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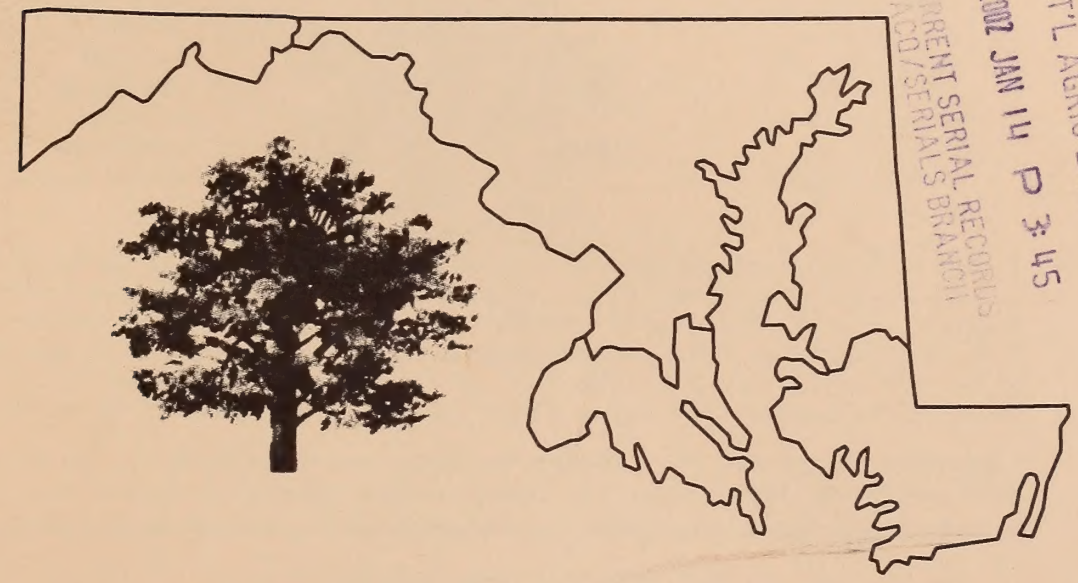
Forest Statistics for Maryland: 1986 and 1999

Thomas Frieswyk



Abstract

A statistical report on the fifth forest inventory of Maryland conducted in 1999 by the Forest Inventory and Analysis Unit of the Northeastern Research Station. Statistics for forest area, numbers of trees, wildlife habitat, tree biomass, timber volume, growth, and change are displayed at the state, geographic unit and, where appropriate, the county level. The current inventory indicates that there are approximately 5.1 billion cubic feet of growing-stock volume on 2.4 million acres of timberland in Maryland.

Acknowledgment

The Forest Inventory and Analysis Unit thanks the landowners of Maryland and the Maryland Forest Service for their cooperation and assistance during this inventory.

Manuscript received for publication 18 June 2001

Foreword

The fifth inventory of Maryland was directed by John R. Peters (retired), Project Leader of the Forest Inventory and Analysis Unit. David J. Alerich supervised the data-collection phase of the inventory. He was assisted by Robert E. Ilgenfritz, Brian M. LaPoint, Richard A. McCullough, Jason W. Morrison, Lucretia B. Stewart, and Kathryn M. Tillman. The members of the data-collection field staff in Maryland were:

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Thomas S. Frieswyk supervised information-management activities. Carol L. Alerich applied FINSYS (Forest Inventory SYStem), a generalized data-processing system, ORACLE SQLPlus, and SAS to process and analyze the information provided by the field crews, and produced summary tables of estimates and errors for the state and counties. Kathryn M. Tillman produced the summary information of the quality control data for this report. Richard L. Goren and Michael J. Kazimer performed data entry services. Vickie M. Sharon was responsible for administrative and secretarial services. She was assisted by Karen Y. Chenery.

Wade Dorsey, Kenneth Jolly, Steven Koehn, Wayne Merkel, Jack Perdue, Kip Powers, Don VanHassent, and Robert Webster of the Maryland Forest Service assisted in reviewing this document for accuracy.

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Forest Statistics for Maryland: 1986 and 1999

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Highlights

Forest-Land Area

Maryland encompasses 6.256 million acres of land according to the U.S. Bureau of Census 1990 figures. Forest land covers 2.566 million acres or 41 percent of that land area. There has been a 3 percent decrease in forest land since the 1986 inventory.

Unit	1986	1999	Percent change
Forest land	2,645.3	2,565.8	-3.0
Nonforest land	3,610.4	3,690.0	+2.2
State total	**6,255.8**	**6,255.8**	

Figure 1. Land Area (in thousand acres) and percent change, Maryland, 1986 and 1999 (Source: Table 1).

Timberland, the largest component of forest land, totals 2.372 million acres and makes up 92 percent of the forest land and 38 percent of the land area. This is a decrease from 1986, when timberland totaled 2.522 million acres, or 95 percent of the forest land, and 40 percent of the land area.

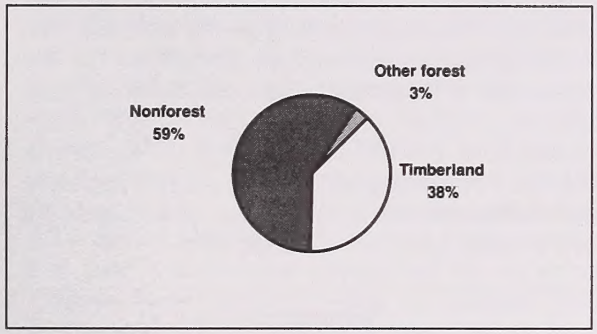

Figure 2. Percent area by land class, Maryland, 1999 (Source: Table 1).

Timberland

Eighty-two percent of the timberland acres are privately owned. The state controls approximately 73 percent of publicly owned lands.

The oak/hickory forest-type group makes up the preponderance of timberland acres, accounting for 58 percent (1.388 million acres) of the acreage. The loblolly/shortleaf pine group contributes 12 percent (282,600 acres); and the oak/pine group 9.7 percent (229,600 acres). Northern hardwood forests, characterized by sugar maple, beech, yellow birch, and black cherry, cover 8.8 percent (209,100 acres); other forest-type groups combined contribute about 262,700 acres.

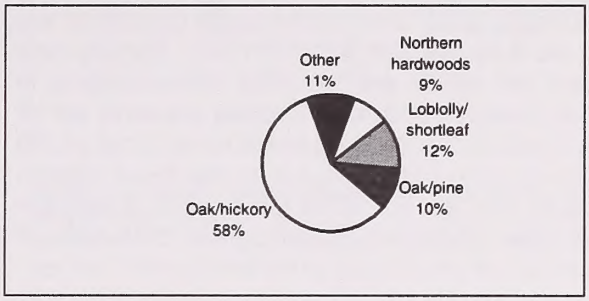

Figure 3. Timberland by forest-type group, Maryland, 1999 (Source: Table 4).

Sawtimber stands (stands in which live sawtimber trees make up the majority of stocking) occupy 66 percent (1.575 million acres) of timberland. Poletimber stands occupy 21 percent (506,100 acres), and sapling and seedling stands occupy 11 percent (268,400 acres). In 1986, sawtimber stands occupied 60 percent (1.511 million acres) of timberland area, poletimber stands 29 percent (740,000 acres) and sapling and seedling stands 10 percent (252,000 acres).

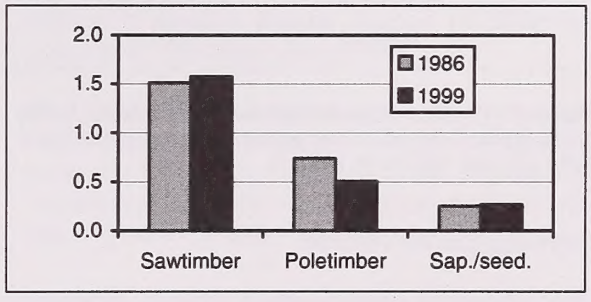

Figure 4. Area of timberland (million acres) by stand-size class, Maryland, 1986 and 1999 (Source: Tables 3 and 4).

Numbers of Trees

There are 1.447 billion live trees 1 inch or larger in diameter at breast height (d.b.h.) on Maryland's timberland, or 609 trees per acre. Of these, 385 million (162 trees per acre) are at least 5 inches in d.b.h. Red maple is the most common tree species in Maryland, accounting for 18 percent of all saplings and 15 percent of the live trees 5 inches and larger in d.b.h. Sweetgum is the second most common tree

species, with 10 percent of the saplings and 9 percent of the live trees at least 5 inches in diameter. Loblolly pine rounds out the top three, with 8 percent of the saplings and 14 percent of the live trees 5 inches and larger in d.b.h.

Growing-stock trees make up 94 percent of live trees 5 inches and larger in d.b.h. Loblolly pine and red maple are the most common trees in this category and each species accounts for 14 percent of the growing-stock trees. Most of the loblolly pine can be found on the lower eastern shore (75 percent) while red maple's distribution is more ubiquitous. Sweetgum is third, with 10 percent of all growing-stock trees.

A 4.5 percent decrease in growing-stock trees 5 to 12.9 inches d.b.h has been recorded. However, there has been a 12 percent increase in growing-stock trees 13 inches or greater in diameter.

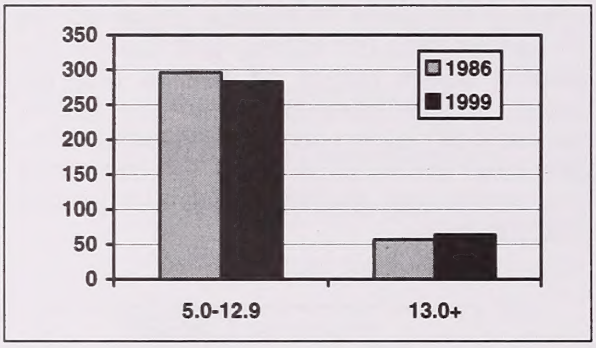

Figure 5. Number of growing-stock trees (million trees) on timberland by diameter group, Maryland, 1986 and 1999 (Source: Tables 20 and 21).

Growing-Stock Volume

The volume of growing-stock trees in Maryland is 5.072 billion cubic feet, or 2,133 cubic feet per acre. This is a 7 percent increase since 1986 when the volume totaled 4.745 billion cubic feet, or 1,881 cubic feet per acre. Yellow-poplar is the leading species in growing-stock volume, with 749.9 million cubic feet, or 15 percent of the total. Red maple contributes 13 percent of the total volume, or 640.7 million cubic feet. Other red oaks rank third with 11 percent of the total (570.8 million cubic feet).

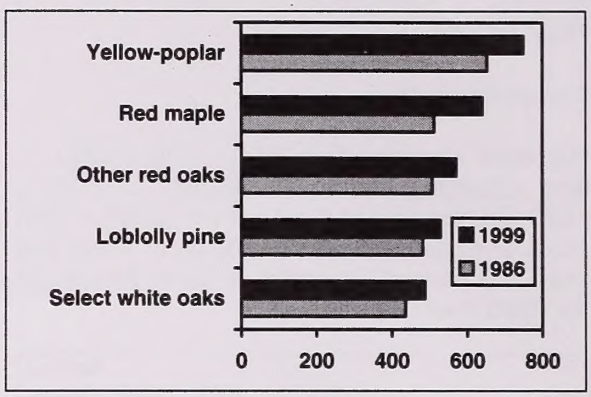

Figure 6. Net volume of growing-stock trees (imillion cubic feet) on timberland, top five species, Maryland, 1986 and 1999 (Source: Tables 35 and 36).

Sawtimber Volume

With an average of 6,797 board feet per acre, there are 16.161 billion board feet of sawtimber in Maryland. In 1986, the volume was 14.156 billion board feet, or 5,953 board feet per acre. Sawtimber volume increased by 14 percent since the last inventory. Although the top three species are the same as the top species in growing-stock volume, there is a different ranking. Yellow-poplar is the top species with 3.164 billion board feet, or 20 percent of the total, and a 20-percent increase over its 1986 volume. Other red oaks have 2.136 billion board feet or 13 percent of the sawtimber volume. Rounding out the top three species in sawtimber volume is red maple with 11 percent of the total (1.846 billion board feet).

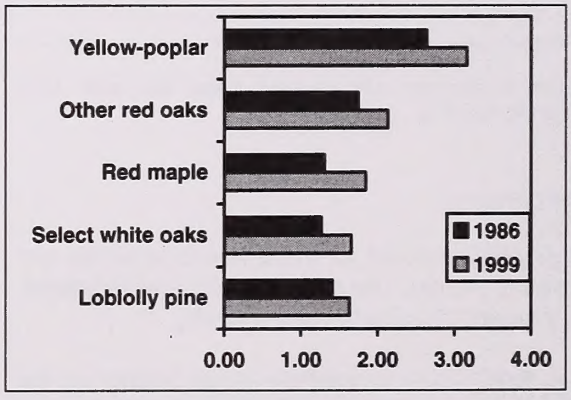

Figure 7. Net volume of sawtimber trees (billion board feet) on timberland, top five species, Maryland, 1986 and 1999 (Source: Tables 38 and 39).

Biomass

There are more than 204 million dry tons of biomass in all live trees on forest land in Maryland, or an average of 79.6 dry tons per acre. Sixty-five percent of the weight is in growing-stock trees, 19 percent is in stumps and roots, and 16 percent is distributed among branches, foliage, and cull trees.

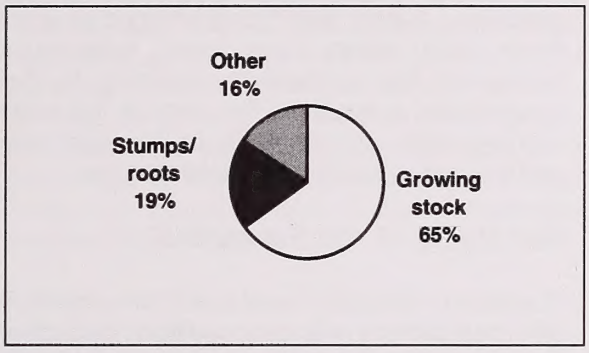

Figure 8. Biomass of all timber on forest land by component , Maryland, 1999 (Source: Table 101).

Growth, Mortality, and Removals

Since the last inventory, the average annual net growth of growing stock on timberland is 106.8 million cubic feet, or 45 cubic feet per acre per year. This represents 2.1 percent of the current inventory. Average annual mortality is 36.5 million cubic feet or 15 cubic feet per acre per year. Mortality is 34 percent of net growth. Average annual removals of growing stock total 82.6 million cubic feet, or 35 cubic feet per acre per year. Sixty-three percent of the removals comes from harvesting and 37 percent from land-use change. The removals going into land-use change are not necessarily trees that are harvested. The trees may still be standing, but the use may have changed from timberland to another use for example, reserved or unproductive forest. Even in the case of timberland being converted to a nonforest land use, the trees may be standing, but it is much more likely that these trees are harvested or killed.

Figure 9. Average annual net change (millions of cubic feet) of growing stock by net growth, harvest removals and land-use change removals, Maryland 1986-1999 (Source: Table 41).

Ratios of growth to removals of growing-stock volume vary with tree species. Yellow-poplar is growing 4.5 times faster than it is being removed, either by harvest or by land-use change, while red maple, the species with the highest amount of total growing-stock removals, has a growth-to-removals ratio of 0.5 to 1.

Average annual net growth of sawtimber on timberland is 428.6 million board feet, or 181 board feet per acre per year. The ratio of growth to removals of sawtimber volume is 1.6 to 1. Annual removals are 272.7 million board feet per year, or 115 board feet per acre annually. Removals combined with growth yielded a positive annual change in board-foot volume of 156 million board feet.

Yellow-poplar exhibited an annual increase of 150 million board feet, a growth-to-removals ratio of 6.2 to 1. Loblolly pine showed no significant increase in sawtimber volume and has a growth-to-removals ratio of 1.1 to 1.

Introduction

The USDA Forest Service conducts periodic inventories of all states to provide up-to-date information on the forest resources of the Nation under the authority of the McSweeney-McNary Forest Research Act of 1928 and subsequent acts, including the Renewable Resources Planning Act of 1974 and the Renewable Resources Research Act of 1978.

The initial inventory of Maryland's forest resources was conducted in 1950, and subsequent inventories were conducted in 1964, 1975, and 1986. This report presents forest-resource data from the fifth inventory conducted in 1999, through a cooperative effort by the Northeastern Research Station, the Maryland Forest Service, and the landowners of Maryland.

The Forest Inventory and Analysis (FIA) Unit of the Northeastern Research Station conducted the inventory on all lands, developed the resource tables, and prepared this report.

During the 1999 Maryland inventory, a new system to select ground plots was implemented. This system has been adopted by all of the FIA Units in the United States as the basis for the upcoming *Annual Inventory Program*. A hexagonal grid with each cell representing approximately 5,933 acres was superimposed over the United States. One ground plot was selected in each hexagon. If the hexagon contained one or more ground plots from the 1986 inventory, the plot closest to the hexagon center was selected; otherwise, a new ground plot was established randomly near the hexagon center.

There were 516 ground plots from the previous inventory that were remeasured, and 582 ground plots were established for the first time. The data collected were summarized using the FINSYS computer system developed at the Northeastern Research Station. More detailed analysis of the state's forest resource are being prepared.

The forest area, numbers of trees and shrubs, biomass, timber volume, growth, and change statistics in this report summarize the information collected by the field crews. Other information or additional summaries may be developed. For information, contact the **Forest Inventory and Analysis Unit, USDA Forest Service, 11 Campus Boulevard, Suite 200, Newtown Square, PA 19073 (Telephone: 610-557-4075; Fax: 610-557-4250; Web site: www.fs.fed.us/ne/fia).**

The Northeastern, North Central, and Southern Research Stations have agreed to include a set of 25 core tables in each of their state resource bulletins. The format of any of these tables will be identical for all 37 states in the Stations' territories. Rather than being grouped as a set, these core tables have been interspersed throughout this publication according to their level of data or content. The index in this report includes both a list of tables in this publication and the corresponding core-table number.

Reliability of the Estimates

The data in this report were based on a carefully designed sample of forest conditions throughout Maryland. But, the field crews did not measure every tree or every acre in the state, hence the results are estimates. The reliability of the estimating procedure can be judged by two important statistical measures: accuracy and precision. Accuracy refers to the success of estimating the true value. Precision refers to the clustering of sample values about their own averages or to the variation among repeated samples. We are interested primarily in the accuracy of the inventory but in most cases we can only measure its precision.

Although accuracy cannot be measured exactly, it can be checked. Preliminary tables were sent to other agencies and to outside experts familiar with the forest conditions in Maryland. If questions arose, the data were reviewed and reanalyzed to resolve differences. Great effort was taken to minimize sources of procedural error through detailed training of both field and office personnel, frequent inspection of field and office work, and application of the most reliable inventory methods.

Because of the care exercised in the inventory process, estimates of precision afford a reasonable measure of the inventory's adequacy. The precision of each estimate is described by its sampling error. Sampling errors are given with several tables in this report. The others are available upon request.

Here is an example of how the sampling error is used to indicate reliability. The estimate of

timberland for Maryland is 2,377,800 acres. The associated sampling error is 2 percent, or 47,556 acres. This means that if there are no errors in the procedure, we are 68 percent confident that the true number of acres is between 2,330,244 and 2,425,356 acres, or 2,377,800 $\pm$ 47,556 (one standard deviation). Similarly, we are 95 percent confident that the true number of acres is within $\pm$ 95,112 acres (two standard deviations). County estimates are less precise. While the sampling error for timberland at the state level is 2 percent, the sampling error for Carroll County is 14.3 percent. In general, as the size of the sample decreases, the sampling error, expressed as a percentage of the estimate, increases. A high amount of variance within a county increases the sampling error.

For many of the tables in this report, both the last column and last row are labeled "SE." These figures are the sampling errors of the column and row totals. The last sampling error given (SE) is for the table total. To calculate the approximate sampling error (SE_{ij}) for a table cell (ij), use the following formula (**this formula is reliable only for estimating sampling errors of individual cells in AREA tables**):

$$SE_{ij} = 1/P_{ij}((P_{ij} (1- P_{ij}))/n)^{1/2}$$

where:

n = total number of sample plots of a population

$P_{ij} = A_{ij} / A$

A_{ij} = cell estimate

A = total land area of a population

ij = row(i) and column(j)

A note of caution:

Any estimate with a sampling error of 50 percent or more is not significantly different from zero, and estimates with errors of 25 to 50 percent are suspect. Therefore, any estimates with errors exceeding 25 percent should be used with caution.

Comparison Between Inventories

To evaluate the condition of the forest resource, it is useful to compare the current estimates with those from the previous inventory. As a result of ongoing efforts to improve the efficiency of the inventory, we have made several changes in procedures and definitions since 1986. Because these changes make it inappropriate to compare some of the current estimates with those published by Frieswyk and DiGiovanni (1988), users should use caution when comparing the data in this report with those in the 1986 report. In this report, several tables containing 1986 data are provided to allow comparisons. The changes in methods and definitions follow.

To improve data consistency at the national level, a standard plot design is being used by all FIA projects in the country. The new plot design, a cluster of four 24-foot-radius points covering a 1/6-acre area, was established with this inventory at all selected plot locations, both new and previously measured. Field crews recorded different conditions on the plots if certain attributes (land use, forest type, stand origin, stand size, tree density, and/or owner) differed from those at plot center. Crews "mapped" these conditions by recording information that described the boundaries of the conditions. This mapping procedure is designed to reduce bias in the estimates

On all selected remeasured plots, a subsample of the trees that were recorded in the past were reconciled to calculate change estimates. Condition mapping was ignored for change estimation because mapping was not used at the previous occasion.

FIA uses U.S. Bureau of Census estimates of total state or county land area as the basis for estimating land area by various classes. For the 1986 report (1988), 1980 Bureau of Census data were used; in 1999, 1990 data were available. Between 1980 and 1990, the Bureau of Census changed its estimating procedures: it now can identify as inland water streams that are more than 200 feet wide and bodies of water 4.5 acres and larger in area. Previously, the minimum width for streams was 660 feet and the minimum area for bodies of water was 40 acres. This new procedure results in a reduction in total land area. For comparison of land area between inventories, 1986 estimates of land area by class were recalculated using 1990 total land-area values from the Bureau of Census.

Stocking, stand size, and forest-type algorithms have been revised. The algorithms for stocking and stand size are consistent across the Nation. Stocking is a quantitative expression of live-tree stand density that can be expressed in absolute terms, such as basal area per acre, volume per acre, or number of trees per acre; or in relative terms, such as a percentage of a previously defined standard.[1] For the 1986 inventory statistics, the stocking value of a tree was calculated using the basal area of the tree as a percent of 75 square feet per acre, which is the basal-area standard for full use of the site.[2]

Basal-area stocking may well describe current timber volume, but it is inadequate to describe stand composition in a multiresource inventory because it neither adequately measures present site utilization nor describes small-diameter stands. For the statistics in this publication, stocking is calculated using relative density, which represents site occupancy based on normal yield tables. Basal area is diameter-dependent only, whereas relative density reflects species composition, stage of development, and the social position of the trees present. A relative measure of stand density is useful for interpreting findings of extensive inventories, such as those performed by FIA in which a variety of stands are sampled. A procedure using relative density to calculate stocking was developed and accepted as a standard to be used by all FIA projects in the United States.

Stand size is a classification (sapling/seedling, poletimber, sawtimber, or nonstocked) of forest land based on the size of the trees that dominate an area, and forest type is a classification of forest land based on the species found in the area. Both stand size and forest type are calculated based on stocking of all live trees, and, therefore, are affected by the change in the procedure to calculate stocking. To allow comparisons, this report includes several 1986 area tables showing estimates of area of timberland by stand-size class and forest type and forest-type group that are calculated based on relative density.

Forty-five percent of the 1986 plots were remeasured in 1999. The estimates of average annual change are derived from this set of data. These estimates afford an opportunity to look at components of change in the volume from occasion to occasion or from plot to plot.

The tables showing 1986 information are from the plots that were selected at the prior inventory to produce an estimate of the area and volume. This data set has been reprocessed using current procedures to produce a new estimate of the area and volume of the 1986 inventory.

Because the tables of estimates for average annual change only contain a portion of the plots from the 1986 survey, inconsistencies in trends may result when the recalculated estimates of 1986 are compared with the average annual change estimates between the 1986 and 1999 tables.

[1] Arner, Stanford L. and others. **National algorithms for determining stocking class, stand size class, and forest type for Forest Inventory and Analysis plots**. In preparation.

[2] U.S. Department of Agriculture, Forest Service. 1967. **Forest survey handbook.** For. Serv. Handb. 4809.11. On file at Northeastern Research Station, Forest Inventory and Analysis, Newtown Square, PA.

Definitions of Terms

Acceptable tree. (a) Live sawtimber trees that do not qualify as preferred trees but are not cull trees. (b) Live poletimber trees that prospectively will not qualify as preferred trees, but are not now or prospectively cull trees.

Accretion. The estimated net growth on growing-stock trees that were measured during the previous inventory (divided by the number of growing seasons between surveys to produce average annual accretion). It does not include the growth on trees that were cut during the period, nor those trees that died.

Apical meristem. The point on a tree where stem elongation and growth occur.

Azimuth. The horizontal direction as sighted from subplot center to the center of the base of the tree. Recorded to the nearest degree on all trees 1 inche d.b.h. or greater.

Basal-area class. A classification of forest land based on basal area (cross-sectional area of a tree stem at breast height in square feet per acre) of all live trees of all sizes.

Board foot. A unit of lumber measurement 1 foot long, 1 foot wide, and 1 inch thick, or its equivalent. International ¼ inch rule is used as the USDA Forest Service standard log rule in the eastern United States.

Board-foot cull. The volume within the sawlog length of the tree that cannot be used as lumber because of rot, sweep, crook, excessive limbs, and other defects.

Board-foot soundness. The amount of board-foot cull that is sound, expressed as a percentage.

Board-foot stand-volume class. A classification of forest land based on net board-foot volume of sawtimber trees per acre.

Bog/Marsh/Swamp. Land that has less than 10 percent stocking with live trees and which characteristically supports low, generally herbaceous or shrubby vegetation, and which is intermittently covered with water during all seasons; includes tidal areas that are covered with brackish water during high tides.

Bole length. The length of a tree stem from a 1 foot stump to a 1) four-inch top diameter outside bark (d.o.b.); 2) where the central stem terminates by branching before reaching four inches d.o.b.; or 3) point of a break on broken-off trees. Recorded to the nearest foot on all live and sound dead poletimber and sawtimber trees.

Christmas tree plantation. Forest land sufficiently productive to qualify as timberland but is used exclusively for Christmas tree production.

Commercial species. Tree species currently or prospectively suitable for industrial wood products; excludes species of typically small size, poor form, or inferior quality, such as hawthorn and sumac.

Condition. A classification of a land area based on land use, forest type, stand origin, and stand size (see definitions).

Corporate-owned lands. Lands owned by private corporations, partnerships, trusts, or clubs other than forest industry or farmers.

County and municipal lands. Lands owned by counties and local public agencies or municipalities or leased to them for 50 years or more.

Cropland. Land that currently supports agricultural crops including silage and feed grains, bare farm fields resulting from cultivation or harvest, and maintained orchards.

Crown class. An indicator of the status of the tree in relation to other trees in the stand.

Crown ratio. The percentage of the total tree height that supports a full, live crown.

Cubic-foot cull. The volume within the bole length of the tree that is not suitable for products because of rot, decay, large limbs, forks, sweep, crook, embedded wire, and other defects.

Cubic-foot soundness. The amount of cubic-foot cull that is sound, expressed as a percentage.

Cubic-foot stand-volume class. A classification of forest land based on net cubic-foot volume of either all live trees per acre or growing-stock trees per acre.

Cull decrement. The net volume of rough or rotten trees in the previous inventory that are classified as growing-stock trees in current inventory (divided by the number of growing seasons between surveys to produce average annual cull decrement).

Cull tree. A rough tree or a rotten tree.

Cull increment. The net volume of growing-stock trees in the previous inventory that are classified as rough or rotten trees in the current inventory (divided by the number of growing seasons between surveys to produce average annual cull increment).

Damage, general. An agent that is serious enough to cause the reduction of tree class, significantly deter growth of the tree, or prevent it from producing marketable products within the next 10 years.

Damage, special. An indication of the presence, to any extent, of an agent.

Diameter at breast height (d.b.h.). The diameter

outside bark of a standing tree measured at 4-1/2 feet above the ground.

Dry ton. A unit of measure of dry weight equivalent to 2,000 pounds or 907.1848 kilograms.

Dry ton stand-volume class. A classification of forest land based on net dry weight of the aboveground components of all live trees per unit area; usually expressed in dry tons per acre.

Dry weight. The weight of wood and bark as it would be if it had been oven-dried; usually expressed in pounds or tons.

Farmer-owned lands. Lands owned by farm operators, whether part of the farmstead or not; excludes land leased by farm operators from nonfarm owners.

Federal lands. Lands (other than National Forests) administered by Federal agencies.

Forest industry lands. Lands owned by companies or individuals that operate primary wood-using plants.

Forest land. Land that is at least 10 percent stocked with trees of any size, or that formerly had such tree cover and is not currently developed for a nonforest use. The minimum area for classification of forest land is one acre. The components that make up forest land are timberland and all noncommercial forest land (see definitions).

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

Forest-type group. A classification of forest land based on the species forming a plurality of live-tree stocking. A combination of forest types that share closely associated species or site requirements are combined into the following major forest-type groups (the descriptions apply to this report):

a. White/red pine. Forests in which eastern white pine, red pine, or eastern hemlock, singly or in combination, make up the plurality of the stocking; common associates include red maple, oak, sugar maple, and aspen.

b. Spruce/fir. Forests in which red, white, black, or Norway spruces, balsam fir, northern white-cedar, tamarack, or planted larch, singly or in combination, make up a plurality of the stocking; common associates include white pine, red maple, yellow birch, and aspens.

c. Hard pine (also called loblolly/shortleaf pine). Forests in which eastern redcedar or pitch pine, singly or in combination, make up a plurality of the stocking; common associates include white pine, paper birch, sugar maple, and basswood.

e. Oak/pine. Forests in which hardwoods (usually hickory or upland oaks) make up a plurality of the stocking and in which pines or eastern redcedar contribute 25 to 50 percent of the stocking.

f. Oak/hickory. Forests in which upland oaks, hickory, yellow-poplar, black locust, sweetgum, or red maple (when associated with central hardwoods), singly or in combination, make up a plurality of the stocking and in which pines or eastern redcedar make up less than 25 percent of the stocking; common associates include white ash, sugar maple, and hemlock.

g. Oak/gum/cypress. Bottomland forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, make up a plurality of the stocking and in which pines make up less than 25 percent of the stocking; common associates include cottonwood, willow, ash, elm, hackberry, and maple.

h. Elm/ash/red maple (also called elm/ash/cottonwood). Forests in which elm, willow, cottonwood, or red maple (when growing on wet sites), singly or in combination, make up a plurality of the stocking; common associates include white ash, sugar maple, aspens, and oaks.

i. Northern hardwoods (also called maple/beech/birch). Forests in which sugar maple, beech, yellow birch, black cherry, or red maple (when associated with northern hardwoods), singly or in

combination, make up a plurality of the stocking; common associates include white ash, eastern hemlock, basswood, aspens, and red oak.

j. Aspen/birch. Forests in which aspen, paper birch, or gray birch, singly or in combination, make up a plurality of the stocking; common associates include red maple, white pine, red oaks, and white ash.

Gross growth. The sum of accretion and ingrowth.

Growing-stock trees. Live trees of commercial species classified as sawtimber, poletimber, saplings, or seedlings; that is, all live trees of commercial species except rough and rotten trees.

Growing-stock volume. Net volume, in cubic feet, of growing-stock trees 5 inches d.b.h. and larger from a 1-foot stump to a minimum 4-inch top diameter outside bark of the central stem, or to the point where the central stem breaks into limbs. Net volume equals gross volume less deduction for cull.

