	3,297,378	9,542,524	2,043,731

Table 6--Area of timberland, by county and stocking **class** of **growing-stock** tree, Virginia, 1992

County	All classes	Stocking class (percent) ^a				
		>130	100-130	60-99	16.7-59	<16.7
		Acres				
Accomack	94,507	13,445	46,730	26,265	8,067	--
Albemarle	278,205	8,885	81,639	132,521	47,587	7,573
Al leghany	249,199	—	54,551	158,842	32,449	3,357
Amelia	169,355	12,474	73,295	66,440	9,556	7,590
Amherst	224,549	4,081	77,438	97,237	31,518	14,275
Appomat tox	151,559	4,191	62,098	69,271	15,999	--
Arlington	--	--	--	--	--	--
Augusta	291,118	3,626	59,896	133,640	78,949	15,007
Bath	287,742	8,372	63,325	179,754	36,291	—
Bedford	276,133	16,180	81,241	142,525	36,187	—
Bland	173,503	6,038	28,507	112,571	26,387	--
Botetourt	250,882	8,911	63,742	120,954	57,275	--
Brunswick	290,950	38,802	143,521	81,344	24,664	2,619
Buchanan	290,585	9,893	92,484	128,648	54,614	4,946
Buckingham	300,672	15,792	131,230	136,656	13,196	3,798
Campbell	205,236	16,856	70,080	95,321	22,979	--
Caroline	261,702	13,831	106,885	122,852	15,494	2,640
Carroll	182,605	4,837	32,972	81,908	48,376	14,512
Charles City	84,737	8,050	47,525	24,034	--	5,128
Charlotte	209,194	16,091	93,078	89,139	10,886	—
Chesapeake	59,974	767	33,301	21,318	4,588	—
Chesterfield	187,487	2,635	99,763	79,125	5,964	--
Clarke	37,876	--	14,183	18,796	4,897	--
Craig	162,684	24,139	43,300	71,369	23,876	—
Culpeper	114,304	3,122	35,659	65,842	9,681	--
Cumberland	131,624	12,206	64,616	42,598	8,136	4,068
Dickenson	171,650	—	27,316	75,352	64,497	4,485
Dinwiddie	244,049	8,013	128,169	88,866	19,001	--
Essex	98,013	11,692	40,995	33,634	11,692	--
Fairfax	68,538	2,813	28,286	30,861	6,578	--
Fauquier	174,154	3,626	56,547	70,475	39,881	3,625
Floyd	141,181	8,971	25,402	81,337	25,471	--
F luvanna	137,348	8,761	52,938	62,974	12,675	--
Franklin	279,964	22,053	102,657	108,926	46,328	--
Frederick	128,921	4,001	20,381	76,307	28,232	--
Giles	167,121	4,930	57,321	89,719	10,221	4,930
Gloucester	94,613	12,704	45,994	28,295	7,620	—
Goochland	130,505	6,898	55,172	64,976	3,459	—
Grayson	164,742	9,828	34,921	85,274	34,719	--
Greene	53,599	3,713	27,608	18,565	3,713	—
Greensville	135,286	7,035	51,417	44,321	23,294	9,219
Halifax	351,662	16,116	141,411	142,452	44,300	7,383
Hampton	4,342	50	4,248	44	--	--
Hanover	178,181	16,112	74,088	78,223	5,770	3,988
Henrico	59,429	--	31,448	25,171	2,810	--
Henry	176,780	15,882	63,642	70,290	22,995	3,971
Highland	196,003	17,860	80,894	79,275	13,462	4,512
Isle of Wight	114,161	7,608	56,862	40,884	8,807	—
James City	60,221	14,571	10,787	28,156	6,707	--
King and Queen	152,722	20,739	68,432	45,579	17,972	—
King George	70,130	2,905	22,170	37,267	7,788	--
King William	111,822	15,401	43,909	31,823	15,403	5,286

Continued

Table 6--Area of timberland, by county and stocking class of growing-stock trees, Virginia, 1992--Continued

County	All classes	Stocking class (percent) ^a				
		>130	100-130	60-99	16.7-59	<16.7
Acres						
Lancaster	52,501	7,000	14,460	22,172	8,869	---
Lee	150,024	9,145	19,671	80,052	41,156	---
Loudoun	117,248	---	27,029	64,973	25,246	---
Louisa	228,537	3,828	115,698	104,070	4,941	---
Lunenburg	209,807	18,369	81,443	82,043	20,364	7,588
Madison	88,259	2,495	32,438	41,292	12,034	---
Mathews	34,787	6,326	11,856	8,295	8,310	---
Mecklenburg	263,242	14,293	131,422	90,918	17,740	8,869
Middlesex	49,882	1,591	27,258	21,033	--	--
Montgomery	145,281	5,634	56,782	43,626	39,239	--
Nelson	231,868	3,109	64,353	125,731	34,624	4,051
New Kent	98,183	9,616	40,161	37,941	10,465	---
Newport News	7,934	3,961	1,117	5	2,851	---
Northampton	30,351	2,511	12,652	15,128	60	---
Northumberland	67,886	---	20,072	39,727	5,392	2,695
Not t o w a y	137,331	10,530	59,009	38,279	25,297	4,216
Orange	125,448	3,522	33,004	64,268	24,654	---
Page	81,722	--	32,568	21,237	27,917	---
Patrick	212,148	12,735	40,349	125,735	33,329	---
Pittsylvania	405,446	31,973	211,367	135,678	26,428	--
Powhatan	132,471	---	72,249	53,056	7,166	--
Prince Edward	165,647	8,048	75,617	65,888	12,071	4,023
Prince George	117,291	7,792	60,403	49,096	--	--
Prince William	94,125	---	29,600	52,468	12,057	--
Pulaski	118,624	--	20,164	69,766	22,774	5,920
Rappahannock	71,760	3,410	3,560	44,330	13,640	6,820
Richmond	76,279	12,118	17,887	38,773	7,501	---
Roanoke	107,085	---	19,681	70,752	16,652	---
Rockbridge	241,345	4,548	38,769	150,557	47,471	--
Rockingham	253,579	4,157	39,737	138,886	66,062	4,737
Russell	174,359	4,806	24,187	116,529	19,225	9,612
Scott	235,375	---	81,362	111,463	42,550	---
Shenandoah	184,362	12,927	41,723	90,123	39,589	---
Smyth	172,279	4,677	45,297	89,121	23,654	9,530
Southampton	240,492	21,171	120,307	90,585	5,519	2,910
Spotsylvania	169,148	23,064	94,327	47,568	4,189	---
Stafford	118,956	18,631	56,202	40,839	3,284	--
Suffolk	111,147	4,507	43,726	40,924	19,433	2,557
Surry	122,880	10,278	45,716	44,790	17,160	4,936
Sussex	250,649	16,334	128,183	89,845	8,165	8,122
Tazewell	207,871	16,989	59,820	97,084	33,978	---
Virginia Beach	36,581	4,156	15,779	14,892	1,754	--
Warren	64,311	---	15,276	25,048	19,325	4,662
Washington	189,398	13,447	47,138	92,477	36,336	--
Westmoreland	74,248	5,108	36,644	27,388	5,108	--
Wise	178,114	---	31,209	101,076	36,831	8,998
Wythe	140,921	4,204	31,305	72,390	33,022	--
York	28,849	6,849	13,954	4,740	3,306	--
Total	15,447,550	849,365	5,396,605	6,930,673	2,037,749	233,158

^aSee stocking standards on page 16.

Table 7--Volume of growing stock and sawtimber on timberland, by county and species group, Virginia, 1992

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				
Accomack	189,647	114,068	--	47,617	27,962	670,520	492,202	--	94,557	83,761
Albemarle	494,599	76,035	16,416	119,620	282,528	1,667,590	169,809	65,502	487,333	944,946
Al leghany	382,121	42,842	18,557	35,098	285,624	1,080,683	93,235	72,359	104,267	810,822
Amelia	257,378	125,953	1,629	45,605	84,191	766,373	340,443	5,710	155,177	265,043
Amherst	400,046	57,478	26,875	120,479	195,214	1,259,387	130,874	117,533	443,145	567,835
Appomattox	203,365	68,484	1,189	34,397	99,295	461,212	127,926	--	75,567	257,719
Arlington	--	--	--	--	--	--	--	--	--	--
Augusta	421,685	65,632	21,886	31,454	302,713	1,160,740	241,292	66,899	71,547	781,002
Bath	521,754	44,360	25,338	54,351	397,705	1,534,105	130,710	81,569	119,147	1,202,679
Bedford	505,405	112,818	8,127	164,036	220,424	1,565,422	330,931	36,086	551,720	646,685
Bland	294,218	13,356	31,098	86,735	163,029	819,568	44,089	140,990	227,972	406,517
Botetourt	403,423	38,207	27,066	99,977	238,173	1,347,672	110,502	136,214	408,919	692,037
Brunswick	401,268	207,389	2,239	79,419	112,221	1,096,193	629,739	--	192,924	273,530
Buchanan	551,581	--	19,721	230,110	301,750	1,723,549	--	91,924	670,431	961,194
Buckingham	365,041	135,150	1,058	67,938	160,895	801,250	219,548	2,034	168,215	411,453
Campbell	346,044	100,001	--	84,273	161,770	864,759	199,561	--	241,476	423,722
Carol iae	434,440	150,396	312	140,627	143,105	1,416,238	480,573	--	507,809	427,856
Carroll	251,542	13,911	88,923	37,287	111,421	821,265	45,282	363,392	109,610	302,981
Charles City	177,075	62,871	8,968	45,412	59,824	573,895	213,476	49,196	103,519	207,704
Charlotte	331,886	150,238	3,719	70,417	107,512	821,854	264,319	2,382	218,317	336,836
Chesapeake	132,921	37,966	685	62,141	32,129	538,161	209,654	3,807	198,350	126,350
Chesterfield	330,227	103,795	--	84,541	141,891	954,455	289,997	--	257,689	406,769
Clarke	93,396	--	--	40,809	52,587	364,188	--	--	175,182	189,006
Craig	297,107	64,064	18,625	9,641	204,777	763,452	219,250	73,797	12,835	457,570
Culpeper	216,041	52,702	1,564	62,174	99,601	653,732	156,772	2,079	184,649	310,232
Cumberland	175,570	66,605	396	46,833	61,736	412,471	121,874	--	122,365	168,232
Dickenson	283,767	15,579	9,840	93,284	165,064	979,626	44,856	48,850	328,755	557,165
Dinwiddie	340,407	157,362	1,251	63,829	117,965	1,016,331	545,831	2,228	167,812	300,460
Essex	165,553	59,031	--	45,618	60,904	519,225	203,392	--	127,926	187,907
Fairfax	187,033	9,752	2,087	43,305	131,889	741,413	33,955	1,730	169,774	535,954
Fauquier	321,265	53,650	5,082	88,099	174,434	1,038,338	162,911	6,333	325,194	543,900
Floyd	249,027	12,719	73,228	64,823	98,257	708,665	30,066	247,386	177,665	253,548
Fluvanna	193,777	64,580	467	40,866	87,864	442,244	156,291	--	86,474	199,479
Frankl in	550,970	69,330	26,053	232,474	223,113	1,574,618	139,768	100,642	720,564	613,644
Frederick	213,952	13,068	12,635	36,925	151,324	660,288	35,681	46,616	83,836	494,155
Giles	330,477	10,743	10,825	99,084	209,825	1,013,525	33,634	60,527	339,720	579,644
Gloucester	208,635	64,728	260	80,083	63,564	679,648	243,622	--	233,591	202,435
Goochland	276,142	78,051	1,517	80,046	116,528	779,303	134,005	--	285,038	360,260
Grayson	286,747	8,172	76,228	55,241	147,106	1,013,809	36,414	347,180	160,633	469,582
Greene	128,355	28,301	1,806	41,097	57,151	457,211	55,836	--	184,200	217,175
Greensville	185,353	55,961	2,768	60,433	66,191	595,907	223,040	11,077	169,611	192,179
Halifax	516,970	191,898	3,868	138,700	182,504	1,327,747	476,639	2,131	336,124	512,853
Hampton	11,784	--	--	4,283	7,501	29,863	--	--	12,409	17,454
Hanover	290,711	98,111	277	84,047	108,276	823,194	261,794	--	203,869	357,531
Henrico	97,609	28,160	206	25,666	43,577	272,730	106,847	--	43,299	122,584
Henry	231,955	99,644	21,928	39,471	70,912	584,413	236,311	95,105	70,094	182,903
Highland	389,841	15,291	44,036	63,981	266,533	1,212,280	25,698	188,471	184,520	813,591
Isle of Wight	148,556	46,138	--	49,116	53,302	509,406	172,069	--	124,132	213,205
James City	138,394	35,978	402	32,797	69,217	457,321	104,228	--	111,311	241,782
King and Queen	281,876	140,413	4,995	64,508	71,960	811,007	404,144	28,884	168,093	209,886
King George	154,933	17,497	1,685	84,692	51,059	558,728	73,087	5,102	310,017	170,522
King William	159,267	67,354	--	40,013	51) 900	404,431	150,933	--	103,452	150,046