Hard hardwoods. Hardwood species with an average specific gravity of greater than 0.50.

Hardwoods. Dicotyledonous trees, usually broad-leaved and deciduous.

Harvested cropland. All lands from which crops were harvested or hay was cut; all land in orchards, citrus groves, vineyards, and nursery and greenhouse products.

Horizontal distance. The measure of length on a horizontal plane from subplot center to the center of the base of the tree. Recorded to the nearest .1 foot on all trees 1inche d.b.h. and greater.

Idle farmland. Former cropland or pasture that has not been tended for within the last 2 years and has less than 10 percent stocking with live trees (established seedlings or larger trees), regardless of species.

Improved/maintained pasture. Land that is currently used and maintained for grazing (not including grazed cropland).

Individual-owned lands. Lands owned by private individuals that do not own a farm, wood-processing plant, or corporation.

Industrial and commercial lands. Supply yards, parking lots, factories, etc.

Ingrowth. The estimated net volume of growing-stock trees that became 5 inches d.b.h. or larger during the period between inventories (divided by the number of growing seasons between surveys to produce average annual ingrowth). Also, the estimated net volume of growing-stock trees 5 inches d.b.h. and larger that are growing on land that was reclassified from noncommercial forest land or nonforest land to timberland.

International 1/4-inch rule. A log rule or formula for estimating the board-foot volume of logs. The mathematical formula is:

$$(0.22D^2 - 0.71D)(0.904762)$$

for 4-foot sections, where D=diameter inside bark at the small end of the log section. This rule is used as the USDA Forest Service standard log rule in the Eastern United States.

Land area. (a) Bureau of Census: The area of dry land and land temporarily or partly covered by water, such as marshes, swamps, and river flood plains; streams, sloughs, estuaries, and canals less than 200 feet wide; and lakes, reservoirs, and ponds less than 4.5 acres in area. (b) Forest Inventory and Analysis: same as (a) except that the minimum width of streams, etc. is 120 feet, and the minimum size of lakes, etc. is 1 acre.

Land use. A classification of land that indicates the primary use at the time of inventory. Major categories are forest land and nonforest land (see definitions).

Merchantability class. An indicator of the relative amounts of sound and unsound cull in a tree. Based on board-foot cull for sawtimber-sized trees and on cubic-foot cull for poletimber-sized trees.

Merchantable stem. The main stem of the tree between a 1-foot stump height and a 4-inch top diameter (outside the bark), including the wood and bark.

Mining and waste land. Surface mining, gravel pits, dumps.

Mortality. The estimated net volume of growing-stock trees at the previous inventory that died from natural causes before the current

inventory (divided by the number of growing seasons between surveys to produce average annual mortality).

Multi-family house. House or building sheltering multiple families and immediately adjacent managed land.

National Forest lands. Federal lands legally designated as National Forests or purchase units and other lands administered as part of the National Forest System by the USDA Forest Service.

Net change. The difference between the current and previous inventory estimates of growing-stock volume (divided by the number of growing seasons between surveys to produce average annual net change). Components of net change are ingrowth plus accretion, minus mortality, minus cull increment, plus cull decrement, minus removals.

Net dry weight. The dry weight of woody material less the weight of all unsound (rotten) material.

Net growth. The change, resulting from natural causes, in growing-stock volume during the period between surveys (divided by the number of growing seasons to produce average annual net growth). Components of net growth are ingrowth plus accretion, minus mortality, minus cull increment, plus cull decrement.

Noncensus water. Streams/rivers between 120 feet and 200 feet in width, and bodies of water between 1 and 4.5 acres in size. The Bureau of the Census classifies such water as land.

Noncommercial forest land. Reserved productive forest land, Christmas tree plantations, other forest land, and other reserved forest land (see definitions).

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

Nonforest land. Land that has never supported forests, or land formerly forested but now in nonforest use such as cropland, pasture, idle farmland, other farmland, single- and multi-family housing, bogs/marshes/swamps, rights-of-way, industrial or commercial sites, or noncensus water.

Nonsalvable dead tree. A dead tree with most or all of its bark missing that is at least 5 inches d.b.h. and is at least 4.5 feet tall.

Nonstocked area. A stand-size class of forest land that is less than 10 percent stocked with live trees of any size.

Other cropland. Includes cropland used for cover crops and soil improvement (legumes).

Other farmland. All nonforest land on a farm excluding cropland, pasture, and idle farmland; includes farm lanes, stock pens, and farmsteads.

Other forest land. Forest land that is incapable of producing 20 cubic feet per acre per year of industrial wood under natural conditions, because of adverse site conditions (formerly known as unproductive forest land).

Other reserved forest land. Forest land that is incapable of producing 20 cubic feet per acre per year of industrial wood under natural conditions, because of adverse site conditions, and is protected through statute or administrative designation.

Ownership class. A classification of forest land based on ownership and nature of business or control of decisionmaking for the land. It encompasses all types of legal entities having ownership interest in the land, whether public or private.

Pasture. Includes any pasture land other than cropland and woodland pasture. It can include lands that have had lime fertilizer or seed applied, or that had been improved by irrigation, drainage, or control of weeds and brush.

Poletimber stand. A stand-size class of forest land that is at least 10 percent stocked with live trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of poletimber exceeds that of sawtimber.

Poletimber tree. A live tree of commercial species meeting regional specifications of soundness and form and at least 5.0 inches in d.b.h., but smaller than a sawtimber tree.

Preferred tree. A high-quality tree, from a lumber viewpoint, that would be favored in cultural operations. General characteristics include grade

1 butt log (if sawtimber size), good form, good vigor, and freedom from serious damage.

Recreation site. Parks, campgrounds, playing fields, tracks, etc.

Relative stand density. A stocking classification procedure that reflects species, stage of development, and the characteristics of the trees present in a stand.

Removals. The net growing-stock volume harvested or killed in logging, cultural operations (such as timber stand improvement) or land clearing, and the net growing-stock volume neither harvested nor killed but growing on land that was reclassified from timberland to noncommercial forest land or nonforest land during the period between surveys. This volume is divided by the number of growing seasons to produce average annual removals.

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

Rights-of-way. Highways, pipelines, powerlines, canals.

Rotten tree. A live tree of commercial species that does not contain at least one 12-foot sawlog or two noncontiguous sawlogs, each 8 feet or longer, now or prospectively, and does not meet regional specifications for freedom from defect primarily because of rot; that is, more than 50 percent of the cull volume in the tree is rotten.

Rough tree. (a)The same as a rotten tree except that a rough tree does not meet regional specifications for freedom from defect primarily because of roughness or poor form; also (b) a live tree of noncommercial species.

Salvable dead tree. A tree at least 5 inches d.b.h. that has died recently and still has intact bark; may be standing, fallen, windthrown, knocked down, or broken off.

Sampling error. A measure of the reliability of an estimate, expressed as a percentage of the estimate. The sampling errors given in this report correspond to one standard error and are calculated as the square root of the variance, divided by the estimate, and multiplied by 100. Indicated in statistical tables as "SE".

Sapling. All live trees 1 through 4.9 inches d.b.h.

Sapling/seedling stand. A stand-size class of forest land that is at least 10 percent stocked with live trees with half or more of such stocking in saplings or seedlings or both.

Sawlog. A log meeting regional standards of diameter, length, and freedom from defect, including a minimum 8-foot length and a minimum top diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods. (See specifications under Tree-Grade Classification.)

Sawlog length (portion). The length of a tree stem from a 1-foot stump to a 1) point above which no physical log, whether or not merchantable, can be produced because of excessive limbs, forks or crooks; 2) minimum sawlog top; or 3) point of a break on broken-off trees. Recorded to the nearest foot on all live and sound dead sawtimber trees.

Sawlog top. The point on the bole of a sawtimber tree above which a sawlog cannot be produced. The minimum sawlog top is 7 inches diameter outside bark (d.o.b.) for softwoods and 9 inches d.o.b. for hardwoods.

Sawtimber stand. A stand-size class of forest land that is at least 10 percent stocked with live trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of sawtimber is at least equal to that of poletimber.

Sawtimber tree. A live tree of commercial species at least 9 inches d.b.h. for softwoods or 11 inches for hardwoods, containing at least one 12-foot sawlog or two noncontiguous 8-foot sawlogs, and meeting regional specifications for freedom from defect.

Sawtimber volume. Net volume in board feet, by the International 1/4-inch rule, of sawlogs in sawtimber trees. Net volume equals gross volume less deductions for rot, sweep, and other defects that affect use for lumber.

SE. See Sampling error.

Seedling. A live tree less than 1.0 inch d.b.h. and at least 1 foot tall.

Single-family house. House sheltering one family and immediately adjacent managed land.

Snag. Standing dead tree with most or all of its bark missing that is at least 5.0 inches d.b.h. and at least 4.5 feet tall (does not include salvable dead).

Soft hardwoods. Hardwood species with an average specific gravity of 0.50 or less.

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

Sound cull. Defects that are due to form: sweep, crook, limbs, and forks.

Species. A class of individuals having common attributes and designated by a common name.

Stand. A group of forest trees growing on forest land.

Stand origin. An indication of how the measured stand originated: 100 percent natural, 100 percent artificial, or a combination of both.

Stand-size class. A classification of forest land based on the size class (that is, seedlings, saplings, poletimber, or sawtimber) of the stocking of all live trees in the area.

Standard cord. A unit of measure for stacked bolts of wood, encompassing 128 cubic feet of wood, bark, and air space. Fuelwood cord estimates can be derived from cubic-foot estimates of growing stock by applying an average factor of 80 cubic feet of solid wood per cord. For pulpwood, a conversion of 85 cubic feet of solid wood per cord is used because pulpwood is more uniform.

State lands. Lands owned by the state or leased to the state for 50 years or more.

Stocking. The degree of occupancy of land by trees relative to the growth potential utilized by a site. It is expressed as a percent of the "normal" value presented in yield tables and stocking quides. Two categories of stocking are used in this report: all live trees and growing-stock trees. The relationships between the classes and the percentage of the stocking standard are: nonstocked (0 to 9); poorly stocked (10 to 34); moderately stocked (35 to 59); fully stocked (60 to 100); and overstocked (greater than 100).

Strip mine. Area devoid of vegetation due to current or recent general excavation.

Stump. The main stem of a tree from ground level to 1 foot above ground level, including the wood and bark.

Timberland. Forest land producing or capable of producing crops of industrial wood (more than 20 cubic feet per acre per year) and not withdrawn from timber utilization (formerly known as commercial forest land).

Timber products. Roundwood (round timber) products and manufacturing plant by-products harvested from growing-stock trees on timberland; from other sources, such as cull trees, salvable dead trees, limbs, tops, and saplings; and from trees on noncommercial forest and nonforest lands.

Timber removals. The growing-stock or sawtimber volume of trees removed from the inventory for roundwood products, plus logging residues, volume destroyed during land clearing, and volume of standing trees on land that was reclassified from timberland to noncommercial forest land.

Top. The wood and bark of a tree above the merchantable height (or above the point on the stem 4 inches in diameter outside bark); generally includes the uppermost stem, branches, and twigs of the tree, but not the foliage.

Total length. The length from a 1-foot stump to the apical meristem, to the nearest foot on all live and dead poletimber and sawtimber trees.

Tract/multiple family housing. Multiple individual residential units or attached units (e.g., apartment buildings and condominiums) and immediately adjacent managed land.

Transportation right-of-way. Land associated with highways and railroads.

Tree class. A classification of the quality or condition of trees for sawlog production. Tree class for sawtimber trees is based on their current condition. Tree class for poletimber trees is a prospective determination--a forecast of their potential quality when they reach sawtimber size (11 inches d.b.h. for hardwoods, 9 inches d.b.h. for softwoods).

Tree condition. A classification for all live and dead trees 5 inches d.b.h or greater that indicates the status of the top of the tree, whether broken or intact.

Tree grade. A classification of sawtimber quality based on guidelines for tree grades for hardwoods, white pine, and southern pine. (Note: Red pine was graded using the guidelines for southern pine. All specifications are shown under Tree-Grade Classification.)

Tree history. A classification for all trees 5 inches d.b.h. or greater, either currently or previously, that indicates the status of the tree (accretion, ingrowth, mortality, removals).

Trees. Woody plants that have well-developed stems and that usually are more than 12 feet tall at maturity.

Unproductive forest land. See Other forest land.

Upper-stem portion. That part of the main stem or fork of a sawtimber tree above the sawlog top to a diameter of 4 inches outside bark, or to the point where the main stem or fork breaks into limbs.

Urban forest land. Forest land sufficiently productive to qualify as timberland that is completely surrounded by or nearly surrounded by urban development (not parks), whether commercial, industrial, or residential.

Utility right-of-way. Land associated with pipeline or electric transmission lines; identified only if vegetative cover differs from adjacent land use.

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Species Groups of Maryland

Species group	Scientific name	Common name(s)
White/red pine	*Pinus resinosa*	red pine
	Pinus strobus	eastern white pine
Loblolly pine	*Pinus echinata*	shortleaf pine
	Pinus serotina	pond pine
	Pinus taeda	loblolly pine
Virginia pine	*Pinus virginiana*	Virginia pine
Other yellow pines	*Pinus pungens*	Table Mountain pine
	Pinus rigida	pitch pine
	Pinus sylvestris	Scotch pine
Other pine	*Chamaecyparis thyoides*	Atlantic white-cedar
	Juniperus virginiana	eastern redcedar
	Picea abies	Norway spruce
	Taxodium distichum	baldcypress
	Tsuga canadensis	eastern hemlock
Red maple	*Acer rubrum*	red maple
	Acer saccharinum	silver maple
Sugar maple	*Acer saccharum*	sugar maple
Hickory	*Carya sp.*	hickory
	Carya cordiformis	bitternut hickory
	Carya glabra	pignut hickory
	Carya ovata	shagbark hickory
	Carya tomentosa	mockernut hickory
Beech	*Fagus grandifolia*	American beech
Sweetgum	*Liquidambar styraciflua*	sweetgum
Yellow-poplar	*Liriodendron tulipifera*	yellow-poplar
Blackgum	*Nyssa aquatica*	water tupelo
	Nyssa sylvatica	blackgum
Ash/walnut/cherry	*Fraxinus americana*	white ash
	Fraxinus nigra	black ash
	Fraxinus pennsylvanica	green ash
	Juglans nigra	black walnut
	Prunus serotina	black cherry
Select white oaks	*Quercus alba*	white oak
	Quercus bicolor	swamp white oak
	Quercus michauxii	swamp chestnut oak
Select red oaks	*Quercus falcata var. pagodaefolia*	cherrybark oak, swamp red oak
	Quercus rubra	northern red oak
Other white oaks	*Quercus lyrata*	overcup oak
	Quercus prinus	chestnut oak
	Quercus stellata	post oak
Other red oaks	*Quercus coccinea*	scarlet oak

Species Groups of Maryland (continued)

Species group	Scientific name	Common name
	Quercus ellipsoidalis	northern pin oak
	Quercus falcata var. falcata	southern red oak
	Quercus imbricaria	shingle oak
	Quercus nigra	water oak
	Quercus palustris	pin oak
	Quercus phellos	willow oak
	Quercus velutina	black oak
Black locust	*Robinia pseudoacacia*	black locust
Other hardwoods	*Acer negundo*	boxelder
	Acer pensylvanicum	striped maple
	Acer platanoides	Norway maple
	Ailanthus altissima	ailanthus
	Amelanchier sp.	serviceberry
	Asimina triloba	pawpaw
	Betula alleghaniensis	yellow birch
	Betula lenta	sweet birch
	Betula nigra	river birch
	Carpinus caroliniana	American hornbeam
	Castanea dentata	American chestnut
	Catalpa sp.	catalpa
	Celtis occidentalis	hackberry
	Cercis canadensis	eastern redbud
	Cornus florida	flowering dogwood
	Crataegus sp.	hawthorn
	Diospyros virginiana	common persimmon
	Fraxinus profunda	pumpkin ash
	Gleditsia triacanthos	honeylocust
	Ilex opaca	American holly
	Juglans cinerea	butternut
	Maclura pomifera	Osage-orange
	Magnolia acuminata	cucumbertree
	Magnolia virginiana	sweetbay
	Malus sp.	apple
	Morus sp.	mulberry
	Morus alba	white mulberry
	Morus rubra	red mulberry
	Ostrya virginiana	eastern hophornbeam
	Oxydendrum arboreum	sourwood
	Paulownia tomentosa	Paulownia
	Platanus occidentalis	sycamore
	Populus deltoides	eastern cottonwood
	Populus grandidentata	bigtooth aspen
	Populus tremuloides	quaking aspen
	Prunus sp.	cherry, plum
	Prunus pensylvanica	pin cherry
	Prunus virginiana	chokecherry
	Quercus sp.	oak
	Quercus ilicifolia	bear oak, scrub oak
	Quercus marilandica	blackjack oak
	Salix sp.	willow
	Salix nigra	black willow
	Sassafras albidum	sassafras
	Tilia americana	American basswood
	Ulmus sp.	elm
	Ulmus americana	American elm
	Ulmus rubra	slippery elm
	unknown	unknown or not listed tree

Tree Species of Maryland (as encountered on field plots)

Scientific name ***	Common name(s)	Occurrence**
	Softwoods	
Chamaecyparis thyoides (L.) B.S.P.	Atlantic white-cedar	r
Juniperus virginiana L.	eastern redcedar	r
Picea abies (L.) Karst.	Norway spruce	r
Pinus echinata Mill.	shortleaf pine	vr
Pinus pungens Lamb.	Table Mountain pine	vr
Pinus resinosa Ait.	red pine	c
Pinus rigida Mill.	pitch pine	vr
Pinus serotina Michx.	pond pine	vr
Pinus strobus L.	eastern white pine	c
Pinus sylvestris L.	Scotch pine	r
Pinus taeda L.	loblolly pine	vc
Pinus virginiana Mill.	Virginia pine	c
Taxodium distichum (L.) Rich.	baldcypress	vr
Tsuga canadensis (L.) Carr.	eastern hemlock	r
	Hardwoods	
Acer negundo L. *	boxelder	c
Acer pensylvanicum L. *	striped maple	vr
Acer rubrum L.	red maple	vc
Acer saccharinum L.	silver maple	r
Acer saccharum Marsh.	sugar maple	c
Acer platanoides L.	Norway maple	vr
Ailanthus altissima (Mill.) Swingle *	ailanthus	r
Amelanchier sp. Medic. *	serviceberry	r
Asimina triloba (L.) Dunal *	pawpaw	vr
Betula alleghaniensis Britton	yellow birch	r
Betula lenta L.	sweet birch	c
Betula nigra L.	river birch	r
Carpinus caroliniana Walt. *	American hornbeam	r
Carya cordiformis (Wangenh.) K. Koch	bitternut hickory	r
Carya glabra (Mill.) Sweet	pignut hickory	c
Carya ovata (Mill.) K. Koch	shagbark hickory	r
Carya tomentosa (Poir.) Nutt.	mockernut hickory	c
Castanea dentata (Marsh.) Borkh. *	American chestnut	vr
Catalpa sp. Scop. *	catalpa	vr
Celtis occidentalis L.	hackberry	r
Cercis canadensis L. *	eastern redbud	vr
Cornus florida L. *	flowering dogwood	r
Crataegus sp. L. *	hawthorn	vr
Diospyros virginiana L.	common persimmon	c
Fagus grandifolia Ehrh.	American beech	c
Fraxinus americana L.	white ash	c
Fraxinus nigra Marsh.	black ash	vr
Fraxinus pennsylvanica Marsh.	green ash	r
Fraxinus profunda (Bush) Bush	pumpkin ash	vr
Gleditsia triacanthos L.	honeylocust	vr
Ilex opaca Ait.	American holly	c
Juglans cinerea L.	butternut	vr
Juglans nigra L.	black walnut	r
Liquidambar styraciflua L.	sweetgum	vc
Liriodendron tulipifera L.	yellow-poplar	vc
Maclura pomifera (Raf.) Schneid. *	Osage-orange	r

Tree Species of Maryland (continued)

Scientific name ***	Common name(s)	Occurrence**
Magnolia acuminata L.	cucumbertree	vr
Magnolia virginiana L.	sweetbay	r
Malus sp. Mill. *	apple	r
Morus alba L. *	white mulberry	vr
Morus rubra L. *	red mulberry	vr
Nyssa aquatica L.	water tupelo	vr
Nyssa sylvatica Marsh.	blackgum	c
Ostrya virginiana (Mill.) K. Koch *	eastern hophornbeam	r
Paulownia tomentosa (Thunb.) Sieb. & Zucc. ex Steud.	Paulownia	vr
Platanus occidentalis L.	sycamore	c
Populus deltoides Bartr. ex Marsh.	eastern cottonwood	r
Populus grandidentata Michx.	bigtooth aspen	r
Populus tremuloides Michx.	quaking aspen	vr
Prunus sp. L.	cherry, plum	vr
Prunus pensylvanica L. f. *	pin cherry	r
Prunus serotina Ehrh.	black cherry	c
Prunus virginiana L. *	chokecherry	vr
Quercus sp. L. *	oak	vr
Quercus alba L.	white oak	vc
Quercus bicolor Willd.	swamp white oak	r
Quercus coccinea Muenchh.	scarlet oak	c
Quercus ellipsoidalis E. J. Hill	northern pin oak	vr
Quercus falcata var. falcata Michx.	southern red oak	c
Quercus falcata var. pagodaefolia Ell.	cherrybark oak, swamp red oak	r
Quercus ilicifolia Wangenh.	bear oak, scrub oak	vr
Quercus imbricaria Michx.	shingle oak	vr
Quercus lyrata Walt.	overcup oak	vr
Quercus marilandica Muenchh. *	blackjack oak	vr
Quercus michauxii Nutt.	swamp chestnut oak	r
Quercus nigra L.	water oak	r
Quercus palustris Muenchh.	pin oak	r
Quercus phellos L.	willow oak	c
Quercus prinus L.	chestnut oak	c
Quercus rubra L.	northern red oak	c
Quercus stellata Wangenh.	post oak	r
Quercus velutina Lam.	black oak	c
Robinia pseudoacacia L.	black locust	c
Salix sp. L. *	willow	vr
Salix nigra Marsh.	black willow	r
Sassafras albidum (Nutt.) Nees *	sassafras	c
Tilia americana L.	American basswood	r
Ulmus sp. L.	elm	vr
Ulmus americana L.	American elm	r
Ulmus rubra Muhl.	slippery elm	r
*	unknown or not listed tree	vr

*** Names according to: Little, Elbert L., Jr. 1979. Checklist of United States Trees (native and naturalized). Agric. Handb. 541. Washington, DC: U.S Department of Agriculture. 375 p.

** Occurrence is based on the proportion of the species among all live trees 5 inches d.b.h. or greater encountered on forest survey field plots: vr = very rare (<0.05%), r = rare (0.05 to 0.49%), c = common (0.5 to 4.9%), and vc = very common (>5.0%).

* Noncommercial species.

Tree-Grade Classification

HARDWOOD TREE GRADES

GRADING FACTOR	TREE GRADE 1	TREE GRADE 2	TREE GRADE 3
Length of grading zone (feet)	Butt 16	Butt 16	Butt 16
Length of grading section [a] (feet)	Best 12	Best 12	Best 12
Minimum d.b.h. (inches)	16[b]	13	11
Minimum diameter inside bark at top of grading section (inches)	13[b] 16 20	11[c] 12	8
Clear cuttings on 3rd best face[d]			
minimum length (feet)	7 5 3	3 3	2
number on face (maximum)	2	2 3	unlimited
yield in face length (minimum)	5/6	4/6	3/6
Cull deduction, including crook and sweep but excluding shake, maximum within grading section (%)	9	9[e]	50

[a] Whenever a 14- or 16-foot section of the butt 16-foot log is better than the best 12-foot section, the grade of the longer section will become the grade of the tree. This longer section, when used, is the basis for determining the grading factors, such as diameter and cull deduction.

[b] In basswood and ash, diameter inside bark at the top of the grading section may be 12 inches and d.b.h. may be 15 inches.

[c] Grade 2 trees can be 10 inches diameter inside bark at the top of the grading section if otherwise meeting surface requirements for small grade 1's.

[d] A clear cutting is a portion of a face free of defects, extending the width of the face. A face is one-fourth of the surface of the grading section as divided lengthwise.

[e] Fifteen percent crook and sweep, or 40 percent total cull deduction are permitted in grade 2 if size and surface of grading section qualify as grade 1. If rot shortens the required clear cuttings to the extent of dropping the butt log to grade 2, do not drop the tree's grade to 3 unless the cull deduction for rot is greater than 40 percent.

Tree-Grade Classification (continued)

TIE AND TIMBER GRADE

GRADE FACTORS	SPECIFICATIONS
Position in tree	Butts and uppers
Scaling diameter (inches)	8 inches d.i.b. and larger
Length, without trim (feet)	12 feet and larger
Clear cuttings	no requirements: not graded on cutting basis
Maximum sweep allowance	One-fourth d.i.b. of small end for half logs, and one-half d.i.b. for logs 16 feet long
Sound surface defects permitted Single knots	Any number, if none has an average collar[a] diameter that is more than one third of the log diameter at the point of occurrence
Sound surface defects permitted Whorled knots	Any number, provided the sum of the collar diameters does not exceed one third the log diameter at the point of occurrence
Sound surface defects permitted Knots	Any number not exceeding knot specifications, if they do not extend more than 3 inches into the contained tie or timber
Unsound surface defects permitted[b]	Any number and size if they do not extend into contained tie or timber. If they extend into the contained tie or timber, they shall not exceed size, number, and depth of limits for sound defects.

[a] Knot collar is the average of the vertical and horizontal diameters of the limb, or knot swelling, as measured flush with the surface of the log.

[b] Interior defects are not visible in standing trees. They are considered in grading cut logs. No interior defects are permitted except one shake not more than one-third the width of the contained tie or timber, and one split not more than 5 inches long.

Tree-Grade Classification (continued)

EASTERN WHITE PINE TREE GRADE SPECIFICATIONS

GRADING FACTOR	TREE GRADE 1	TREE GRADE 2	TREE GRADE 3	TREE GRADE 4
(1) Minimum d.b.h. (inches)	9	9	9	9
(2) Maximum weevil injury in butt 16 ft section (number)	None	None	2 injuries	No limit
(3) Minimum face requirements on butt 16 ft section	Two full length or four 50% length good faces[1] (In addition, knots on balance of faces shall not exceed size limitations for grade 2 sections)	NO GOOD FACES REQUIRED. Maximum diameter of knots on three best faces: **SOUND RED KNOTS** not to exceed 1/6 of scaling dia. or 3 inch maximum[2] **DEAD OR BLACK KNOTS,** including overgrown knots, not to exceed 1/12 scaling dia. and 1-1/2 inch max.	NO GOOD FACES REQUIRED. Maximum diameter of knots on three best faces: **SOUND RED KNOTS** not to exceed 1/3 of scaling diameter or 5 inch maximum[2] **DEAD OR BLACK KNOTS,** including overgrown knots, not to exceed 1/6 scaling dia. and 2-1/2 inch max.	Includes all trees not qualifying for grade 3 or better and judged to have at least 1/3 of their gross volume in sound wood suitable for manufacture into standard lumber
(4) Maximum sweep or crook in butt 16 ft section (percent)	20	30	40	No limit
(5) Maximum total scaling deduction in butt 16 ft. section (percent)	50	50	50	No limit

After the tentative grade of the section is established from face examination, the section will be reduced one grade whenever the following defects are evident:

CONKS, PUNK KNOTS, AND PINE BORER DAMAGE ON THE SURFACE OF THE SECTION[3] Degrade one grade if present on one face. Degrade two grades if present on two faces. Degrade three grades if present on three or four faces.

(7) If the final grade of the grading section is 1, 2, or 3, examine the tree for weevil injuries in the merchantable stem *above* 16 ft. If the total apparent weevil injuries exceed three, degrade the tree one grade below the section grade[3]. Otherwise the tree grade equals the final section grade.

[1] Trees under 16 inches d.b.h. require four full length good faces.

[2] Scaling diameter is estimated at the top of the 16-foot grading section.

[3] No tree will be designated below Grade 4 unless net tree scale is less than one-third of gross tree scale.

Tree-Grade Classification (continued)

SOUTHERN PINE TREE GRADES

Grade 1 - trees with 3 or 4 clear faces on the 16-foot grading section.

Grade 2 - trees with 1 or 2 clear faces on the 16-foot grading section.

Grade 3 - trees with no clear faces on the 16-foot grading section.

After the tentative grade is established, the tree will be reduced one grade for each of the following:

(1) **Sweep**. Degrade any tentative Grade 1 or 2 tree one grade if sweep in the lower 12 feet of the grading section amounts to 3 or more inches and equals or exceeds one-fourth the diameter at breast height.

(2) **Heart rot**. Degrade any tentative Grade 1 or 2 tree one grade if conks, punk knots, or other evidence of advanced heart rot is found anywhere on the tree stem.

NOTE: No tree can be degraded below Grade 3, provided the total scaling deductions for sweep and/or rot do not exceed two-thirds the gross scale of the tree. Trees with total scaling deductions in excess of two-thirds are classified as cull.

A face is one-fourth the circumference of the 16-foot grading section and extends the full length of the grading section. Clear faces are those free from knots measuring more than 1/2 inch in diameter, overgrown knots of any size, and holes more than 1/4 inch in diameter. Faces may be rotated, if necessary, to obtain the maximum number of clear faces on the grading section.

One-log trees are graded by using the Southern Pine Log Grades. This is recommended because the entire merchantable volume of the tree is contained in the graded section. The log grading system gives a more accurate prediction of the lumber grade-yields for such trees than would the tree grading system.

SPRUCE, FIR, CEDAR, TAMARACK, AND HEMLOCK LOGS

Minimum Merchantability Specifications for Grade One Logs				
D.I.B.[1]	**LENGTH[2]**	**TOTAL DEDUCTION**	**SWEEP PERMITTED**	**OTHER REQUIREMENTS**
6" - 12"	12' - 16' in 2 foot multiples	50 %	25 %	Sound knots not over 2" in diameter permitted. Shake permitted up to 20 % of gross scale if not combined with other serious defect.
13"+	12' - 16' in 2 foot multiples	50 %	25 %	Sound knots not over 3" in diameter permitted. Shake permitted up to 20 % of gross scale if not combined with other serious defect.

[1] ...at small end of log.
[2] ...without trim.

TREE GRADE 5 (ALL SPECIES)

Any tree which does not make tree grade 1,2, or 3 (or 4) but is still a merchantable tree.

Data-Quality Standards for Plots

A quality assurance (QA) program ensures that a final product will meet the desired level of accuracy and precision. Within the quality assurance program, quality control (QC) procedures are designed to maintain data quality within an acceptable range. There are three basic aspects of a QA program: error prevention, assessment and appraisal, and correction.

Error prevention is achieved by developing standardized methods, establishing measurement quality objectives and data quality standards, and applying calibration techniques and training. Assessment and appraisal are accomplished by performing audits, debriefings and data validation and verification; soliciting field personnel feedback; and a remeasurement program for QC data collection. Correction uses all of the information from the prevention and assessment and appraisal components to make improvements in the measurement system.

Our periodic resource inventories are designed to satisfy specified precision objectives. Much of our resource information comes from a statistically sound but small sample of actual ground conditions that were selected to satisfy the precision objectives. While there is no guarantee that the data are error free, it is obvious that field errors must be kept to a minimum. Establishing and adhering to a QA program can accomplish this objective. By setting standards and monitoring fieldwork, we can detect and correct, prevent, or eliminate the repetition of most errors.

After the initial training period for crew members, field supervisors periodically inspect fieldwork. The number of errors detected will be used to determine frequency of inspections. All instances of error are analyzed and discussed with the crew. Supervisors monitor progress and goals, and minimum acceptable performance levels are adjusted as conditions warrant. In addition, a percentage of all plots are subjected to a second measurement as part of the QC program.

Tolerance levels are set depending on the type of data item. When an item is obtained by measurements that can be repeated with uniform results by several individuals, narrow tolerance limits that define acceptable data are set. Some items require subjective evaluation; the breadth of the tolerance limits depends on the degree of subjectivity. When an item requires an objective answer, crews are expected to complete the item as best they can, based on their training, instructions received, and observation on the plot, with zero tolerance for error.

Quality Control Remeasurement Program

The following procedures were followed to obtain the QC tree-data results.

Sample Size

* Four percent random sample of all plots in state is selected.

Data Collection

* Crew 1 visits a plot.
* The plot is identified as QC by field supervisor.
* Crew 2 visits the same plot.

Compilation

* Trees from both data sets (Crew 1 and 2) are extracted from forested subplots.
* Trees are matched between sets based on the following criteria:

    1) Tree numbers for all remeasure trees.
    2) Distance, azimuth, and species for all new or ingrowth trees.

Comparison

* Tolerance limits from state field instructions are used to compare the tree data between Crew 1 and Crew 2.
* Four tree-data item classes are grouped prior to applying tolerance.

1) Six condition classes are reduced to three: live, dead, or snag.
2) Six tree grades are reduced to four: merchantable, tie and timber, cull, and dead.
3) Six tree classes are reduced to five: preferred and acceptable, rough, rotten, dead, and snag.
4) Three merchantability classes are reduced to two: sound and unsound.

* Values are within tolerance (1x) or exceed tolerance by a factor of 2, 3 or 4 times (2x, 3x, or 4x).

Results

Tree-data items are presented as:

* Percentage of data within tolerance limits.
* Number of times data exceeded tolerance limits.

Delaware and Maryland QA Tree-Data Results from 83 Subplots*

		Percentage of data within tolerance				Number of times data exceeded tolerance				
Tree-data item	Tolerance	@1x	@2x	@3x	@4x	@1x	@2x	@3x	@4x	Records
Species	No tolerance	93%				42				635
Trees (missed)	No tolerance	98%				(10)				645
Horizontal distance	± 0.2 feet	78%	92%	96%		142	53	27		635
Azimuth	± 2 degrees	57%	79%	90%		272	132	66		635
Tree history	No tolerance	98%				3				147
Diameter	± 0.1 inch	90%	93%	95%		64	41	30		622
Ecotype	No tolerance	99%				5				635
Condition	No tolerance**	92%				48				622
Tree grade	No tolerance**	90%				18				181
Saw length	± 4 feet	44%	62%	77%	92%	102	69	42	15	181
Bole length	± 4 feet	47%	76%	88%	94%	307	138	69	33	576
Total length	± 10 feet	83%	98%	100%		106	12	3		622
Board foot cull	± 10%	80%	92%	96%	97%	36	15	8	6	181
Board foot soundness	± 1 class	88%	91%	92%	93%	21	17	15	13	181
Cubic foot cull	± 10%	78%	93%	97%	98%	124	41	19	14	576
Cubic foot soundness	± 1 class	92%	93%	94%	95%	47	43	37	30	576
Crown ratio	± 1 class	91%	99%			50	8			576
Crown class	No tolerance	71%				166				576
General damage	Variable tolerance	94%				32				576
Special damage	Variable tolerance	87%				154				1,152
Tree class	No tolerance**	94%				35				622
Merchantability class	No tolerance**	94%				35				576

* Because of the small number of samples, Delaware and Maryland data cannot be reported individually. Twenty-four plots visited with forest land

** Item codes have been grouped for comparison

Metric Equivalents

1 acre = 4,046.86 square meters
1 acre = 0.404686 hectares
1,000 acres = 404.686 hectares
1,000,000 acres = 404,686 hectares
1 board foot = 0.00348 cubic meters
1 board foot = 3,480 cubic centimeters
1,000 board feet = 3.48 cubic meters
1,000,000 board feet = 3,480 cubic meters
1 cubic foot = 0.028317 cubic meters
1,000 cubic feet = 28.317 cubic meters
1,000,000 cubic feet = 28,317 cubic meters
1 cord (wood, bark, and air space) = 3.6246 cubic meters
1 cord (solid wood, pulpwood) = 2.4069 cubic meters
1 cord (solid wood, other than pulpwood) = 2.2654 cubic meters
1,000 cords (pulpwood) = 2,406.9 cubic meters
1,000 cords (other products) = 2,265.4 cubic meters
1 inch = 2.54 centimeters or 0.0254 meters
1 foot = 30.48 centimeters or 0.3048 meters
1 mile = 1.609 kilometers
1 square foot = 929.03 square centimeters
1 square foot = 0.0929 square meters
1 square foot per acre basal area = 0.229568 square meters per hectare
1 cubic foot per acre = 0.0699 cubic meters per hectare
1 ton = 907.1848 kilograms
1,000 tons = 907.1848 metric tons
Breast height = 1.4 meters above ground level

Although 1,000 board feet are theoretically equivalent to 2.36 cubic meters, this is true only when a board foot is actually a piece of wood with a volume 1/12 of a cubic foot. The International 1/4-inch log rule is used by the USDA Forest Service in the East to estimate the product potential in board feet. The reliability of the estimate obtained by conversion will vary with the size of the log measure. The conversion given here, 3.48 cubic meters, is based on the cubic volume of a log 16 feet long and 15 inches in diameter inside bark (d.i.b.) at the small end. This conversion could be used for average comparisons when accuracy of 10 percent is acceptable. Because the board foot unit is not a true measure of wood volume and because products other than dimension lumber are becoming important, this unit may eventually be phased out and replaced by the cubic meter.

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MARYLAND
STATE TABLES

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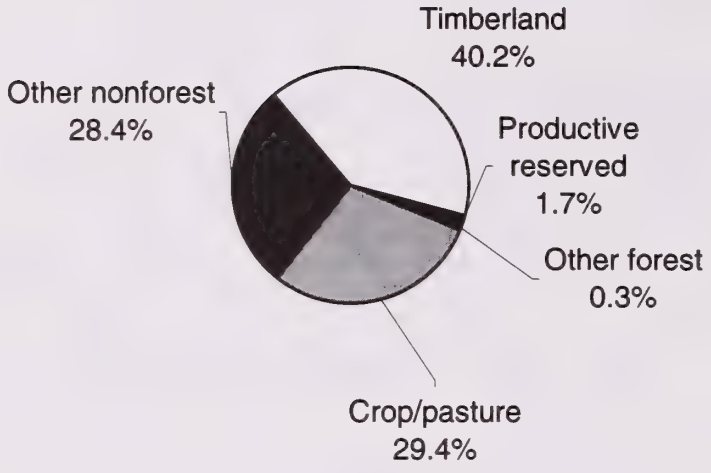
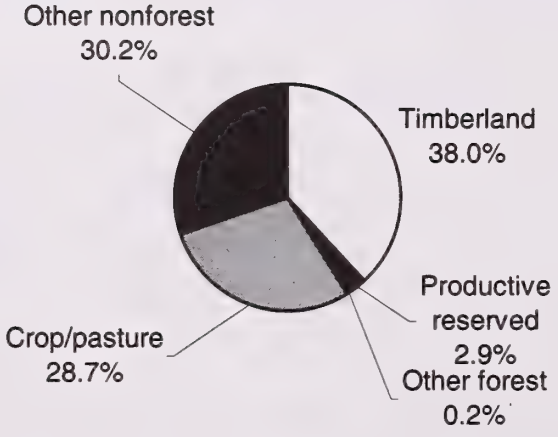


1986



1999

Area of forest land by forest-type group, Maryland, 1999

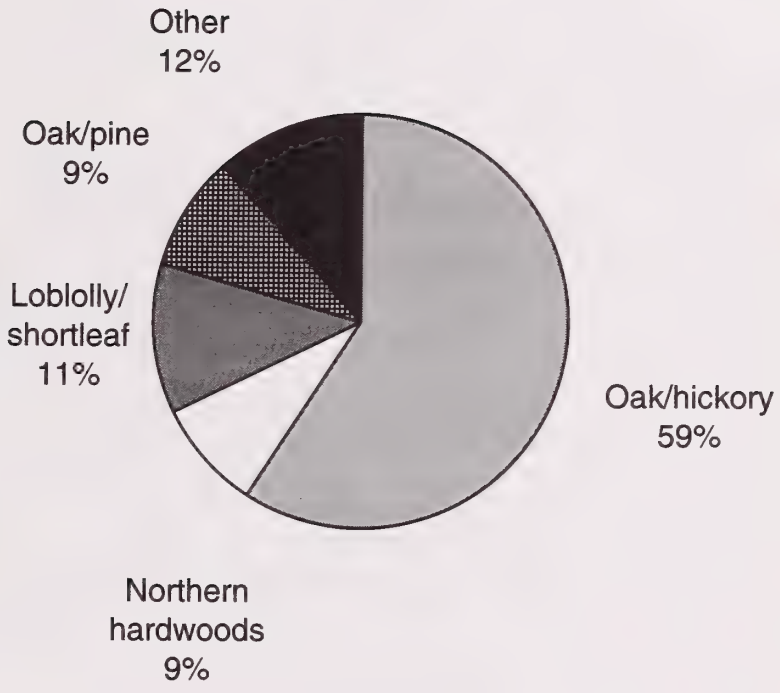


Table 1.--Land area by land class, Maryland, 1999[a]

(In thousands of acres)[b]

Land class	Area			
	1986	Percent	1999	Percent
Timberland:				
Rural	2,421.7	39	2,233.5	36
Urban	100.5	1	138.5	2
Total timberland	2,522.2	40	2,371.9	38
Forested land:				
Productive reserved	104.3	2	179.8	3
Other forest land[c]	18.9	<1	14.1	<1
Total forest land	2,645.3	42	2,565.8	41
Nonforest land:				
Cropland	1,502.4	24	1,575.7	25
Pasture	334.1	5	225.6	4
Other	1,726.2	28	1,875.8	30
Noncensus water	47.7	1	12.8	<1
Total nonforest land	3,610.4	58	3,690.0	59
Total land area[d]	6,255.8	100	6,255.8	100

[a] In this and other tables, a zero indicates that the data are negligible or the condition was not encountered in the sample. A dash indicates that the condition is not possible under current Forest Service definitions.

[b] Rows and columns in all tables may not sum due to rounding.

[c] "Other forest land" formerly known as unproductive forest land.

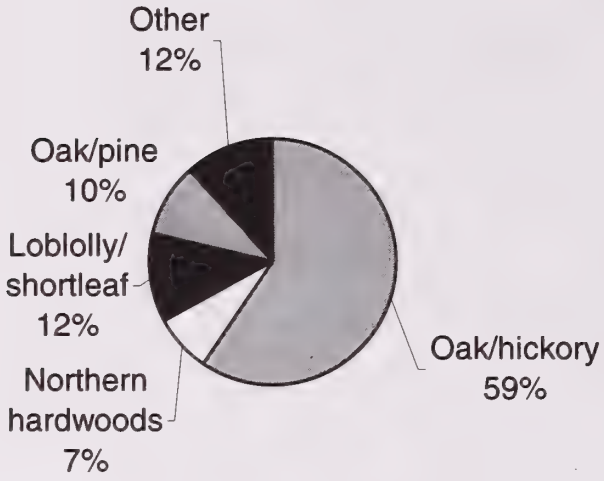
[d] Source: 1990 United States Department of Commerce, Bureau of Census.

Table 2.--Area of all forest land by forest type group and forest land class, Maryland, 1999

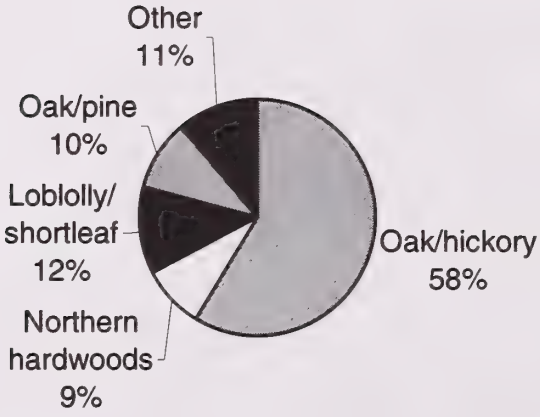
(In thousands of acres)

Forest-type group	Land class						Total forest	SE
	Rural	Urban	Total timberland	Productive reserved	Unproductive reserved	Other forest land		
White/red pine	21.8	2.9	24.7	.0	.0	.0	24.7	42.3
Spruce/fir	3.2	.0	3.2	1.2	.0	.0	4.4	78.2
Loblolly/shortleaf	271.5	11.1	282.6	12.0	.0	.0	294.6	10.9
Oak/pine	225.1	4.5	229.6	.0	.0	.0	229.6	14.4
Oak/hickory	1,294.9	93.0	1,387.9	130.5	.0	.0	1,518.4	3.8
Oak/gum/cypress	124.8	.0	124.8	.0	.0	7.5	132.3	19.4
Elm/ash/red maple	95.4	12.8	108.2	21.1	.0	6.6	135.8	19.8
Northern hardwoods	194.9	14.2	209.1	15.1	.0	.0	224.2	14.8
Aspen/birch	1.8	.0	1.8	.0	.0	.0	1.8	100.0
Total, all groups	2,233.5	138.5	2,371.9	179.8	.0	14.1	2,565.8	1.5
SE	2.2	17.9	1.9	16.6	.0	64.6	1.5	

Area of timberland by forest-type group, Maryland, 1986 and 1999

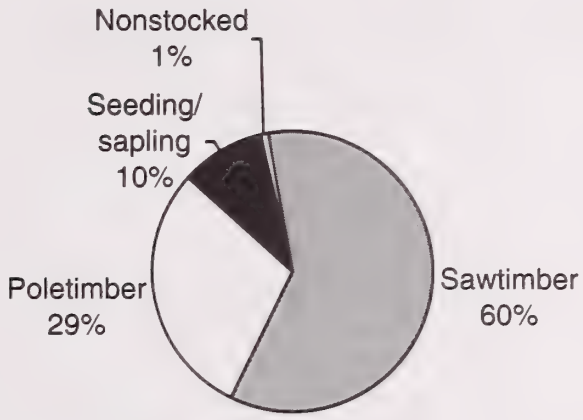


1986



1999

Area of timberland by stand-size class, Maryland, 1986 and 1999



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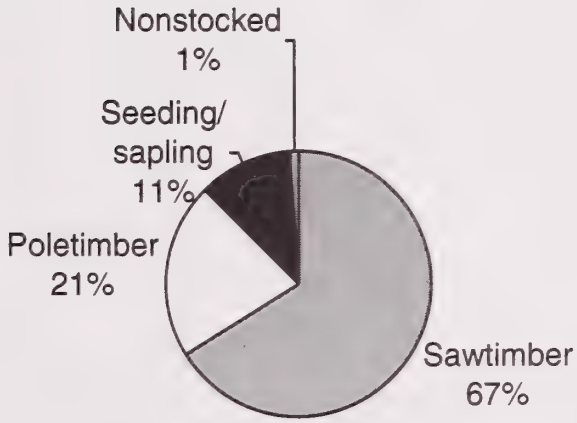


1999

Table 3.--Area of timberland by forest type, forest-type group, and stand-size class, Maryland, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	3.0	9.9	4.4	.0	17.3	45.5
White pine	4.4	8.0	.0	.0	12.4	57.9
Hemlock	6.9	.0	.0	.0	6.9	71.0
Scotch pine	.0	.0	.0	12.9	12.9	100.0
White/red pine group	14.3	17.9	4.4	12.9	49.5	35.2
Loblolly pine	95.8	78.6	11.9	.0	186.4	13.1
Virginia pine	52.4	48.4	4.9	.0	105.8	19.5
Loblolly/shortleaf group	148.3	127.1	16.8	.0	292.2	10.8
Virginia pine/oak	53.1	26.7	5.9	.0	85.7	20.6
Loblolly pine/hardwood	100.0	21.6	30.2	.0	151.8	16.5
Other oak/pine	5.9	.0	.0	.0	5.9	100.0
Oak/pine group	159.0	48.3	36.2	.0	243.4	12.7
Post, black, or bear oak	5.4	3.5	.0	.0	8.9	68.5
Chestnut oak	56.4	10.3	.0	.0	66.8	23.8
White oak/red oak/hickory	80.7	57.6	.0	.0	138.3	16.5
White oak	26.9	47.5	.0	.0	74.4	23.9
Northern red oak	13.0	.0	.0	.0	13.0	50.9
Y-poplar/wh. oak/no.red oak	22.9	14.1	.0	.0	37.0	34.3
Black locust	5.1	24.0	11.9	.0	41.0	31.3
Sweetgum/yellow-poplar	41.4	21.6	8.5	.0	71.6	23.9
Black walnut	3.0	.0	.0	.0	3.0	100.0
Yellow-poplar	53.7	2.9	.0	.0	56.6	36.8
Scarlet oak	16.7	.0	.0	.0	16.7	46.5
Sassafras/persimmon	.0	10.4	14.9	.0	25.4	48.8
Red maple/central hardwood	21.3	19.1	6.5	.0	46.9	26.3
Mixed central hardwoods	622.7	212.8	67.3	.0	902.8	5.8
Oak/hickory group	969.2	423.9	109.2	.0	1,502.3	3.7
Swamp chsnt oak/cherrybark oak	13.9	21.6	.0	.0	35.4	36.6
Sweetgm/nuttall oak/willow oak	41.8	18.0	13.4	.0	73.2	21.0
Baldcypress/water tupelo	4.2	3.4	.0	.0	7.6	71.1
Sweetbay/swamp tupelo/red mple	17.7	3.0	10.6	.0	31.3	32.8
Oak/gum/cypress group	77.5	46.0	24.0	.0	147.6	15.1
Black ash/Amer. elm/red maple	29.3	5.6	4.1	.0	39.0	32.8

Table 3.--continued

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red maple(lowland)	8.0	3.4	8.8	.0	20.2	55.3
Red maple(upland)	3.1	.0	.0	.0	3.1	100.0
River birch/sycamore	22.7	.0	.0	.0	22.7	49.8
Willow	.0	1.7	.0	.0	1.7	100.0
Sycamore/pecan/American elm	7.2	1.5	.0	.0	8.8	61.8
Elm/ash/red maple group	70.4	12.3	12.9	.0	95.6	22.3
Sugar maple/beech/yellow birch	34.4	13.3	3.5	.0	51.1	25.6
Black Cherry	3.0	17.2	18.1	4.8	43.1	26.2
Red maple/northern hardwoods	.0	9.0	.0	.0	9.0	59.0
Pin cherry/reverting field	.0	.0	8.2	.0	8.2	72.7
Mixed northern hardwoods	35.8	22.7	18.8	.0	77.2	24.7
Northern hardwoods group	73.2	62.2	48.5	4.8	188.7	13.7
Aspen	.0	3.0	.0	.0	3.0	100.0
Aspen/birch group	.0	3.0	.0	.0	3.0	100.0
All forest types	1,511.9	740.7	252.0	17.7	2,522.2	2.0
SE	3.9	6.3	12.9	77.8	2.0	

Table 4.--Area of timberland by forest type, forest-type group, and stand-size class, Maryland, 1999

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	6.1	8.5	.0	.0	14.6	57.5
White pine	9.2	.0	.9	.0	10.0	61.4
White/red pine group	15.2	8.5	.9	.0	24.7	42.3
Norway spruce	3.2	.0	.0	.0	3.2	100.0
Spruce/fir group	3.2	.0	.0	.0	3.2	100.0
Loblolly pine	123.0	66.7	55.4	.0	245.1	11.8
Virginia pine	19.8	17.7	.0	.0	37.4	30.9
Loblolly/shortleaf group	142.8	84.4	55.4	.0	282.6	10.9
Eastern redcedar/hardwood	5.4	.0	12.6	.0	18.0	58.4
Shortleaf pine/oak	.0	.0	1.8	.0	1.8	100.0
Virginia pine/oak	36.4	10.3	.0	.0	46.7	31.6
Loblolly pine/hardwood	91.1	60.1	11.9	.0	163.1	17.3
Oak/pine group	132.9	70.4	26.3	.0	229.6	14.4
Post, black, or bear oak	10.4	2.3	.0	.0	12.7	58.4
Chestnut oak	31.8	15.6	.0	.0	47.4	32.0
White oak/red oak/hickory	112.6	14.9	.0	6.4	133.9	20.2
White oak	53.4	19.5	.0	.0	72.8	28.9
Northern red oak	28.2	.0	.0	.0	28.2	47.8
Y-poplar/wh. oak/no.red oak	50.3	.0	.0	.0	50.3	32.4
Black locust	13.8	7.5	16.7	.0	38.0	34.5
Sweetgum/yellow-poplar	46.6	13.7	12.3	.0	72.6	26.8
Black walnut	.0	1.1	.0	1.2	2.2	70.4
Yellow-poplar	55.5	1.4	2.9	1.5	61.3	25.4
Hawthorn/reverting field	.0	.0	.3	1.9	2.1	88.9
Scarlet oak	22.3	.0	.0	.0	22.3	46.2
Sassafras/persimmon	.0	5.7	10.5	.0	16.3	53.2
Red maple/central hardwood	32.9	12.1	.0	.0	45.0	34.6
Mixed central hardwoods	550.5	149.2	75.1	7.9	782.7	7.0
Oak/hickory group	1,008.4	242.9	117.8	18.8	1,387.9	4.3
Swamp chsnt oak/cherrybark oak	18.8	3.2	3.2	.0	25.2	40.1
Sweetgm/nuttall oak/willow oak	44.3	6.8	12.0	.0	63.1	28.4
Baldcypress/water tupelo	7.0	2.5	.0	.0	9.4	57.8
Sweetbay/swamp tupelo/red mple	25.5	1.6	.0	.0	27.1	44.8

Table 4.--continued

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Oak/gum/cypress group	95.6	14.1	15.2	.0	124.8	19.6
Black ash/Amer. elm/red maple	19.7	11.9	.0	.0	31.6	47.0
Red maple(lowland)	13.4	.0	7.9	2.8	24.2	45.9
Red maple(upland)	14.6	1.8	.0	.0	16.4	54.7
River birch/sycamore	12.5	8.7	4.1	.0	25.4	49.0
Willow	.0	.0	1.3	.0	1.3	100.0
Sycamore/pecan/American elm	5.2	.0	.0	.0	5.2	89.1
American elm/green ash	1.8	2.3	.0	.0	4.0	71.2
Elm/ash/red maple group	67.2	24.8	13.4	2.8	108.2	22.7
Sugar maple/beech/yellow birch	51.2	4.9	6.0	.0	62.2	32.8
Black cherry	10.9	25.2	13.1	.0	49.2	32.3
Red maple/northern hardwoods	11.3	18.0	.0	.9	30.2	46.9
Pin cherry/reverting field	.0	.0	3.0	.0	3.0	81.1
Mixed northern hardwoods	36.1	11.0	17.4	.0	64.5	28.2
Northern hardwoods group	109.6	59.1	39.5	.9	209.1	15.5
Aspen	.0	1.8	.0	.0	1.8	100.0
Aspen/birch group	.0	1.8	.0	.0	1.8	100.0
All forest types	1,575.0	506.1	268.4	22.5	2,371.9	1.9
SE	3.6	9.5	13.1	37.9	1.9	

Table 5.--Area of timberland by forest-type group and ownership class, Maryland, 1999

(In thousands of acres)

Forest-type group	Ownership class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
White/red pine	.0	.0	.0	24.7	24.7	42.3
Spruce/fir	.0	3.2	.0	.0	3.2	100.0
Loblolly/shortleaf	.0	34.6	57.3	190.7	282.6	10.9
Oak/pine	.0	21.5	10.8	197.3	229.6	14.4
Oak/hickory	.0	281.5	9.9	1,096.5	1,387.9	4.3
Oak/gum/cypress	.0	8.5	7.4	108.9	124.8	19.6
Elm/ash/red maple	.0	32.0	2.6	73.5	108.2	22.7
Northern hardwoods	.0	40.3	.0	168.8	209.1	15.5
Aspen/birch	.0	.0	.0	1.8	1.8	100.0
All groups	.0	421.6	88.0	1,862.3	2,371.9	1.9
SE	.0	10.7	24.6	3.2	1.9	

Table 6.--Area of timberland by forest-type group and stand-size class, Maryland, 1999

(In thousands of acres)

Forest-type group	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
White/red pine	15.2	8.5	.9	.0	24.7	42.3
Spruce/fir	3.2	.0	.0	.0	3.2	100.0
Loblolly/shortleaf	142.8	84.4	55.4	.0	282.6	10.9
Oak/pine	132.9	70.4	26.3	.0	229.6	14.4
Oak/hickory	1,008.4	242.9	117.8	18.8	1,387.9	4.3
Oak/gum/cypress	95.6	14.1	15.2	.0	124.8	19.6
Elm/ash/red maple	67.2	24.8	13.4	2.8	108.2	22.7
Northern hardwoods	109.6	59.1	39.5	.9	209.1	15.5
Aspen/birch	.0	1.8	.0	.0	1.8	100.0
All groups	1,575.0	506.1	268.4	22.5	2,371.9	1.9
SE	3.6	9.5	13.1	37.9	1.9	

Table 7.--Area of timberland by board-foot stand-volume class and ownership class, Maryland, 1999

(In thousands of acres)

Stand-volume class	Ownership class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
0 - 1,999	.0	96.0	57.8	439.9	593.8	7.9
2000 - 3,999	.0	72.8	5.2	290.1	368.1	11.9
4000 - 5,999	.0	54.0	6.1	261.3	321.4	12.6
6000 - 7,999	.0	64.2	2.2	236.7	303.1	12.7
8000 - 9,999	.0	23.8	.0	154.8	178.6	17.5
10000+	.0	110.8	16.6	479.6	607.0	7.6
All classes	.0	421.6	88.0	1,862.3	2,371.9	1.9
SE	.0	10.7	24.6	3.2	1.9	

Table 8. Area of timberland by ownership class and stocking class of growing-stock trees, Maryland, 1999

(In thousands of acres)

Ownership class	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
Other public	6.3	81.2	114.3	203.6	16.3	421.6	10.7
Forest industry	.0	11.2	28.3	33.9	14.6	88.0	24.6
Other private	29.0	169.1	576.3	981.4	106.6	1,862.3	3.2
All classes	35.2	261.5	718.9	1,218.9	137.5	2,371.9	1.9
SE	30.1	14.2	7.4	5.0	16.6	1.9	

Table 9.--Area of timberland by forest-type group and cubic-foot stand-volume class, Maryland, 1999

(In thousands of acres)

Forest-type group	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
White/red pine	.9	.0	6.3	6.1	.0	11.4	24.7	42.3
Spruce/fir	.0	.0	.0	.0	.0	3.2	3.2	100.0
Loblolly/shortleaf	61.9	24.8	32.3	47.3	35.5	80.8	282.6	10.9
Oak/pine	31.0	10.6	26.6	38.7	44.5	78.2	229.6	14.4
Oak/hickory	123.9	142.0	146.0	228.7	208.9	538.4	1,387.9	4.3
Oak/gum/cypress	12.5	14.9	7.3	19.2	11.9	59.1	124.8	19.6
Elm/ash/red maple	16.8	26.1	11.7	20.1	1.5	32.1	108.2	22.7
Northern hardwoods	48.8	25.6	46.7	17.1	30.9	39.9	209.1	15.5
Aspen/birch	.0	.0	.0	.0	1.8	.0	1.8	100.0
All groups	295.7	244.0	276.8	377.2	335.1	843.2	2,371.9	1.9
SE	12.1	14.3	13.6	11.1	12.5	6.3	1.9	

Table 10.--Area of timberland by forest-type group and board-foot stand-volume class, Maryland, 1999

(In thousands of acres)

Forest-type group	Stand-volume class (board feet per acre)						All classes	SE
	0-1999	2000-3999	4000-5999	6000-7999	8000-9999	10000+		
White/red pine	.9	5.3	11.4	4.3	.0	2.9	24.7	42.3
Spruce/fir	.0	.0	.0	.0	.0	3.2	3.2	100.0
Loblolly/shortleaf	125.1	28.3	37.0	28.1	14.8	49.4	282.6	10.9
Oak/pine	50.0	43.2	35.7	49.2	10.9	40.7	229.6	14.4
Oak/hickory	283.5	185.5	205.7	171.7	142.8	398.7	1,387.9	4.3
Oak/gum/cypress	22.1	16.4	5.5	13.7	8.3	58.9	124.8	19.6
Elm/ash/red maple	39.3	15.0	12.6	9.6	1.9	29.8	108.2	22.7
Northern hardwoods	72.9	72.6	13.6	26.6	.0	23.5	209.1	15.5
Aspen/birch	.0	1.8	.0	.0	.0	.0	1.8	100.0
All groups	593.8	368.1	321.4	303.1	178.6	607.0	2,371.9	1.9
SE	7.9	11.9	12.6	12.7	17.5	7.6	1.9	

Table 11.--Area of timberland by forest-type group and stocking class of all live trees, Maryland, 1986

(In thousands of acres)

Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	12.9	6.8	15.0	7.3	7.5	49.5	35.2
Loblolly/shortleaf	.0	8.2	89.2	170.2	24.5	292.2	10.8
Oak/pine	.0	11.1	69.9	162.4	.0	243.4	12.7
Oak/hickory	.0	91.3	472.7	865.7	72.7	1,502.3	3.7
Oak/gum/cypress	.0	17.1	52.4	56.4	21.7	147.6	15.1
Elm/ash/red maple	.0	12.4	45.1	35.5	2.6	95.6	22.3
Northern hardwoods	4.8	41.6	52.5	74.9	14.8	188.7	13.7
Aspen/birch	.0	.0	3.0	.0	.0	3.0	100.0
All groups	17.7	188.6	799.7	1,372.5	143.8	2,522.2	2.0
SE	77.8	16.2	6.5	4.0	16.3	2.0	

Table 12.--Area of timberland by forest-type group and stocking class of all live trees, Maryland, 1999

(In thousands of acres)

Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	.0	6.3	9.8	4.3	4.3	24.7	42.3
Spruce/fir	.0	.0	3.2	.0	.0	3.2	100.0
Loblolly/shortleaf	.0	9.5	65.4	152.5	55.3	282.6	10.9
Oak/pine	.0	10.4	42.5	153.9	22.9	229.6	14.4
Oak/hickory	18.8	77.8	396.3	815.4	79.5	1,387.9	4.3
Oak/gum/cypress	.0	14.1	23.6	76.2	11.0	124.8	19.6
Elm/ash/red maple	2.8	12.1	43.4	41.0	8.9	108.2	22.7
Northern hardwoods	.9	49.9	57.5	93.7	7.1	209.1	15.5
Aspen/birch	.0	.0	.0	.0	1.8	1.8	100.0
All groups	22.5	180.2	641.6	1,336.9	190.7	2,371.9	1.9
SE	37.9	17.2	8.3	4.6	14.8	1.9	

Table 13.--Area of timberland by forest-type group and stocking class of growing-stock trees, Maryland, 1986

(In thousands of acres)