Continued

Table 7--Volume of growing stock and sawtimber on timberland, by county and species group, Virginia, 1992--Continued

county	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet ^a					Thousand board feet				
Lancaster	95,084	48,207	--	24,677	22,200	309,925	154,032	--	85,423	70,470
Lee	245,905	--	6,816	97,182	141,907	746,976	--	2,399	293,535	451,042
Loudoun	181,094	2,567	2,794	32,580	143,153	648,708	3,179	2,287	148,483	494,759
Louisa	371,099	96,042	4,928	80,684	189,445	899,612	198,482	9,702	243,923	447,505
Lunenburg	313,426	138,002	1,838	76,631	96,955	910,432	455,143	1,869	200,537	252,883
Madison	200,218	14,566	10,316	54,056	121,280	781,140	35,496	53,447	222,197	470,000
Mathews	74,003	51,448	270	11,360	10,925	279,939	206,145	--	19,324	54,470
Mecklenburg	502,474	117,732	2,493	158,860	223,389	1,410,066	309,632	3,143	440,687	656,604
Middlesex	98,430	44,768	183	26,114	27,365	310,217	135,370	--	80,564	94,283
Montgomery	270,208	34,223	46,647	36,751	152,587	864,988	97,473	216,381	106,271	444,863
Nelson	449,610	35,191	18,421	148,809	247,189	1,636,417	63,848	79,275	609,634	883,660
New Kent	194,785	68,282	--	58,474	68,029	584,372	149,398	--	207,553	227,421
Newport News	20,979	9,639	--	6,500	4,840	83,354	36,889	--	25,333	21,132
Northampton	57,006	28,607	--	18,174	9,625	172,583	122,371	--	25,648	24,564
Northumberland	89,506	28,336	--	29,521	31,649	281,120	99,387	--	82,836	98,897
Nottoway	198,340	91,601	--	49,064	57,675	594,942	255,162	--	176,466	163,314
Orange	178,427	35,251	6,976	49,898	86,302	521,113	34,814	25,328	204,202	256,769
Page	140,902	16,180	5,567	15,430	103,725	440,413	55,289	26,923	59,209	298,992
Patrick	340,996	40,474	17,214	136,738	146,570	913,389	92,948	68,706	350,254	401,481
Pittsylvania	735,259	203,456	2,570	247,086	282,147	2,026,942	492,164	10,013	788,732	736,033
Powhatan	231,934	35,378	--	79,397	117,159	679,742	69,686	--	253,434	356,622
Prince Edward	211,440	70,542	965	59,820	80,113	520,664	87,678	1,736	168,661	262,589
Prince George	187,235	68,944	8,797	49,857	59,637	624,834	234,869	49,965	154,915	185,085
Prince William	213,956	45,444	1,655	43,677	123,180	709,457	94,965	--	165,043	449,449
Pulaski	156,621	8,844	5,796	26,501	115,480	353,831	35,263	28,637	80,403	209,528
Rappahannock	130,294	4,577	2,083	56,200	67,434	519,667	19,397	13,015	244,830	242,425
Richmond	154,550	39,969	--	68,239	46,342	488,090	73,178	--	243,801	171,111
Roanoke	172,440	32,338	20,020	19,484	100,598	474,955	78,670	83,887	46,080	266,318
Rockbridge	391,142	35,777	24,721	61,725	268,919	1,184,042	117,944	90,264	179,085	796,749
Rockingham	433,406	21,860	42,143	54,324	315,079	1,452,968	70,848	138,547	146,172	1,097,401
Russell	320,466	--	5,097	121,779	193,590	1,040,442	--	14,991	393,625	631,826
Scott	483,870	16,025	5,086	204,188	258,571	1,627,034	69,213	12,877	699,423	845,521
Shenandoah	321,049	36,575	16,030	40,992	227,452	932,952	126,226	74,246	90,123	642,357
Smyth	333,688	16,078	15,486	66,066	236,058	1,131,540	52,257	76,279	197,996	805,008
Southampton	382,178	160,163	12,402	136,474	73,139	1,261,200	525,485	63,817	417,846	254,052
Spotsylvania	347,322	122,935	2,203	98,246	123,938	841,444	225,903	8,958	242,012	364,571
Stafford	303,053	47,473	666	119,725	135,189	1,017,342	130,391	--	373,611	513,340
Suffolk	157,872	49,064	5,525	60,051	43,232	478,291	147,758	28,923	173,291	128,319
Surry	171,753	70,099	2,201	60,732	38,721	554,607	227,749	11,017	188,365	127,476
Sussex	364,651	213,567	3,958	73,371	73,755	1,199,378	765,491	22,865	179,798	231,224
Tazewell	419,629	--	2,485	160,065	257,079	1,195,415	--	8,489	470,819	716,107
Virginia Beach	65,065	19,835	984	27,535	16,711	227,605	92,970	4,307	67,044	63,284
Warren	95,974	5,711	1,509	19,864	68,890	298,465	11,618	5,599	91,052	190,196
Washington	397,699	9,651	7,728	171,805	208,515	1,245,298	35,377	26,021	588,489	595,411
Westmoreland	144,700	49,461	265	45,323	49,651	418,234	125,182	--	131,200	161,852
Wise	288,051	1,698	9,237	132,582	144,534	912,666	7,834	42,577	415,673	446,582
Wythe	231,688	18,702	23,161	19,748	170,077	699,122	79,896	109,016	54,551	455,659
York	96,181	24,203	--	35,718	36,260	395,583	105,166	--	133,608	156,809
Total	26,486,794	5,675,317	973,071	7,126,149	12,712,257	80,251,521	15,961,346	3,919,241	22,092,596	38,278,338

^aFactors for converting to cords are shown on page 16.

Table g--Average net annual growth of growing stock and sawtimber on timberland, by county and species group, Virginia, 1986-1991

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				
Accomack	5,698	3,343	--	1,564	791	25,821	17,667	--	4,832	3,322
Albemarle	15,462	4,321	604	3,866	6,671	75,809	18,386	2,612	20,069	34,742
Alleghany	7,563	887	581	961	5,134	25,779	3,724	2,429	2,500	17,126
Amelia	12,870	7,712	62	2,005	3,091	51,647	29,135	114	8,620	13,778
Amherst	11,170	2,420	780	3,555	4,415	52,944	12,415	3,689	17,443	19,397
Appomattox	9,325	5,026	99	1,172	3,028	38,545	17,952	--	7,598	12,995
Arlington	--	--	--	--	--	--	--	--	--	--
Augusta	7,948	651	805	826	5,666	33,630	3,892	3,544	2,210	23,984
Bath	9,596	544	596	1,528	6,928	37,229	2,718	4,420	3,568	26,523
Bedford	16,781	3,921	333	5,463	7,064	71,452	13,920	1,499	27,909	28,124
Bland	7,196	116	1,025	2,599	3,456	27,684	771	5,609	6,712	14,592
Botetourt	6,655	534	485	2,836	4,800	41,372	3,730	3,511	12,411	21,720
Brunswick	22,068	14,136	316	3,210	4,406	75,238	50,891	94	7,507	16,746
Buchanan	10,814	--	409	4,444	5,961	47,322	--	2,781	18,916	25,625
Buckingham	19,793	10,259	74	2,924	6,536	52,057	24,681	163	10,698	16,515
Campbell	13,863	6,234	--	2,900	4,729	48,840	19,383	--	11,951	17,506
Caroline	17,535	8,255	6	5,101	4,173	61,496	24,642	--	20,931	15,923
Carroll	7,377	342	3,980	1,047	2,008	48,453	3,906	26,961	3,901	13,685
Charles City	6,676	3,486	166	1,266	1,758	26,630	14,767	995	4,830	6,038
Charlotte	14,394	8,817	122	2,510	2,945	42,450	21,469	278	9,008	11,695
Chesapeake	3,797	930	14	2,011	842	17,625	5,283	88	7,997	4,257
Chesterfield	13,567	6,310	16	2,464	4,777	50,530	25,305	--	7,722	17,503
Clarke	1,990	--	--	1,087	903	9,272	--	--	5,477	3,795
Craig	5,604	702	447	314	4,141	22,594	5,409	3,523	432	13,230
Culpeper	4,981	1,071	45	1,864	2,001	24,820	6,183	28	7,200	11,409
Cumberland	10,217	5,380	5	1,974	2,858	23,624	9,521	--	7,025	7,078
Dickenson	5,165	306	299	1,855	2,705	25,411	1,690	1,265	8,787	13,669
Dinwiddie	17,388	10,029	42	2,749	4,568	57,664	32,453	68	8,509	16,634
Essex	6,046	2,175	83	1,704	2,084	28,570	9,403	--	8,168	10,999
Fairfax	3,062	191	a5	916	1,870	15,102	732	386	4,731	9,253
Fauquier	7,764	1,231	211	2,499	3,823	37,111	5,040	260	12,716	19,095
Floyd	7,990	374	3,484	1,869	2,263	39,399	719	22,683	6,046	9,951
Fluvanna	8,700	3,973	13	1,668	3,046	25,635	10,548	--	6,050	9,037
Franklin	18,415	2,946	965	8,137	6,367	77,181	10,019	3,953	37,063	26,146
Frederick	4,196	190	226	1,218	2,562	20,229	996	1,347	3,446	14,440
Giles	6,710	106	249	2,107	4,248	30,834	588	1,284	11,240	17,722
Gloucester	8,066	3,696	10	2,443	1,917	31,426	12,936	--	10,033	a,457
Goochland	8,320	2,784	56	2,419	3,061	37,099	7,088	--	13,141	16,070
Grayson	7,171	205	2,533	1,783	2,650	39,059	299	14,412	9,096	15,252
Greene	2,913	760	88	998	1,059	15,516	4,274	351	4,650	6,241
Greensville	9,082	3,798	91	2,979	2,214	31,249	10,179	409	8,822	11,839
Halifax	21,599	9,892	229	5,830	5,648	85,670	36,027	43	19,505	30,095
Hampton	400	--	--	115	285	1,385	--	--	384	1,001
Hanover	13,261	6,114	--	3,594	3,553	46,130	20,260	--	12,029	13,841
Henrico	4,121	986	25	1,340	1,770	12,187	4,488	--	2,515	5,184
Henry	10,242	4,838	989	2,061	2,354	26,765	10,778	3,909	5,562	6,516
Highland	7,630	189	1,588	1,207	4,646	31,168	966	4,363	4,144	21,695
Isle of Wight	6,250	2,720	--	2,211	1,319	22,873	9,143	--	8,032	5,698
James City	4,628	1,820	--	1,285	1,523	18,094	7,010	--	4,754	6,330
King and Queen	11,896	6,865	74	2,631	2,326	40,566	22,759	459	8,441	8,907
King George	4,560	447	14	2,664	1,435	23,346	2,876	140	14,299	6,031
King William	8,283	5,122	--	1,629	1,532	26,310	14,959	--	4,623	6,728

Continued

Table (I)--Average net annual growth of growing stock end sawtimber on timberland, by county and species group, Virginia, 1986-1991--Continued

County	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet						Thousand board feet			
Lancaster	3,533	2,027	--	768	738	15,831	7,793	--	3,582	4,456
Lee	5,462	—	508	2,157	2,797	19,003	--	496	7,958	10,549
Loudoun	4,126	270	169	871	2,816	15,052	8	94	4,530	10,420
Louisa	15,572	6,505	274	2,726	6,067	42,470	9,078	148	12,886	20,358
Lunenburg	13,464	7,438	142	2,789	3,095	49,367	28,258	350	8,145	12,614
Madison	4,118	358	285	1,247	2,228	23,894	1,234	1,559	9,391	11,710
Mathews	2,353	1,698	6	445	204	12,758	10,589	--	721	1,448
Mecklenburg	18,560	6,619	157	5,104	6,680	67,303	17,260	115	20,539	29,389
Middlesex	3,561	1,876	44	762	879	11,731	5,778	--	2,481	3,472
Montgomery	6,346	719	1,382	975	3,270	29,131	4,009	? ,894	3,737	13,491
Nelson	11,843	2,502	476	4,129	4,736	53,783	2,824	2,315	25,322	23,322
New Kent	8,774	4,195	--	2,343	2,236	27,591	9,710	--	7,790	10,091
Newport News	646	298	--	215	133	3,064	1,576	--	771	717
Northampton	1,997	1,122	--	594	281	7,711	5,479	--	1,161	1,071
Northumberland	3,156	1,064	--	1,000	1,092	14,022	4,735	--	4,348	4,939
Nottoway	10,097	6,493	33	1,546	2,025	27,708	16,069	--	5,780	5,859
Orange	7,029	2,857	173	1,434	2,565	23,313	4,254	584	7,477	10,998
Page	2,491	239	207	290	1,755	12,242	1,496	598	1,787	8,361
Patrick	12,560	1,448	758	5,524	4,830	47,048	6,341	4,222	18,781	17,704
Pittsylvania	27,193	8,767	114	8,593	9,719	100,977	19,512	405	35,675	45,385
Powhatan	8,049	2,212	10	2,580	3,247	34,549	4,075	--	13,883	16,591
Prince Edward	9,015	3,675	92	2,595	2,653	26,039	8,466	13	7,073	10,487
Prince George	8,046	4,271	174	1,756	1,845	24,131	10,370	1,035	5,850	6,876
Prince William	4,312	902	89	918	2,403	20,926	3,780	398	5,370	11,378
Pulaski	4,074	170	265	987	2,652	16,188	660	1,092	3,044	11,392
Rappahannock	3,060	92	52	1,528	1,388	15,561	438	310	9,014	5,799
Richmond	5,918	2,944	--	1,906	1,068	25,096	10,259	--	10,504	4,333
Roanoke	4,988	747	456	966	2,819	19,214	5,100	2,772	1,326	10,011
Rockbridge	9,000	534	832	2,230	5,404	42,290	3,341	3,720	10,452	24,777
Rockingham	7,442	135	1,485	1,296	4,526	28,616	1,060	4,477	3,800	19,279
Russell	7,643	--	469	3,468	3,706	31,718	—	441	13,941	17,336
Scott	9,095	324	117	4,332	4,322	37,939	1,885	177	16,635	19,242
Shenandoah	5,422	341	205	1,347	3,529	22,631	3,334	1,348	2,751	15,198
Smyth	5,757	217	499	1,336	3,705	27,303	876	2,047	6,226	18,154
Southampton	17,720	9,989	226	4,981	2,524	57,819	31,966	1,308	15,863	8,682
Spotsylvania	13,910	6,863	35	3,426	3,586	41,391	17,311	173	12,530	11,377
Stafford	8,140	745	93	4,600	2,702	31,687	3,854	--	14,515	13,318
Suffolk	7,198	3,238	153	2,563	1,244	26,640	10,106	917	10,553	5,064
Surry	8,683	5,011	55	2,002	1,615	27,920	15,686	309	6,693	5,232
Sussex	19,219	12,928	106	3,004	3,181	56,659	36,220	578	8,424	11,437
Tazewell	9,380	--	115	4,019	5,246	38,508	--	107	19,019	19,382
Virginia Beach	2,229	945	21	866	397	7,391	3,228	121	2,158	1,884
Warren	2,137	37	31	688	1,381	8,624	346	421	2,179	5,678
Washington	7,852	84	218	4,037	3,513	38,552	325	883	20,267	17,077
Westmoreland	5,586	2,370	71	1,696	1,449	18,368	5,784	--	7,120	5,464
Wise	5,863	16	260	2,979	2,608	26,355	102	1,016	12,148	13,089
Wythe	4,627	110	942	573	3,002	24,607	664	7,069	1,161	15,713
York	2,362	490	--	1,034	838	10,854	2,892	--	3,768	4,194
Total	848,406	283,047	34,123	226,627	304,609	3,270,417	910,911	167,187	903,382	1,288,937

Table 9--Average annual removals of growing stock and sawtimber on timberland, by county and species group, Virginia, 1986-1991