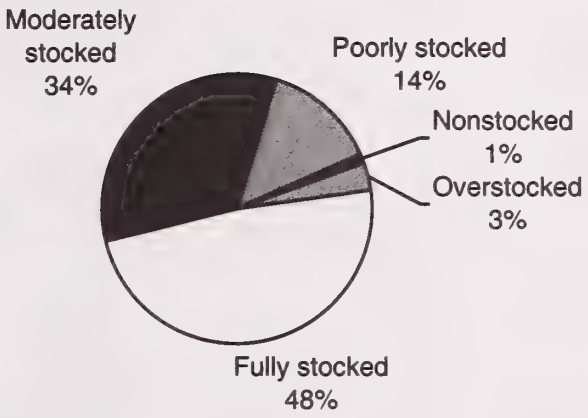
Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	12.9	11.2	14.3	3.6	7.5	49.5	35.2
Loblolly/shortleaf	.0	16.3	84.5	166.8	24.5	292.2	10.8
Oak/pine	.0	22.8	72.9	147.7	.0	243.4	12.7
Oak/hickory	3.0	169.8	537.7	754.8	37.1	1,502.3	3.7
Oak/gum/cypress	.0	21.6	58.9	56.8	10.3	147.6	15.1
Elm/ash/red maple	.0	29.3	36.7	29.6	.0	95.6	22.3
Northern hardwoods	11.7	72.4	42.0	58.9	3.6	188.7	13.7
Aspen/birch	.0	3.0	.0	.0	.0	3.0	100.0
All groups	27.6	346.5	846.9	1,218.2	83.0	2,522.2	2.0
SE	54.2	11.1	6.3	4.5	20.5	2.0	

Table 14.--Area of timberland by forest-type group and stocking class of growing-stock trees, Maryland, 1999

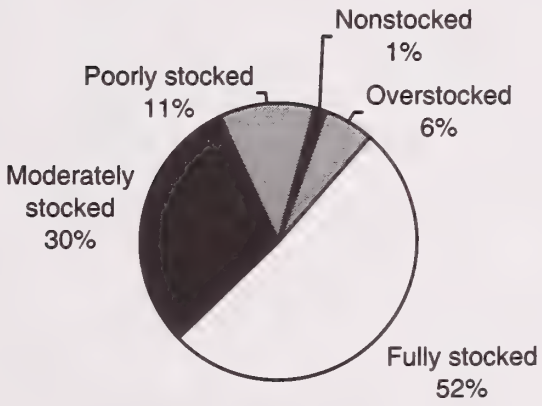
(In thousands of acres)

Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	.0	6.3	9.8	4.3	4.3	24.7	42.3
Spruce/fir	.0	.0	3.2	.0	.0	3.2	100.0
Loblolly/shortleaf	.0	11.9	63.0	158.4	49.3	282.6	10.9
Oak/pine	.0	10.4	45.4	159.2	14.6	229.6	14.4
Oak/hickory	24.5	134.6	476.2	707.0	45.7	1,387.9	4.3
Oak/gum/cypress	.0	21.0	19.6	76.2	8.0	124.8	19.6
Elm/ash/red maple	2.8	30.1	25.4	43.2	6.7	108.2	22.7
Northern hardwoods	7.9	47.3	76.2	70.6	7.1	209.1	15.5
Aspen/birch	.0	.0	.0	.0	1.8	1.8	100.0
All groups	35.2	261.5	718.9	1,218.9	137.5	2,371.9	1.9
SE	30.1	14.2	7.4	5.0	16.6	1.9	

Area of timberland by stocking class of growing-stock trees, Maryland, 1986 and 1999



1986



1999

Table 15.--Area of timberland by stand-size class, forest-type group, and basal-area class (all live trees), Maryland, 1999

(In thousands of acres)

Forest-type group	Basal area class (square feet per acre)							All classes	SE
	0-49	50-99	100-149	150-199	200-249	250-299	300+		
Sawtimber:									
White/red pine	.0	12.4	.0	2.9	.0	.0	.0	15.2	56.5
Spruce/fir	.0	.0	3.2	.0	.0	.0	.0	3.2	100.0
Loblolly/shortleaf	5.7	25.1	53.7	41.7	15.1	1.5	.0	142.8	16.4
Oak/pine	.0	8.3	76.8	43.1	2.2	1.3	1.1	132.9	19.2
Oak/hickory	20.0	290.9	484.5	150.4	51.1	9.3	2.2	1,008.4	5.5
Oak/gum/cypress	.0	9.2	50.4	25.9	7.1	.7	2.2	95.6	23.1
Elm/ash/red maple	.6	24.0	23.3	14.1	1.8	3.4	.0	67.2	26.9
Northern hardwoods	5.4	55.7	39.8	8.8	.0	.0	.0	109.6	23.0
All type groups	31.7	425.5	731.8	286.8	77.3	16.2	5.5	1,575.0	3.6
Poletimber:									
White/red pine	.0	.0	.0	4.3	.0	4.3	.0	8.5	68.1
Loblolly/shortleaf	.0	18.9	45.1	15.4	5.1	.0	.0	84.4	24.5
Oak/pine	10.8	9.8	34.7	15.0	.0	.0	.0	70.4	27.7
Oak/hickory	9.1	135.7	77.8	20.2	.0	.0	.0	242.9	14.6
Oak/gum/cypress	1.6	5.7	4.3	.0	2.5	.0	.0	14.1	51.4
Elm/ash/red maple	1.8	20.7	.0	2.3	.0	.0	.0	24.8	60.8
Northern hardwoods	13.3	10.4	26.2	8.8	.0	.3	.0	59.1	31.2
Aspen/birch	.0	.0	1.8	.0	.0	.0	.0	1.8	100.0
All type groups	36.7	201.2	190.0	66.0	7.6	4.6	.0	506.1	9.5
Seedling/sapling:									
White/red pine	.9	.0	.0	.0	.0	.0	.0	.9	100.0
Loblolly/shortleaf	35.6	12.3	7.4	.0	.0	.0	.0	55.4	26.8
Oak/pine	25.5	.0	.8	.0	.0	.0	.0	26.3	43.2
Oak/hickory	67.4	42.8	2.5	5.1	.0	.0	.0	117.8	22.1
Oak/gum/cypress	6.8	5.2	3.2	.0	.0	.0	.0	15.2	60.1
Elm/ash/red maple	3.6	8.3	1.5	.0	.0	.0	.0	13.4	49.2
Northern hardwoods	28.6	10.9	.0	.0	.0	.0	.0	39.5	35.6
All type groups	168.3	79.5	15.5	5.1	.0	.0	.0	268.4	13.1
Nonstocked:									
Oak/hickory	18.8	.0	.0	.0	.0	.0	.0	18.8	42.5
Elm/ash/red maple	2.8	.0	.0	.0	.0	.0	.0	2.8	100.0
Northern hardwoods	.9	.0	.0	.0	.0	.0	.0	.9	100.0
All type groups	22.5	.0	.0	.0	.0	.0	.0	22.5	37.9
All classes	259.2	706.3	937.3	357.9	84.9	20.8	5.5	2,371.9	1.9
SE	13.2	7.7	6.3	10.8	19.6	41.7	52.8	1.9	

Table 16.--Number of live trees on forest land by species and diameter group, Maryland, 1999

(In thousands of trees)

Species	Diameter				All Classes
	1.0-4.9	5.0-10.9	11.0-20.9	21+	
White/red pine	2,152	6,683	941	32	9,808
Loblolly pine	84,631	39,894	11,624	212	136,361
Virginia pine	14,282	13,751	4,138	36	32,208
Other yellow pines	0	227	207	0	434
Other softwoods	11,674	3,454	880	100	16,108
Total softwoods	112,740	64,010	17,789	381	194,920
Red maple	203,466	43,271	12,945	1,819	261,501
Sugar maple	16,429	5,096	1,113	170	22,808
Hickory	27,731	8,549	3,153	274	39,707
Beech	32,791	7,304	2,393	315	42,804
Sweetgum	110,969	26,133	9,305	563	146,969
Yellow-poplar	41,163	10,672	10,706	2,476	65,017
Blackgum	73,008	12,905	2,617	138	88,668
Ash-walnut-cherry	79,533	20,846	5,019	465	105,863
Select white oaks	16,795	16,621	9,666	1,137	44,219
Select red oaks	14,899	3,665	4,502	701	23,767
Other white oaks	11,058	9,746	5,483	307	26,595
Other red oaks	33,084	14,526	12,498	1,500	61,608
Blacklocust	14,111	6,350	1,299	218	21,978
Other hardwoods	161,672	23,554	4,287	855	190,369
Noncommercial hardwoods	168,812	12,466	1,397	33	182,708
Total hardwoods	1,005,521	221,706	86,384	10,973	1,324,584
All species	1,118,261	285,715	104,173	11,353	1,519,503

Table 17.--Number of live trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Maryland, 1999

(In thousands of trees)

Species	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
White/red pine	1,243	909	2,129	2,881	1,545	560	191	101
Loblolly pine	56,953	27,678	17,925	13,333	8,601	5,454	2,888	1,803
Virginia pine	8,620	5,663	5,255	4,665	3,065	1,971	871	728
Other yellow pines	0	0	80	118	29	29	69	0
Other softwoods	7,976	3,032	1,672	1,039	613	283	300	86
Total softwoods	74,792	37,281	27,061	22,037	13,854	8,297	4,319	2,717
Red maple	148,917	42,821	21,501	12,064	7,892	5,037	3,494	1,644
Sugar maple	11,311	4,026	2,109	1,569	834	776	166	115
Hickory	17,419	5,303	3,419	2,332	1,763	1,253	808	393
Beech	19,770	8,250	3,716	1,820	1,081	825	586	429
Sweetgum	78,539	30,628	13,055	7,149	5,494	4,126	2,705	1,493
Yellow-poplar	27,737	11,253	4,339	3,175	2,426	2,603	1,960	1,872
Blackgum	53,877	12,899	7,128	2,725	2,101	986	636	428
Ash-walnut-cherry	52,172	26,501	10,307	6,410	3,846	2,240	998	647
Select white oaks	10,062	6,282	4,743	4,727	5,144	3,246	2,406	1,515
Select red oaks	13,153	1,745	1,118	1,342	911	1,561	889	764
Other white oaks	6,258	4,800	2,756	3,097	2,694	1,441	1,615	712
Other red oaks	22,821	9,130	5,956	3,720	3,867	3,557	3,134	2,306
Blacklocust	7,977	4,209	2,334	2,356	1,213	586	515	81
Other hardwoods	126,627	31,605	13,688	5,827	2,873	1,530	948	401
Noncommercial hardwoods	128,495	26,025	7,336	2,554	867	780	174	69
Total hardwoods	725,137	225,479	103,506	60,869	43,009	30,547	21,032	12,869
All species	799,929	262,760	130,567	82,906	56,862	38,844	25,351	15,586
SE	5.7	6.1	4.3	4.7	4.5	4.3	5.0	6.0

Table 17.--continued

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	Total 5.0+	All classes	
White/red pine	88	0	32	0	7,528	9,680	42.0
Loblolly pine	893	533	212	0	51,641	136,272	16.4
Virginia pine	84	0	36	0	16,676	30,958	25.8
Other yellow pines	0	0	0	0	326	326	74.2
Other softwoods	93	60	54	21	4,221	15,229	26.8
Total softwoods	1,157	593	334	21	80,392	192,466	12.7
Red maple	1,240	805	1,302	362	55,341	247,079	8.2
Sugar maple	57	0	72	73	5,771	21,107	24.6
Hickory	235	102	260	14	10,580	33,302	14.3
Beech	214	127	147	58	9,003	37,023	14.0
Sweetgum	630	263	523	39	35,478	144,645	10.5
Yellow-poplar	2,170	1,307	1,888	289	22,029	61,019	19.3
Blackgum	205	128	138	0	14,476	81,253	10.5
Ash-walnut-cherry	461	173	355	109	25,548	104,221	12.9
Select white oaks	1,142	919	838	227	24,907	41,251	11.2
Select red oaks	317	197	378	148	7,626	22,525	26.6
Other white oaks	721	232	160	0	13,427	24,485	18.7
Other red oaks	1,423	1,039	1,033	314	26,351	58,301	11.5
Blacklocust	0	81	133	0	7,299	19,484	23.5
Other hardwoods	338	240	398	101	26,344	184,577	8.9
Noncommercial hardwoods	21	0	0	0	11,801	166,321	10.2
Total hardwoods	9,175	5,613	7,626	1,735	295,980	1,246,596	4.2
All species	10,332	6,207	7,960	1,756	376,372	1,439,062	4.1
SE	7.5	9.3	8.5	17.7	3.0	4.1	

Table 18.--Number of live trees on timberland by diameter class, tree class, and species group, Maryland, 1999

(In thousands of trees)

Diameter class	Growing stock		Cull		All classes	SE
	Softwoods	Hardwoods	Softwoods	Hardwoods		
Seedlings	204,024	4,792,738	0	1,471,153	6,467,915	6.0
1.0 - 2.9	74,792	596,641	0	128,495	799,929	5.7
3.0 - 4.9	37,281	199,454	0	26,025	262,760	6.1
Total saplings	112,074	796,095	0	154,520	1,062,689	5.1
5.0 - 6.9	26,665	89,802	396	13,704	130,567	4.3
7.0 - 8.9	22,011	54,973	26	5,896	82,906	4.7
9.0 - 10.9	0	40,493	0	2,516	43,009	5.0
Total poletimber	48,677	185,267	421	22,117	256,482	3.7
9.0 - 10.9	13,167	0	686	0	13,854	11.3
11.0 - 12.9	8,297	27,421	0	3,125	38,844	4.3
13.0 - 14.9	4,261	19,532	58	1,500	25,351	5.0
Total small sawtimber	25,726	46,953	744	4,625	78,049	3.9
15.0 - 16.9	2,636	12,205	81	664	15,586	6.0
17.0 - 18.9	1,125	8,785	32	389	10,332	7.5
19.0 - 20.9	593	5,449	0	164	6,207	9.3
21.0 - 28.9	334	7,435	0	190	7,960	8.5
29.0 and larger	21	1,611	0	123	1,756	17.7
Total large sawtimber	4,709	35,487	114	1,531	41,841	4.5
All classes	395,210	5,856,541	1,279	1,653,946	7,906,977	5.2
SE	14.2	5.6	22.3	9.8	5.2	

Number of trees by tree class on timberland, top 5 species, Maryland 1999

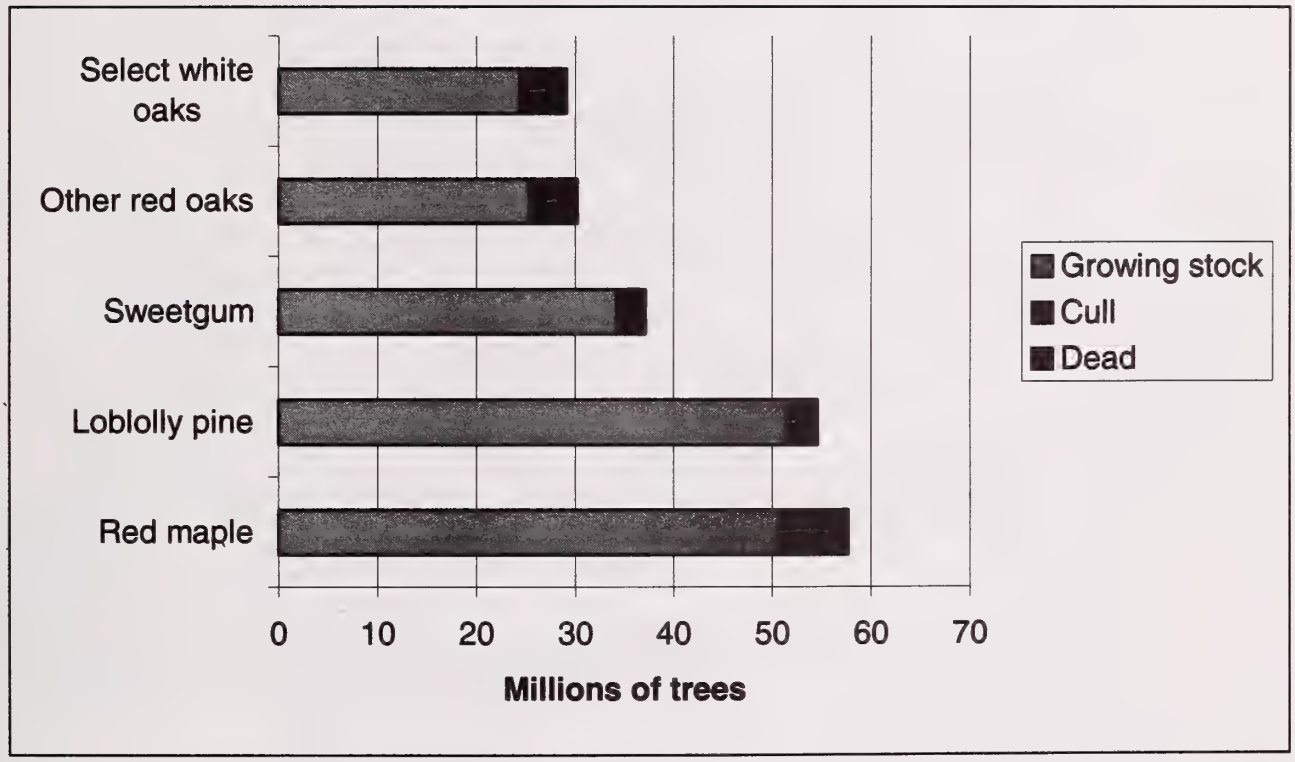
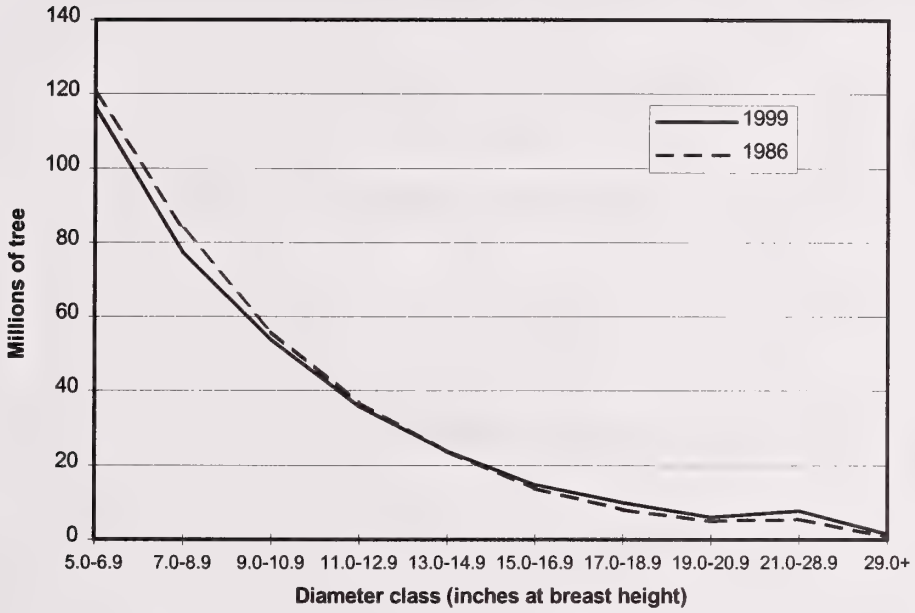


Table 19.--Number of trees (5.0+ inches d.b.h.) on timberland by species and tree class, Maryland, 1999

(In thousands of trees)

Species	Tree class								All classes	SE
	Preferred	Acceptable	All growing stock	Rough cull	Rotten cull	All live	Salvable dead	Nonsalvable dead		
White/red pine	0	7,446	7,446	57	25	7,528	358	346	8,232	48.2
Loblolly pine	2,422	48,884	51,306	221	114	51,641	644	2,285	54,571	11.3
Virginia pine	39	16,140	16,179	357	140	16,676	552	1,863	19,091	15.8
Other yellow pines-	0	305	305	21	0	326	0	66	392	70.9
Other softwoods	75	3,802	3,877	293	51	4,221	311	325	4,857	22.7
Total softwoods	2,535	76,577	79,112	951	329	80,392	1,866	4,885	87,143	9.2
Red maple	105	50,451	50,555	3,236	1,550	55,341	337	1,993	57,671	6.1
Sugar maple	85	5,366	5,451	254	66	5,771	0	36	5,807	20.8
Hickory	202	10,230	10,432	102	46	10,580	156	496	11,231	11.8
Beech	0	8,309	8,309	286	407	9,003	201	29	9,233	13.4
Sweetgum	606	33,598	34,203	1,032	242	35,478	248	1,398	37,124	10.7
Yellow-poplar	1,646	19,753	21,399	199	431	22,029	100	570	22,699	9.5
Blackgum	28	13,696	13,723	525	227	14,476	68	847	15,391	8.6
Ash-walnut-cherry	180	22,424	22,604	2,375	569	25,548	453	1,233	27,235	12.1
Select white oaks	770	23,661	24,431	379	96	24,907	456	3,778	29,141	9.2
Select red oaks	287	7,215	7,502	67	57	7,626	126	1,821	9,574	15.5
Other white oaks	64	12,801	12,865	425	136	13,427	115	1,844	15,386	16.2
Other red oaks	928	24,462	25,391	488	472	26,351	657	3,213	30,221	8.4
Blacklocust	0	6,215	6,215	616	468	7,299	251	1,728	9,278	20.2
Other hardwoods	150	24,474	24,624	1,461	259	26,344	356	1,095	27,796	9.5
Noncommercial hardwoods	0	0	0	10,861	940	11,801	1,072	3,963	16,836	11.9
Total hardwoods	5,052	262,655	267,707	22,306	5,967	295,980	4,599	24,044	324,623	3.1
All species	7,587	339,232	346,819	23,257	6,296	376,372	6,465	28,929	411,766	2.9
SE	12.6	3.2	3.1	8.0	9.9	3.0	12.4	7.0	2.9	

Number of growing-stock trees on timberland, Maryland, 1986 and 1999



Number of growing-stock trees on timberland, top 5 species, Maryland, 1986 and 1999

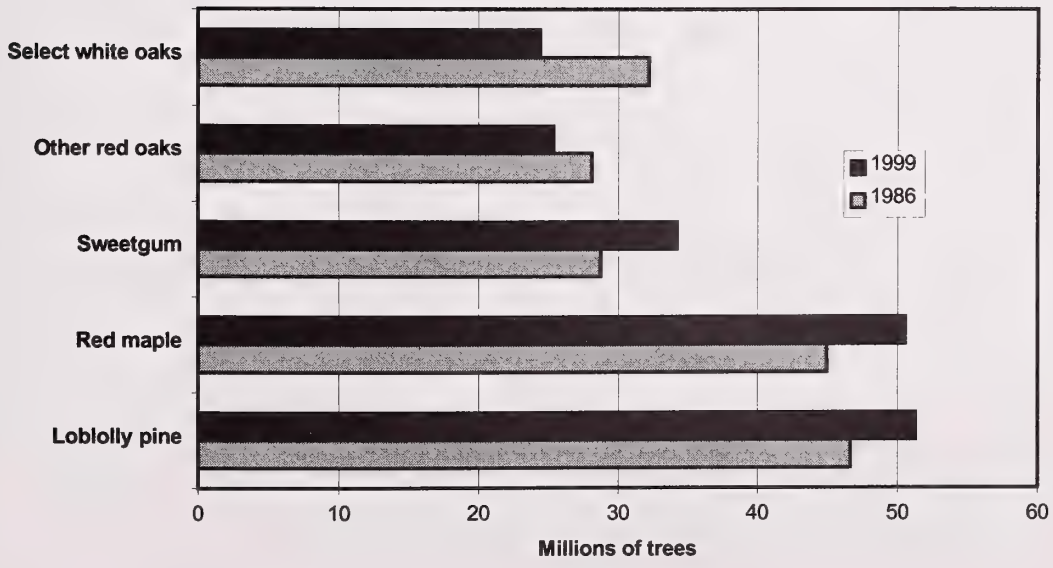


Table 20.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Maryland, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	4,609	2,464	698	514	205	38	30	18	0	0	8,577	40.3
Loblolly pine	17,135	11,181	7,546	5,256	3,029	1,457	694	217	119	0	46,633	11.4
Virginia pine	7,868	7,915	5,187	2,933	1,409	331	28	0	5	0	25,675	14.8
Other yellow pines	724	462	415	202	69	39	9	0	0	0	1,921	34.0
Other softwoods	991	1,036	407	307	208	139	121	72	56	4	3,343	22.8
Total softwoods	31,328	23,058	14,254	9,212	4,920	2,004	883	307	180	4	86,149	8.7
Red maple	18,421	10,456	6,283	4,179	2,400	1,259	813	472	581	95	44,958	6.0
Sugar maple	2,027	1,264	644	404	241	203	43	83	43	9	4,961	16.3
Hickory	3,776	3,048	1,850	969	641	467	297	100	70	8	11,226	10.4
Beech	3,157	1,518	1,294	878	722	406	280	220	224	40	8,739	13.7
Sweetgum	10,866	7,097	4,007	2,885	1,916	1,091	461	212	200	27	28,762	8.6
Yellow-poplar	4,858	3,660	3,151	2,702	2,206	1,576	1,398	1,017	1,487	238	22,296	11.0
Blackgum	6,018	2,565	2,151	950	728	536	203	123	105	0	13,379	8.7
Ash-walnut-cherry	5,521	4,161	2,647	1,292	1,090	515	286	122	81	33	15,748	11.4
Select white oaks	9,541	7,791	6,083	3,408	2,013	1,336	873	445	635	97	32,223	8.3
Select red oaks	2,018	2,248	2,220	1,982	1,636	986	517	442	557	89	12,696	8.0
Other white oaks	3,361	4,726	3,820	2,283	1,698	923	601	238	361	23	18,034	10.9
Other red oaks	7,695	5,529	3,808	3,919	2,457	1,753	1,127	851	846	132	28,118	7.4
Black locust	2,617	1,738	1,156	358	292	139	79	36	9	0	6,424	19.7
Other hardwoods	8,893	4,481	2,474	1,443	838	565	201	251	194	27	19,368	9.2
Total hardwoods	88,768	60,282	41,590	27,653	18,879	11,756	7,179	4,613	5,393	819	266,932	2.9
All species	120,095	83,339	55,844	36,865	23,799	13,760	8,063	4,919	5,573	823	353,081	2.8
SE	4.5	4.0	3.7	3.6	3.7	4.4	5.8	6.9	6.8	12.7	2.8	

Table 21.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Maryland, 1999

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	2,073	2,881	1,519	560	191	101	88	0	32	0	7,446	49.0
Loblolly pine	17,784	13,333	8,445	5,454	2,888	1,764	893	533	212	0	51,306	11.7
Virginia pine	5,077	4,665	2,821	1,971	871	685	51	0	36	0	16,179	16.8
Other yellow pines	59	118	29	29	69	0	0	0	0	0	305	79.0
Other softwoods	1,672	1,013	353	283	242	86	93	60	54	21	3,877	24.0
Total softwoods	26,665	22,011	13,167	8,297	4,261	2,636	1,125	593	334	21	79,112	9.7
Red maple	20,005	11,006	7,540	3,927	3,262	1,480	1,058	787	1,231	260	50,555	6.1
Sugar maple	1,992	1,533	723	750	166	85	57	0	72	73	5,451	20.8
Hickory	3,383	2,254	1,763	1,253	775	393	235	102	260	14	10,432	12.3
Beech	3,534	1,761	1,049	703	421	376	175	127	127	36	8,309	13.4
Sweetgum	12,151	7,005	5,454	3,993	2,652	1,493	630	263	523	39	34,203	10.5
Yellow-poplar	4,172	3,083	2,347	2,529	1,849	1,872	2,090	1,307	1,860	289	21,399	9.4
Blackgum	6,698	2,616	1,926	965	618	428	205	128	138	0	13,723	8.9
Ash-walnut-cherry	9,461	5,588	3,587	1,783	746	473	435	103	319	109	22,604	13.2
Select white oaks	4,598	4,671	5,080	3,113	2,341	1,501	1,142	919	838	227	24,431	9.8
Select red oaks	1,089	1,342	884	1,561	889	697	317	197	378	148	7,502	14.8
Other white oaks	2,588	2,965	2,589	1,402	1,546	712	721	182	160	0	12,865	17.1
Other red oaks	5,539	3,624	3,795	3,460	2,976	2,264	1,381	1,039	997	314	25,391	8.4
Black locust	1,895	2,111	941	515	458	81	0	81	133	0	6,215	24.3
Other hardwoods	12,696	5,414	2,813	1,467	833	348	338	215	398	101	24,624	9.8
Total hardwoods	89,802	54,973	40,493	27,421	19,532	12,205	8,785	5,449	7,435	1,611	267,707	3.2
All species	116,467	76,984	53,660	35,719	23,793	14,841	9,910	6,043	7,770	1,632	346,819	3.1
SE	4.5	4.9	4.6	4.5	5.2	6.1	7.6	9.5	8.7	17.7	3.1	

Table 22.--Number of seedlings on timberland by species and stand-size class, Maryland, 1999

(In thousands of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Atlantic white-cedar	2,424	0	0	0	2,424	100.0
eastern redcedar	12,005	765	6,782	0	19,551	37.7
Norway spruce	0	0	3,025	0	3,025	100.0
shortleaf pine	0	0	1,221	0	1,221	100.0
eastern white pine	1,081	0	0	0	1,081	100.0
loblolly pine	18,240	36,722	97,862	0	152,825	28.9
Virginia pine	19,560	1,719	1,536	0	22,815	62.3
eastern hemlock	1,081	0	0	0	1,081	100.0
boxelder	121,970	0	6,702	0	128,672	60.4
striped maple	64,556	5,406	0	0	69,963	36.5
red maple	512,448	171,702	247,857	0	932,007	12.4
silver maple	1,267	0	0	0	1,267	100.0
sugar maple	26,580	24,021	10,653	0	61,255	32.2
Norway maple	4,462	0	0	0	4,462	71.7
ailanthus	25,587	0	6,195	0	31,782	52.7
serviceberry	66,537	34,951	9,215	0	110,704	23.4
pawpaw	349,842	2,534	11,105	0	363,481	20.5
yellow birch	6,144	9,075	0	0	15,219	64.2
sweet birch	14,467	7,204	48,625	0	70,296	67.8
river birch	7,105	0	0	0	7,105	68.2
American hornbeam	151,644	79,547	0	0	231,191	24.8
hickory	1,536	0	12,100	0	13,636	89.4
bitternut hickory	28,966	0	1,525	0	30,491	38.9
pignut hickory	52,182	7,598	3,072	0	62,852	22.2
mockernut hickory	47,508	10,483	1,536	0	59,527	29.0
American chestnut	25,907	6,487	6,050	0	38,445	40.6
catalpa	1,861	0	0	0	1,861	100.0
hackberry	13,005	6,619	1,340	0	20,964	69.9
eastern redbud	31,786	14,728	0	0	46,514	42.6
flowering dogwood	63,020	4,894	10,040	0	77,954	25.9
hawthorn	45,975	19,809	6,863	0	72,647	37.3
common persimmon	0	0	5,705	0	5,705	75.0
American beech	135,905	16,717	13,068	0	165,691	21.6
ash	3,802	0	0	0	3,802	100.0
white ash	218,352	20,158	19,384	0	257,895	28.2
black ash	2,315	0	0	0	2,315	100.0
green ash	3,445	7,561	0	0	11,007	75.5
American holly	229,483	104,870	68,893	0	403,246	12.7
black walnut	0	1,286	0	0	1,286	100.0
sweetgum	255,817	153,821	217,440	0	627,079	15.6
yellow-poplar	131,242	45,386	9,897	0	186,525	35.0
cucumbertree	20,290	0	0	0	20,290	68.0
sweetbay	20,555	22,184	1,637	0	44,377	37.4

Table 22.--continued

(In thousands of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
apple	0	1,081	0	0	1,081	100.0
mulberry	2,238	2,213	8,043	0	12,494	69.1
blackgum	149,142	31,063	79,225	0	259,430	22.6
eastern hophornbeam	22,875	0	0	0	22,875	43.7
bigtooth aspen	1,157	0	1,719	0	2,876	72.0
quaking aspen	1,861	0	0	0	1,861	100.0
pin cherry	2,163	15,641	1,776	0	19,579	55.3
black cherry	577,597	134,795	95,445	0	807,837	14.5
chokecherry	16,807	0	0	0	16,807	45.4
white oak	74,780	60,982	3,717	0	139,480	23.3
scarlet oak	19,735	7,651	10,210	0	37,597	36.2
northern pin oak	1,802	0	0	0	1,802	100.0
southern red oak	9,003	920	3,603	0	13,526	38.9
cherrybark oak, swamp red oak	8,110	0	0	0	8,110	100.0
bear oak, scrub oak	0	1,340	0	0	1,340	100.0
blackjack oak	2,534	0	0	0	2,534	100.0
swamp chestnut oak	5,502	0	0	0	5,502	58.7
water oak	10,726	0	808	0	11,534	38.0
pin oak	569	0	0	0	569	100.0
willow oak	23,186	0	5,910	0	29,097	28.4
chestnut oak	150,881	18,463	2,757	0	172,101	30.1
northern red oak	38,348	31,559	4,608	0	74,516	37.3
black oak	88,398	47,373	2,762	0	138,533	25.9
black locust	22,323	1,536	13,003	0	36,862	32.2
willow	1,995	0	0	0	1,995	100.0
sassafras	107,252	61,614	43,938	0	212,804	18.0
American elm	13,258	1,898	0	0	15,155	55.2
slippery elm	23,484	4,566	0	0	28,050	75.3
unknown tree	5,859	0	569	0	6,428	53.6
Total seedlings	4,121,544	1,238,948	1,107,422	0	6,467,915	6.0
SE	7.7	15.6	18.9	.0	6.0	

Table 23.--Number of saplings on timberland by species and stand-size class, Maryland, 1999

(In thousands of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
eastern redcedar	3,453	886	2,736	0	7,075	42.9
Norway spruce	320	2,568	0	0	2,888	61.5
pond pine	0	168	0	0	168	100.0
eastern white pine	397	320	1,435	0	2,152	54.3
loblolly pine	3,452	31,367	49,643	0	84,463	23.8
Virginia pine	3,413	9,505	1,364	0	14,282	42.6
eastern hemlock	405	640	0	0	1,045	72.5
boxelder	2,489	655	0	0	3,145	45.2
striped maple	3,936	451	2,712	0	7,099	46.3
red maple	103,396	56,076	32,265	0	191,738	10.0
sugar maple	7,664	5,419	2,253	0	15,337	29.9
Norway maple	257	0	0	0	257	100.0
ailanthus	851	0	1,784	0	2,635	55.8
serviceberry	3,903	0	0	0	3,903	37.2
pawpaw	21,962	0	0	0	21,962	35.1
yellow birch	1,217	320	0	0	1,537	81.9
sweet birch	7,209	3,609	15,510	0	26,329	33.1
river birch	0	1,311	0	0	1,311	100.0
American hornbeam	16,706	3,995	0	0	20,701	23.3
bitternut hickory	1,102	0	0	0	1,102	100.0
pignut hickory	7,742	551	361	0	8,654	26.4
shagbark hickory	0	305	0	0	305	100.0
mockernut hickory	9,929	1,873	859	0	12,661	24.2
American chestnut	4,234	320	0	0	4,554	44.1
hackberry	642	0	397	0	1,039	72.6
eastern redbud	795	0	1,364	0	2,159	67.5
flowering dogwood	24,102	3,669	4,278	0	32,049	15.6
hawthorn	2,177	5,475	1,577	0	9,229	62.3
common persimmon	0	0	3,307	0	3,307	68.2
American beech	22,850	2,917	2,253	0	28,020	16.5
white ash	8,373	3,863	1,713	0	13,948	31.4
black ash	297	0	0	0	297	100.0
green ash	0	1,128	0	0	1,128	72.2
honeylocust	0	0	3,183	0	3,183	75.6
American holly	66,345	26,504	5,461	0	98,309	12.1
black walnut	1,687	1,142	0	0	2,829	54.3
sweetgum	47,056	41,735	20,377	0	109,167	12.4
yellow-poplar	17,954	11,596	9,441	0	38,990	29.2
cucumbertree	1,889	0	0	0	1,889	75.0
sweetbay	7,175	4,000	0	0	11,176	27.6
apple	455	2,367	0	0	2,821	62.5
mulberry	551	0	1,092	0	1,643	61.6
blackgum	46,562	11,824	8,391	0	66,777	12.2

Table 23.--continued

(In thousands of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
eastern hophornbeam	2,809	0	0	0	2,809	45.0
sycamore	1,335	0	1,559	0	2,894	52.9
bigtooth aspen	655	0	655	0	1,311	67.8
pin cherry	455	0	0	0	455	100.0
black cherry	36,727	14,767	8,978	0	60,472	19.0
chokecherry	2,781	0	0	0	2,781	60.3
white oak	7,772	7,017	1,555	0	16,344	22.7
scarlet oak	1,792	2,216	3,482	0	7,490	45.8
southern red oak	3,519	0	895	0	4,413	35.7
cherrybark oak, swamp red oak	480	0	0	0	480	100.0
water oak	3,466	1,518	2,871	0	7,855	43.6
pin oak	0	0	455	0	455	100.0
willow oak	1,366	2,052	519	0	3,938	34.8
chestnut oak	3,935	2,269	4,547	0	10,751	31.0
northern red oak	4,071	5,373	4,974	0	14,418	41.7
post oak	0	0	307	0	307	100.0
black oak	4,731	2,285	784	0	7,801	26.6
black locust	4,089	3,487	4,609	0	12,186	33.2
willow	394	0	0	0	394	100.0
sassafras	14,411	7,021	12,397	0	33,829	32.8
American basswood	642	0	0	0	642	100.0
American elm	2,220	0	455	0	2,675	53.4
slippery elm	1,031	1,346	0	0	2,377	52.6
unknown tree	562	1,791	0	0	2,353	53.8
Total saplings	552,189	287,704	222,797	0	1,062,689	5.1
SE	5.8	12.7	20.1	.0	5.1	

Table 24.--Number of shrubs on timberland by species and stand-size class, Maryland, 1999

(In thousands of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
alder	3,445	0	0	0	3,445	100.0
speckled alder	0	21,543	0	0	21,543	100.0
Hercules club	46,545	20,262	38,129	0	104,936	28.8
barberry	147,077	60,986	9,215	0	217,278	38.5
buttonbush	17,489	0	0	0	17,489	100.0
sweet pepperbush	2,169,423	848,960	530,743	0	3,549,127	15.7
alternate-leaved dogwood	16,437	0	2,251	0	18,687	56.0
silky dogwood	10,417	0	0	0	10,417	100.0
gray-stemmed dogwood	0	2,534	0	0	2,534	100.0
American hazelnut	1,861	0	0	0	1,861	100.0
beaked hazelnut	0	2,601	0	0	2,601	100.0
autumn olive	3,167	22,971	32,043	0	58,181	61.0
huckleberry	1,159,060	352,843	116,719	0	1,628,622	22.6
witch-hazel	213,592	34,925	19,151	0	267,668	24.5
winterberry holly	1,632	5,355	4,575	14,676	26,239	62.2
sheep laurel	8,643	10,794	4,664	0	24,102	47.5
mountain laurel	226,018	104,925	19,967	0	350,910	36.3
swamp laurel	14,391	0	0	0	14,391	100.0
common spicebush	908,511	121,663	0	0	1,030,175	16.6
bush honeysuckle	60,859	2,251	0	0	63,110	49.9
wax myrtle	17,186	32,154	68,631	0	117,971	65.9
bayberry	19,921	0	1,236	0	21,157	71.1
buckthorn	3,617	0	0	0	3,617	71.1
rhododendron (evergreen)	1,650	0	0	0	1,650	74.0
azalea (deciduous)	59,674	10,500	0	0	70,174	46.0
winged sumac	2,332	0	23,218	0	25,550	79.5
smooth sumac	0	0	2,073	0	2,073	100.0
staghorn sumac	0	8,593	13,566	0	22,159	93.3
currant, gooseberry	3,887	8,872	0	0	12,758	60.9
rose	815,169	345,545	168,951	3,795	1,333,460	16.3
brier, bramble, dewberry	1,358,574	404,457	601,421	24,399	2,388,851	13.3
American elderberry	13,905	0	0	0	13,905	100.0
spirea	2,055	0	15,980	0	18,035	89.3
blueberry	1,238,405	1,091,298	217,495	0	2,547,198	21.3
viburnum	39,142	16,985	0	0	56,127	41.7
maple-leaved viburnum	308,721	9,850	0	0	318,571	31.6
wild raisin, withe-rod	18,903	0	0	0	18,903	100.0
arrowwood	171,083	27,674	45,581	1,048	245,386	22.1
nannyberry	1,797	0	0	0	1,797	100.0
blackhaw	98,240	12,861	54,108	0	165,209	36.9
common prickly-ash	186,995	3,072	0	0	190,067	98.4
unknown deciduous shrub	66,657	93,888	24,759	0	185,303	46.3
unknown evergreen shrub	5,757	8,635	0	0	14,391	68.0
Total shrubs	9,442,241	3,686,994	2,014,478	43,919	15,187,632	6.8
SE	8.4	18.9	19.2	58.2	6.8	

Table 25.--Number of standing dead trees (5.0+ inches d.b.h.) on timberland by species, condition class, and diameter class, Maryland, 1999

(In thousands of trees)

Species	Intact top				Broken top					
	5.0-10.9	11.0-14.9	15+	Total	5.0-10.9	11.0-14.9	15+	Total	Total all trees	SE
White/red pine	230	0	0	230	474	0	0	474	704	64.7
Loblolly pine	677	144	0	821	1,763	217	31	2,012	2,833	26.4
Virginia pine	721	118	0	839	1,304	212	60	1,576	2,415	17.9
Other yellow pines	0	0	0	0	29	37	0	66	66	71.1
Other softwoods	159	0	0	159	367	84	26	477	636	37.9
Total softwoods	1,787	262	0	2,049	3,939	550	117	4,605	6,655	14.8
Red maple	599	22	26	647	1,325	110	248	1,683	2,330	16.0
Sugar maple	0	0	0	0	0	36	0	36	36	100.0
Hickory	49	0	52	101	280	233	37	550	652	34.5
Beech	27	29	0	57	135	39	0	173	230	53.3
Sweetgum	169	0	0	169	1,233	147	97	1,477	1,646	20.7
Yellow-poplar	41	0	0	41	503	126	0	629	670	26.0
Blackgum	125	24	0	149	616	126	24	766	915	27.7
Ash-walnut-cherry	370	95	0	465	979	158	85	1,222	1,687	15.4
Select white oaks	441	372	159	971	2,351	663	249	3,263	4,234	15.4
Select red oaks	351	158	104	614	1,149	98	87	1,333	1,947	28.7
Other white oaks	119	26	0	145	1,471	211	131	1,813	1,959	28.0
Other red oaks	888	265	125	1,278	1,803	351	438	2,592	3,870	15.1
Blacklocust	411	37	0	447	1,456	27	49	1,532	1,979	26.3
Other hardwoods	390	69	0	459	715	231	46	992	1,451	24.1
Noncommercial hardwoods	814	62	21	898	3,299	596	242	4,137	5,035	16.8
Total hardwoods	4,794	1,160	487	6,441	17,314	3,155	1,731	22,201	28,642	7.1
All species	6,580	1,423	487	8,491	21,253	3,705	1,848	26,806	35,297	6.3
SE	10.6	17.7	27.9	9.7	7.5	12.1	15.6	6.7	6.3	

Table 26.--Net volume of all trees on timberland by class of timber and species group, Maryland, 1999

(In millions of cubic feet)

Class of timber	Species group				All species	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	489.7	26.3	1,364.2	1,292.3	3,172.6	4.0
Upper stem portion	65.2	2.9	291.2	278.9	638.2	3.8
Total	554.9	29.2	1,655.4	1,571.2	3,810.8	3.9
Poletimber trees	207.0	9.9	584.1	460.5	1,261.4	4.1
Total growing stock	761.9	39.1	2,239.5	2,031.7	5,072.2	3.3
Rough trees:						
Sawtimber size	3.0	1.2	45.6	22.7	72.6	12.2
Poletimber size	.5	.1	38.4	16.2	55.1	10.2
Total	3.5	1.3	84.0	38.9	127.7	8.9
Rotten trees:						
Sawtimber size	1.4	.2	15.6	10.6	27.8	17.0
Poletimber size	.1	.0	1.8	2.5	4.5	19.0
Total	1.5	.2	17.5	13.1	32.3	15.1
Salvable dead trees:						
Sawtimber size	3.6	.9	1.7	3.8	10.1	28.8
Poletimber size	3.2	.3	3.5	4.0	10.9	16.5
Total	6.8	1.2	5.2	7.8	20.9	16.6
Total, all trees	773.8	41.7	2,346.2	2,091.5	5,253.2	3.2
SE	9.1	25.3	5.4	4.9	3.2	

Table 27.--Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class, Maryland, 1999

(In millions of cubic feet)

Species group	Ownership class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
All live:						
Softwoods	.0	113.8	59.5	634.2	807.5	8.7
Hardwoods	.0	801.8	53.7	3,569.2	4,424.7	3.7
Total, all groups	.0	915.5	113.2	4,203.4	5,232.2	3.2
Growing stock:						
Softwoods	.0	112.8	59.4	628.8	801.0	8.7
Hardwoods	.0	776.5	53.1	3,441.6	4,271.2	3.8
Total, all groups	.0	889.3	112.5	4,070.4	5,072.2	3.3
Sawtimber:						
Softwoods	.0	413.9	110.6	1,839.2	2,363.7	10.0
Hardwoods	.0	2,455.1	183.3	11,159.5	13,797.8	4.8
Total, all groups	.0	2,869.0	293.9	12,998.7	16,161.5	4.2
SE	.0	14.1	32.9	5.2	4.2	

Table 28.--Net volume of all live trees on timberland by species and diameter class, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	16.8	18.6	8.8	10.0	4.9	1.2	1.5	1.1	.0	.0	62.9	36.8
Loblolly pine	49.3	74.0	86.5	95.1	77.8	49.5	29.7	12.3	8.5	.0	482.6	9.1
Virginia pine	22.6	51.8	60.1	53.2	35.3	10.7	1.2	.0	.3	.0	235.2	13.4
Other yellow pines	2.0	2.9	4.9	3.6	1.7	1.2	.4	.0	.0	.0	16.7	30.1
Other softwoods	2.6	6.2	4.5	5.2	5.2	4.2	5.4	4.2	4.5	.6	42.5	31.4
Total softwoods	93.2	153.4	164.7	167.1	125.0	66.7	38.2	17.6	13.3	.6	839.8	7.4
Red maple	47.9	70.6	78.0	85.2	68.5	49.0	42.0	29.4	56.6	18.4	545.6	6.4
Sugar maple	6.7	9.4	10.0	8.7	6.6	8.2	2.9	5.9	5.2	3.4	67.2	17.3
Hickory	11.0	22.7	24.4	21.9	19.9	19.5	15.2	7.5	6.6	1.5	150.1	10.1
Beech	7.2	9.6	15.8	20.0	21.8	15.7	16.4	17.7	26.3	10.6	161.1	12.0
Sweetgum	26.4	46.1	49.0	55.3	52.6	41.4	21.9	13.3	17.0	4.0	327.1	8.7
Yellow-poplar	13.8	28.0	45.0	59.6	73.9	74.4	81.8	77.1	160.1	49.6	663.3	11.7
Blackgum	15.5	17.4	27.5	22.6	21.3	23.5	9.8	8.6	11.1	1.2	158.6	9.9
Ash-walnut-cherry	18.9	30.1	35.8	28.0	32.7	20.2	14.4	8.2	6.8	4.3	199.4	9.5
Select white oaks	23.5	45.8	69.8	62.6	53.6	48.8	41.2	26.5	56.4	18.8	447.0	6.7
Select red oaks	5.4	14.7	26.1	38.1	44.9	38.1	25.1	27.6	49.7	18.0	287.7	7.7
Other white oaks	8.8	29.0	44.2	41.6	44.8	32.1	26.5	12.7	28.9	4.5	273.2	11.4
Other red oaks	19.1	35.0	45.3	75.3	67.3	66.3	53.6	53.3	75.7	25.4	516.2	6.7
Blacklocust	6.8	10.4	14.3	7.9	8.9	6.6	4.3	2.7	1.0	.0	63.1	16.1
Other hardwoods	22.2	28.1	29.8	26.2	22.3	20.2	10.4	14.4	18.9	5.2	197.8	11.6
Noncommercial hardwoods	14.0	12.1	11.2	8.0	6.7	3.1	1.0	.0	.7	.0	56.9	14.3
Total hardwoods	247.3	409.1	526.5	561.1	545.9	467.1	366.5	305.0	520.7	164.9	4,114.2	3.4
All species	340.5	562.5	691.2	728.2	670.9	533.8	404.7	322.6	534.0	165.5	4,954.0	2.8
SE	4.5	4.0	3.6	3.5	3.6	4.4	5.9	6.9	7.0	12.7	2.8	

Table 29.--Net volume of live trees on timberland by species and diameter class, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	8.0	22.2	19.1	10.6	4.1	3.2	4.5	.0	2.8	.0	74.5	41.7
Loblolly pine	48.4	81.6	93.3	95.2	71.3	57.9	38.0	29.1	15.5	.0	530.4	10.5
Virginia pine	16.0	30.3	32.1	32.3	21.5	21.3	2.5	.0	2.6	.0	158.6	16.0
Other yellow pines	.2	.8	.3	.4	1.7	.0	.0	.0	.0	.0	3.5	61.5
Other softwoods	4.0	5.9	4.4	4.5	5.8	2.5	3.6	1.8	3.7	4.2	40.5	25.7
Total softwoods	76.8	140.8	149.3	143.0	104.3	84.9	48.6	30.9	24.6	4.2	807.5	8.7
Red maple	49.7	69.4	85.6	85.5	88.7	54.3	49.3	41.6	92.8	58.9	675.7	9.7
Sugar maple	6.9	11.3	11.2	15.4	4.7	4.6	3.2	.0	7.8	14.8	79.9	26.1
Hickory	9.2	16.0	23.6	26.9	24.5	16.1	11.4	7.8	22.2	2.4	160.1	13.1
Beech	8.0	10.1	11.8	15.3	13.7	14.6	8.8	9.2	12.1	6.2	109.7	14.6
Sweetgum	30.5	45.2	68.8	78.2	74.4	58.1	30.2	14.0	42.0	5.4	446.9	11.0
Yellow-poplar	11.5	23.3	33.7	56.7	64.2	85.1	121.7	96.0	212.9	50.1	755.4	10.7
Blackgum	15.2	14.9	21.5	17.8	16.1	15.1	7.9	7.7	10.9	.0	127.1	12.6
Ash-walnut-cherry	28.4	40.1	47.1	41.1	22.8	21.7	23.9	8.9	27.3	11.0	272.3	13.1
Select white oaks	12.3	30.4	60.9	58.2	63.9	53.4	55.2	54.9	64.5	36.7	490.4	9.6
Select red oaks	3.0	9.2	10.4	29.1	24.3	28.6	16.4	12.6	31.8	24.2	189.6	16.3
Other white oaks	6.8	18.4	30.1	25.2	41.8	22.8	30.2	11.8	12.6	.0	199.6	17.2
Other red oaks	13.5	21.1	44.5	64.1	82.3	86.8	67.7	61.1	93.6	45.7	580.3	8.9
Blacklocust	5.3	12.1	10.7	10.2	10.8	2.5	.0	3.7	7.6	.0	62.9	22.9
Other hardwoods	30.3	30.0	32.0	26.7	22.6	12.3	14.2	12.4	37.0	15.4	233.0	12.6
Noncommercial hardwoods	12.0	10.4	7.0	8.4	2.1	1.8	.1	.0	.0	.0	41.8	15.7
Total hardwoods	242.7	361.9	498.8	558.8	557.1	477.8	440.0	341.6	675.3	270.8	4,424.7	3.7
All species	319.5	502.7	648.1	701.8	661.4	562.7	488.6	372.5	699.9	275.0	5,232.2	3.2
SE	4.8	5.2	4.8	4.4	5.1	6.2	8.0	9.6	9.0	19.6	3.2	

Table 30.--Net volume of growing-stock trees on timberland by forest type and stand-size class, Maryland, 1999

(In millions of cubic feet)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	11.5	39.2	.0	.0	50.7	61.0
White pine	18.5	.0	.0	.0	18.5	68.0
White/red pine group	30.1	39.2	.0	.0	69.2	48.2
Norway spruce	9.9	.0	.0	.0	9.9	100.0
Spruce/fir group	9.9	.0	.0	.0	9.9	100.0
Loblolly pine	329.5	95.2	7.4	.0	432.1	16.3
Virginia pine	50.5	31.4	.0	.0	81.9	30.1
Loblolly/shortleaf group	380.0	126.6	7.4	.0	514.0	14.5
Eastern redcedar/hardwood	12.0	.0	4.7	.0	16.7	75.2
Virginia pine/oak	92.7	13.6	.0	.0	106.3	35.4
Loblolly pine/hardwood	254.9	95.9	1.7	.0	352.6	18.9
Oak/pine group	359.7	109.5	6.4	.0	475.5	16.0
Post, black, or bear oak	28.9	1.8	.0	.0	30.6	67.8
Chestnut oak	78.8	30.3	.0	.0	109.1	38.2
White oak/red oak/hickory	307.0	27.5	.0	1.5	336.1	22.5
White oak	113.6	37.7	.0	.0	151.3	28.9
Northern red oak	81.1	.0	.0	.0	81.1	55.5
Y-poplar/wh. oak/no.red oak	172.4	.0	.0	.0	172.4	35.2
Black locust	30.8	11.4	7.9	.0	50.1	42.8
Sweetgum/yellow-poplar	149.0	21.9	.1	.0	171.0	31.5
Black walnut	.4	.9	.0	.0	1.3	75.6
Yellow-poplar	257.2	2.2	1.6	.0	261.0	28.2
Scarlet oak	55.9	.0	.0	.0	55.9	50.1
Sassafras/persimmon	.0	2.9	1.0	.0	3.9	65.1
Red maple/central hardwood	48.5	10.6	.0	.0	59.1	32.7
Mixed central hardwoods	1,450.2	191.6	29.2	.4	1,671.4	8.2
Oak/hickory group	2,773.8	338.8	39.8	1.9	3,154.3	5.3
Swamp chsnt oak/cherrybark oak	47.7	4.3	3.3	.0	55.3	44.8
Sweetgm/nuttall oak/willow oak	133.6	3.5	3.8	.0	140.9	33.1
Baldcypress/water tupelo	23.5	13.2	.0	.0	36.7	56.6
Sweetbay/swamp tupelo/red mple	70.2	.9	.0	.0	71.1	56.4
Oak/gum/cypress group	275.0	21.9	7.1	.0	304.0	22.8

Table 30.--continued

(In millions of cubic feet)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Black ash/Amer. elm/red maple	29.6	6.2	.0	.0	35.8	43.3
Red maple(lowland)	76.2	.0	2.4	.9	79.5	68.9
Red maple(upland)	31.8	1.6	.0	.0	33.4	66.9
River birch/sycamore	41.7	7.8	1.5	.0	50.9	53.2
Willow	.0	.0	.1	.0	.1	100.0
Sycamore/pecan/American elm	8.2	.0	.0	.0	8.2	100.0
American elm/green ash	8.6	5.8	.0	.0	14.4	72.1
Elm/ash/red maple group	196.1	21.4	4.0	.9	222.3	30.6
Sugar maple/beech/yellow birch	106.9	2.3	3.6	.0	112.8	36.3
Black cherry	11.9	44.5	1.1	.0	57.4	47.4
Red maple/northern hardwoods	25.4	45.9	.0	.0	71.2	55.3
Pin cherry/reverting field	.0	.0	.1	.0	.1	100.0
Mixed northern hardwoods	62.8	12.4	2.3	.0	77.5	32.8
Northern hardwoods group	206.9	105.1	7.0	.0	319.1	20.5
Aspen	.0	3.8	.0	.0	3.8	100.0
Aspen/birch group	.0	3.8	.0	.0	3.8	100.0
All forest types	4,231.4	766.3	71.7	2.8	5,072.2	3.3
SE	4.3	11.6	21.3	63.8	3.3	

Table 31.--Net volume of growing-stock trees on timberland by species and forest-type group, Maryland, 1986

(In millions of cubic feet)

Species	Forest-type group									All type groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
White/red pine	50.7	.0	.1	2.8	7.0	.0	.0	1.5	.0	62.1	37.0
Loblolly pine	.0	.0	305.6	127.0	38.6	10.5	.0	.0	.0	481.7	9.1
Virginia pine	.0	.0	144.7	51.3	35.2	1.4	.0	.6	.0	233.2	13.3
Other yellow pines	1.9	.0	3.7	4.7	5.9	.0	.0	.0	.0	16.3	30.4
Other softwoods	16.2	.0	.8	.8	14.7	3.3	.0	5.5	.0	41.4	31.9
Total softwoods	68.9	.0	454.9	186.7	101.3	15.2	.0	7.6	.0	834.6	7.3
Red maple	2.4	.0	15.8	42.8	290.8	74.8	66.0	20.0	.0	512.6	6.5
Sugar maple	.0	.0	.0	.0	21.5	.0	.3	39.0	.0	60.8	18.0
Hickory	.0	.0	1.4	4.6	129.2	.0	3.5	9.5	.0	148.1	10.1
Beech	.9	.0	.5	4.8	132.6	2.8	.9	6.3	.0	148.8	12.3
Sweetgum	.0	.0	30.8	31.8	198.5	54.2	8.2	.1	.0	323.7	8.7
Yellow-poplar	.0	.0	21.0	36.1	560.6	3.8	11.3	20.5	.0	653.4	11.8
Blackgum	.0	.0	6.3	16.3	73.6	30.7	7.2	4.1	.0	138.2	9.4
Ash-walnut-cherry	1.6	.0	1.7	7.0	105.4	11.0	12.7	48.1	.0	187.6	9.8
Select white oaks	.7	.0	15.1	34.2	350.9	25.3	2.9	7.2	.0	436.3	6.7
Select red oaks	.3	.0	2.1	2.1	260.4	4.1	1.8	10.6	.0	281.4	7.8
Other white oaks	.0	.0	3.6	4.7	250.7	.3	.2	5.1	.0	264.6	11.5
Other red oaks	.0	.0	23.1	64.7	372.1	40.3	5.6	1.7	.0	507.5	6.7
Black locust	.0	.0	.4	.8	43.6	.0	3.1	5.1	.2	53.2	17.8
Other hardwoods	2.4	.0	1.1	6.8	97.5	8.3	41.5	35.6	1.0	194.1	11.8
Total hardwoods	8.3	.0	122.9	256.7	2,887.5	255.7	165.3	212.9	1.2	3,910.5	3.4
All species	77.2	.0	577.8	443.4	2,988.8	270.8	165.3	220.5	1.2	4,745.1	2.9
SE	37.2	.0	11.9	13.7	4.7	18.0	25.1	17.7	100.0	2.9	

Table 32.--Net volume of growing-stock trees on timberland by species and forest-type group, Maryland, 1999

(In millions of cubic feet)

Species	Forest-type group									All type groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
White/red pine	56.5	4.6	1.8	.0	9.8	.6	.0	.7	.0	74.1	41.6
Loblolly pine	.0	.0	348.6	139.0	29.1	12.1	.0	.0	.0	528.8	10.6
Virginia pine	.0	.0	74.4	51.7	24.7	4.7	.0	.0	.0	155.6	16.0
Other yellow pines	.0	.0	.0	.0	3.5	.0	.0	.0	.0	3.5	61.5
Other softwoods	1.0	5.2	.2	3.7	15.0	9.7	.0	4.2	.0	39.1	26.3
Red maple	.5	.0	13.5	40.0	362.6	63.6	116.6	43.8	.0	640.7	10.0
Sugar maple	.0	.0	.0	.0	16.2	.0	.0	61.1	.0	77.3	26.7
Hickory	.0	.0	1.1	3.7	147.0	.0	3.5	3.9	.0	159.2	13.1
Beech	.0	.0	1.6	4.3	93.9	2.5	.0	.8	.0	103.1	14.9
Sweetgum	.0	.0	29.7	62.9	265.8	72.4	5.5	5.3	.0	441.5	10.9
Yellow-poplar	6.2	.0	10.4	42.4	662.0	2.7	11.2	15.0	.0	749.9	10.8
Blackgum	.0	.0	3.0	11.1	81.0	21.8	4.4	3.3	.0	124.6	12.8
Ash-walnut-cherry	4.1	.0	1.5	8.7	104.2	6.5	28.6	95.1	.0	248.8	13.3
Select white oaks	.0	.0	9.8	43.7	394.0	34.7	1.8	3.4	.0	487.4	9.6
Select red oaks	.2	.0	.0	2.5	172.4	3.0	.0	9.8	.0	187.9	16.3
Other white oaks	.0	.0	.0	1.8	188.9	.4	.0	2.9	.0	194.0	17.7
Other red oaks	.2	.0	14.7	49.2	436.7	52.0	12.2	5.8	.0	570.8	9.0
Black locust	.0	.0	.9	.9	50.7	.4	1.0	5.6	.0	59.4	23.9
Other hardwoods	.5	.0	2.9	9.9	96.7	16.9	37.5	58.3	3.8	226.6	12.8
All species	69.2	9.9	514.0	475.5	3,154.3	304.0	222.3	319.1	3.8	5,072.2	3.3
SE	48.2	100.0	14.5	16.0	5.3	22.8	30.6	20.5	100.0	3.3	

Table 33.--Net volume of growing-stock trees on timberland by species and stand-size class, Maryland, 1986

(In millions of cubic feet)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
White/red pine	17.5	38.7	5.9	.0	62.1	37.0
Loblolly pine	322.7	145.0	13.9	.0	481.7	9.1
Virginia pine	145.8	82.9	4.5	.0	233.2	13.3
Other yellow pines	10.2	6.1	.0	.0	16.3	30.4
Other softwoods	25.1	16.2	.1	.0	41.4	31.9
Total softwoods	521.3	288.9	24.4	.0	834.6	7.3
Red maple	384.4	124.0	4.2	.0	512.6	6.5
Sugar maple	48.7	11.9	.3	.0	60.8	18.0
Hickory	115.3	31.5	1.3	.0	148.1	10.1
Beech	124.7	22.9	1.2	.0	148.8	12.3
Sweetgum	245.7	69.9	8.1	.0	323.7	8.7
Yellow-poplar	570.9	76.6	5.9	.0	653.4	11.8
Blackgum	109.5	26.2	2.5	.0	138.2	9.4
Ash-walnut-cherry	120.1	63.2	3.8	.5	187.6	9.8
Select white oaks	296.0	138.3	2.1	.0	436.3	6.7
Select red oaks	220.1	57.7	3.6	.0	281.4	7.8
Other white oaks	222.5	41.4	.6	.0	264.6	11.5
Other red oaks	384.9	117.8	4.8	.0	507.5	6.7
Black locust	24.5	27.6	1.0	.0	53.2	17.8
Other hardwoods	149.9	43.4	.7	.0	194.1	11.8
Total hardwoods	3,017.4	852.3	40.3	.5	3,910.5	3.4
All species	3,538.7	1,141.2	64.6	.5	4,745.1	2.9
SE	4.3	7.2	21.8	100.0	2.9	

Table 34.--Net volume of growing-stock trees on timberland by species and stand-size class, Maryland, 1999