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				
Accomack	2,614	1,736	--	464	414	9,104	7,424	--	1,372	308
Albemarle	9,237	4,739	288	2,622	1,588	39,857	18,602	1,427	13,697	6,131
Al leglhany	965	226	--	260	479	2,236	504	--	--	1,732
Amelia	13,467	4,523	--	2,646	6,298	39,610	9,807	--	9,819	19,984
Amherst	7,787	2,897	120	1,128	3,642	15,111	4,030	331	733	10,017
Appomattox	7,796	4,429	115	198	3,054	17,555	5,847	454	--	11,254
Arlington	--	--	--	--	--	--	--	--	--	--
Augusta	3,934	179	--	248	3,507	9,754	326	--	329	9,099
Bath	3,764	--	--	787	2,977	11,956	--	--	2,527	9,429
Bedford	9,366	356	239	3,591	5,180	34,017	1,032	1,243	12,945	18,797
Bland	1,870	--	418	961	491	8,622	--	2,375	4,247	2,000
Botetourt	7,118	770	207	2,530	3,611	26,615	1,648	869	11,612	12,486
Brunswick	14,557	8,229	--	3,858	2,470	48,576	26,167	--	14,865	7,544
Buchanan	4,513	--	122	2,314	2,077	18,459	--	453	11,041	6,965
Buckingham	11,651	7,000	--	1,170	3,481	27,456	14,350	--	4,166	8,940
Campbell	5,326	3,492	--	401	1,433	12,244	10,190	--	1,028	1,026
Caroline	14,399	7,818	--	1,755	4,826	42,191	24,209	--	3,351	14,631
Carroll	11,774	1,080	7,074	--	3,620	48,511	2,162	34,999	--	11,350
Charles City	7,003	4,035	--	1,355	1,613	24,902	14,727	--	4,431	5,744
Charlotte	7,456	3,958	77	2,909	512	25,715	11,839	318	12,360	1,198
Chesapeake	7,791	1,503	--	5,120	1,168	23,827	7,957	--	14,100	1,770
Chesterfield	16,195	8,663	--	2,102	5,430	48,959	29,482	--	5,000	14,477
Clarke	--	--	--	--	--	--	--	--	--	--
Craig	1,206	1,012	--	--	194	6,453	5,434	--	--	1,019
Culpeper	2,598	1,616	47	286	649	7,189	3,142	--	1,075	2,972
Cumberland	8,050	5,431	88	1,533	998	18,364	9,690	341	4,425	3,908
Dickenson	7,047	--	141	1,958	4,948	20,234	--	693	10,594	16,947
Dinwiddie	12,079	6,809	--	1,842	3,428	45,869	30,118	--	4,287	11,464
Essex	5,576	1,144	--	1,835	3,597	29,003	5,802	--	6,343	16,858
Fairfax	3,051	61	142	740	2,108	10,131	--	--	2,879	7,252
Fauquier	4,754	1,388	--	250	3,116	16,491	5,319	--	--	11,172
Floyd	14,417	798	9,189	2,672	1,758	68,396	2,108	45,494	13,378	7,416
Fluvanna	4,765	3,409	77	136	1,143	15,784	12,347	--	--	3,437
Franklin	9,936	4,052	1,328	1,506	3,050	32,870	12,649	6,288	5,149	8,784
Frederick	1,890	--	--	--	1,890	10,248	--	--	--	10,248
Giles	2,128	--	--	349	1,779	7,956	--	--	1,573	6,383
Gloucester	6,278	1,331	--	3,251	1,696	27,271	7,257	--	13,050	6,964
Goochland	1,545	224	--	499	822	5,989	1,250	--	1,264	3,475
Grayson	4,645	--	404	1,188	3,053	19,882	--	2,151	5,270	12,461
Greene	--	--	--	--	--	--	--	--	--	--
Greensville	9,160	6,691	--	560	1,909	33,306	25,932	--	933	6,441
Halifax	22,552	7,123	--	9,072	6,357	66,047	16,909	--	27,533	21,605
Hampton	1,969	1,344	--	188	437	9,014	6,333	--	665	2,016
Hanover	6,630	3,971	--	1,978	681	20,419	12,889	--	5,935	1,595
Henrico	2,068	221	--	765	1,082	4,281	--	--	2,294	1,987
Henry	7,940	3,465	--	2,977	1,498	21,526	7,138	--	10,129	4,259
Highland	2,252	--	201	638	1,413	10,917	--	1,217	2,988	6,712
Isle of Wight	13,110	5,645	--	4,682	2,783	53,693	30,026	--	13,256	10,411
James City	82	--	--	82	--	--	--	--	--	--
King and Queen	8,352	3,263	--	2,247	2,842	26,128	6,186	--	7,031	12,911
King George	1,745	363	--	957	425	7,192	1,913	--	3,628	1,651
King William	11,634	4,489	76	3,707	3,362	38,731	15,177	--	12,273	11,281

Continued

Table 9--Average annual removals of growing stock and sawtimber on timberland, by county and species group, Virginia, 1986-1991--Continued

county	Growing stock					Sawtimber				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet					Thousand board feet				
Lancaster	2,917	1,922	--	513	482	4,403	2,278	--	1,273	852
Lee	3,111	--	--	2,212	899	9,873	--	--	7,878	1,995
Loudoun	1,870	619	--	435	816	3,808	1,195	--	1,135	1,478
Louisa	5,904	2,715	--	339	2,850	14,446	5,933	--	380	8,133
Lunenburg	13,523	2,347	--	5,880	5,296	44,108	6,090	--	19,337	18,681
Madison	3,690	2,067	--	248	1,375	11,012	7,392	--	467	3,153
Mathews	1,404	678	--	152	574	3,231	2,030	--	404	797
Mecklenburg	8,406	4,524	166	534	3,182	20,145	11,331	--	590	8,224
Middlesex	3,454	1,564	--	1,890	--	9,417	2,537	--	6,880	--
Montgomery	2,500	--	--	--	2,500	9,567	--	--	--	9,567
Nelson	3,794	268	--	1,296	2,230	13,057	562	--	5,295	7,200
New Kent	8,980	6,463	--	1,298	1,219	28,970	20,246	--	4,540	4,184
Newport News	251	--	--	--	251	683	--	--	--	683
Northampton	1,311	962	--	178	171	4,309	3,757	--	552	--
Northumberland	4,786	1,156	--	961	2,669	21,155	6,098	--	4,792	10,265
Not toway	11,549	10,755	--	140	654	42,704	39,390	--	--	3,314
Orange	4,445	302	--	534	3,609	16,563	596	--	2,216	13,751
Page	--	--	--	--	--	--	--	--	--	--
Patrick	4,390	803	777	1,942	868	12,643	960	3,295	5,298	3,090
Pittsylvania	12,810	7,392	--	2,610	2,808	44,576	24,742	--	9,047	10,787
Powhatan	4,562	1,814	102	735	1,911	10,847	4,022	--	875	5,950
Prince Edward	7,131	1,830	--	1,103	4,198	21,691	4,727	--	4,869	12,095
Prince George	7,357	6,486	--	298	573	21,741	18,607	--	1,218	1,916
Prince William	4,230	1,048	58	565	2,559	15,891	3,943	--	1,782	10,166
Pulaski	--	--	--	--	--	--	--	--	--	--
Rappahannock	1,679	933	--	--	746	6,713	3,320	--	--	3,393
Richmond	3,747	2,107	--	727	913	13,063	7,641	--	2,848	2,574
Roanoke	2,017	--	--	310	1,707	4,997	--	--	1,406	3,591
Rockbridge	5,625	1,563	--	710	3,352	21,083	3,849	--	2,695	14,539
Rockingham	3,216	--	539	272	2,405	13,572	--	3,084	1,208	9,280
Russell	3,385	--	219	368	2,798	14,344	--	1,331	1,067	11,946
Scott	3,150	--	--	2,043	1,107	10,008	--	--	7,795	2,213
Shenandoah	101	--	--	--	101	305	--	--	--	305
Smyth	4,517	2,558	--	507	1,452	12,794	8,848	--	512	3,434
Southampton	21,613	8,221	85	6,451	6,856	77,199	32,633	--	20,452	24,114
Spotsylvania	10,194	6,835	--	1,885	1,474	23,928	17,537	--	4,569	1,822
Stafford	3,262	2,729	--	397	136	7,915	5,395	--	1,973	547
Suffolk	6,938	1,783	--	4,027	1,128	28,349	7,574	--	17,672	3,103
Surry	9,134	3,440	--	1,201	4,493	38,034	16,328	--	5,659	16,047
Sussex	19,464	11,846	--	3,556	4,062	62,777	43,389	--	10,457	8,931
Tazewell	5,454	--	49	2,289	3,116	24,528	--	--	11,056	13,472
Virginia Beach	3,174	603	--	2,097	474	11,527	3,499	--	6,928	1,100
Warren	3,178	527	--	387	2,264	9,206	1,498	--	1,838	5,870
Washington	2,822	1,011	325	158	1,328	12,955	5,141	1,801	646	5,367
Westmoreland	3,773	698	--	1,159	1,916	15,500	2,578	--	5,468	7,454
Wise	11,459	--	--	5,204	6,255	42,951	--	--	15,045	27,906
Wythe	1,694	135	--	49	1,510	6,095	760	--	--	5,335
York	49	--	--	--	49	--	--	--	--	--
Total	599,062	230,187	22,673	139,977	206,225	2,019,344	734,348	108,164	481,697	695,135

State Tables

Table 10--Area of timberland, by forest type and ownership class, Virginia, 1992

Forest type	All ownerships	Ownership class				
		National forest	Other public	Forest industry	Forest industry- leased	Other private
<u>Acres</u>						
Softwood types						
White pine-hemlock	216,920	25,910	4,181	5,857	--	180,972
Spruce-fir	--		--	--	--	--
Longleaf pine	--				--	--
Slash pine	--	--	--	--	--	--
Loblolly pine	1,996,447		78,869	767,941	7,922	1,141,715
Shortleaf pine	118,428		4,016	4,394	--	110,018
Virginia pine	802,645	13,170	51,087	52,823	--	685,565
Sand pine	--	--		--	--	--
Eastern redcedar	87,498			--	--	87,498
Pond pine	1,753			--	--	1,753
Spruce pine	--	--		--	--	--
Pitch pine	66,119	30,591		--	--	35,528
Table Mountain pine	62,941	37,551		1,256	--	24,134
Total	3,352,751	107,222	138,153	832,271	7,922	2,267,183
Hardwood types						
Oak-pine	1,941,207	149,686	54,939	215,709	--	1,520,873
Oak-hickory	8,276,236	825,534	255,580	382,608	9,444	6,803,070
Chestnut oak	1,095,830	369,476	39,374	33,927	--	653,053
Southern scrub oak	5,002	--	--	--	--	5,002
Oak-gum-cypress	392,257	--	9,896	49,147	--	333,214
Elm-ash-cottonwood	242,764	--	16,865	23,735	--	202,164
Maple-beech-birch	141,503	16,208	353	--	--	124,942
Total	12,094,799	1,360,904	377,007	705,126	9,444	9,642,318
All types	15,447,550	1,468,126	515,160	1,537,397	17,366	11,909,501

Table 11--Area of timberland, by ownership and stocking class of growing-stock trees, Virginia, 1992

Ownership class	All classes	Stocking class (percent) ^a				
		>130	100-130	60-99	16.7-59	<16.7
<u>Acres</u>						
National forest	1,468,126	57,802	390,162	832,250	183,059	4,853
Other public	515,160	43,798	180,229	233,685	53,638	3,810
Forest industry	1,537,397	152,715	779,260	471,118	98,092	36,212
Forest industry-leased	17,366	2,003	15,363	--	--	--
Other private	11,909,501	593,047	4,031,591	5,393,620	1,702,960	188,283
All ownerships	15,447,550	849,365	5,396,605	6,930,673	2,037,749	233,158

^aSee stocking standards on page 16.

Table 12--Area of timberland, by forest type and stand-size class, Virginia, 1992

Forest type	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling-seedling	
Acres					
Softwood type6					
White pine-hemlock	216,920	149,168	27,200	36,040	4,512
Spruce-fir	--	--	--	--	--
Longleaf pine	--	--	--	--	--
Slash pine	--	--	--	--	--
Loblolly pine	1,996,447	540,383	769,513	667,179	19,372
Shortleaf pine	118,428	73,408	32,401	12,619	--
Virginia pine	802,645	302,027	343,964	152,683	3,971
Sand pine	--	--	--	--	--
Eastern redcedar	87,498	8,328	16,792	53,678	8,700
Pond pine	1,753	1,753	--	--	--
Spruce pine	--	--	--	--	--
Pitch pine	66,119	44,746	12,847	8,526	--
Table Mountain pine	62,941	29,392	27,629	5,920	--
Total	3,352,751	1,149,205	1,230,346	936,645	36,555
Hardwood types					
Oak-pine	1,941,207	772,230	577,187	582,487	9,303
Oak-hickory	8,276,236	4,520,304	2,330,651	1,380,118	45,163
Chestnut oak	1,095,830	683,052	391,306	21,472	--
Southern scrub oak	5,002	--	--	5,002	--
Oak-gum-cypress	392,257	203,329	113,693	65,848	9,387
Elm-ash-cottonwood	242,764	143,711	52,924	42,438	3,691
Maple-beech-birch	141,503	127,586	13,917	--	--
Total	12,094,799	6,450,212	3,479,678	2,097,365	67,544
All types	15,447,550	7,599,417	4,710,024	3,034,010	104,099

Table 13--Area of timberland, by stand-age and broad management classes, all ownerships, Virginia, 1992

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
O-10	1,705,241	525,030	119,501	363,584	669,955	27,171
11-20	1,455,053	468,744	211,060	227,336	491,761	56,152
21-30	1,207,990	342,906	288,204	160,660	402,096	14,124
31-40	1,055,712	119,904	277,445	113,824	519,567	24,972
41-50	1,361,383	8,609	325,203	132,799	851,853	42,919
51-60	1,926,517	--	263,851	242,636	1,356,744	63,286
61-70	1,819,932	--	146,808	194,780	1,418,716	59,628
71-80	1,282,400	--	70,466	137,927	1,027,139	46,868
81+	1,784,681	--	89,566	150,772	1,460,950	83,393
No manageable stand	1,848,641	7,131	88,323	216,889	1,319,790	216,508
All classes	15,447,550	1,472,324	1,880,427	1,941,207	9,518,571	635,021

Table 14--Area of timberland, by stand-age and broad management classes, public ownerships, Virginia, 1992

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
O-10	87,480	12,682	7,052	11,228	56,518	--
11-20	84,401	13,043	10,360	13,722	47,276	--
21-30	103,983	1,677	20,415	23,098	58,320	473
31-40	47,294	4,548	24,644	2,103	15,999	--
41-50	117,948	459	38,729	8,617	68,960	1,183
51-60	186,696	--	31,229	31,569	122,807	1,091
61-70	290,391	--	25,621	13,255	251,515	--
71-80	286,060	--	27,786	47,933	204,251	6,090
81+	545,941	--	24,423	22,411	485,493	13,614
No manageable stand	233,092	--	2,707	30,689	195,386	4,310
All classes	1,983,286	32,409	212,966	204,625	1,506,525	26,761

Table 15--Area of timberland, by stand-age and broad management classes, forest industry,a Virginia, 1992

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
0-10	375,867	234,340	7,101	76,059	53,691	4,676
11-20	309,417	216,917	26,453	19,265	30,230	16,552
21-30	249,672	176,341	30,772	21,311	18,951	2,297
31-40	99,099	48,068	24,346	11,696	14,989	--
41-50	84,757	--	27,658	11,978	38,014	7,107
51-60	78,688	--	15,525	23,346	31,115	8,702
61-70	106,844	--	6,683	14,529	80,628	5,004
71-80	43,560	--	7,705	10,418	23,245	2,192
81+	94,687	--	8,977	12,059	58,069	15,582
No manageable stand	112,172	--	9,307	15,048	77,047	10,770
All classes	1,554,763	675,666	164,527	215,709	425,979	72,882

^aIncludes 17,366 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 Virginia, 1992

Stand-age class (years)	All classes	Broad management class				
		Pine plantation	Natural pine	Oak-pine	Upland hardwood	Lowland hardwood
Acres						
0-10	1,241,894	278,008	105,348	276,297	559,746	22,495
11-20	1,061,235	238,784	174,247	194,349	414,255	39,600
21-30	854,335	164,888	237,017	116,251	324,825	11,354
31-40	909,319	67,288	228,455	100,025	488,579	24,972
41-50	1,158,678	8,150	258,816	112,204	744,879	34,629
51-60	1,661,133	--	217,097	187,721	1,202,822	53,493
61-70	1,422,697	--	114,504	166,996	1,086,573	54,624
71-80	952,780		34,975	79,576	799,643	38,586
81+	1,144,053	--	56,166	116,302	917,388	54,197
No manageable stand	1,503,377	7,131	76,309	171,152	1,047,357	201,428
All classes	11,909,501	764,249	1,502,934	1,520,873	7,586,067	535,378

^aExcludes 17,366 acres of other private land under long-term lease to forest industry.