(In millions of cubic feet)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
White/red pine	31.5	41.1	1.5	.0	74.1	41.6
Loblolly pine	386.0	137.3	5.4	.0	528.8	10.6
Virginia pine	119.2	36.2	.2	.0	155.6	16.0
Other yellow pines	1.7	1.8	.0	.0	3.5	61.5
Other softwoods	29.9	9.0	.1	.0	39.1	26.3
Total softwoods	568.4	225.3	7.2	.0	801.0	8.7
Red maple	536.5	94.4	9.1	.7	640.7	10.0
Sugar maple	68.9	7.3	1.1	.0	77.3	26.7
Hickory	140.7	14.5	2.5	1.5	159.2	13.1
Beech	98.1	4.7	.3	.0	103.1	14.9
Sweetgum	363.3	70.1	7.9	.2	441.5	10.9
Yellow-poplar	706.7	32.3	10.9	.0	749.9	10.8
Blackgum	103.6	19.9	1.0	.1	124.6	12.8
Ash-walnut-cherry	151.6	85.0	12.2	.0	248.8	13.3
Select white oaks	432.7	52.9	1.8	.0	487.4	9.6
Select red oaks	173.7	12.3	1.9	.0	187.9	16.3
Other white oaks	156.7	34.3	2.9	.0	194.0	17.7
Other red oaks	504.5	62.4	3.9	.0	570.8	9.0
Black locust	39.6	18.9	.9	.0	59.4	23.9
Other hardwoods	186.5	31.7	8.2	.2	226.6	12.8
Total hardwoods	3,663.0	540.9	64.4	2.8	4,271.2	3.8
All species	4,231.4	766.3	71.7	2.8	5,072.2	3.3
SE	4.3	11.6	21.3	63.8	3.3	

Table 35.--Net volume of growing-stock trees on timberland by species and diameter class, Maryland, 1986

(In millions of cubic feet)

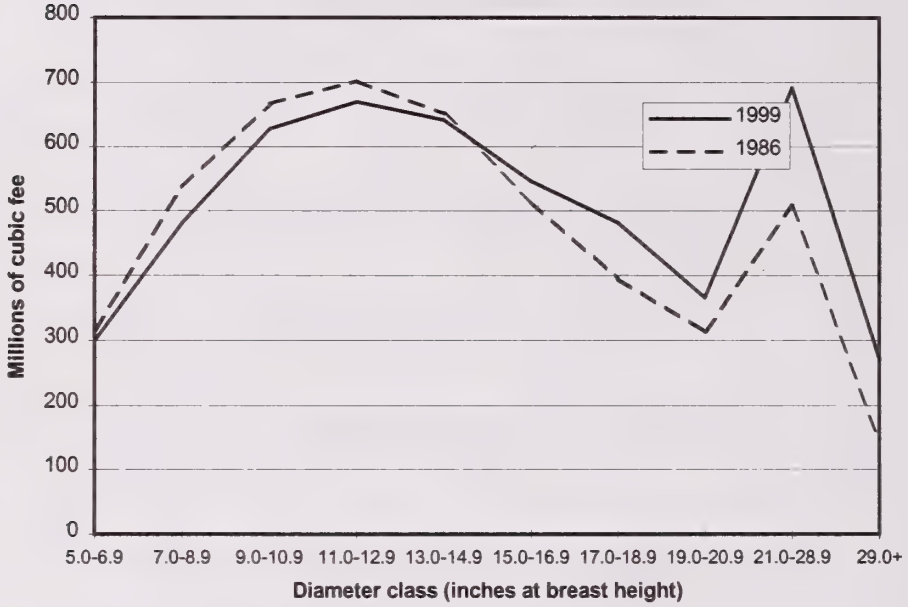
Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
White/red pine	16.7	18.4	8.6	9.7	4.9	1.2	1.5	1.1	.0	.0	62.1	37.0
Loblolly pine	49.1	73.9	86.3	94.8	77.8	49.3	29.7	12.3	8.5	.0	481.7	9.1
Virginia pine	22.4	51.6	59.6	52.0	35.3	10.7	1.2	.0	.3	.0	233.2	13.3
Other yellow pines	1.9	2.8	4.8	3.5	1.7	1.2	.4	.0	.0	.0	16.3	30.4
Other softwoods	2.5	6.2	4.1	4.9	5.2	4.2	5.4	4.2	4.2	.6	41.4	31.9
Total softwoods	92.6	152.8	163.4	164.8	125.0	66.5	38.2	17.6	13.0	.6	834.6	7.3
Red maple	45.5	67.6	75.5	81.4	65.2	45.5	38.4	27.4	49.9	16.2	512.6	6.5
Sugar maple	6.6	8.8	9.2	8.5	6.4	8.2	2.4	5.5	3.5	1.7	60.8	18.0
Hickory	10.8	22.5	24.2	21.0	19.7	19.5	15.1	7.5	6.4	1.5	148.1	10.1
Beech	7.1	9.1	15.3	18.5	21.4	15.7	15.9	16.6	22.5	6.7	148.8	12.3
Sweetgum	26.1	45.5	48.9	54.8	51.8	40.8	21.5	13.3	17.0	4.0	323.7	8.7
Yellow-poplar	13.6	27.7	44.9	58.9	73.3	72.4	81.6	75.0	158.4	47.4	653.4	11.8
Blackgum	13.7	15.9	25.2	18.2	19.1	20.2	9.3	7.6	9.0	.0	138.2	9.4
Ash-walnut-cherry	16.7	28.0	34.0	26.5	30.0	19.2	14.4	8.2	6.5	4.2	187.6	9.8
Select white oaks	22.7	45.3	68.5	62.0	52.8	47.2	41.0	26.1	53.9	16.9	436.3	6.7
Select red oaks	5.0	14.4	26.1	38.1	44.1	37.2	24.5	27.3	48.2	16.4	281.4	7.8
Other white oaks	8.2	28.3	43.1	40.9	44.0	30.8	26.0	12.2	27.6	3.5	264.6	11.5
Other red oaks	18.7	34.4	45.0	74.6	66.4	66.0	53.4	52.9	74.8	21.3	507.5	6.7
Black locust	6.0	9.4	12.6	6.2	7.7	5.0	3.6	2.1	.6	.0	53.2	17.8
Other hardwoods	21.8	27.2	30.6	27.0	23.2	19.7	9.4	14.4	16.5	4.3	194.1	11.8
Total hardwoods	222.7	384.2	503.1	536.5	525.3	447.6	356.4	296.1	494.6	144.0	3,910.5	3.4
All species	315.3	537.0	666.5	701.3	650.3	514.1	394.6	313.6	507.6	144.6	4,745.1	2.9
SE	4.8	4.1	3.7	3.6	3.7	4.5	6.0	7.0	7.2	13.5	2.9	

Table 36.--Net volume of growing-stock trees on timberland by species and diameter class, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	7.9	22.2	18.9	10.6	4.1	3.2	4.5	.0	2.8	.0	74.1	41.6
Loblolly pine	48.3	81.6	92.4	95.2	71.3	57.4	38.0	29.1	15.5	.0	528.8	10.6
Virginia pine	15.7	30.3	30.6	32.3	21.5	20.4	2.1	.0	2.6	.0	155.6	16.0
Other yellow pines	.2	.8	.3	.4	1.7	.0	.0	.0	.0	.0	3.5	61.5
Other softwoods	4.0	5.8	3.4	4.5	5.4	2.5	3.6	1.8	3.7	4.2	39.1	26.3
Total softwoods	76.2	140.7	145.6	143.0	104.0	83.5	48.3	30.9	24.6	4.2	801.0	8.7
Red maple	48.1	66.2	83.3	73.7	85.2	51.3	45.4	41.2	90.5	55.8	640.7	10.0
Sugar maple	6.7	11.0	10.2	15.4	4.7	3.5	3.2	.0	7.8	14.8	77.3	26.7
Hickory	9.1	15.6	23.6	26.9	24.0	16.1	11.4	7.8	22.2	2.4	159.2	13.1
Beech	7.9	9.9	11.7	13.9	12.2	13.6	8.2	9.2	11.4	5.2	103.1	14.9
Sweetgum	29.1	44.4	68.6	76.3	73.3	58.1	30.2	14.0	42.0	5.4	441.5	10.9
Yellow-poplar	11.5	23.2	33.0	56.5	62.9	85.1	120.6	96.0	211.0	50.1	749.9	10.8
Blackgum	14.7	14.6	20.6	17.5	15.7	15.1	7.9	7.7	10.9	.0	124.6	12.8
Ash-walnut-cherry	26.8	37.3	44.8	36.2	19.6	17.4	23.8	5.9	25.8	11.0	248.8	13.3
Select white oaks	12.1	30.2	60.8	56.9	63.1	52.9	55.2	54.9	64.5	36.7	487.4	9.6
Select red oaks	2.9	9.2	10.3	29.1	24.3	27.1	16.4	12.6	31.8	24.2	187.9	16.3
Other white oaks	6.5	17.9	29.3	24.8	40.8	22.8	30.2	9.1	12.6	.0	194.0	17.7
Other red oaks	13.0	20.9	43.9	63.6	79.8	85.6	66.5	61.1	90.7	45.7	570.8	9.0
Black locust	4.7	11.7	9.4	9.4	10.3	2.5	.0	3.7	7.6	.0	59.4	23.9
Other hardwoods	29.0	28.8	31.8	26.0	21.2	11.3	14.2	12.0	37.0	15.4	226.6	12.8
Total hardwoods	222.1	340.9	481.5	526.4	536.9	462.3	433.3	335.1	666.0	266.6	4,271.2	3.8
All species	298.3	481.7	627.1	669.5	640.9	545.8	481.5	366.0	690.6	270.9	5,072.2	3.3
SE	5.0	5.4	4.9	4.6	5.2	6.3	8.1	9.7	9.1	19.9	3.3	

Net volume of growing-stock trees on timberland, Maryland, 1986 and 1999



Net volume of growing-stock trees on timberland, top 5 species, Maryland, 1986 and 1999

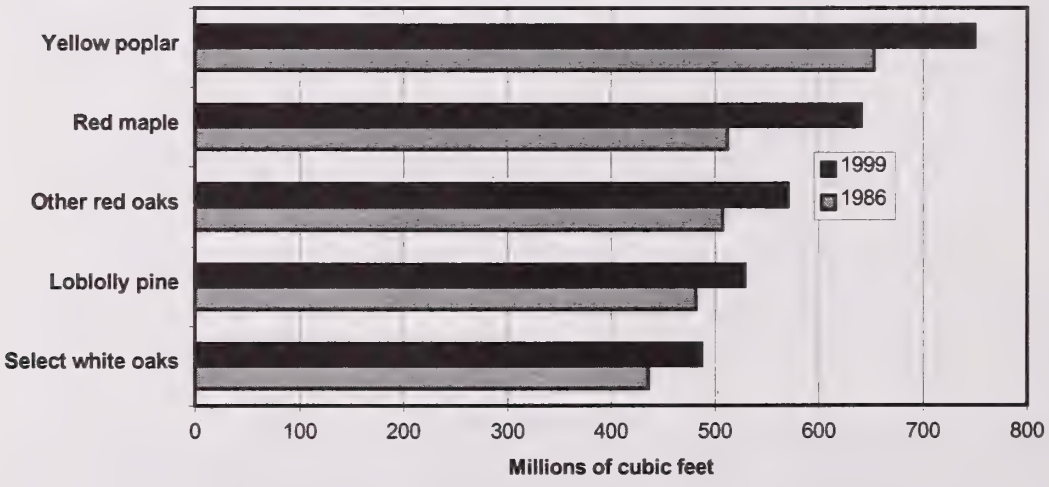


Table 37.--Net volume of growing-stock in the sawlog portion of sawtimber trees on timberland by species and diameter class, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)								All classes	SE
	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+		
White/red pine	15.9	9.2	3.6	2.9	4.2	.0	2.7	.0	38.4	34.0
Loblolly pine	77.7	82.8	63.7	52.2	35.1	27.1	14.5	.0	353.1	12.3
Virginia pine	25.8	28.1	19.2	18.6	2.0	.0	2.4	.0	96.0	18.1
Other yellow pines	.3	.4	1.5	.0	.0	.0	.0	.0	2.2	58.1
Other softwoods	2.9	3.9	4.8	2.3	3.3	1.7	3.5	4.0	26.3	29.9
Total softwoods	122.5	124.4	92.9	76.0	44.5	28.7	23.0	4.0	516.1	9.6
Red maple	.0	54.3	69.0	43.1	38.6	35.0	76.9	47.4	364.3	13.5
Sugar maple	.0	11.3	3.8	3.0	2.8	.0	6.6	12.5	40.0	35.2
Hickory	.0	19.8	19.4	13.5	9.7	6.7	18.9	2.1	90.0	15.1
Beech	.0	10.3	9.9	11.4	6.9	7.8	9.7	4.4	60.4	18.2
Sweetgum	.0	56.2	59.4	48.8	25.7	11.9	35.7	4.6	242.3	13.1
Yellow-poplar	.0	41.6	50.9	71.5	102.5	81.6	179.4	42.6	570.1	11.4
Blackgum	.0	12.9	12.7	12.7	6.7	6.5	9.3	.0	60.7	18.2
Ash-walnut-cherry	.0	26.7	15.9	14.6	20.3	5.0	21.9	9.4	113.7	15.9
Select white oaks	.0	41.9	51.1	44.5	46.9	46.7	54.9	31.2	317.0	10.7
Select red oaks	.0	21.4	19.7	22.7	13.9	10.7	27.1	20.6	136.1	17.5
Other white oaks	.0	18.2	33.0	19.2	25.6	7.8	10.7	.0	114.5	19.3
Other red oaks	.0	46.8	64.6	71.9	56.5	51.9	77.1	38.8	407.7	9.8
Black locust	.0	6.9	8.4	2.1	.0	3.1	6.5	.0	27.0	34.5
Other hardwoods	.0	19.1	17.2	9.5	12.1	10.2	31.5	13.1	112.6	17.6
Total hardwoods	.0	387.5	434.9	388.4	368.3	284.8	566.1	226.6	2,656.5	4.6
All species	122.5	511.9	527.9	464.3	412.8	313.6	589.1	230.6	3,172.6	4.0
SE	11.9	4.6	5.2	6.3	8.0	9.8	9.1	19.9	4.0	

Table 38.--Net volume of sawtimber trees on timberland by species and diameter class, Maryland, 1986

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	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+		
White/red pine	28.4	39.3	22.1	5.0	7.8	5.6	.0	.0	108.2	42.0
Loblolly pine	271.1	364.1	329.9	215.5	137.4	57.1	39.6	.0	1,414.7	9.6
Virginia pine	187.8	199.3	150.1	47.1	5.6	.0	1.4	.0	591.3	13.6
Other yellow pines	15.1	13.4	7.5	5.3	1.8	.0	.0	.0	43.1	33.3
Other softwoods	11.5	17.5	18.4	16.9	24.3	19.8	20.5	2.7	131.7	39.1
Total softwoods	513.8	633.6	528.0	289.8	176.9	82.5	61.6	2.7	2,289.0	7.8
Red maple	.0	279.2	253.7	176.9	161.3	118.2	235.5	85.1	1,309.8	8.2
Sugar maple	.0	30.5	23.0	32.1	9.5	24.6	18.3	7.2	145.2	22.0
Hickory	.0	73.8	77.5	79.7	65.2	37.4	29.9	7.0	370.4	12.3
Beech	.0	68.8	86.4	64.7	71.0	74.3	101.6	22.3	489.2	13.0
Sweetgum	.0	189.7	202.0	176.1	94.3	61.2	84.2	17.9	825.3	10.6
Yellow-poplar	.0	205.2	292.7	325.5	384.8	363.7	831.7	236.7	2,640.3	12.3
Blackgum	.0	61.6	72.7	85.0	40.0	34.0	43.7	.0	337.0	12.0
Ash-walnut-cherry	.0	91.8	114.3	76.9	61.8	30.1	28.6	21.5	425.0	11.2
Select white oaks	.0	221.9	211.8	204.0	180.5	115.5	253.7	82.5	1,270.0	7.7
Select red oaks	.0	131.6	170.8	158.1	107.5	123.3	239.5	79.3	1,010.2	8.6
Other white oaks	.0	144.7	162.1	116.0	105.6	47.4	126.7	16.2	718.7	13.0
Other red oaks	.0	258.4	259.1	282.0	234.0	241.9	371.1	100.6	1,747.1	7.7
Black locust	.0	21.7	30.5	21.6	15.7	9.0	2.6	.0	101.2	21.4
Other hardwoods	.0	96.2	93.8	86.5	41.4	64.9	73.7	21.2	477.7	16.4
Total hardwoods	.0	1,875.1	2,050.4	1,885.2	1,572.7	1,345.5	2,440.7	697.5	11,867.2	4.4
All species	513.8	2,508.8	2,578.4	2,175.1	1,749.5	1,428.0	2,502.4	700.2	14,156.2	3.7
SE	8.8	3.7	3.7	4.6	6.0	7.0	7.4	13.7	3.7	

Table 39.--Net volume of sawtimber trees on timberland by species and diameter class, Maryland, 1999

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	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+		
White/red pine	64.1	44.3	17.6	12.8	22.8	.0	15.5	.0	177.1	34.1
Loblolly pine	306.6	375.8	306.8	259.0	176.4	137.7	73.8	.0	1,636.0	12.7
Virginia pine	96.9	121.8	91.5	90.7	9.7	.0	12.6	.0	423.3	18.5
Other yellow pines	1.0	1.7	7.4	.0	.0	.0	.0	.0	10.0	58.4
Other softwoods	9.9	16.6	20.4	10.8	15.0	5.9	16.8	21.9	117.3	32.1
Total softwoods	478.5	560.1	443.7	373.3	223.8	143.6	118.7	21.9	2,363.7	10.0
Red maple	.0	264.1	335.5	195.6	195.4	164.1	422.6	269.0	1,846.3	13.7
Sugar maple	.0	58.0	17.1	13.9	11.9	.0	37.3	48.9	187.2	36.9
Hickory	.0	98.5	97.7	69.3	50.6	37.2	105.9	13.1	472.4	15.5
Beech	.0	52.7	49.2	58.5	34.6	41.8	48.6	17.5	302.8	18.4
Sweetgum	.0	262.4	284.1	249.7	129.8	68.7	200.9	28.8	1,224.5	13.2
Yellow-poplar	.0	195.5	249.9	370.5	561.8	457.3	1,098.9	230.2	3,164.1	11.6
Blackgum	.0	58.5	61.0	63.9	36.4	35.4	51.2	.0	306.4	19.7
Ash-walnut-cherry	.0	126.5	74.9	72.0	98.9	20.9	110.5	60.9	564.5	16.7
Select white oaks	.0	215.4	264.5	225.7	245.4	259.3	283.3	165.9	1,659.5	11.0
Select red oaks	.0	105.1	92.5	110.8	69.2	57.1	141.8	111.1	687.7	17.7
Other white oaks	.0	88.0	152.4	88.6	121.6	33.3	57.6	.0	541.5	20.2
Other red oaks	.0	227.7	317.4	363.2	289.7	269.3	457.0	211.6	2,135.9	10.4
Black locust	.0	26.3	35.2	11.5	.0	16.2	27.1	.0	116.2	38.0
Other hardwoods	.0	96.9	91.6	52.9	63.4	49.4	159.0	75.5	588.8	18.0
Total hardwoods	.0	1,875.7	2,123.1	1,946.1	1,908.7	1,510.0	3,201.7	1,232.5	13,797.8	4.8
All species	478.5	2,435.9	2,566.8	2,319.5	2,132.5	1,653.6	3,320.5	1,254.4	16,161.5	4.2
SE	12.1	4.6	5.4	6.4	8.2	10.2	9.3	19.7	4.2	

Table 40.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Maryland, 1999

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes						
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	SE
White/red pine	7.5	40.9	2.7	.0	.0	51.1	10.7	61.8	103.3	1.3	.0	177.1	34.1
Loblolly pine	484.5	91.0	62.9	.0	8.5	646.9	958.9	267.0	393.7	.0	16.4	1,636.0	12.7
Virginia pine	17.1	13.1	75.8	.0	6.9	113.0	46.7	43.4	323.2	.0	10.0	423.3	18.5
Other yellow pines	.0	.0	.0	.0	.0	.0	.0	3.8	4.5	.0	1.7	10.0	58.4
Other softwoods	69.2	.0	.0	.0	1.2	70.4	113.6	.0	.0	.0	3.7	117.3	32.1
Total softwoods	578.3	145.0	141.4	.0	16.6	881.4	1,130.0	376.0	824.7	1.3	31.8	2,363.7	10.0
Red maple	233.3	263.1	235.0	293.1	222.3	1,246.8	233.3	353.9	593.1	404.8	261.3	1,846.3	13.7
Sugar maple	.0	6.4	19.4	.0	86.3	112.1	.0	6.4	91.3	1.3	88.1	187.2	36.9
Hickory	77.8	102.7	60.0	14.3	21.3	276.2	77.8	136.2	214.0	23.1	21.3	472.4	15.5
Beech	.0	12.9	33.4	129.1	25.5	200.9	.0	12.9	45.4	209.6	34.9	302.8	18.4
Sweetgum	351.5	198.1	81.1	14.8	32.5	677.9	351.5	380.2	401.5	55.4	35.8	1,224.5	13.2
Yellow-poplar	1,511.5	678.7	310.9	73.2	144.4	2,718.7	1,511.5	836.6	510.6	146.8	158.6	3,164.1	11.6
Blackgum	55.5	44.7	32.8	20.7	33.3	186.9	55.5	78.7	106.2	26.1	40.0	306.4	19.7
Ash-walnut-cherry	143.4	44.4	58.4	.0	116.9	363.1	143.4	72.6	211.4	6.3	130.8	564.5	16.7
Select white oaks	432.7	369.4	137.6	47.4	192.5	1,179.6	432.7	494.6	439.1	95.4	197.7	1,659.5	11.0
Select red oaks	171.4	186.1	99.7	.0	32.8	490.1	171.4	237.9	234.5	8.7	35.3	687.7	17.7
Other white oaks	37.8	104.7	90.2	21.3	47.1	301.1	37.8	151.4	267.8	29.2	55.2	541.5	20.2
Other red oaks	722.7	441.9	303.4	115.8	7.0	1,590.8	722.7	598.4	596.4	208.5	9.8	2,135.9	10.4
Black locust	.0	9.4	30.9	.0	14.5	54.8	.0	26.6	44.2	3.4	42.1	116.2	38.0
Other hardwoods	87.0	134.0	113.2	60.8	5.3	400.3	87.0	163.8	236.4	78.1	23.6	588.8	18.0
Total hardwoods	3,824.5	2,596.3	1,606.2	790.4	981.6	9,799.1	3,824.5	3,550.3	3,991.7	1,296.8	1,134.5	13,797.8	4.8
All species	4,402.8	2,741.3	1,747.7	790.4	998.2	10,680.4	4,954.5	3,926.2	4,816.4	1,298.1	1,166.2	16,161.5	4.2
SE	9.1	7.9	9.3	14.6	12.5	5.6	8.5	6.3	4.8	10.2	11.1	4.2	

Net volume of 15+ inches d.b.h. sawtimber trees on timberland, top 5 species by tree grade, Maryland, 1999

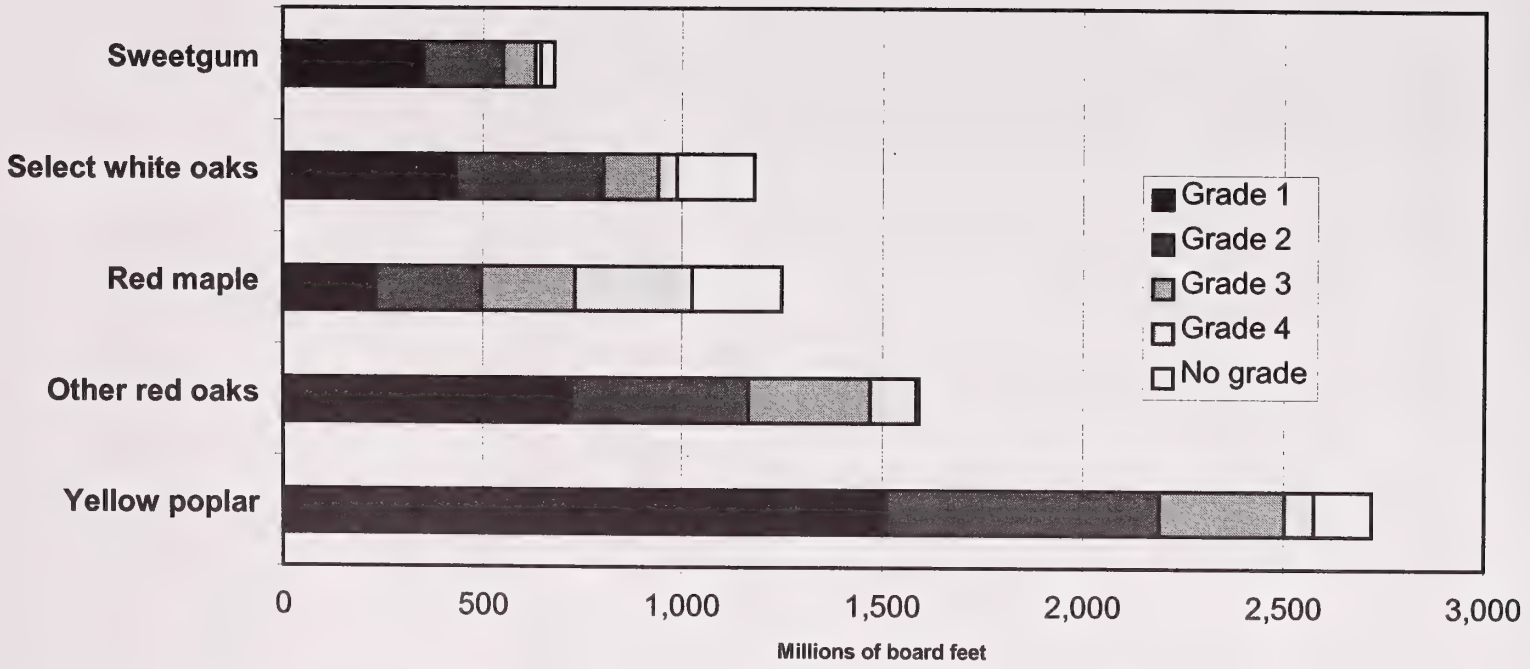


Table 41.--Average annual net change of growing-stock volume on timberland by species and component of change, Maryland, 1999

(In thousands of cubic feet)

Species	Component of change										Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull decrement	Cull increment	Net growth	Harvest removals	Land use removals	Total removals	
White/red pine	485	2,403	2,889	-103	0	0	2,786	0	0	0	2,786
Loblolly pine	6,349	11,269	17,618	-2,691	0	0	14,927	-13,906	-1,076	-14,982	-55
Virginia pine	3,140	5,047	8,187	-2,985	0	0	5,202	-2,075	-1,667	-3,742	1,460
Other yellow pines	0	98	98	0	0	0	98	0	-239	-239	-142
Other softwoods	507	688	1,195	-476	0	-57	662	0	0	0	662
Total softwoods	10,481	19,505	29,987	-6,254	0	-57	23,675	-15,981	-2,982	-18,963	4,711
Red maple	4,184	10,856	15,040	-5,728	559	-1,877	7,994	-3,453	-11,717	-15,169	-7,175
Sugar maple	991	951	1,942	-48	97	-365	1,627	-2,294	0	-2,294	-667
Hickory	1,300	1,384	2,684	-920	0	-56	1,707	-2,210	-147	-2,357	-649
Beech	417	1,710	2,126	0	0	-41	2,085	-1,905	0	-1,905	180
Sweetgum	2,341	10,227	12,568	-3,828	191	-66	8,864	-585	-190	-775	8,089
Yellow-poplar	3,645	26,374	30,019	-2,611	0	-320	27,087	-6,005	0	-6,005	21,082
Blackgum	630	2,105	2,735	-377	53	-224	2,187	-338	-234	-573	1,614
Ash-walnut-cherry	3,277	3,850	7,127	-1,534	2,340	-1,656	6,277	-1,119	0	-1,119	5,158
Select white oaks	1,459	7,377	8,836	-4,387	170	-107	4,512	-6,537	-3,659	-10,197	-5,685
Select red oaks	220	1,685	1,905	-966	91	0	1,031	-3,276	-885	-4,161	-3,130
Other white oaks	392	5,653	6,045	-1,880	1,027	-86	5,107	-1,655	-5,018	-6,673	-1,566
Other red oaks	1,677	8,878	10,555	-6,927	0	-70	3,558	-4,943	-3,616	-8,559	-5,001
Black locust	827	1,103	1,930	-350	1,762	-61	3,280	0	0	0	3,280
Other hardwoods	2,867	5,401	8,268	-730	300	-39	7,799	-1,750	-2,153	-3,904	3,896
Total hardwoods	24,229	87,554	111,783	-30,288	6,591	-4,969	83,117	-36,072	-27,619	-63,691	19,425
All species	34,710	107,060	141,769	-36,543	6,591	-5,026	106,791	-52,053	-30,602	-82,655	24,137

Table 42.--Average annual net change of sawtimber volume on timberland by species and component of change, Maryland, 1999

(In thousands of board feet)

Species	Component of change										Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull decrement	Cull increment	Net growth	Harvest removals	Land use removals	Total removals	
White/red pine	5,025	6,960	11,986	0	0	0	11,986	0	0	0	11,986
Loblolly pine	37,703	21,278	58,981	-5,484	0	0	53,497	-44,809	-1,797	-46,606	6,891
Virginia pine	6,378	18,977	25,355	-6,774	0	0	18,581	-7,078	-4,018	-11,097	7,484
Other yellow pines	306	305	612	0	0	0	612	0	-897	-897	-285
Other softwoods	3,848	0	3,848	-1,012	0	0	2,836	0	0	0	2,836
Total softwoods	53,260	47,521	100,782	-13,270	0	0	87,511	-51,887	-6,712	-58,600	28,912
Red maple	25,377	24,680	50,057	-21,627	796	-5,233	23,993	-7,972	-45,106	-53,078	-29,085
Sugar maple	0	2,441	2,441	0	0	-1,391	1,050	-9,259	0	-9,259	-8,209
Hickory	6,110	1,106	7,216	0	0	0	7,216	-5,563	0	-5,563	1,654
Beech	7,580	506	8,086	0	0	0	8,086	-6,387	0	-6,387	1,699
Sweetgum	28,016	18,083	46,099	-9,741	582	0	36,940	0	-686	-686	36,254
Yellow-poplar	46,352	114,216	160,568	-10,489	0	0	150,078	-24,332	0	-24,332	125,747
Blackgum	4,458	5,583	10,041	-454	0	0	9,587	0	0	0	9,587
Ash-walnut-cherry	14,932	-275	14,656	-3,502	0	-2,912	8,242	-4,447	0	-4,447	3,795
Select white oaks	19,159	10,595	29,755	-11,753	0	0	18,002	-28,021	-8,221	-36,243	-18,241
Select red oaks	6,081	990	7,070	-2,753	0	0	4,317	-12,335	-2,374	-14,709	-10,392
Other white oaks	13,485	10,886	24,371	-2,696	2,968	0	24,644	-3,129	-17,331	-20,460	4,183
Other red oaks	18,212	22,833	41,045	-25,181	0	0	15,864	-16,401	-11,317	-27,718	-11,854
Black locust	3,689	0	3,689	-829	3,435	0	6,295	0	0	0	6,295
Other hardwoods	18,849	9,290	28,140	-1,408	0	0	26,731	-4,110	-7,064	-11,174	15,557
Total hardwoods	212,299	220,935	433,235	-90,435	7,781	-9,536	341,045	-121,955	-92,101	-214,055	126,990
All species	265,560	268,457	534,016	-103,705	7,781	-9,536	428,557	-173,842	-98,813	-272,655	155,901

Average annual net growth and removals of sawtimber volume on timberland for top 5 species, Maryland, 1986-99

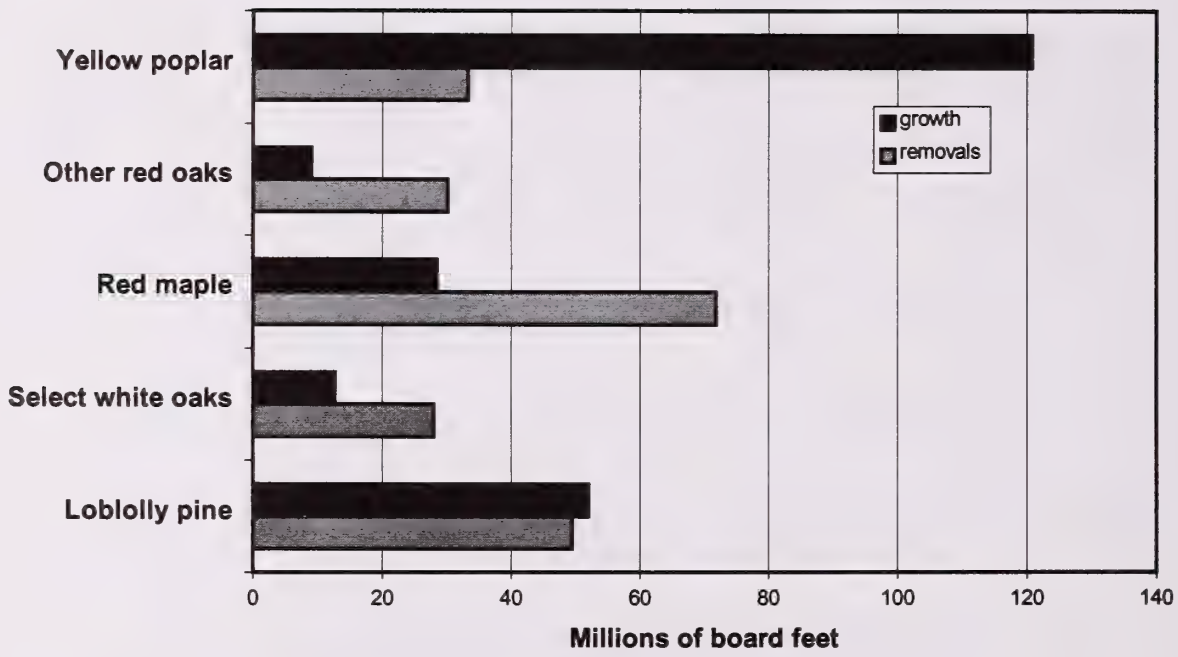


Table 43.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Maryland, 1999

(In thousands of cubic feet)

Ownership class	Net Growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Other public	4,871	1,663	6,535	1,671	23,520	25,191
Forest industry	3,044	1,169	4,213	3,813	3,897	7,710
Other private	15,760	80,283	96,043	13,480	36,274	49,754
All classes	23,675	83,117	106,791	18,963	63,691	82,655

Table 44.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Maryland, 1999

(In thousands of board feet)

Ownership class	Net Growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Other public	24,274	6,471	30,745	4,798	75,368	80,166
Forest industry	6,015	10,033	16,048	9,387	10,442	19,830
Other private	57,223	324,541	381,763	44,415	128,245	172,659
All classes	87,511	341,045	428,557	58,600	214,055	272,655

Table 45.--Change in area of timberland between inventories by forest-type group, Maryland, 1986 and 1999

(In thousands of acres)

Forest-type group	1986	1999	Change	Percent change
White/red pine	49.5	24.7	-24.8	-50.1
Spruce/fir	0.0	3.2	3.2	100.0
Loblolly/shortleaf	292.2	282.6	- 9.6	- 3.3
Oak/pine	243.4	229.6	-13.8	- 5.7
Oak/hickory	1,502.3	1,387.9	-114.4	- 7.6
Oak/gum/cypress	147.6	124.8	-22.8	-15.4
Elm/ash/red maple	95.6	108.2	12.6	13.2
Northern hardwoods	188.7	209.1	20.4	10.8
Aspen/birch	3.0	1.8	- 1.2	-40.0
All types	2,522.2	2,371.9	-150.3	-6.0

Table 46.--Change in area of timberland between inventories by stand-size class, Maryland, 1986 and 1999

(In thousands of acres)

Stand-size class	1986	1999	Change	Percent change
Sawtimber	1,511.9	1,575.0	63.1	4.2
Poletimber	740.7	506.1	-234.6	-31.7
Sapling and seedling	252.0	268.4	16.4	6.5
Nonstocked	17.7	22.5	4.8	27.1
All classes	2,522.2	2,371.91	-150.3	-6.0

Table 47.--Change in volume on timberland between inventories, Maryland, 1986 and 1999

Species group	1986	1999	Change	Percent change
	Growing stock (Millions of cubic feet)			
Softwoods	834.6	801.0	33.6	- 4.0
Hardwoods	3,910.5	4,271.2	360.7	9.2
All groups	4,745.1	5,072.2	327.1	6.9
	Sawtimber (Millions of board feet)			
Softwoods	2,289.0	2,363.7	74.7	3.3
Hardwoods	11,867.2	13,797.8	1,930.6	16.3
All groups	14,156.2	16,161.5	2,005.3	14.2

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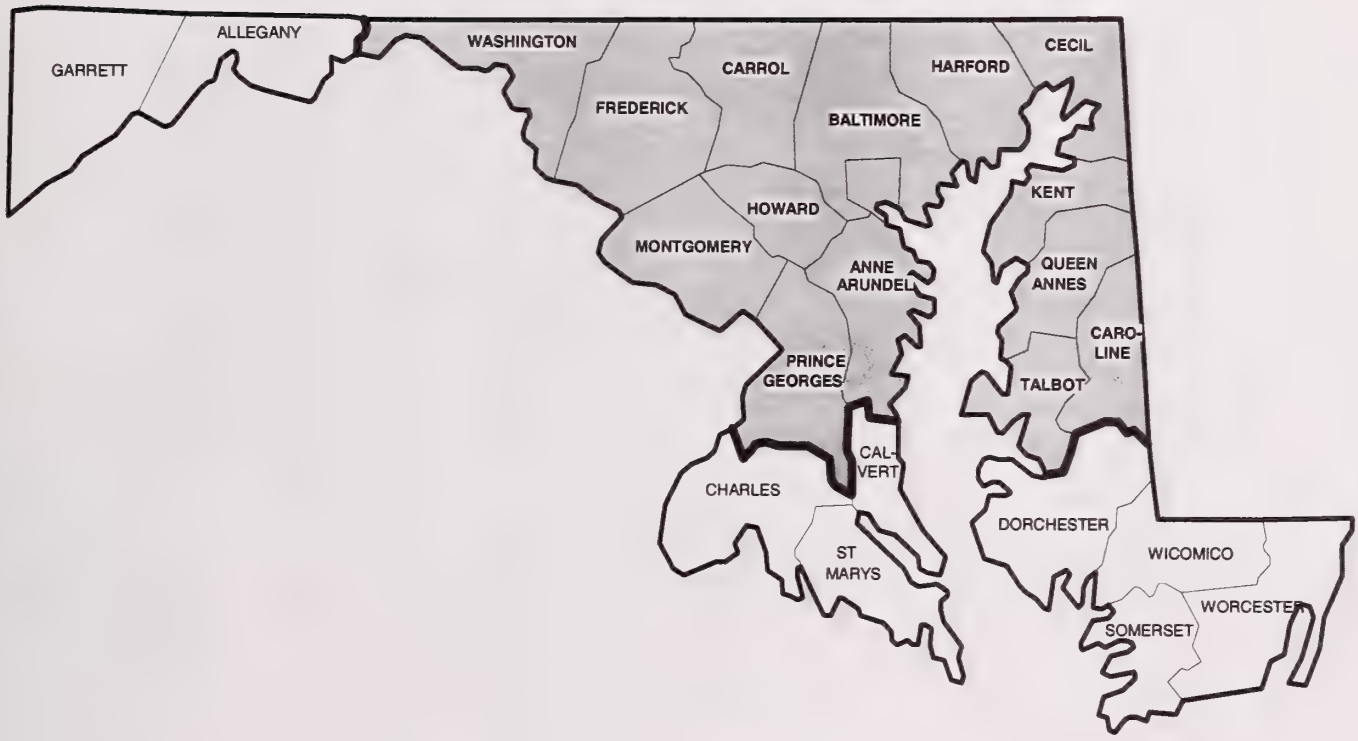


Table 48.--Area of timberland by forest type, forest-type group, and stand-size class, Central Unit, Maryland, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	.0	3.6	.0	.0	3.6	100.0
White pine	4.4	4.3	.0	.0	8.7	70.7
Scotch pine	.0	.0	.0	12.9	12.9	100.0
White/red pine group	4.4	7.9	.0	12.9	25.2	58.4
Loblolly pine	16.9	.0	.0	.0	16.9	40.5
Virginia pine	25.0	22.6	.0	.0	47.6	31.2
Loblolly/shortleaf group	41.9	22.6	.0	.0	64.6	25.3
Virginia pine/oak	24.1	5.0	3.0	.0	32.1	36.5
Loblolly pine/hardwood	25.8	4.1	12.2	.0	42.1	40.4
Other oak/pine	5.9	.0	.0	.0	5.9	100.0
Oak/pine group	55.8	9.1	15.2	.0	80.2	26.7
Post, black, or bear oak	5.4	3.5	.0	.0	8.9	68.5
Chestnut oak	39.8	3.0	.0	.0	42.8	30.6
White oak/red oak/hickory	31.2	25.7	.0	.0	56.9	28.4
White oak	13.5	18.7	.0	.0	32.2	38.9
Northern red oak	3.0	.0	.0	.0	3.0	100.0
Y-poplar/wh. oak/no.red oak	16.5	10.9	.0	.0	27.3	41.7
Black locust	5.1	13.6	4.9	.0	23.6	43.2
Sweetgum/yellow-poplar	29.1	13.6	.0	.0	42.7	32.6
Black walnut	3.0	.0	.0	.0	3.0	100.0
Yellow-poplar	53.7	2.9	.0	.0	56.6	36.8
Scarlet oak	8.4	.0	.0	.0	8.4	70.9
Sassafras/persimmon	.0	7.9	14.9	.0	22.8	53.0
Red maple/central hardwood	11.2	2.3	1.4	.0	14.9	43.8
Mixed central hardwoods	356.2	86.0	17.2	.0	459.4	8.9
Oak/hickory group	576.0	188.2	38.3	.0	802.6	5.6
Swamp chsnt oak/cherrybark oak	3.7	5.5	.0	.0	9.3	72.1
Sweetgm/nuttall oak/willow oak	7.5	.0	.0	.0	7.5	70.8
Sweetbay/swamp tupelo/red mple	3.5	.0	.0	.0	3.5	100.0
Oak/gum/cypress group	14.7	5.5	.0	.0	20.2	45.5
Black ash/Amer. elm/red maple	10.7	5.6	4.1	.0	20.4	46.5
Red maple(lowland)	8.0	.0	8.8	.0	16.8	63.4
River birch/sycamore	18.8	.0	.0	.0	18.8	56.5

Table 48.--continued

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Willow	.0	1.7	.0	.0	1.7	100.0
Sycamore/pecan/American elm	4.3	1.5	.0	.0	5.8	78.2
Elm/ash/red maple group	41.7	8.9	12.9	.0	63.5	29.0
Sugar maple/beech/yellow birch	7.2	.0	.0	.0	7.2	81.6
Black Cherry	.0	9.8	14.6	.0	24.4	32.1
Red maple/northern hardwoods	.0	2.2	.0	.0	2.2	100.0
Pin cherry/reverting field	.0	.0	8.2	.0	8.2	72.7
Mixed northern hardwoods	25.2	3.7	4.5	.0	33.5	43.0
Northern hardwoods group	32.4	15.8	27.3	.0	75.4	24.5
All forest types	767.0	258.1	93.7	12.9	1,131.7	4.0
SE	6.2	12.9	25.0	100.0	4.0	

Table 49.--Area of timberland by forest type, forest-type group, and stand-size class, Central Unit, Maryland, 1999

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
White pine	9.2	.0	.0	.0	9.2	66.6
White/red pine group	9.2	.0	.0	.0	9.2	66.6
Loblolly pine	21.4	8.2	9.9	.0	39.5	32.5
Virginia pine	13.1	11.5	.0	.0	24.6	37.1
Loblolly/shortleaf group	34.5	19.8	9.9	.0	64.1	24.2
Eastern redcedar/hardwood	5.4	.0	12.6	.0	18.0	58.4
Virginia pine/oak	21.7	1.7	.0	.0	23.3	41.7
Loblolly pine/hardwood	20.2	6.3	5.3	.0	31.7	40.6
Oak/pine group	47.2	8.0	17.9	.0	73.1	26.4
Post, black, or bear oak	10.4	.9	.0	.0	11.4	64.2
Chestnut oak	21.3	11.3	.0	.0	32.6	38.2
White oak/red oak/hickory	45.7	.0	.0	6.4	52.1	30.1
White oak	19.2	.0	.0	.0	19.2	45.7
Northern red oak	20.1	.0	.0	.0	20.1	53.6
Y-poplar/wh. oak/no.red oak	28.3	.0	.0	.0	28.3	46.1
Black locust	10.2	7.5	16.7	.0	34.4	36.7
Sweetgum/yellow-poplar	30.9	12.8	1.6	.0	45.3	34.3
Black walnut	.0	.0	.0	1.2	1.2	100.0
Yellow-poplar	46.3	1.4	.0	1.5	49.2	28.2
Hawthorn/reverting field	.0	.0	.0	1.9	1.9	100.0
Scarlet oak	19.9	.0	.0	.0	19.9	50.4
Sassafras/persimmon	.0	5.7	7.3	.0	13.0	61.6
Red maple/central hardwood	25.4	11.3	.0	.0	36.7	39.6
Mixed central hardwoods	272.7	76.4	30.6	6.3	386.0	10.3
Oak/hickory group	550.3	127.3	56.2	17.2	751.1	5.7
Swamp chsnt oak/cherrybark oak	5.8	.0	.0	.0	5.8	100.0
Sweetgm/nuttall oak/willow oak	14.8	1.1	.0	.0	16.0	55.5
Oak/gum/cypress group	20.7	1.1	.0	.0	21.8	48.6
Black ash/Amer. elm/red maple	9.6	.0	.0	.0	9.6	54.4
Red maple(lowland)	8.9	.0	1.5	2.8	13.2	71.5
Red maple(upland)	2.2	.0	.0	.0	2.2	100.0
River birch/sycamore	6.5	8.7	4.1	.0	19.3	56.2
Willow	.0	.0	1.3	.0	1.3	100.0

Table 49.--continued

(In thousands of acres)

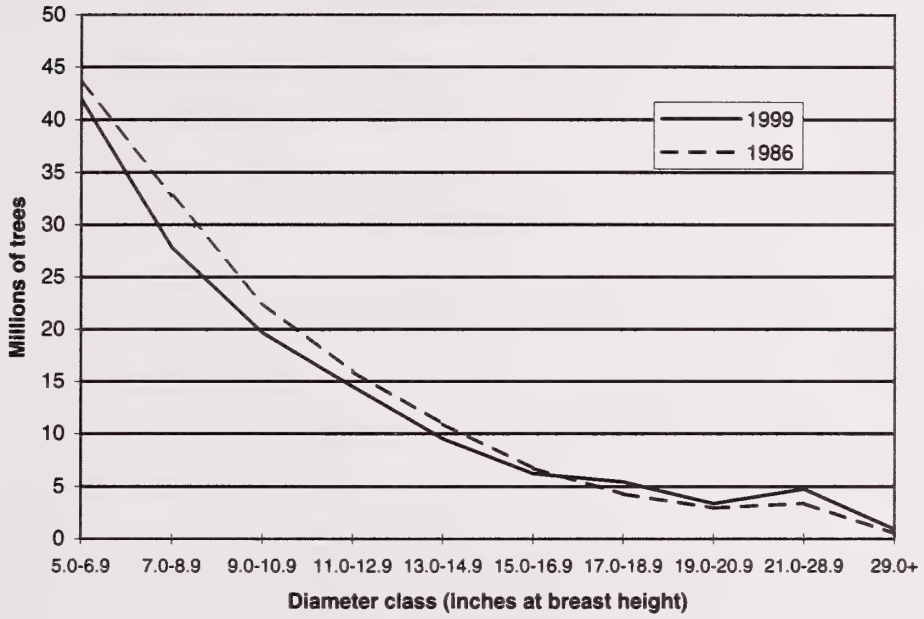
Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Sycamore/pecan/American elm	5.2	.0	.0	.0	5.2	89.1
Elm/ash/red maple group	32.4	8.7	7.0	2.8	50.9	31.4
Black cherry	6.7	.3	7.6	.0	14.6	58.7
Red maple/northern hardwoods	3.2	3.2	.0	.0	6.4	70.7
Mixed northern hardwoods	34.4	2.2	7.6	.0	44.2	35.5
Northern hardwoods group	44.3	5.7	15.2	.0	65.2	27.5
Aspen	.0	1.8	.0	.0	1.8	100.0
Aspen/birch group	.0	1.8	.0	.0	1.8	100.0
All forest types	738.5	172.4	106.3	20.0	1,037.2	3.6
SE	5.3	16.4	22.5	41.6	3.6	

Table 50.--Number of live trees (1.0+ inches d.b.h.) on forest land by species and diameter group, Central Unit, Maryland, 1999

(In thousands of trees)

Species	Diameter				All Classes	SE
	1.0-4.9	5.0-10.9	11.0-20.9	21+		
White/red pine	397	667	377	32	1,472	47.2
Loblolly pine	7,669	6,420	1,987	53	16,131	35.4
Virginia pine	3,637	7,226	2,017	0	12,879	31.9
Other yellow pines	0	0	32	0	32	100.0
Other softwoods	5,762	1,583	287	21	7,653	40.2
Total softwoods	17,465	15,895	4,701	106	38,168	19.7
Red maple	76,665	16,941	5,203	1,059	99,869	13.7
Sugar maple	642	829	194	0	1,665	49.9
Hickory	15,687	4,733	2,063	164	22,647	23.9
Beech	16,571	3,789	1,000	215	21,575	19.5
Sweetgum	40,819	10,077	3,513	371	54,780	16.9
Yellow-poplar	31,320	7,026	7,243	1,723	47,312	23.2
Blackgum	39,654	6,069	1,160	73	46,956	16.4
Ash-walnut-cherry	23,334	9,300	2,997	325	35,957	14.2
Select white oaks	6,370	4,273	3,468	528	14,639	15.8
Select red oaks	507	1,185	1,723	533	3,947	16.9
Other white oaks	3,330	5,384	3,674	173	12,562	22.2
Other red oaks	6,900	5,353	6,861	1,102	20,216	15.5
Blacklocust	3,417	3,748	673	182	8,021	37.2
Other hardwoods	30,058	10,737	2,452	602	43,849	15.9
Noncommercial hardwoods	78,568	8,338	1,153	33	88,093	11.6
Total hardwoods	373,844	97,783	43,378	7,083	522,088	6.1
All species	391,309	113,679	48,079	7,189	560,256	6.0
SE	7.8	5.4	4.6	9.8	6.0	

Number of growing-stock trees on timberland, Central Unit, Maryland, 1986 and 1999



Number of growing-stock trees on timberland, top 5 species, Central Unit, Maryland, 1986 and 1999

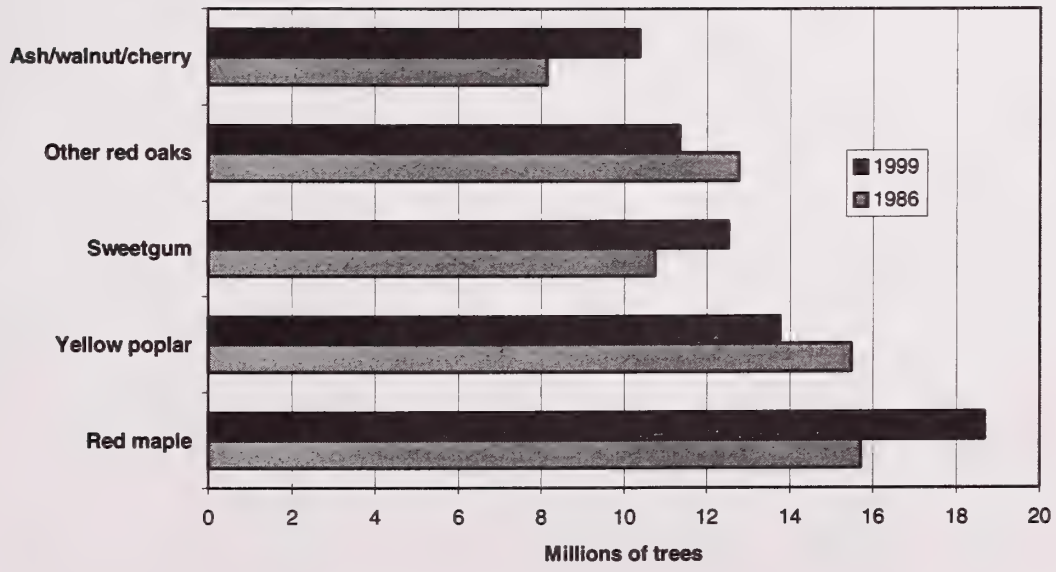


Table 51.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Central Unit, Maryland, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	2,194	853	224	329	160	16	30	12	0	0	3,819	55.6
Loblolly pine	846	1,311	1,351	1,180	769	418	195	118	22	0	6,211	22.3
Virginia pine	4,693	4,189	2,428	1,437	691	143	4	0	0	0	13,586	24.1
Other yellow pines	505	239	283	68	18	15	0	0	0	0	1,129	53.3
Other softwoods	70	126	101	54	46	0	14	13	6	0	429	62.8
Total softwoods	8,308	6,719	4,387	3,069	1,685	592	243	143	28	0	25,174	16.9
Red maple	5,625	3,710	2,402	1,433	993	579	366	234	320	41	15,702	10.9
Sugar maple	86	209	54	21	70	34	0	0	0	0	473	44.5
Hickory	2,042	1,777	807	483	284	272	211	56	46	0	5,979	15.6
Beech	1,573	723	514	267	254	137	152	127	134	30	3,911	23.9
Sweetgum	3,925	2,768	1,306	1,089	771	489	189	108	78	25	10,749	16.9
Yellow-poplar	2,640	2,630	2,295	1,986	1,534	1,175	1,061	813	1,151	197	15,481	14.4
Blackgum	2,652	1,047	1,115	481	351	283	73	63	50	0	6,116	12.9
Ash-walnut-cherry	2,927	2,057	1,205	759	618	250	172	67	61	20	8,136	14.0
Select white oaks	3,457	2,871	2,209	1,135	705	535	399	236	311	68	11,926	12.9
Select red oaks	455	931	886	765	743	443	277	221	273	53	5,049	14.3
Other white oaks	1,545	2,189	2,108	1,431	1,129	631	398	151	231	6	9,819	16.2
Other red oaks	3,344	2,182	1,365	2,021	1,120	858	615	558	635	63	12,761	12.8
Black locust	1,635	958	864	227	204	118	24	9	0	0	4,040	26.4
Other hardwoods	3,320	2,039	941	774	452	340	110	191	93	18	8,279	15.8
Total hardwoods	35,227	26,092	18,071	12,872	9,228	6,145	4,047	2,835	3,383	521	118,421	5.0
All species	43,536	32,811	22,458	15,941	10,913	6,736	4,291	2,977	3,411	521	143,596	4.8
SE	8.0	6.4	6.6	6.2	6.3	7.2	9.2	10.0	9.7	17.9	4.8	

Table 52.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Central Unit, Maryland, 1999

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	161	124	222	98	114	101	64	0	32	0	916	42.0
Loblolly pine	2,968	2,291	1,061	879	306	319	240	189	53	0	8,308	36.9
Virginia pine	2,852	2,359	1,447	1,058	362	416	51	0	0	0	8,545	25.7
Other yellow pines	0	0	0	0	32	0	0	0	0	0	32	100.0
Other softwoods	825	355	158	107	106	0	0	42	0	21	1,614	37.7
Total softwoods	6,805	5,130	2,889	2,142	921	836	355	232	85	21	19,416	20.0
Red maple	6,681	4,058	3,160	1,460	1,239	428	445	345	736	128	18,683	10.2
Sugar maple	226	118	43	129	32	0	32	0	0	0	580	53.1
Hickory	1,662	1,349	754	712	453	230	198	75	150	14	5,598	14.9
Beech	1,709	765	485	195	151	105	64	67	64	0	3,605	20.1
Sweetgum	4,823	2,725	1,282	1,404	1,023	558	202	129	332	39	12,518	20.5
Yellow-poplar	2,524	1,927	1,648	1,490	1,161	1,235	1,371	1,017	1,231	166	13,769	12.4
Blackgum	2,928	1,066	647	453	259	151	31	85	73	0	5,692	13.3
Ash-walnut-cherry	4,117	2,220	1,648	1,036	403	253	304	67	287	38	10,374	13.6
Select white oaks	1,210	1,136	1,120	865	779	535	553	337	288	168	6,992	14.9
Select red oaks	334	454	261	415	201	347	237	61	320	63	2,693	20.0
Other white oaks	1,426	1,399	1,890	1,047	1,044	357	514	145	160	0	7,983	24.4
Other red oaks	1,662	1,378	1,507	1,871	1,355	1,029	986	611	721	228	11,348	13.6
Black locust	986	1,443	670	258	214	51	0	81	97	0	3,801	36.8
Other hardwoods	4,878	2,646	1,677	1,013	276	113	147	143	218	65	11,177	15.3
Total hardwoods	35,167	22,685	16,793	12,349	8,591	5,394	5,086	3,162	4,676	910	114,812	5.1
All species	41,972	27,815	19,682	14,491	9,513	6,230	5,441	3,393	4,761	930	134,228	5.1
SE	7.6	7.2	7.9	7.2	8.3	9.9	10.5	12.1	11.6	22.8	5.1	

Table 53.--Net volume of all live trees on timberland by species and diameter class, Central Unit, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	7.9	6.2	2.8	6.4	3.9	.5	1.5	.8	.0	.0	30.1	48.9
Loblolly pine	2.6	9.0	15.6	21.0	19.4	14.4	8.5	6.6	1.4	.0	98.4	21.9
Virginia pine	13.6	27.5	27.8	26.5	17.4	4.8	.2	.0	.0	.0	117.8	22.0
Other yellow pines	1.4	1.4	3.2	1.1	.5	.4	.0	.0	.0	.0	8.0	53.4
Other softwoods	.3	.8	1.1	.9	1.2	.0	.6	.8	.4	.0	6.2	59.4
Total softwoods	25.8	45.0	50.5	55.9	42.4	20.2	10.7	8.2	1.8	.0	260.5	15.0
Red maple	15.1	24.9	28.7	29.2	28.4	22.2	18.3	15.3	31.7	8.0	221.9	11.6
Sugar maple	.3	1.5	.8	.5	1.8	1.4	.0	.0	.8	.0	7.1	49.0
Hickory	6.2	13.6	10.5	11.2	9.0	11.3	10.6	4.1	4.5	.0	81.0	15.5
Beech	3.5	4.4	6.2	6.7	8.1	5.2	8.9	10.8	16.1	8.5	78.4	18.8
Sweetgum	9.7	17.7	16.1	20.4	20.9	18.7	9.1	6.9	6.9	3.7	130.1	16.0
Yellow-poplar	7.3	20.3	32.6	43.8	50.7	56.1	62.4	61.1	122.6	41.1	498.0	15.0
Blackgum	6.8	6.6	12.8	9.9	9.5	10.8	3.2	3.9	4.8	1.2	69.4	13.2
Ash-walnut-cherry	9.8	14.8	16.2	16.0	17.9	10.2	8.7	4.3	5.3	2.7	105.9	12.3
Select white oaks	8.6	16.8	25.4	21.0	19.1	19.2	18.8	14.4	26.6	12.8	182.9	10.7
Select red oaks	1.3	6.0	10.5	15.2	20.7	16.6	13.3	13.9	24.0	10.7	132.1	12.8
Other white oaks	4.1	13.5	24.3	25.8	30.2	21.5	17.3	8.2	18.5	1.3	164.7	16.8
Other red oaks	8.4	14.0	16.2	38.8	30.5	32.3	29.2	34.4	56.1	13.1	273.0	10.6
Blacklocust	4.1	5.4	9.7	4.6	6.0	5.2	1.2	.9	.2	.0	37.2	24.5
Other hardwoods	8.0	13.5	13.4	15.4	12.9	12.7	6.6	10.8	9.5	2.6	105.5	18.9
Noncommercial hardwoods	8.3	5.2	4.7	3.6	3.7	2.3	.3	.0	.0	.0	28.1	18.2
Total hardwoods	101.2	178.1	228.2	262.1	269.4	245.8	207.9	189.1	327.6	105.7	2,115.1	5.6
All species	127.0	223.1	278.7	318.1	311.8	265.9	218.7	197.3	329.3	105.7	2,375.6	5.0
SE	8.0	6.3	6.3	6.2	6.2	7.2	9.4	9.9	10.0	18.3	5.0	

Table 54.--Net volume of live trees on timberland by species and diameter class, Central Unit, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	.5	.9	2.6	2.0	2.3	3.2	3.3	.0	2.8	.0	17.5	48.4
Loblolly pine	9.0	13.2	11.1	14.0	7.2	11.2	10.5	9.6	3.7	.0	89.5	24.8
Virginia pine	9.4	15.1	16.2	16.7	9.0	13.2	2.1	.0	.0	.0	81.7	24.6
Other yellow pines	.0	.0	.0	.0	.9	.0	.0	.0	.0	.0	.9	100.0
Other softwoods	1.8	1.8	2.0	1.3	2.0	.0	.0	1.0	.0	4.2	14.2	43.6
Total softwoods	20.6	31.0	31.9	33.9	21.4	27.6	15.9	10.6	6.5	4.2	203.8	16.1
Red maple	15.3	24.3	34.6	31.3	32.6	17.2	18.9	16.9	57.0	38.9	287.1	17.9
Sugar maple	.8	.9	.5	3.0	.9	.0	1.7	.0	.0	.0	7.8	55.1
Hickory	4.1	9.3	9.7	15.3	14.4	9.5	8.9	5.8	13.9	2.4	93.4	15.1
Beech	3.6	4.4	4.9	5.2	5.1	4.0	3.5	4.8	6.5	1.0	42.8	21.5
Sweetgum	12.1	17.2	16.1	27.5	30.0	22.7	10.1	6.3	24.6	5.4	172.1	20.4
Yellow-poplar	6.7	14.6	23.3	31.9	39.0	56.3	81.6	73.6	141.4	30.1	498.5	14.3
Blackgum	6.5	6.2	7.6	8.7	6.6	5.1	1.1	5.2	6.1	.0	53.0	19.8
Ash-walnut-cherry	10.6	13.8	19.4	22.3	13.0	10.6	15.9	4.8	23.6	5.4	139.5	16.0
Select white oaks	3.4	7.1	12.5	17.4	22.1	18.9	27.0	21.1	24.0	28.0	181.4	17.1
Select red oaks	.9	3.4	3.1	8.9	5.8	14.6	12.3	3.7	27.4	10.5	90.7	25.4
Other white oaks	3.5	8.9	22.5	19.0	29.4	12.2	22.6	9.9	12.6	.0	140.6	22.9
Other red oaks	4.0	8.9	18.1	35.9	39.7	40.7	48.5	36.1	68.0	34.6	334.6	13.2
Blacklocust	2.5	7.6	5.9	4.9	5.1	1.9	.0	3.7	6.2	.0	37.8	34.1
Other hardwoods	12.5	15.1	19.0	18.4	7.0	4.8	6.5	8.7	20.4	9.3	121.7	16.8
Noncommercial hardwoods	7.4	7.2	4.8	6.3	1.1	.7	.1	.0	.0	.0	27.4	20.1
Total hardwoods	93.7	148.9	202.1	256.0	251.7	219.2	258.8	200.6	431.7	165.6	2,228.4	5.9
All species	114.3	179.9	234.0	290.0	273.1	246.8	274.7	211.3	438.2	169.9	2,432.2	5.4
SE	7.8	6.9	8.1	6.9	8.4	10.1	11.2	12.5	12.2	26.5	5.4	