Table 17--**Area** of timberland, by broad management and stand-volume classes,
Virginia, 1992

Broad management class	All classes	Stand-volume class (cubic feet of growing stock per acre)				
		0-499	500-999	1000-1499	1500-1999	2000+
		<u>Acres</u>				
Pine plantation	1,472,324	654,966	190,891	183,483	149,768	293,216
Natural pine	1,880,427	309,710	159,931	235,516	198,736	976,534
Oak-pine	1,941,207	560,010	268,232	300,400	227,603	584,962
Upland hardwood	9,518,571	1,308,681	1,103,159	1,410,891	1,597,224	4,098,616
Lowland hardwood	635,021	152,072	107,597	79,152	61,855	234,345
All classes	15,447,550	2,985,439	1,829,810	2,209,442	2,235,186	6,187,673

Table 18--Volume of growing stock on timberland, by broad management class, species group, and stand-age class, Virginia, 1992

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	1,469,711	—	17,814	391,290	724,603	287,079	48,925	--	--	--	--
Hardwood	116,416	--	12,655	22,587	57,355	16,812	7,007	--	--	--	--
Total	1,586,127	--	30,469	413,877	781,958	303,891	55,932	--	--	—	--
Natural pine											
Softwood	3,163,857	15,021	15,876	104,305	393,170	561,872	770,461	654,293	362,654	126,375	159,830
Hardwood	631,781	2,521	14,106	19,583	53,020	95,295	110,772	133,001	90,410	36,244	76,829
Total	3,795,638	17,542	29,982	123,888	446,190	657,167	881,233	787,294	453,064	162,619	236,659
Oak-pine											
Softwood	1,149,016	56,234	14,209	68,340	97,612	88,257	115,450	215,415	198,676	123,292	171,531
Hardwood	1,534,516	54,405	39,945	68,103	97,682	122,880	180,901	284,896	265,538	179,372	240,794
Total	2,683,532	110,639	54,154	136,443	195,294	211,137	296,351	500,311	464,214	302,664	412,325
Upland hardwood											
Softwood	783,915	53,339	9,418	39,319	39,911	61,912	91,836	125,834	124,269	112,544	125,533
Hardwood	16,515,786	855,983	191,200	245,263	404,940	782,757	1,648,571	3,115,491	3,354,614	2,323,738	3,593,229
Total	17,299,701	909,322	200,618	284,582	444,851	844,669	1,740,407	3,241,325	3,478,883	2,436,282	3,718,762
Lowland hardwood											
Softwood	81,889	6,187	827	1,042	1,274	3,234	3,573	7,476	14,844	8,974	34,458
Hardwood	1,039,907	131,675	3,014	30,216	19,246	40,959	86,314	170,030	168,769	156,735	232,949
Total	1,121,796	137,862	3,841	31,258	20,520	44,193	89,887	177,506	183,613	165,709	267,407
All types											
Softwood	6,648,388	130,781	58,144	604,296	1,256,570	1,002,354	1,030,245	1,003,018	700,443	371,185	491,352
Hardwood	19,838,406	1,044,584	260,920	385,752	632,243	1,058,703	2,033,565	3,703,418	3,879,331	2,696,089	4,143,801
Total	26,486,794	1,175,365	319,064	990,048	1,888,813	2,061,057	3,063,810	4,706,436	4,579,774	3,067,274	4,635,153

Table 19--Average net annual growth of growing stock on timberland, by broad management class, species group, and stand-age class, Virginia, 1986-1991

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	144,767	—	13,008	67,043	50,236	13,061	1,419	--	--	--	—
Hardwood	9,877	--	817	2,422	4,838	1,688	112	—	--	--	--
Total	154,644	--	13,825	69,465	55,074	14,749	1,531	--	--	—	--
Natural pine											
Softwood	110,661	607	1,248	12,360	25,417	22,300	23,261	14,734	6,563	1,873	2,298
Hardwood	26,386	84	683	1,302	3,549	5,340	5,151	4,990	2,674	823	1,790
Total	137,047	691	1,931	13,662	28,966	27,640	28,412	19,724	9,237	2,696	4,088
Oak-pine											
Softwood	37,613	1,683	1,528	7,097	5,593	3,781	3,318	5,199	3,768	2,274	3,372
Hardwood	50,168	1,510	1,809	5,409	5,536	5,396	7,271	8,471	7,163	3,637	3,966
Total	87,781	3,193	3,337	12,506	11,129	9,177	10,589	13,670	10,931	5,911	7,338
Upland hardwood											
Softwood	22,108	1,536	713	2,777	2,050	2,357	2,813	2,542	2,433	2,436	2,451
Hardwood	414,860	25,012	8,536	16,171	21,761	32,585	53,075	78,037	73,992	46,088	59,603
Total	436,968	26,548	9,249	18,948	23,811	34,942	55,888	80,579	76,425	48,524	62,054
Lowland hardwood											
Softwood	2,021	137	29	66	46	178	112	243	297	203	710
Hardwood	29,945	4,949	485	2,365	993	1,686	3,169	4,360	4,307	3,376	4,255
Total	31,966	5,086	514	2,431	1,039	1,864	3,281	4,603	4,604	3,579	4,965
All types											
Softwood	317,170	3,963	16,526	89,343	83,342	41,677	30,923	22,718	13,061	6,786	8,831
Hardwood	531,236	31,555	12,330	27,669	36,677	46,695	68,778	95,858	88,136	53,924	69,614
Total	848,406	35,518	28,856	117,012	120,019	88,372	99,701	118,576	101,197	60,710	78,445

^aClassifications at the end of the remeasurement period.

Table 20--Average annual removals of growing stock on timberland, by broad management class, species group, and stand-age class, Virginia, 1986-1991

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	46,550	---	---	15,513	24,886	6,151	---	---	---	---	---
	3,677	--	---	202	2,530	945	---	---	--	--	---
	50,227	---	---	15,715	27,416	7,096	--	--	---	---	--
Natural pine	154,627	234	109	7,247	11,058	39,892	45,518	31,059	17,479	2,031	---
Softwood	25,591	---	--	1,059	2,163	4,371	7,955	5,679	3,594	770	--
Hardwood											--
Total	180,218	234	109	8,306	13,221	44,263	53,473	36,738	21,073	2,801	--
Oak-pine	31,412	537	432	1,167	2,751	6,264	7,236	4,705	4,978	1,828	1,514
Softwood	34,253	1,039	85	255	1,518	5,595	7,622	6,268	6,798	3,161	1,912
Hardwood											
Total	65,665	1,576	517	1,422	4,269	11,859	14,858	10,973	11,776	4,989	3,426
Upland hardwood	19,106	340	316	825	772	2,241	2,709	3,247	4,224	2,627	1,805
Softwood	250,683	12,143	2,020	1,718	8,935	20,053	23,253	45,707	54,458	37,510	44,886
Hardwood											
Total	269,789	12,483	2,336	2,543	9,707	22,294	25,962	48,954	58,682	40,137	46,691
Lowland hardwood	1,165	---	---	---	194	525	85	168	83	110	---
Softwood	31,998	3,801	---	--	662	3,344	4,457	11,595	3,445	3,420	1,274
Hardwood											
Total	33,163	3,801	---	---	856	3,869	4,542	11,763	3,528	3,530	1,274
All types	252,860	1,111	857	24,752	39,661	55,073	55,548	39,179	26,764	6,596	3,319
Softwood	346,202	16,983	2,105	3,234	15,808	34,308	43,287	69,249	68,295	44,861	48,072
Hardwood											
Total	599,062	18,094	2,962	27,986	55,469	89,381	98,835	108,428	95,059	51,457	51,391

^aClassifications before timber removals.

Table 21--Merchantable volume of live trees and growing stock on timberland, by forest-type and species groups, Virginia, 1992

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	478,473	18,871	335,309	33,719	90,574	449,887	18,546	329,886	30,140	71,315
Spruce-fir	--	--	--	--	--	--	--	--	--	--
Longleaf-slash pine	--	--	--	--	--	--	--	--	--	--
Loblolly-shortleaf pine	5,049,640	4,254,857	68,357	370,472	355,954	4,931,878	4,219,382	65,754	342,139	304,603
Oak-pine	2,862,581	875,949	287,127	559,024	1,140,481	2,683,532	865,772	283,244	516,124	1,018,392
Oak-hickory	18,565,497	551,712	232,789	5,916,575	11,864,421	16,968,071	542,364	227,450	5,502,528	10,695,729
Oak-gum-cypress	891,083	24,891	50,235	524,988	290,969	799,379	24,891	49,040	463,636	261,812
Elm-ash-cottonwood	389,293	4,362	4,930	235,584	144,417	322,417	4,362	3,596	198,413	116,046
Maple-beech-birch	375,991	--	14,101	81,347	280,543	331,630	--	14,101	73,169	244,360
All types	28,612,558	5,730,642	992,848	7,721,709	14,167,359	26,486,794	5,675,317	973,071	7,126,149	12,712,257

Table 22--Area of timberland treated or disturbed annually and retained in timberland, by treatment or disturbance and ownership class, Virginia, 1986 to 1992

Treatment or disturbance	All ownerships	Ownership class			
		Public	Forest industry	Forest industry- leased	Other private
Acres ^a					
Final harvest	186,158	10,599	38,488	--	137,071
Partial harvest ^b	44,630	1,803	1,226	--	41,601
Commercial thinning	21,660	277	9,694	—	11,689
Other stand improvement	5,864	2,795	957	—	2,112
Site preparation	81,416	4,065	33,090	--	44,261
Artificial regeneration ^c	77,697	1,222	32,821	--	43,654
Natural regeneration ^c	123,486	9,785	11,451	--	102,250
Other treatment	73,317	6,068	1,162	--	66,087
Natural disturbance	195,894	47,622	10,753	--	137,519

^aSince some acres experience more than one treatment or disturbance, there are no column totals.

^bIncludes high grading and some selective cutting.

^cIncludes 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, Virginia, 1986 to 1992

Treatment or disturbance	All classes	Broad management class^a				
		Pine plantation	Natural pine	Oak- pine	Upland hardwood	Lowland hardwood
Acres^b						
Final harvest	186,158	9,595	53,478	25,087	91,417	6,581
Partial harvest^c	44,630	--	3,767	4,301	35,814	748
Commercial thinning	21,660	17,203	2,501	599	1,357	--
Other stand improvement	5,864	1,233	--	--	4,631	—
Site preparation	81,416	5,905	22,822	11,572	39,785	1,332
Other treatment	73,317	2,043	7,323	4,029	56,951	2,971
Natural disturbance	195,894	5,718	24,480	17,957	132,711	15,028

^aClassification before treatment or disturbance.

^bSince some acres experience more than one treatment or disturbance, there are no column totals.

^cIncludes high grading and some selective cutting.

Table 24--Area of timberland regenerated annually, by type of regeneration and broad management class, Virginia, 1986 to 1992

Type of regeneration	All classes	Broad management class ^a				
		Pine plantation	Natural pine	Oak- pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
Artificial regeneration following harvest	46,659	28,649	--	14,126	3,884	--
Natural regeneration following harvest	76,703	--	5,258	16,395	52,567	2,483
Other artificial regener- ation on forest land	24,771	17,006	--	6,543	1,222	--
Other natural regener- ation on forest land	26,475	--	5,737	4,222	14,882	1,634
Artificial regeneration on nonforest land	6,267	5,748	--	519	--	--
Natural reversion of nonforest land	20,308	--	6,042	5,257	8,563	446
Total	201,183	51,403	17,037	47,062	81,118	4,563

^aClassification after regeneration.

Table 25--Area of timberland, by treatment opportunity and broad management classes, Virginia, 1992

Treatment opportunity class	All classes	Broad management class				
		Pine plantation	Natural pine	Oak- pine	Upland hardwood	Lowland hardwood
<u>Acres</u>						
Salvage	78,761	2,884	22,459	9,733	39,304	4,381
Harvest	1,386,618	--	128,733	178,163	976,988	102,734
Commercial thinning	718,075	373,706	275,227	28,023	41,119	--
Other stand improvement	1,135,254	130,268	137,500	197,407	630,536	39,543
Stand conversion	62,489	--	11,192	7,018	44,279	--
Regeneration	1,264,965	7,131	69,651	140,625	893,306	154,252
Stands in relatively good condition	7,938,499	953,255	1,105,953	1,162,630	4,506,323	210,338
Adverse sites ^a	2,862,889	5,080	129,712	217,608	2,386,716	123,773
All classes	15,447,550	1,472,324	1,880,427	1,941,207	9,518,571	635,021

^aAreas where management opportunities are severely limited because of steep slopes or poor drainage.

Table 26--Area of timberland, by treatment opportunity and ownership classes, Virginia, 1992

Treatment opportunity class	All ownerships	Ownership class			
		Public	Forest industry	Forest industry- leased	Other private
			<u>Acres</u>		
Salvage	78,761	14,186	2,297	--	62,278
Harvest	1,386,618	337,924	113,548	--	935,146
Commercial thinning	718,075	13,988	221,563	2,003	480,521
Other stand improvement	1,135,254	84,955	109,817	--	940,482
Stand conversion	62,489	--	12,817	--	49,672
Regeneration	1,264,965	101,620	86,633	--	1,076,712
Stands in relatively good condition	7,938,499	811,756	896,589	15,363	6,214,791
Adverse sites ^a	2,862,889	618,857	94,133	--	2,149,899
All classes	15,447,550	1,983,286	1,537,397	17,366	11,909,501

^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, Virginia, 1992

Ownership class	Live trees					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
<u>Thousand cubic feet</u>										
National forest	2,974,967	229,944	140,628	418,469	2,185,926	2,662,644	224,472	137,974	380,200	1,919,998
Other public	1,414,515	333,555	28,314	408,931	643,715	1,300,254	330,916	27,727	376,327	565,284
Forest industry	2,239,620	1,096,098	46,012	444,820	652,690	2,153,793	1,090,292	46,012	418,723	598,766
Forest industry-leased	28,232	20,363	—	3,783	4,086	28,232	20,363	—	3,783	4,086
Other private	21,955,224	4,050,682	777,894	6,445,706	10,680,942	20,341,871	4,009,274	761,358	5,947,116	9,624,123
All ownerships	28,612,558	5,730,642	992,848	7,721,709	14,167,359	26,486,794	5,675,317	973,071	7,126,149	12,712,257

Table 28--**Volume** of sawtimber on timberland, by ownership class and species group, Virginia, 1992

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
<u>Thousand board feet</u>										
National forest	3,017,011	578,481	221,556	395,074	1,821,900	4,785,879	187,827	266,690	657,195	3,674,167
Other public	1,624,921	641,622	39,165	422,656	521,478	2,751,928	499,302	89,501	846,745	1,316,380
Forest industry	2,849,830	1,727,086	41,001	471,757	609,986	2,631,862	649,849	142,677	733,657	1,105,679
Forest industry-leased	51,244	41,327	--	3,226	6,691	4,035	--	--	4,035	--
Other private	26,563,606	8,476,983	1,077,485	6,684,847	10,324,291	35,971,205	3,158,869	2,041,166	11,873,404	18,897,766
All ownerships	34,106,612	11,465,499	1,379,207	7,977,560	13,284,346	46,144,909	4,495,847	2,540,034	14,115,036	24,993,992

^aVolume of sawtimber trees less than 15.0 inches at d.b.h.^bVolume of sawtimber trees 15.0 inches and larger at d.b.h.

Table 29--Average net annual growth and removals of growing stock on timberland, by ownership class and species group, Virginia, 1986-1991

Ownership class	Net annual growth					Annual timber removals				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Thousand cubic feet									
National forest	50,304	2,251	4,342	10,761	32,950	16,604	2,640	—	3,938	10,026
Other public	37,008	12,137	839	11,101	12,931	19,188	12,178	863	644	5,503
Forest industry	119,970	82,657	1,682	16,192	19,439	108,716	69,088	447	18,397	20,784
Forest industry-leased	1,382	936	--	157	289	—	--	—	--	—
Other private	639,742	185,066	27,260	188,416	239,000	454,554	146,281	21,363	116,998	169,912
All ownerships	848,406	283,047	34,123	226,627	304,609	599,062	230,187	22,673	139,977	206,225

Table 30--Average net annual growth and removals of sawtimber on timberland, by ownership class and species group, Virginia, 1986-1991

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	190,727	13,711	18,507	30,511	127,998	53,749	9,174	—	13,447	31,128
Other public	147,852	46,098	3,813	47,243	50,698	51,067	31,901	2,697	2,219	14,250
Forest industry	342,036	213,139	9,478	55,195	64,224	289,724	181,665	772	53,683	53,604
Forest industry-leased	7,935	6,997	--	428	510	—	--	—	—	—
Other private	2,581,867	630,966	135,389	770,005	1,045,507	1,624,804	511,608	104,695	412,348	596,153
All ownerships	3,270,417	910,911	167,187	903,382	1,288,937	2,019,344	734,348	108,164	481,697	695,135

Table 31--Volume of timber on timberland, by class of timber and species group, Virginia, 1992

Class of timber	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
<u>Thousand cubic feet</u>					
Sawtimber trees					
Saw-log portion	15,307,142	3,101,058	699,520	4,028,522	7,478,042
Upper-stem portion ^a	2,558,529	399,311	61,768	734,816	1,362,634
Total	17,865,671	3,500,369	761,288	4,763,338	8,840,676
Poletimber trees	8,621,123	2,174,948	211,783	2,362,811	3,871,581
All growing-stock trees	26,486,794	5,675,317	973,071	7,126,149	12,712,257
Rough trees					
Sawtimber size	822,635	29,533	10,287	220,133	562,682
Poletimber size	986,820	24,954	6,089	260,149	695,628
Total	1,809,455	54,487	16,376	480,282	1,258,310
Rotten trees					
Sawtimber size	290,885	838	3,401	105,532	181,114
Poletimber size	25,424	--	--	9,746	15,678
Total	316,309	838	3,401	115,278	196,792
Salvable dead trees					
Sawtimber size	41,142	8,497	758	5,437	26,450
Poletimber size	29,265	7,816	686	4,612	16,151
Total	70,407	16,313	1,444	10,049	42,601
Total, all timber	28,682,965	5,746,955	994,292	7,731,758	14,209,960

^aIncludes cull sections in the saw-log portion.

Table 32--Number of live trees on timberland, by species and diameter class, Virginia, 1992

Species	All classes	Diameter class (inches at breast height)											
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 6.9	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	80,489	16,772	16,878	16,815	12,991	9,009	5,016	2,021	698	191	86	--	--
Loblolly pine	960,922	311,206	258,739	184,128	111,276	41,249	21,103	10,145	5,394	2,193	1,350	932	7
Pond pine	518	--	--	--	76	167	108	36	33	60	29	6	3
Virginia pine	613,167	248,344	146,939	91,272	62,951	34,798	15,898	5,250	1,348	322	29	10	--
Pitch pine	35,108	11,006	5,202	3,294	4,946	4,168	3,366	1,972	745	282	109	18	--
Table Mountain pine	25,048	5,145	4,847	4,364	4,664	2,749	1,508	859	276	21	15	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	113,068	86,860	36,881	15,610	11,210	8,316	4,927	2,991	2,665	1,557	1,099	918	34
Eastern hemlock	52,126	24,400	13,091	6,293	3,754	1,821	1,390	574	567	266	192	280	98
Spruce and fir	1,574	1,302	--	--	106	--	131	29	--	--	--	--	--
Baldcypress	937	--	--	143	--	100	70	169	112	91	90	109	53
Pondcypress	176	--	--	--	32	--	26	--	31	12	19	32	24
Cedars	231,894	155,250	51,970	17,579	4,516	1,580	564	246	129	--	--	--	--
Total softwoods	2,175,627	866,885	534,547	345,498	216,594	109,957	54,113	24,298	11,998	5,595	3,018	2,305	219
Hardwood													
Select white oaks	544,067	241,649	97,779	65,055	40,745	33,454	22,886	14,883	9,615	5,389	2,921	3,292	339
Select red oaks	195,315	85,293	36,989	19,749	12,536	10,747	8,811	6,770	4,902	3,328	2,335	3,415	440
Chestnut oak	388,611	98,662	14,340	63,892	54,848	35,028	23,291	14,984	8,819	6,358	3,465	4,375	489
Other white oaks	47,331	29,511	7,691	2,500	3,257	1,808	1,093	712	375	192	87	79	26
Other red oaks	639,130	336,261	98,522	64,339	48,690	34,631	21,823	15,252	8,980	5,506	2,634	2,939	153
Hickory	466,401	210,990	85,805	39,647	26,999	17,558	11,201	6,613	3,778	1,899	1,014	856	47
Yellow birch	4,794	2,800	542	691	79	388	--	135	25	40	51	43	--
Hard maple	131,596	82,415	25,489	10,187	5,555	3,045	1,716	1,430	775	375	259	303	47
Soft maple	1,618,900	1,164,859	251,218	95,692	48,028	24,463	16,019	9,247	4,227	2,239	1,443	1,339	126
Beech	183,732	122,453	21,559	9,128	6,990	4,824	3,938	2,864	2,092	1,646	898	1,233	107
Sweetgum	752,244	514,351	138,265	46,218	23,286	14,034	7,362	4,512	2,094	928	541	591	62
Tupelo and blackgum	692,110	541,770	89,696	21,251	13,087	8,722	5,450	2,632	1,627	787	438	539	111
Ash	169,086	98,255	32,644	16,986	8,647	4,931	3,339	1,780	1,088	590	452	311	63
Cottonwood	274	--	160	--	--	10	32	--	--	--	--	12	--
Basswood	21,663	8,097	3,233	2,880	2,024	1,669	1,245	840	149	406	207	267	46
Yellow-poplar	628,179	322,903	113,620	53,914	37,808	28,317	24,750	11,840	12,884	7,567	4,171	3,974	311
Bay and magnolia	50,582	38,088	6,503	2,420	1,316	1,401	311	321	115	15	--	32	--
Black cherry	153,839	110,124	28,232	8,108	3,390	1,639	1,097	590	320	175	36	106	22
Black walnut	20,572	4,106	4,940	3,378	2,403	2,535	1,126	1,016	462	214	222	150	20
Sycamore	21,305	12,823	6,312	1,807	2,084	1,056	958	529	700	431	249	324	32
Black locust	118,039	58,867	22,054	14,909	6,535	7,013	4,251	2,189	1,154	595	270	202	--
Elm	89,619	55,459	16,714	9,946	3,415	1,835	1,233	413	284	165	60	89	6
Other eastern hardwoods	2,496,813	1,953,594	367,680	105,285	37,819	16,375	8,153	3,196	1,897	1,102	588	470	54
Total hardwoods	9,440,868	6,159,330	1,536,047	664,042	389,601	255,603	110,085	109,348	61,082	39,941	22,341	24,941	2,501
All species	11,616,495	7,026,215	2,070,594	1,009,540	606,195	365,560	224,198	133,646	19,080	45,542	25,359	27,246	2,720

Table 33--Number of growing-stock trees on timberland, by species and diameter class, Virginia, 1992

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	77,415	14,421	16,656	16,815	12,773	8,777	4,971	2,027	698	191	86	--	--
Loblolly pine	943,035	304,528	255,300	183,127	110,809	47,103	21,653	10,085	5,363	2,793	1,341	926	7
Pond pine	503	--	--	--	76	167	93	36	33	60	29	6	3
Virginia pine	569,172	217,308	138,810	94,661	61,707	34,347	15,482	5,188	1,326	304	29	10	--
Pitch pine	31,527	8,603	4,691	2,984	4,946	3,906	3,318	1,925	745	282	109	18	--
Table Mountain pine	19,663	3,224	3,435	4,185	3,779	2,494	1,469	765	276	21	15	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	163,761	79,919	35,302	15,471	11,035	8,099	4,749	2,991	2,647	1,537	1,099	878	34
Eastern hemlock	49,319	21,526	12,792	6,293	3,662	1,705	1,390	574	567	266	178	280	86
Spruce and fir	1,574	1,302	--	--	106	--	137	29	--	--	--	--	--
Baldcypress	931	--	--	143	--	100	70	169	112	91	90	109	47
Pondcypress	176	--	--	--	32	--	26	--	31	12	19	32	24
Cedars	196,744	129,914	44,517	15,520	4,397	1,580	490	197	129	--	--	--	--
Total softwoods	2,053,820	780,745	511,503	339,199	213,322	108,278	53,848	23,986	11,927	5,557	2,995	2,259	201
Hardwood													
Select white oaks	453,399	178,096	85,971	60,082	39,421	32,322	22,170	14,656	9,465	5,179	2,846	2,993	198
Select red oaks	150,187	57,937	26,081	16,859	10,463	10,167	8,508	6,463	4,746	3,181	2,270	3,145	367
Chestnut oak	288,906	55,428	50,968	52,175	46,866	31,528	20,143	12,826	7,159	5,413	2,810	3,319	271
Other white oaks	39,929	23,909	7,104	1,968	3,037	1,608	1,035	599	340	168	87	63	11
Other red oaks	526,587	248,680	83,436	59,454	46,459	33,448	20,872	14,762	8,908	5,197	2,569	2,679	123
Hickory	338,745	162,318	72,681	37,311	25,427	16,516	10,743	6,436	3,681	1,814	998	790	30
Yellow birch	2,870	1,372	542	551	79	115	--	68	25	40	35	43	--
Hard maple	73,433	31,036	21,898	8,438	5,146	2,584	1,508	1,306	721	313	226	237	20
Soft maple	899,045	567,513	168,776	73,524	40,949	20,261	13,179	7,720	3,345	1,850	1,040	815	73
Beech	115,235	68,418	18,723	7,341	5,996	3,996	3,359	2,554	1,836	1,437	713	801	61
Sweetgum	602,610	391,130	119,156	42,195	21,852	12,985	6,934	4,385	2,023	863	516	520	51
Tupelo and blackgum	258,268	156,032	53,240	21,716	10,649	7,106	4,719	2,173	1,355	612	341	282	43
Ash	91,620	41,997	20,430	12,455	6,331	3,874	2,847	1,468	1,016	492	365	296	49
Cottonwood	242	--	160	--	--	70	--	--	--	--	--	12	--
Basswood	13,106	2,260	1,446	2,735	1,704	1,620	1,067	778	695	406	192	160	43
Yellow-poplar	558,020	272,185	101,675	51,226	35,812	27,215	24,184	17,563	12,710	7,383	4,056	3,791	220
Bay and magnolia	29,309	20,696	3,879	1,830	1,290	1,028	245	225	69	15	--	32	--
Black cherry	67,752	48,082	11,254	4,364	1,394	1,029	816	394	163	175	19	48	14
Black walnut	11,413	720	2,534	2,025	1,476	2,010	990	878	355	140	195	80	10
Sycamore	20,546	7,834	5,315	1,262	2,021	1,019	935	504	679	402	241	304	30
Black locust	59,905	25,854	9,857	9,567	4,272	4,636	2,922	1,349	822	390	162	74	--
Elm	48,663	23,243	11,618	7,547	2,854	1,464	1,046	384	198	154	60	89	6
Other eastern hardwoods	138,881	71,184	23,034	17,086	10,555	7,353	4,317	2,430	1,236	870	414	362	40
Total hardwoods	4,788,671	2,455,924	899,778	491,711	324,053	223,954	152,539	99,921	61,547	36,494	20,155	20,935	1,660
All species	6,842,491	3,236,669	1,411,281	830,910	537,375	332,232	206,387	123,907	73,474	42,051	23,150	23,194	1,861

Table 34--Merchantable volume of live trees on timberland, by species and diameter class, Virginia, 1992

Species	All classes	Diameter class (inches at breast height)									
		5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 and larger
Thousand cubic feet											
Softwood											
Longleaf pine	--	--	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	482,815	51,882	96,521	120,512	104,960	61,499	30,498	10,604	6,339	--	--
Loblolly pine	3,002,066	454,107	679,314	551,646	431,458	305,409	229,869	158,323	95,761	94,930	1,249
Pond pine	12,522	--	436	1,868	1,959	1,128	1,065	2,974	1,758	625	709
Virginia pine	1,852,690	342,380	493,122	467,725	324,649	152,539	52,356	17,266	1,793	860	--
Pitch pine	246,295	9,987	29,924	45,700	62,067	52,378	25,379	12,800	6,453	1,607	--
Table Mountain pine	134,254	12,566	29,663	31,756	27,701	21,863	8,796	1,008	901	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	672,090	45,258	72,020	89,168	79,939	73,848	91,813	71,080	64,024	79,022	5,918
Eaa tern hemlock	168,405	14,313	18,519	16,453	20,252	12,440	18,172	11,793	11,911	25,542	19,010
Spruce and fir	3,686	--	606	--	2,275	805	--	--	--	--	--
Baldcypress	40,800	573	--	1,216	1,616	4,529	3,763	4,367	5,149	10,424	9,163
Pondcypress	10,342	--	184	--	585	--	1,399	679	1,363	3,245	2,887
Cedar a	97,525	42,968	23,431	14,527	8,140	4,456	4,003	--	--	--	--
Total softwoods	6,723,490	974,034	1,443,740	1,340,571	1,065,601	690,894	467,113	290,894	195,452	216,255	38,936
Hardwood											
Select white oaks	2,974,122	187,880	273,956	411,413	440,580	421,799	389,603	280,919	196,227	311,901	59,844
Select red oaks	1,552,470	59,780	81,807	128,476	169,908	186,539	186,706	169,348	151,003	337,723	81,180
Chestnut oak	2,811,389	173,086	341,301	383,727	394,188	365,158	288,989	275,456	184,230	337,009	68,245
Other white oaks	119,019	6,672	19,513	20,401	18,659	15,935	13,433	8,684	5,688	6,376	3,658
Other red oaks	2,772,091	182,574	309,264	403,745	396,340	412,740	337,179	271,210	168,966	264,751	25,322
Hickory	1,304,216	95,487	164,249	209,577	219,335	193,042	152,402	103,312	73,183	85,282	8,347
Yellow birch	19,776	2,285	735	4,189	--	3,286	797	1,745	2,365	4,374	--
Hard maple	278,290	32,375	36,735	35,218	33,380	39,267	29,694	18,902	16,159	29,078	7,482
Soft maple	1,815,334	289,519	308,427	275,505	274,794	230,160	141,785	99,312	76,928	100,924	17,980
Beech	604,106	27,988	44,049	53,417	71,128	78,639	78,118	80,822	54,149	101,272	14,524
Sweetgum	966,743	111,551	150,579	173,174	150,500	136,041	89,154	49,682	37,510	57,860	10,692
Tupelo and blackgum	548,452	67,650	74,885	93,633	94,370	61,360	54,273	31,375	21,726	34,530	14,650
Ash	396,448	43,434	48,075	59,317	60,396	48,461	41,576	28,723	27,430	27,802	11,234
Cottonwood	3,044	--	--	1,350	796	--	--	--	--	898	--
Basswood	186,936	7,576	14,485	20,917	26,758	24,899	28,916	21,269	14,210	18,275	9,631
Yellow-poplar	3,548,929	171,980	264,911	360,495	515,367	541,234	543,043	411,854	291,352	389,369	59,324
Bay and magnolia	51,657	6,626	7,627	15,889	5,341	8,034	3,743	650	--	3,747	--
Black cherry	119,938	20,492	18,157	14,241	20,223	13,966	10,743	9,272	1,606	8,292	2,946
Black walnut	143,895	7,307	14,102	25,328	20,421	27,548	14,568	9,322	14,067	8,897	2,335
Sycamore	168,947	6,761	16,704	14,242	19,403	14,706	24,495	21,300	15,493	28,811	7,032
Black locust	326,326	33,999	33,228	65,791	64,266	47,774	35,028	22,801	11,847	11,592	--
Elm	131,112	22,906	20,534	21,538	21,869	11,895	10,047	7,694	3,964	9,050	1,615
Other eastern hardwoods	1,045,828	247,414	201,971	173,374	137,442	91,483	63,373	51,256	32,856	37,774	8,885
Total hardwoods	21,889,068	1,805,342	2,445,294	2,964,957	3,155,464	2,973,966	2,537,665	1,974,908	1,400,959	2,215,587	414,926
All species	28,612,558	2,779,376	3,889,034	4,305,528	4,221,065	3,664,860	3,004,778	2,265,802	1,596,411	2,431,842	453,862

Table 35--Volume of growing stock on timberland, by species and diameter class, Virginia, 1992

Species	All classes	Diameter class (inches at breast height)									
		5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 and larger
Thousand cubic feet											
Softwood											
Longleaf pine	--	--	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	478,749	51,882	95,280	118,169	104,478	61,499	30,498	10,604	6,339	--	--
Loblolly pine	2,992,353	452,173	676,777	550,648	430,441	303,965	229,004	158,323	95,427	94,346	1,249
Pond pine	12,288	--	436	1,868	1,725	1,128	1,065	2,974	1,758	625	709
Virginia pine	1,826,173	336,669	485,160	462,983	318,965	151,410	51,738	16,595	1,793	860	--
Pitch pine	241,300	9,256	29,924	43,339	61,243	51,299	25,379	12,800	6,453	1,607	--
Table Mountain pine	124,454	12,198	25,193	29,243	26,965	20,150	8,796	1,008	901	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	662,598	44,870	71,184	87,086	77,646	73,848	91,313	70,255	64,024	76,454	5,918
Eastern hemlock	164,998	14,313	18,133	15,922	20,252	12,440	18,172	11,793	10,959	25,542	17,472
Spruce and fir	3,686	--	606	--	2,275	805	--	--	--	--	--
Baldcypress	39,822	573	--	1,216	1,616	4,529	3,763	4,367	5,149	10,424	8,185
Pondcypress	10,342	--	184	--	585	--	1,399	679	1,363	3,245	2,887
Cedars	91,625	39,235	22,685	14,527	7,110	4,065	4,003	--	--	--	--
Total softwoods	6,648,388	961,169	1,425,562	1,325,001	1,053,301	685,138	465,130	289,398	194,166	213,103	36,420
Hardwood											
Select white oaks	2,880,077	176,790	268,248	401,362	432,717	418,232	383,245	272,700	192,923	293,523	40,337
Select red oaks	1,483,753	53,167	72,468	123,552	165,199	181,072	182,483	164,495	148,225	321,193	71,899
Chestnut oak	2,461,032	146,348	304,448	353,618	351,596	324,496	247,070	245,628	161,574	278,666	47,588
Other white oaks	108,746	5,591	18,699	18,760	17,986	14,121	12,676	7,738	5,688	5,477	2,010
Other red oaks	2,691,521	170,445	299,498	395,165	385,339	403,730	335,933	261,973	166,558	250,254	22,626
Hickory	1,262,353	91,033	157,455	201,294	212,732	189,306	150,524	100,327	72,446	81,139	6,097
Yellow birch	14,557	1,931	735	1,441	--	1,767	797	1,745	1,767	4,374	--
Hard maple	251,496	27,974	34,892	31,008	30,616	37,740	28,581	16,306	14,392	25,764	4,223
Soft maple	1,538,216	234,395	272,660	239,316	236,036	199,850	120,180	89,783	62,096	70,937	12,963
Beech	523,191	23,756	39,490	46,580	62,198	71,779	71,455	73,242	47,223	76,324	11,144
Sweetgum	924,199	102,964	143,408	164,828	144,904	133,805	87,149	47,131	36,469	54,054	9,487
Tupelo and blackgum	459,042	55,567	61,906	79,422	83,764	54,649	47,863	25,701	19,005	22,315	8,850
Ash	341,198	33,864	37,893	48,174	54,162	41,611	39,951	25,834	23,403	26,419	9,887
Cottonwood	2,248	--	--	1,350	--	--	--	--	--	898	--
Basswood	172,284	7,261	12,835	20,582	23,627	23,796	27,891	21,269	12,904	13,364	8,755
Yellow-poplar	3,471,878	164,428	254,496	351,547	507,262	536,722	539,222	405,741	286,813	379,488	46,159
Bay and magnolia	43,147	5,798	7,432	11,893	4,362	6,618	2,647	650	--	3,747	--
Black cherry	79,531	12,230	8,147	9,634	16,204	10,390	6,113	9,272	1,074	4,301	2,166
Black walnut	115,219	4,120	10,013	21,143	18,311	23,170	11,359	6,306	12,492	6,596	1,709
Sycamore	161,394	5,266	16,077	13,679	18,901	13,990	24,366	20,273	14,928	27,438	6,476
Black locust	233,206	23,329	24,509	46,022	47,339	33,930	26,970	16,934	8,613	5,560	--
Elm	114,495	17,684	17,553	18,246	19,584	11,263	8,212	7,324	3,964	9,050	1,615
Other eastern hardwoods	505,623	52,627	70,160	86,186	81,680	62,645	44,939	42,392	25,801	31,675	7,518
Total hardwoods	19,838,406	1,416,568	2,133,022	2,684,802	2,914,519	2,794,682	2,399,626	1,862,764	1,318,358	1,992,556	321,509
All species	26,486,794	2,377,737	3,558,584	4,009,803	3,967,820	3,479,820	2,864,756	2,152,162	1,512,524	2,205,659	357,929

Table 36--Volume of sawtimber on timberland, by species and diameter class, Virginia, 1992

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	1,500,943	440,098	472,174	315,625	170,523	62,980	39,543	--	--
Loblolly pine	8,960,423	1,963,519	1,935,401	1,567,994	1,295,244	953,314	603,777	632,039	9,135
Pond pine	64,405	7,106	7,782	5,876	5,876	17,540	10,923	4,135	5,167
Virginia pine	4,104,468	1,674,366	1,356,113	710,090	260,695	88,296	10,012	4,896	--
Pitch pine	922,548	145,863	262,126	253,223	137,196	74,258	39,423	10,459	--
Table Mountain pine	408,559	116,969	126,738	104,436	48,958	5,904	5,554	--	--
Spruce pine	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--
Eastern white pine	2,814,877	312,903	341,339	366,219	490,161	400,306	381,230	482,236	40,483
Eastern hemlock	684,809	54,402	84,592	58,911	92,669	63,802	62,103	153,416	114,914
Spruce and fir	14,254	--	10,107	4,147	--	--	--	--	--
Baldcypress	211,147	3,850	6,368	19,756	18,007	22,305	27,606	60,760	52,495
Pondcypress	57,240	--	2,357	--	6,782	3,516	7,422	19,225	17,938
Cedars	136,914	59,008	33,669	21,579	22,658	--	--	--	--
Total softwoods	19,880,587	4,778,084	4,638,766	3,427,856	2,548,769	1,692,221	1,187,593	1,367,166	240,132
Hardwood									
Select white oaks	8,930,625	--	1,469,816	1,663,838	1,695,384	1,297,253	970,780	1,590,903	242,651
Select red oaks	5,517,673	--	553,494	698,641	771,443	742,123	701,160	1,645,434	405,378
Chestnut oak	7,050,054	--	1,159,285	1,243,264	1,046,948	1,117,661	774,653	1,436,652	271,591
Other white oaks	296,919	--	65,452	59,733	59,380	38,915	30,080	30,324	13,035
Other red oaks	8,070,248	--	1,329,167	1,634,034	1,499,392	1,260,329	848,269	1,361,449	137,608
Hickory	3,533,910	--	734,246	769,715	679,430	489,207	373,676	450,015	37,621
Yellow birch	49,767	--	--	6,950	3,511	8,048	8,441	22,817	--
Hard maple	684,894	--	115,313	154,174	123,799	74,170	67,620	127,806	22,012
Soft maple	3,187,312	--	767,741	761,259	507,111	409,747	297,529	367,638	76,287
Beech	1,621,815	--	226,971	271,938	278,227	291,198	190,926	315,238	47,317
Sweetgum	2,356,572	--	521,487	575,311	421,487	246,394	203,163	325,322	63,408
Tupelo and blackgum	1,068,626	--	267,511	206,904	203,356	117,789	94,106	120,189	58,771
Ash	950,282	--	175,384	163,070	173,328	121,138	116,440	141,399	59,523
Cottonwood	5,073	--	--	--	--	--	--	5,073	--
Basswood	580,003	--	81,300	94,631	121,119	99,163	63,226	69,858	50,706
Yellow-poplar	13,291,881	--	1,824,604	2,338,277	2,652,439	2,170,989	1,634,931	2,349,810	320,831
Bay and magnolia	74,759	--	13,642	25,764	11,554	3,087	--	20,712	--
Black cherry	219,012	--	57,631	42,769	28,005	46,682	5,582	24,639	13,704
Black walnut	301,859	--	62,459	84,257	43,205	25,101	51,009	28,139	7,689
Sycamore	576,532	--	62,051	52,803	103,890	95,014	74,246	148,643	39,885
Black locust	514,511	--	166,462	124,633	101,909	65,403	33,801	22,303	--
Elm	253,867	--	66,505	44,409	35,432	33,437	18,913	46,088	9,083
Other eastern hardwoods	1,234,740	--	280,795	244,216	191,730	193,685	123,109	156,355	44,850
Total hardwoods	60,370,934	--	10,001,316	11,260,590	10,752,079	8,946,533	6,681,660	10,806,806	1,921,950
All species	80,251,521	4,778,084	14,640,082	14,688,446	13,300,848	10,638,754	7,869,253	12,173,972	2,162,082

Table 37--Volume of **sawtimber** on timberland, by species, size class, and tree grade, Virginia, 1992

Species	All size classes					Trees 15.0 inches d.b.h. and larger				
	All grades	Tree grade				All grades	Tree grade			
		1	2	3	4		1	2	3	4
Thousand board feet										
Softwood										
Yellow pines ^a	15,961,346	2,987,085	4,047,310	8,926,951	--	4,495,847	1,816,380	1,188,888	1,490,579	--
Eastern white pine ^b	2,814,877	282,589	840,041	1,673,375	18,872	1,794,416	252,879	612,580	924,235	4,722
Spruce and fir ^b	14,254	--	--	14,254	--	--	--	--	--	--
Cypress ^c	268,387	98,099	88,080	64,452	17,756	236,056	98,099	73,995	48,146	15,816
Other eastern softwoods ^b	821,723	42,067	160,888	559,444	59,324	509,562	42,067	150,778	286,664	30,053
Total	19,880,587	3,409,840	5,136,319	11,238,476	95,952	7,035,881	2,209,425	2,026,241	2,749,624	50,591
Hardwood ^c										
Select white and red oaks	14,448,298	2,253,109	5,029,703	6,407,206	758,280	10,062,509	2,253,109	4,258,361	3,220,703	330,336
Other white and red oaks	15,417,221	1,436,055	4,366,445	8,130,719	1,484,002	9,926,286	1,436,055	3,625,206	4,152,296	712,729
Hickory	3,533,910	327,085	946,295	2,006,107	254,423	2,029,949	327,085	737,322	850,304	115,238
Yellow birch	49,767	--	3,694	30,781	15,292	42,817	--	3,694	23,831	15,292
Hard maple	684,894	14,144	179,868	419,077	71,005	415,407	14,144	141,143	233,522	26,598
Sweetgum	2,356,572	354,954	935,715	946,948	118,955	1,259,774	354,954	639,254	212,290	53,276
Ash, walnut, and black cherry	1,471,153	161,344	477,723	737,957	94,129	885,583	161,344	381,306	298,867	44,066
Yellow-poplar	13,291,881	2,891,011	5,053,559	4,699,321	647,990	9,129,000	2,891,011	3,909,155	2,032,600	296,234
Other eastern hardwoods	9,117,238	415,211	1,896,033	5,255,356	1,550,638	5,357,703	415,211	1,559,773	2,626,329	756,390
Total	60,370,934	7,852,913	18,889,035	28,633,472	4,995,514	39,109,028	7,852,913	15,255,214	13,650,742	2,350,159
All species	80,251,521	11,262,753	24,025,354	39,871,948	5,091,466	46,144,909	10,062,338	17,281,455	16,400,366	2,400,750

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

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

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

Table 38--Cubic volume in the merchantable saw-log portion of sawtimber trees on timberland, by species and diameter class, Virginia, 1992

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	294,524	94,813	94,734	58,533	29,710	10,459	6,275	--	--
Loblolly pine	1,666,763	426,041	386,205	287,537	222,190	155,698	94,453	93,404	1,235
Pond pine	11,200	1,521	1,569	1,081	1,037	2,932	1,740	618	702
Virginia pine	865,510	371,280	205,463	141,034	49,193	15,964	1,739	837	--
Pitch pine	182,190	35,002	54,957	47,917	24,160	12,326	6,258	1,570	
Table Mountain pine	80,871	25,398	25,365	19,547	8,671	998	892	--	--
Spruce pine	--	--	--	--		--	--	--	--
Sand pine	--		--	--	--	--		--	--
Eastern white pine	502,693	69,035	69,182	68,618	86,547	67,365	61,812	74,337	5,797
Eastern hemlock	121,805	12,231	17,738	11,437	17,045	11,203	10,496	24,646	17,009
Spruce and fir	2,780	--	2,023	757	--	--	--	--	--
Baldcypress	36,743	912	1,388	4,058	3,471	4,097	4,877	10,003	7,937
Pondcypress	9,753	--	520	--	1,314	647	1,308	3,150	2,814
Cedars	25,746	11,715	6,393	3,815	3,823		--	--	--
Total softwoods	3,800,578	1,047,948	945,537	644,334	447,161	281,689	189,850	208,565	35,494
Hardwood									
Select white oaks	1,731,130		308,217	343,493	336,032	247,392	178,814	278,111	39,071
Select red oaks	1,044,824	--	117,807	144,819	153,721	142,553	130,632	289,295	65,997
Chestnut oak	1,409,919		254,155	266,316	215,043	220,686	147,934	260,399	45,386
Other white oaks	55,514		13,162	11,735	11,191	7,047	5,280	5,150	1,949
Other red oaks	1,546,744		273,406	331,364	293,214	236,988	154,026	235,885	21,861
Hickory	680,403	--	153,738	155,963	131,430	90,560	66,681	76,184	5,847
Yel low birch	9,424	--	--	1,436	700	1,568	1,613	4,107	--
Hard maple	135,015	--	22,317	31,048	24,983	14,800	13,326	24,462	4,079
Soft maple	633,493	--	160,368	158,400	101,997	79,183	55,860	65,391	12,294
Beech	349,444		44,743	57,926	60,827	64,194	42,153	69,314	10,287
Sweetgum	430,801	--	102,435	110,852	77,623	43,553	34,543	52,408	9,387
Tupelo and blackgum	213,297	--	58,576	44,017	41,144	22,876	17,339	20,834	8,511
Ash	186,334		37,548	34,160	34,887	23,403	21,690	25,033	9,613
Cottonwood	a52		--	--	--	--	--	852	--
Basswood	113,533		17,269	19,734	24,408	19,242	11,901	12,563	8,416
Yellow-poplar	2,333,949		353,612	442,300	478,452	374,533	271,302	368,058	45,692
Bay and magnolia	14,831	--	2,024	5,409	2,342	601	--	3,655	--
Black cherry	41,437	--	12,122	8,574	5,320	8,364	979	4,018	2,060
Black walnut	65,650	--	13,288	18,605	9,576	5,516	11,100	5,986	1,579
Sycamore	106,898	--	12,602	10,710	20,407	17,884	13,515	25,564	6,216
Black locust	109,432	--	33,041	26,888	22,503	14,542	7,519	4,939	--
Elm	49,426	--	13,624	9,073	7,011	6,425	3,540	8,248	1,505
Other eastern hardwoods	244,214		55,540	50,164	38,889	38,520	23,900	29,870	7,331
Total hardwoods	11,506,564	--	2,060,394	2,282,986	2,091,700	1,680,430	1,213,647	1,870,326	307,081
All species	15,307,142	1,047,948	3,005,931	2,927,320	2,538,861	1,962,119	1,403,497	2,078,891	342,575

Table 39--Total volume of live trees on timberland, by species and diameter class, Virginia, 1992

Species	All classes	Diameter class (inches at breast height)											
		1.0- 2.9	3.0- 4.9	5.0 - 6.9	7.0- a.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 and larger
Thousand cubic feet													
Softwood													
Longleaf pine	--	--		--	--	--	--	--	--	--	--	--	--
Slash pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Shortleaf pine	595,103	4,469	20,560	70,881	116,281	139,856	119,959	69,672	34,386	11,922	7,117	--	--
Loblolly pine	3,952,122	74,736	266,176	646,454	829,344	643,646	493,765	346,137	259,119	177,858	107,338	106,157	1,392
Pond pine	14,310	--	--	--	517	2,175	2,252	1,285	1,212	3,375	1,989	706	799
Virginia pine	2,484,901	59,761	203,083	453,106	590,920	545,715	374,608	175,077	59,899	19,710	2,042	980	--
Pitch pine	295,019	2,701	5,569	12,654	35,802	53,297	71,731	60,263	29,122	14,660	7,384	1,836	--
Table Mountain pine	162,095	1,636	4,218	16,199	34,856	36,517	31,625	24,894	9,989	1,142	1,019	--	--
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	857,788	21,574	44,987	60,372	87,161	105,248	93,250	85,599	106,116	81,950	73,707	91,021	6,803
Eastern hemlock	220,734	6,174	15,495	20,191	22,702	19,494	23,516	14,332	20,840	13,475	13,592	29,151	21,772
Spruce and fir	4,685	323	--	--	754	--	2,672	936	--	--	--	--	--
Baldcypress	49,463	--	--	965	--	1,501	1,965	5,474	4,528	5,239	6,163	12,466	11,162
Pondcypress	12,941	--	--	--	250	--	748	--	1,761	852	1,704	4,040	3,586
Cedars	227,388	34,878	58,901	65,605	30,115	17,902	9,830	5,406	4,751	--	--	--	--
Total softwoods	8,876,549	206,252	618,989	1,346,427	1,748,702	1,565,351	1,225,921	789,075	531,723	330,183	222,055	246,357	45,514
Hardwood													
Select white oaks	3,955,168	57,231	132,207	276,906	358,473	521,549	551,112	523,955	481,983	347,309	242,103	385,868	76,472
Select red oaks	2,009,500	19,791	55,391	83,260	104,807	160,950	211,113	230,945	230,288	208,612	185,934	417,124	101,285
Chestnut oak	3,626,586	22,809	107,656	243,221	434,819	476,564	484,046	446,067	352,790	335,599	224,836	412,547	85,632
Other white oaks	170,193	6,216	10,264	9,862	26,014	26,297	23,676	20,207	16,890	10,898	7,062	8,035	4,772
Other red oaks	3,726,920	81,093	144,607	274,042	403,761	508,918	493,344	509,630	414,535	333,346	207,162	325,158	31,324
Hickory	1,802,464	55,836	100,834	150,517	217,026	263,181	269,710	234,876	184,638	124,721	88,077	102,822	10,226
Yelow birch	26,130	908	496	3,112	919	5,209	--	4,051	972	2,125	2,985	5,353	--
Bard maple	400,154	18,928	34,530	45,598	46,488	43,430	40,573	47,728	35,835	22,829	19,508	35,232	9,475
Soft maple	2,954,146	287,225	393,667	414,028	388,635	337,109	332,321	276,267	170,056	118,989	92,467	121,621	21,761
Beech	829,723	27,995	32,968	42,571	58,230	68,190	89,153	97,941	96,834	100,437	67,601	128,511	19,292
Sweetgum	1,445,193	110,423	168,396	165,673	186,734	204,628	174,433	156,121	101,658	56,554	42,666	65,722	12,185
Tupelo and blackgum	901,414	109,612	104,383	97,123	94,368	114,679	114,008	74,215	65,175	38,089	26,412	43,238	20,112
Ash	540,333	22,968	44,550	61,497	59,184	70,056	70,221	55,743	47,688	32,790	31,260	31,607	12,769
Cottonwood	3,792	--	226	--	--	1,600	932	--	--	--	--	1,034	--
Basswood	223,528	2,093	3,865	10,057	17,192	24,301	30,792	28,598	33,305	24,373	16,257	21,630	11,065
Yellow-poplar	4,310,107	72,524	172,206	228,117	315,369	415,830	586,767	612,013	612,040	463,323	327,553	437,121	67,244
Bay and magnolia	81,126	8,533	8,307	9,750	9,677	19,234	6,386	9,592	4,482	760	--	4,405	--
Black cherry	223,979	37,102	39,836	28,231	22,432	17,129	23,915	16,514	12,662	10,869	1,969	9,792	3,468
Black walnut	182,884	739	6,645	10,502	17,733	30,996	24,445	32,843	17,398	11,168	16,636	10,924	2,855
Sycamore	212,236	3,852	9,377	9,191	20,386	16,904	22,713	17,139	28,544	24,716	17,923	33,301	8,190
Black locust	450,896	14,868	27,450	47,896	42,279	81,408	78,870	58,702	42,583	27,853	14,568	14,419	--
Elm	197,609	12,807	21,271	33,540	25,797	26,106	26,019	14,020	11,964	9,012	4,630	10,559	1,884
Other eastern hardwoods	2,203,443	409,756	428,445	367,505	262,887	216,807	169,621	112,151	77,341	61,808	40,093	46,305	10,724
Total hardwoods	30,477,524	1,383,309	2,047,577	2,612,199	3,113,210	3,651,075	3,824,230	3,579,318	3,039,661	2,366,180	1,677,702	2,672,328	510,735
All species	39,354,073	1,589,561	2,666,566	3,958,626	4,861,912	5,216,426	5,050,151	4,368,393	3,571,384	2,696,363	1,899,757	2,918,685	556,249

Table 40--Green weight of forest biomass on timberland, by species and diameter class, Virginia, 1992

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	409,169	2,558	12,462	42,387	79,068	98,589	85,614	50,068	24,696	8,603	5,124	--	--
Loblolly pine	2,825,984	37,869	157,002	460,932	611,124	473,293	361,234	253,024	187,525	128,665	77,861	76,451	1,004
Pond pine	10,195	--	--	--	388	1,560	1,599	906	882	2,383	1,420	498	559
Virginia pine	1,859,212	52,067	165,350	343,330	435,342	400,239	274,813	127,908	43,759	14,193	1,508	703	--
Pitch pine	199,270	2,155	5,077	8,247	23,944	36,206	48,042	40,230	19,534	9,770	4,870	1,195	
Table Mountain pine	100,764	1,369	3,885	8,513	20,535	22,506	20,042	16,029	6,482	738	665	--	
Spruce pine	--	--	--	--	--	--	--	--	--	--	--	--	
Sand pine	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern white pine	544,165	8,850	20,411	39,992	58,695	71,084	63,367	56,819	68,743	52,060	45,910	54,416	3,818
Eastern hemlock	166,453	3,631	9,857	16,183	19,983	16,522	19,553	11,592	15,911	9,986	9,629	19,799	13,807
Spruce and fir	3,396	190	--	--	538	--	1,979	689	--	--	--	--	--
Baldcypress	40,184	--	--	370	--	1,049	1,432	4,164	3,586	4,173	5,011	10,357	10,042
Pondcypress	9,904	--	--	--	145	--	503	--	1,271	630	1,283	3,173	2,899
Cedars	156,054	21,051	37,502	46,785	22,658	13,154	7,333	4,054	3,517	--	--	--	--
Total softwoods	6,324,750	129,740	411,546	966,739	1,272,420	1,134,202	885,511	565,483	375,906	231,201	153,281	166,592	32,129
Hardwood													
Select white oaks	3,192,340	44,872	97,682	196,436	280,659	416,308	446,698	429,653	397,154	288,241	201,869	326,096	66,672
Select red oaks	1,634,604	16,682	41,347	61,789	85,786	132,975	173,221	190,538	189,652	170,649	151,393	338,154	82,418
Chestnut oak	2,862,356	20,815	83,489	174,062	330,708	367,251	380,234	354,707	284,198	271,073	183,419	340,152	72,248
Other white oaks	136,365	4,371	7,155	7,107	20,046	20,718	19,266	17,030	14,086	9,240	6,005	6,991	4,350
Other red oaks	3,143,096	63,310	107,353	204,440	342,126	434,118	423,618	437,372	355,647	286,934	177,968	281,590	28,620
Hickory	1,448,011	48,726	88,512	104,648	164,993	205,021	215,377	190,897	152,726	104,395	74,240	89,171	9,305
Yellow birch	21,003	786	433	2,332	704	4,127	--	3,234	842	1,768	2,448	4,329	--
Hard maple	326,928	15,638	28,931	32,601	36,611	35,136	33,462	39,644	30,064	19,351	16,664	30,447	8,379
Soft maple	2,149,708	217,975	279,326	284,351	291,729	248,584	245,243	203,855	124,480	85,961	66,459	86,533	15,212
Beech	667,503	23,115	27,907	25,389	44,021	54,073	71,910	79,439	79,521	82,640	56,127	107,340	16,021
Sweetgum	1,030,050	73,669	111,931	107,949	132,213	147,822	127,523	115,894	76,284	43,086	32,715	51,155	9,809
Tupelo and blackgum	621,288	84,627	77,122	52,806	58,560	73,643	76,171	51,657	46,347	28,102	19,702	33,898	18,653
Ash	342,869	13,675	28,026	46,896	43,724	45,381	43,987	33,820	27,721	18,734	17,609	16,992	6,304
Cottonwood	2,596	--	158	--	--	1,012	637	--	--	--	--	789	--
Basswood	151,621	1,413	2,699	5,820	11,199	16,080	20,423	19,481	22,888	16,891	11,274	15,476	7,977
Yellow-poplar	3,040,288	53,651	113,877	139,565	213,778	288,563	412,103	436,205	439,170	335,006	237,469	320,926	49,975
Bay and magnolia	49,661	5,114	5,264	5,592	6,026	11,892	3,897	5,915	2,774	485	--	2,702	--
Black cherry	143,783	17,876	26,667	16,555	14,800	11,887	16,270	11,541	9,048	7,719	1,415	7,333	2,672
Black walnut	158,759	585	5,527	8,660	15,052	26,579	21,306	28,332	15,520	9,906	14,487	10,084	2,721
Sycamore	151,724	2,642	6,469	4,430	12,108	10,708	15,863	12,258	21,312	18,726	13,854	26,466	6,888
Black locust	435,623	12,554	23,104	40,642	40,502	80,588	77,842	58,520	43,152	28,383	15,172	15,164	--
Elm	128,187	9,370	14,909	20,003	16,312	16,197	16,757	9,104	7,954	6,190	3,082	7,059	1,250
Other eastern hardwoods	1,679,747	333,056	349,773	249,859	190,564	154,511	123,832	86,308	60,620	49,840	33,364	39,673	8,347
Total hardwoods	23,518,110	1,064,522	1,527,661	1,791,932	2,352,221	2,803,174	2,965,640	2,815,404	2,401,160	1,883,320	1,336,735	2,158,520	417,821
All species	29,842,860	1,194,262	1,939,207	2,758,671	3,624,641	3,937,376	3,851,151	3,380,887	2,777,066	2,114,521	1,490,016	2,325,112	449,950

Table 41--Average net annual growth and removals of live timber and growing stock on timberland, by species, Virginia, 1986-1991

Species	Live timber ^a		Growing stock	
	Net annual growth,	Annual timber removals	Net annual growth	Annual timber removals
	Thousand cubic feet			
Softwood				
Yellow pines	283,955	232,066	283,047	230,187
Eastern white pine	23,701	18,664	23,668	18,479
Spruce and fir	49	--	49	--
Cypress	1,070	85	1,065	85
Other eastern softwoods	9,503	4,212	9,341	4,109
Total softwoods	318,278	255,027	317,170	252,860
Hardwood				
Select white and red oaks	108,097	87,351	107,076	85,510
Other white and red oaks	130,295	86,762	129,277	82,721
Hickory	25,603	17,077	25,384	16,077
Yellow birch	183	--	179	--
Hard maple	6,641	3,987	6,620	3,376
Sweetgum	33,221	33,346	32,538	32,153
Ash, walnut, and black cherry	16,858	8,857	15,735	7,386
Yellow-poplar	116,481	68,774	115,641	67,384
Tupelo and blackgum	8,823	8,349	8,415	7,467
Bay and magnolia	1,241	654	1,196	654
Other eastern hardwoods	98,886	56,960	89,175	43,474
Total hardwoods	546,329	372,117	531,236	346,202
All species	864,607	627,144	848,406	599,062

^aMerchantable portion only.

Table 42--Average net annual growth and removals of sawtimber on timberland, by species, Virginia, **1986-1991**

Species	Net annual growth	Annual timber removals
<u>Thousand board feet</u>		
Softwood		
Yellow pines	910,911	734,348
Eastern white pine	132,942	91,650
Spruce and fir	249	--
Cypress	6,198	--
Other eastern softwoods	27,798	16,514
Total softwoods	1,078,098	842,512
Hardwood		
Select white and red oaks	496,991	299,124
Other white and red oaks	534,126	281,596
Hickory	106,649	48,264
Yellow birch	651	--
Hard maple	24,780	11,440
Sweetgum	107,046	85,312
Ash, walnut, and black cherry	54,986	22,074
Yellow-poplar	551,935	282,073
Tupelo and blackgum	25,920	20,667
Bay and magnolia	3,167	672
Other eastern hardwoods	286,068	125,610
Total hardwoods	2,192,319	1,176,832
All species	3,270,417	2,019,344

Table 43--Average annual removals of growing stock on timberland, by species and diameter class, Virginia, 1986-1991

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	230,187	25,381	49,551	46,363	41,211	28,506	18,753	11,838	4,683	3,772	129
Eastern white pine	18,479	219	1,094	1,498	2,163	2,285	3,310	2,864	2,549	2,310	187
Spruce and fir	--	--	--	--	--	--	--	--	--	--	--
Cypress	85	--	85	--	--	--	--	--	--	--	--
Other eastern softwoods	4,109	432	285	711	648	151	1,013	496	154	219	--
Total softwoods	252,860	26,032	51,015	48,572	44,022	30,942	23,076	15,198	7,386	6,301	316
Hardwood											
Select white and red oaks	85,510	4,505	6,925	7,922	9,214	11,397	11,361	11,154	7,369	12,580	3,083
Other white and red oaks	82,721	4,620	7,290	8,337	9,389	11,252	13,566	10,567	6,440	10,013	1,247
Hickory	16,077	1,052	1,931	1,975	2,973	2,638	1,609	1,820	753	1,326	--
Yellow birch	--	--	--	--	--	--	--	--	--	--	--
Hard maple	3,376	374	123	293	164	786	182	383	680	391	--
Sweet gum	32,153	3,200	4,175	6,314	5,450	3,775	3,285	2,129	1,675	2,017	133
Ash, walnut, and black cherry	7,386	395	738	759	1,392	1,500	580	990	204	828	--
Yellow-poplar	67,384	3,076	3,198	4,655	7,806	12,301	11,586	8,265	7,113	8,687	697
Tupelo and blackgum	7,467	447	610	1,210	1,458	1,512	1,534	539	157	--	--
Bay and magnolia	654	--	200	252	202	--	--	--	--	--	--
Other eastern hardwoods	43,474	4,345	3,993	5,538	6,101	4,883	4,159	3,646	3,628	5,584	1,597
Total hardwoods	346,202	22,014	29,183	37,255	44,149	50,044	47,862	39,493	28,019	41,426	6,757
All species	599,062	48,046	80,198	85,827	88,171	80,986	70,938	54,691	35,405	47,727	7,073

Table 44--Average annual mortality of live timber, growing stock, and sawtimber on timberland, by species, Virginia, 1986-1991

Species	Live timber ^a	Growing stock	Sawtimber
	<u>Thousand cubic feet</u>		<u>Thousand board feet</u>
Softwood			
Yellow pines	53,360	50,660	120,204
Eastern white pine	3,791	3,257	10,087
Spruce and fir	--	--	--
Cypress	93	93	597
Other eastern softwoods	1,381	1,135	1,366
Total softwoods	58,625	55,145	132,254
Hardwood			
Select white and red oaks	27,537	21,727	72,964
Other white and red oaks	59,497	48,323	128,115
Hickory	13,650	12,183	33,024
Yellow birch	--	--	--
Hard maple	1,621	815	2,944
Sweetgum	4,230	3,605	5,093
Ash, walnut, and black cherry	6,041	3,612	8,460
Yellow-poplar	9,861	8,112	21,250
Tupelo and blackgum	2,266	1,249	2,534
Bay and magnolia	387	387	1,330
Other eastern hardwoods	44,085	20,745	48,673
Total hardwoods	169,175	120,758	324,387
All species	227,800	175,903	456,641

^aMerchantable portion only.

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

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
<u>Thousand trees</u>									
Yellow pine									
1986	1,652,962	580,674	415,276	302,211	184,678	91,897	43,654	20,031	14,541
1992	1,715,252	599,073	432,605	305,873	196,916	98,140	47,599	20,289	14,757
Change	+62,290	+18,399	+17,329	+3,662	+12,238	+6,243	+3,945	+258	+216
Other softwood									
1986	439,025	269,513	82,793	38,883	19,021	11,359	5,747	4,476	7,233
1992	460,375	267,812	101,942	39,625	19,678	11,817	7,114	4,009	8,378
Change	+21,350	-1,701	+19,149	+742	+657	+458	+1,367	-467	+1,145
Eardwood									
1986	9,575,370	6,201,092	1,593,135	696,840	409,706	259,976	164,692	105,131	144,798
1992	9,440,868	6,159,330	1,536,047	664,042	389,601	255,603	170,085	109,348	156,812
Change	-134,502	-41,762	-57,088	-32,798	-20,105	-4,373	+5,393	+4,217	+12,014

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

Land use class	Survey completion date			Change 1986-1992
	1977	1986	1992	
<u>Acres</u>				
Forest land				
Timberland:				
Pine and oak-pine types	5,373,812	5,076,570	5,293,958	+217,388
Hardwood types	10,613,320	10,493,118	10,153,592	-339,526
Total	15,987,132	15,569,688	15,447,550	-122,138
Reserved timberland	360,222	471,188	531,980	+60,792
Woodland	70,025	61,417	47,344	-14,073
Total forest land	16,417,379	16,102,293	16,026,874	-75,419
Nonforest land				
Cropland	3,098,623	3,426,068	3,332,421	-93,647
Pasture and range	3,641,844	3,160,322	3,030,334	-129,988
Other	2,138,656	2,560,075	2,883,072	+322,997
Total	8,879,123	9,146,465	9,245,827	+99,362
All land^a				
	25,296,502	25,248,758	25,272,701	+23,943

^aExcludes 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, 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										
1977	17,441,454	--	--	4,336,016	4,367,396	3,378,415	2,272,839	1,395,023	736,737	955,028
1986	18,447,172	--	--	4,520,534	4,190,585	3,423,181	2,505,842	1,653,199	925,007	1,228,824
1992	19,880,587	--	--	4,778,084	4,638,766	3,427,856	2,548,769	1,692,221	1,187,593	1,607,298
Hardwood										
1977	45,489,757	--	--	--	8,829,283	9,432,647	8,368,844	6,317,675	4,307,896	8,233,412
1986	54,170,379	--	--	--	9,532,670	10,663,636	10,154,831	8,003,820	5,421,322	10,394,100
1992	60,370,934	--	--	--	10,001,316	11,260,590	10,752,079	8,946,533	6,681,660	12,728,756
GROWING STOCK (in thousand cubic feet)										
Softwood										
1977	5,928,488	882,268	1,251,760	1,209,086	992,550	674,414	413,037	237,329	119,513	148,531
1986	6,257,946	922,706	1,348,498	1,261,423	955,800	684,833	458,366	283,308	151,139	191,873
1992	6,648,388	961,169	1,425,562	1,325,001	1,053,301	685,138	465,130	289,398	194,166	249,523
Hardwood										
1977	16,875,374	1,530,738	2,218,966	2,611,926	2,589,227	2,353,593	1,881,589	1,321,824	855,860	1,511,651
1986	18,707,447	1,447,270	2,186,394	2,668,693	2,796,687	2,662,610	2,283,409	1,675,686	1,077,045	1,909,653
1992	19,838,406	1,416,568	2,133,022	2,684,802	2,914,519	2,794,682	2,399,626	1,862,764	1,318,358	2,314,065
LIVE TIMBER ^b (in thousand cubic feet)										
Softwood										
1977	6,023,894	905,242	1,274,714	1,230,814	1,001,771	684,647	416,228	238,420	120,559	151,499
1986	6,360,204	946,214	1,372,465	1,284,099	965,262	695,683	462,297	285,860	152,158	196,166
1992	6,723,490	974,034	1,443,740	1,340,571	1,065,601	690,894	467,113	290,894	195,452	255,191
Hardwood										
1977	19,217,173	2,024,847	2,634,531	2,961,735	2,863,847	2,548,423	2,028,089	1,419,603	952,208	1,783,890
1986	21,228,389	1,911,871	2,597,790	3,024,978	3,095,910	2,887,016	2,460,820	1,800,256	1,195,176	2,254,572
1992	21,889,068	1,805,342	2,445,294	2,964,957	3,155,464	2,973,966	2,537,665	1,974,908	1,400,959	2,630,513

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

^bMerchantable volume.

Johnson, Tony G. 1992. Forest statistics for Virginia, 1992. Resour. Bull. SE-131. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station. 66 PP.

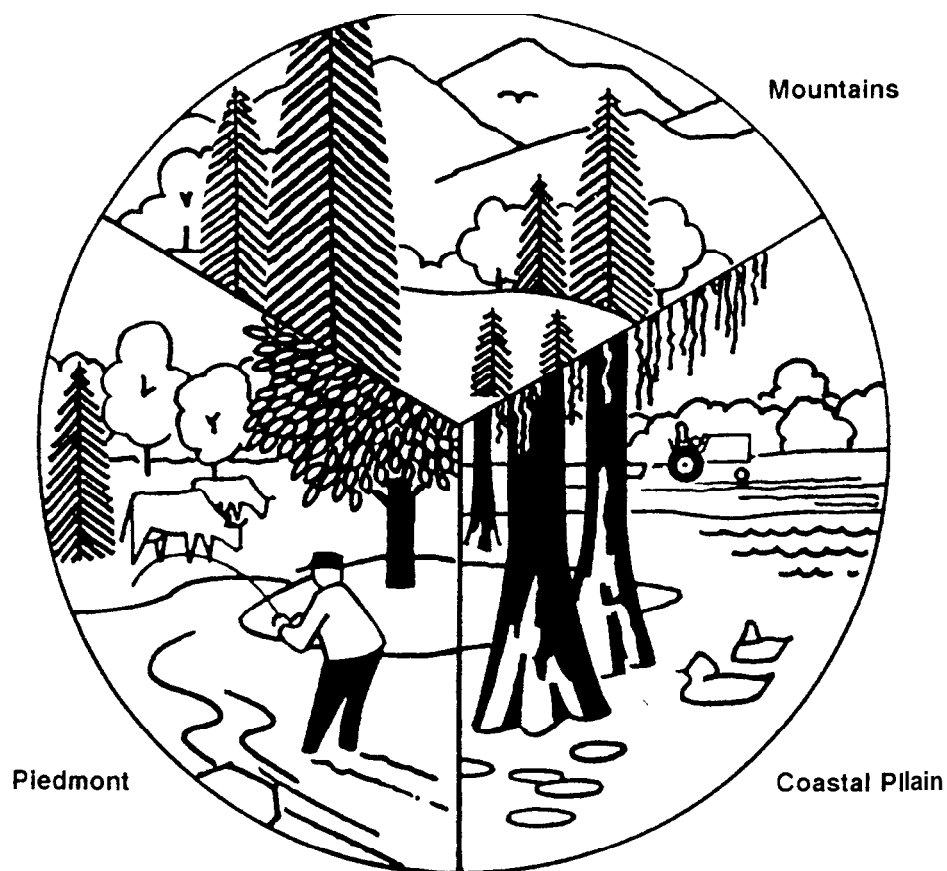
Since 1986, area of timberland in Virginia declined by less than 1 percent. Nonindustrial private forest landowners control 77 percent of the State's timberland. Area classified as a pine type declined less than 1 percent to 3.4 million acres. More than 186,000 acres were harvested annually, while 201,000 acres were regenerated by artificial and natural means. Volumes of both softwood and hardwood growing stock increased by 6 percent. Net annual growth of softwoods increased by 39 percent, while hardwood growth decreased by 7 percent. Annual removals of softwood and hardwood growing stock rose 23 and 27 percent, respectively. Annual mortality of softwood growing stock dropped 24 percent to 55 million cubic feet, whereas hardwood mortality jumped 33 percent to 121 million cubic feet.

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

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Southeastern Forest Experiment Station

Established 1921

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

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

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