Table 55.--Net volume of growing-stock trees on timberland by species and diameter class, Central Unit, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	7.9	6.2	2.8	6.2	3.9	.5	1.5	.8	.0	.0	29.8	48.8
Loblolly pine	2.6	9.0	15.6	20.9	19.4	14.2	8.5	6.6	1.4	.0	98.2	21.9
Virginia pine	13.6	27.5	27.6	25.7	17.4	4.8	.2	.0	.0	.0	116.7	21.8
Other yellow pines	1.3	1.4	3.2	1.1	.5	.4	.0	.0	.0	.0	8.0	53.2
Other softwoods	.2	.8	1.1	.9	1.2	.0	.6	.8	.4	.0	6.1	59.9
Total softwoods	25.6	44.9	50.3	54.9	42.4	20.0	10.7	8.2	1.8	.0	258.7	14.9
Red maple	14.0	24.0	28.7	27.8	27.1	21.2	17.2	13.8	28.3	6.8	208.9	11.6
Sugar maple	.3	1.5	.8	.5	1.8	1.4	.0	.0	.0	.0	6.3	52.4
Hickory	6.1	13.5	10.5	10.5	8.8	11.3	10.6	4.1	4.3	.0	79.7	15.5
Beech	3.5	4.3	5.9	5.8	7.7	5.2	8.7	9.7	13.2	5.1	69.1	20.1
Sweetgum	9.5	17.7	16.1	20.4	20.8	18.1	8.8	6.9	6.9	3.7	128.9	16.0
Yellow-poplar	7.1	20.1	32.5	43.3	50.7	54.4	62.1	59.7	121.6	38.9	490.4	15.1
Blackgum	6.1	6.3	12.8	9.4	9.3	10.8	3.2	3.9	4.1	.0	65.9	13.7
Ash-walnut-cherry	8.8	13.8	15.7	15.4	16.8	9.1	8.7	4.3	4.9	2.6	100.2	12.5
Select white oaks	8.4	16.7	25.1	20.9	19.0	19.0	18.8	14.0	26.2	12.2	180.3	10.8
Select red oaks	1.1	6.0	10.5	15.2	20.4	16.6	13.2	13.9	23.4	10.7	131.0	12.9
Other white oaks	3.8	13.4	24.1	25.7	29.5	21.1	17.3	7.8	18.5	.8	161.8	16.7
Other red oaks	8.2	13.9	16.2	38.5	30.3	32.3	29.1	34.4	55.7	10.3	268.9	10.4
Black locust	3.8	5.2	9.5	4.0	5.4	4.3	1.1	.6	.0	.0	33.7	25.7
Other hardwoods	7.8	12.3	11.2	14.5	12.6	12.2	5.2	10.8	8.1	2.6	97.3	19.8
Total hardwoods	88.5	168.7	219.6	251.8	260.1	237.1	204.0	183.9	315.3	93.7	2,022.6	5.7
All species	114.0	213.6	269.9	306.7	302.5	257.1	214.8	192.1	317.0	93.7	2,281.4	5.1
SE	8.5	6.5	6.5	6.3	6.3	7.4	9.4	10.1	10.3	19.2	5.1	

Table 56.--Net volume of growing-stock trees on timberland by species and diameter class, Central Unit, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	.4	.9	2.6	2.0	2.3	3.2	3.3	.0	2.8	.0	17.4	48.2
Loblolly pine	8.8	13.2	11.1	14.0	7.2	11.2	10.5	9.6	3.7	.0	89.3	24.9
Virginia pine	9.2	15.1	15.2	16.7	9.0	12.3	2.1	.0	.0	.0	79.6	24.7
Other yellow pines	.0	.0	.0	.0	.9	.0	.0	.0	.0	.0	.9	100.0
Other softwoods	1.8	1.8	1.4	1.3	2.0	.0	.0	1.0	.0	4.2	13.6	44.1
Total softwoods	20.2	31.0	30.3	33.9	21.4	26.7	15.9	10.6	6.5	4.2	200.8	16.2
Red maple	14.5	22.2	32.4	26.7	31.4	15.2	18.0	16.9	57.0	35.8	269.9	18.9
Sugar maple	.7	.9	.5	3.0	.9	.0	1.7	.0	.0	.0	7.7	55.5
Hickory	4.1	8.9	9.7	15.3	13.9	9.5	8.9	5.8	13.9	2.4	92.5	15.1
Beech	3.5	4.1	4.9	4.3	4.7	3.0	3.5	4.8	5.7	.0	38.5	22.6
Sweetgum	11.0	16.4	15.9	26.7	29.0	22.7	10.1	6.3	24.6	5.4	168.2	19.9
Yellow-poplar	6.7	14.5	23.3	31.8	38.1	56.3	80.6	73.6	139.5	30.1	494.5	14.4
Blackgum	6.2	5.9	6.8	8.5	6.6	5.1	1.1	5.2	6.1	.0	51.4	20.2
Ash-walnut-cherry	9.9	12.5	18.5	19.9	10.2	8.9	15.9	3.0	23.6	5.4	127.9	16.1
Select white oaks	3.3	7.1	12.5	16.9	22.1	18.9	27.0	21.1	24.0	28.0	180.9	17.1
Select red oaks	.9	3.4	3.1	8.9	5.8	14.2	12.3	3.7	27.4	10.5	90.3	25.4
Other white oaks	3.3	8.6	22.2	19.0	29.0	12.2	22.6	7.2	12.6	.0	136.7	23.4
Other red oaks	3.9	8.7	18.1	35.9	37.8	40.7	48.5	36.1	68.0	34.6	332.4	13.3
Black locust	2.3	7.3	5.5	4.7	4.9	1.9	.0	3.7	6.2	.0	36.5	34.9
Other hardwoods	12.0	14.2	18.7	18.4	6.6	3.8	6.5	8.7	20.4	9.3	118.7	17.2
Total hardwoods	82.3	134.8	192.1	240.1	241.2	212.4	256.6	196.1	429.0	161.5	2,146.2	6.1
All species	102.5	165.8	222.4	274.1	262.6	239.1	272.5	206.7	435.5	165.8	2,347.0	5.6
SE	8.2	7.3	8.4	7.2	8.5	10.3	11.3	12.7	12.2	27.1	5.6	

Table 57.--Net volume of sawtimber trees on timberland by species and diameter class, Central Unit, Maryland, 1986

(In millions of board feet)

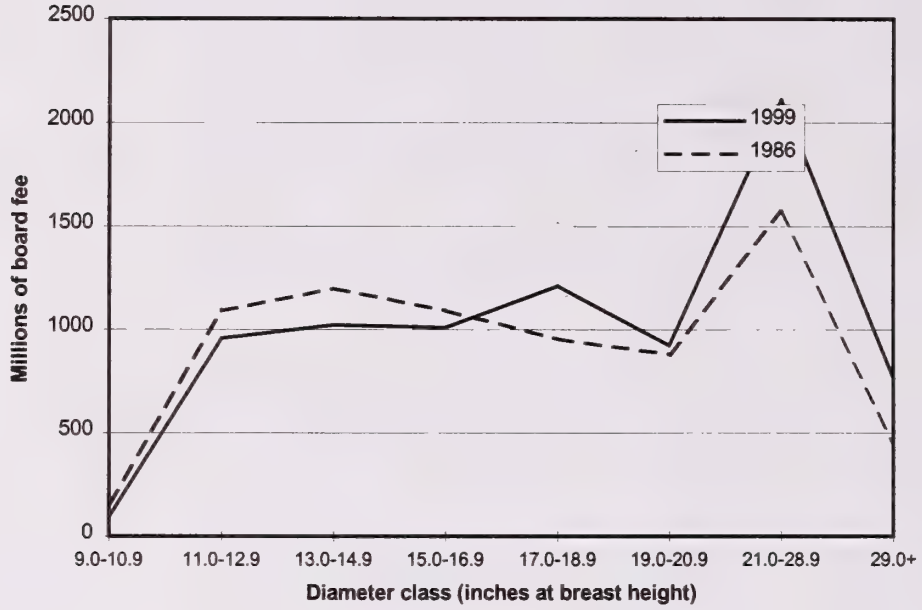
Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
White/red pine	9.2	25.2	17.6	2.1	7.8	3.9	.0	.0	65.9	60.6
Loblolly pine	49.3	80.0	82.1	62.4	39.1	30.4	6.5	.0	349.9	22.5
Virginia pine	86.7	98.7	73.6	21.3	.7	.0	.0	.0	281.1	22.7
Other yellow pines	9.9	4.4	2.2	1.9	.0	.0	.0	.0	18.4	60.2
Other softwoods	3.2	3.4	5.3	.0	2.7	4.1	1.7	.0	20.5	62.2
Total softwoods	158.4	211.7	180.8	87.8	50.4	38.4	8.2	.0	735.7	16.3
Red maple	.0	94.4	105.3	82.5	72.2	59.7	134.0	35.5	583.6	13.7
Sugar maple	.0	1.9	6.7	5.4	.0	.0	.0	.0	14.1	65.4
Hickory	.0	37.2	35.3	46.5	45.5	20.5	20.3	.0	205.3	18.6
Beech	.0	21.6	31.2	21.6	39.1	44.0	59.0	16.9	233.4	21.7
Sweetgum	.0	70.7	80.9	78.2	38.1	31.6	35.4	16.5	351.5	19.4
Yellow-poplar	.0	150.5	202.1	245.5	293.5	289.7	634.1	189.4	2,004.8	15.6
Blackgum	.0	31.8	35.3	45.7	13.8	17.4	19.8	.0	163.8	17.1
Ash-walnut-cherry	.0	52.5	63.5	37.3	37.6	16.5	21.6	13.5	242.5	15.4
Select white oaks	.0	75.1	76.9	82.5	82.7	62.1	123.7	58.9	561.9	12.8
Select red oaks	.0	52.6	79.5	70.7	57.8	62.5	115.6	51.4	490.1	13.6
Other white oaks	.0	91.3	109.2	79.4	70.6	30.3	86.0	3.9	470.7	18.0
Other red oaks	.0	134.9	118.3	138.4	127.1	156.0	275.7	48.5	999.0	11.4
Black locust	.0	13.9	21.5	18.8	4.7	2.5	.0	.0	61.4	31.5
Other hardwoods	.0	50.4	50.3	53.8	23.2	49.0	35.9	12.9	275.6	26.0
Total hardwoods	.0	879.0	1,016.0	1,006.5	905.8	841.9	1,561.0	447.5	6,657.7	7.0
All species	158.4	1,090.7	1,196.8	1,094.3	956.1	880.3	1,569.2	447.5	7,393.4	6.3
SE	18.2	6.4	6.3	7.5	9.5	10.2	10.5	19.5	6.3	

Table 58.--Net volume of sawtimber trees on timberland by species and diameter class, Central Unit, Maryland, 1999

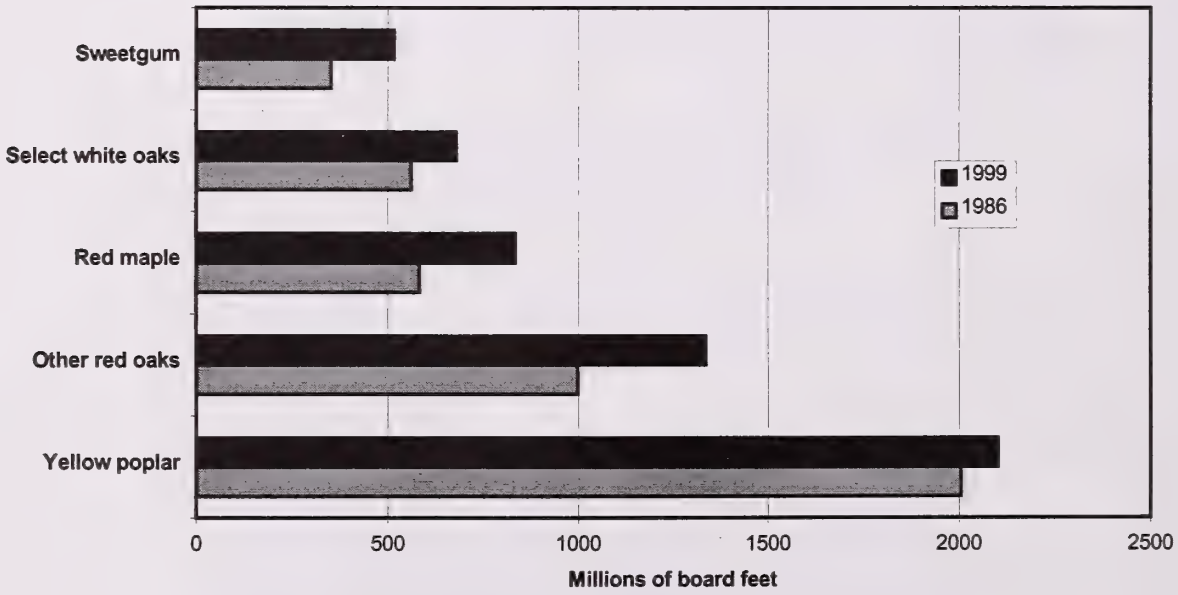
(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	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+		
White/red pine	8.1	7.5	9.5	12.8	16.6	.0	15.5	.0	70.0	53.1
Loblolly pine	37.1	55.5	31.7	52.2	47.5	45.8	17.1	.0	287.0	27.4
Virginia pine	47.0	60.6	38.2	55.3	9.7	.0	.0	.0	210.8	28.4
Other yellow pines	.0	.0	3.8	.0	.0	.0	.0	.0	3.8	100.0
Other softwoods	3.7	4.0	6.1	.0	.0	2.6	.0	21.9	38.2	61.7
Total softwoods	95.9	127.6	89.4	120.4	73.8	48.4	32.6	21.9	609.8	18.6
Red maple	.0	92.0	119.7	53.7	75.5	68.9	260.0	165.1	835.0	24.1
Sugar maple	.0	10.0	3.7	.0	6.4	.0	.0	.0	20.1	67.1
Hickory	.0	53.8	56.0	38.1	41.3	27.3	63.9	13.1	293.4	18.3
Beech	.0	15.9	20.8	11.8	13.7	23.9	27.0	.0	113.1	28.4
Sweetgum	.0	88.3	107.9	96.4	45.1	33.2	118.0	28.8	517.7	23.2
Yellow-poplar	.0	112.3	153.4	245.7	372.3	341.8	736.3	138.9	2,100.6	15.4
Blackgum	.0	25.2	23.7	20.4	5.9	22.4	31.0	.0	128.5	33.3
Ash-walnut-cherry	.0	65.2	35.9	36.3	61.3	10.1	99.7	30.0	338.5	22.2
Select white oaks	.0	60.2	90.2	78.4	128.0	92.0	110.1	121.0	679.9	19.5
Select red oaks	.0	31.5	19.0	57.3	49.4	14.8	119.0	43.2	334.3	26.1
Other white oaks	.0	66.5	109.5	47.2	94.9	26.6	57.6	.0	402.4	25.5
Other red oaks	.0	127.6	150.5	177.5	213.0	163.6	342.5	161.1	1,335.8	14.3
Black locust	.0	10.2	16.3	9.4	.0	16.2	20.6	.0	72.6	57.9
Other hardwoods	.0	70.4	28.3	17.9	28.7	36.1	90.4	44.8	316.6	24.1
Total hardwoods	.0	829.2	934.7	890.0	1,135.5	876.8	2,076.2	746.1	7,488.6	7.3
All species	95.9	956.8	1,024.1	1,010.4	1,209.3	925.2	2,108.7	768.0	8,098.4	6.7
SE	23.8	7.4	8.7	10.4	11.5	13.2	12.5	26.7	6.7	

Net volume of sawtimber trees on timberland, Central Unit, Maryland, 1986 and 1999



Net volume of sawtimber trees on timberland, top 5 species, Central Unit, Maryland, 1986 and 1999



MARYLAND
SOUTHERN UNIT

Table 59.--Area of timberland by forest type, forest-type group, and stand-size class, Southern Unit, Maryland, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Loblolly pine	14.4	8.0	.0	.0	22.4	37.3
Virginia pine	18.5	18.4	3.0	.0	39.8	27.7
Loblolly/shortleaf group	32.9	26.4	3.0	.0	62.3	21.3
Virginia pine/oak	29.0	15.9	3.0	.0	47.8	26.1
Loblolly pine/hardwood	14.8	.0	.0	.0	14.8	42.7
Oak/pine group	43.8	15.9	3.0	.0	62.7	21.9
White oak/red oak/hickory	15.6	.0	.0	.0	15.6	44.9
White oak	3.2	.0	.0	.0	3.2	100.0
Y-poplar/wh. oak/no.red oak	6.4	3.2	.0	.0	9.7	57.7
Sweetgum/yellow-poplar	8.2	8.0	4.7	.0	20.9	39.4
Scarlet oak	6.5	.0	.0	.0	6.5	71.6
Red maple/central hardwood	3.9	.0	.0	.0	3.9	100.0
Mixed central hardwoods	124.3	27.1	14.2	.0	165.6	11.4
Oak/hickory group	168.1	38.4	18.9	.0	225.4	8.2
Swamp chsnt oak/cherrybark oak	3.2	2.4	.0	.0	5.7	71.4
Sweetgm/nuttall oak/willow oak	11.2	14.9	3.6	.0	29.7	33.5
Oak/gum/cypress group	14.4	17.4	3.6	.0	35.4	30.2
Black ash/Amer. elm/red maple	6.2	.0	.0	.0	6.2	70.8
Sycamore/pecan/American elm	3.0	.0	.0	.0	3.0	100.0
Elm/ash/red maple group	9.2	.0	.0	.0	9.2	54.8
All forest types	268.5	98.0	28.4	.0	394.9	3.4
SE	6.9	17.3	34.0	.0	3.4	

Table 60.--Area of timberland by forest type, forest-type group, and stand-size class, Southern Unit, Maryland, 1999

(In thousands of acres)

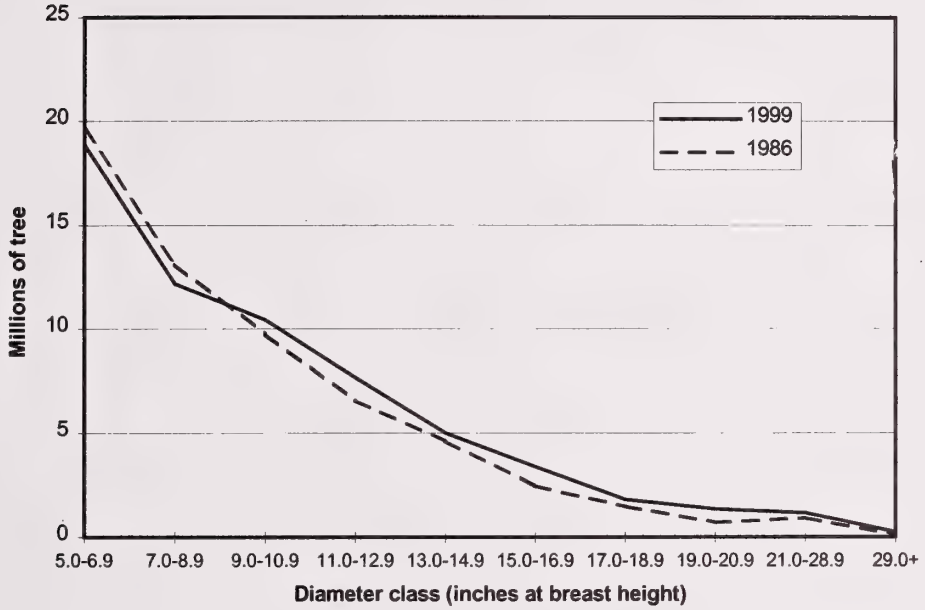
Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Loblolly pine	26.1	.0	.9	.0	26.9	40.4
Virginia pine	4.4	6.1	.0	.0	10.5	64.1
Loblolly/shortleaf group	30.4	6.1	.9	.0	37.4	33.7
Shortleaf pine/oak	.0	.0	1.8	.0	1.8	100.0
Virginia pine/oak	14.7	8.6	.0	.0	23.3	47.5
Loblolly pine/hardwood	23.8	.0	.0	.0	23.8	47.3
Oak/pine group	38.5	8.6	1.8	.0	48.9	30.7
White oak/red oak/hickory	19.8	6.8	.0	.0	26.6	49.4
White oak	21.7	.0	.0	.0	21.7	58.5
Y-poplar/wh. oak/no.red oak	18.1	.0	.0	.0	18.1	49.8
Sweetgum/yellow-poplar	13.2	.9	3.2	.0	17.4	50.3
Yellow-poplar	9.2	.0	2.9	.0	12.1	58.4
Scarlet oak	2.4	.0	.0	.0	2.4	100.0
Red maple/central hardwood	.0	.8	.0	.0	.8	100.0
Mixed central hardwoods	116.2	15.9	8.1	.0	140.2	14.8
Oak/hickory group	200.6	24.4	14.3	.0	239.2	9.6
Swamp chsnt oak/cherrybark oak	7.6	.0	.0	.0	7.6	81.7
Sweetgm/nuttall oak/willow oak	18.1	.0	6.8	.0	24.9	47.0
Oak/gum/cypress group	25.7	.0	6.8	.0	32.5	42.5
Black ash/Amer. elm/red maple	4.5	.0	.0	.0	4.5	100.0
Red maple(lowland)	.0	.0	4.2	.0	4.2	100.0
Red maple(upland)	.0	1.8	.0	.0	1.8	100.0
American elm/green ash	.0	2.3	.0	.0	2.3	100.0
Elm/ash/red maple group	4.5	4.1	4.2	.0	12.8	50.8
Black cherry	.0	1.7	.0	.0	1.7	100.0
Red maple/northern hardwoods	.0	8.8	.0	.0	8.8	100.0
Northern hardwoods group	.0	10.5	.0	.0	10.5	85.4
All forest types	299.7	53.7	27.9	.0	381.3	3.1
SE	6.4	29.5	35.5	.0	3.1	

Table 61.--Number of live trees (1.0+ inches d.b.h.) on forest land by species and diameter group, Southern Unit, Maryland, 1999

(In thousands of trees)

Species	Diameter				All Classes	SE
	1.0-4.9	5.0-10.9	11.0-20.9	21+		
Loblolly pine	259	2,457	2,460	39	5,214	28.3
Virginia pine	8,400	5,102	1,483	36	15,021	44.4
Other softwoods	1,668	154	18	0	1,840	49.5
Total softwoods	10,327	7,713	3,961	75	22,075	31.0
Red maple	25,925	5,179	1,408	39	32,551	16.9
Hickory	3,181	1,139	495	81	4,896	31.8
Beech	13,736	2,879	959	100	17,673	21.0
Sweetgum	22,544	7,341	3,239	18	33,142	16.9
Yellow-poplar	4,473	3,140	2,727	505	10,845	24.5
Blackgum	14,567	2,913	275	0	17,755	17.7
Ash-walnut-cherry	1,041	2,080	410	0	3,531	44.3
Select white oaks	2,832	4,761	2,740	317	10,650	21.4
Select red oaks	1,025	277	500	57	1,859	47.0
Other white oaks	272	131	39	0	442	68.6
Other red oaks	3,583	3,059	2,600	122	9,364	14.8
Blacklocust	1,697	343	123	0	2,163	68.6
Other hardwoods	45,362	1,808	304	108	47,582	18.6
Noncommercial hardwoods	28,730	1,452	109	0	30,291	22.0
Total hardwoods	168,968	36,503	15,929	1,346	222,746	6.7
All species	179,295	44,215	19,889	1,421	244,821	6.8
SE	8.7	6.7	6.2	18.7	6.8	

Number of growing-stock trees on timberland, Southern Unit, Maryland, 1986 and 1999



Number of growing-stock trees on timberland, top 5 species, Southern Unit, Maryland, 1986 and 1999

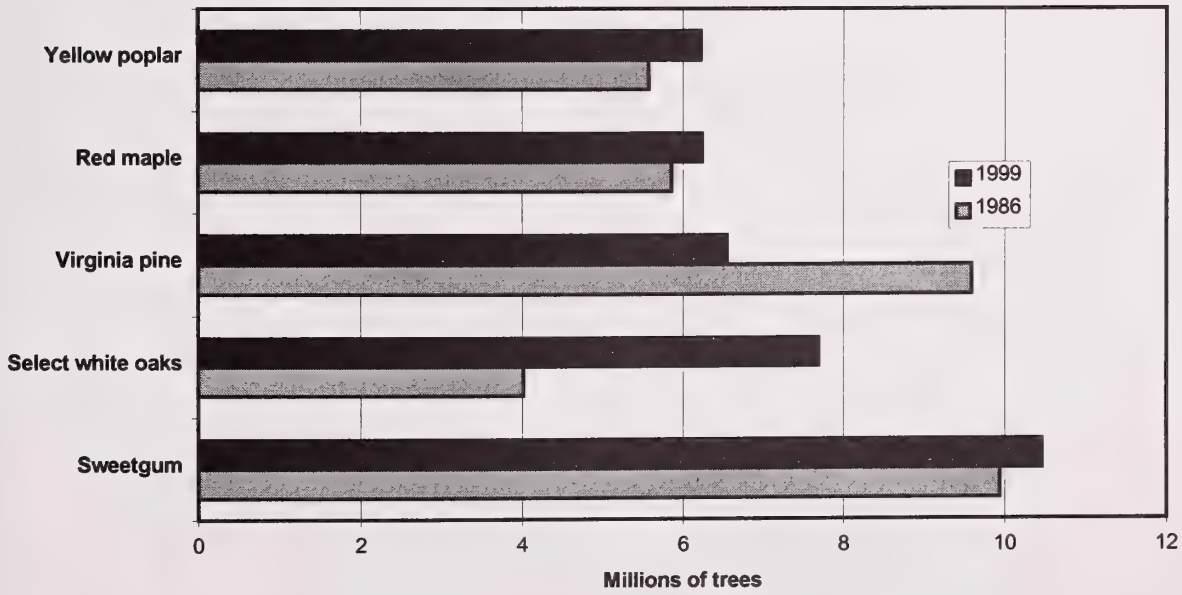


Table 62.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Southern Unit, Maryland, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
Loblolly pine	1,637	1,340	1,050	764	410	167	132	25	29	0	5,555	35.0
Virginia pine	2,488	3,040	2,122	1,181	582	147	25	0	5	0	9,589	19.0
Other yellow pines	90	58	12	0	0	0	0	0	0	0	160	81.6
Other softwoods	56	84	19	28	0	0	0	0	0	4	191	39.7
Total softwoods	4,271	4,522	3,202	1,973	992	315	156	25	35	4	15,495	17.3
Red maple	2,492	1,127	782	726	309	186	132	29	69	8	5,862	15.0
Hickory	135	273	400	155	139	95	29	36	18	8	1,288	20.6
Beech	1,208	570	420	367	329	212	109	73	86	10	3,383	16.2
Sweetgum	3,731	2,412	1,485	1,049	602	333	172	56	94	0	9,933	13.4
Yellow-poplar	1,577	931	777	566	573	347	314	182	277	35	5,579	16.2
Blackgum	1,218	314	206	115	137	110	22	0	22	0	2,145	18.4
Ash-walnut-cherry	367	250	230	83	129	80	32	7	13	0	1,193	27.4
Select white oaks	925	794	698	582	481	193	151	64	112	15	4,017	13.9
Select red oaks	192	140	109	55	63	57	22	36	26	3	703	24.1
Other white oaks	263	137	89	41	63	39	44	28	18	3	726	29.3
Other red oaks	1,645	979	839	701	640	381	225	154	98	42	5,706	12.4
Black locust	14	95	0	18	26	0	0	0	0	0	154	44.7
Other hardwoods	1,567	580	523	132	112	107	66	8	53	0	3,149	17.0
Total hardwoods	15,333	8,603	6,559	4,592	3,604	2,139	1,319	675	889	125	43,839	5.2
All species	19,605	13,125	9,761	6,565	4,596	2,454	1,475	700	923	128	59,334	5.6
SE	7.4	9.2	8.5	6.6	6.4	7.7	10.5	12.9	13.4	25.7	5.6	

Table 63.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Southern Unit, Maryland, 1999

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
Loblolly pine	595	745	1,048	949	677	347	264	184	39	0	4,848	29.3
Virginia pine	1,894	1,950	1,217	768	508	174	0	0	36	0	6,548	23.8
Other softwoods	95	59	0	0	0	18	0	0	0	0	172	42.1
Total softwoods	2,584	2,754	2,265	1,717	1,185	540	264	184	75	0	11,568	18.1
Red maple	2,661	1,475	897	453	304	175	153	87	39	0	6,245	18.3
Hickory	437	244	459	278	149	41	0	27	81	0	1,715	41.8
Beech	1,635	735	453	365	256	213	27	60	63	36	3,845	20.4
Sweetgum	3,375	1,665	2,198	1,543	879	538	191	49	18	0	10,455	16.6
Yellow-poplar	1,403	1,013	606	809	475	527	625	264	442	63	6,226	16.2
Blackgum	1,485	763	541	46	54	139	36	0	0	0	3,064	17.2
Ash-walnut-cherry	807	611	444	213	53	18	89	36	0	0	2,272	40.1
Select white oaks	1,844	1,359	1,494	1,058	567	415	229	407	259	58	7,691	16.7
Select red oaks	146	40	63	192	157	96	18	36	21	36	807	28.6
Other white oaks	32	99	0	0	0	0	0	0	0	0	131	51.1
Other red oaks	1,197	947	826	842	813	632	138	175	73	49	5,692	13.2
Black locust	100	53	0	82	41	0	0	0	0	0	276	47.0
Other hardwoods	1,150	413	204	81	81	58	40	27	108	0	2,161	17.7
Total hardwoods	16,273	9,417	8,184	5,961	3,829	2,853	1,547	1,171	1,104	243	50,581	6.4
All species	18,857	12,171	10,449	7,677	5,014	3,393	1,811	1,355	1,179	243	62,149	5.5
SE	7.6	8.9	8.6	10.1	10.0	13.5	17.9	22.0	19.6	56.1	5.5	

Table 64.--Net volume of all live trees on timberland by species and diameter class, Southern Unit, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
Loblolly pine	4.9	8.8	11.7	13.8	10.5	5.8	5.6	1.5	2.2	.0	64.9	25.9
Virginia pine	7.1	19.8	25.0	21.2	14.6	4.6	1.0	.0	.3	.0	93.7	17.4
Other yellow pines	.2	.4	.2	.0	.0	.0	.0	.0	.0	.0	.8	68.5
Other softwoods	.1	.5	.4	.6	.0	.0	.0	.0	.3	.6	2.5	44.3
Total softwoods	12.3	29.6	37.3	35.6	25.1	10.4	6.7	1.5	2.8	.6	161.8	14.5
Red maple	6.1	7.4	9.7	14.2	9.1	6.7	6.6	1.7	7.2	1.6	70.1	15.7
Hickory	.4	1.9	5.4	3.5	4.3	4.1	1.6	2.7	1.5	1.5	26.9	19.0
Beech	2.7	3.7	5.1	8.1	9.6	8.2	6.4	5.4	9.4	2.0	60.7	16.3
Sweetgum	9.0	15.5	18.1	20.1	16.5	12.4	8.2	3.6	7.9	.0	111.4	13.1
Yellow-poplar	4.6	7.0	11.1	12.4	20.0	15.8	18.1	14.0	31.6	7.4	141.8	13.8
Blackgum	3.1	2.6	3.3	2.7	4.9	5.6	1.0	.0	2.7	.0	25.9	17.0
Ash-walnut-cherry	1.1	1.8	3.1	1.7	3.7	3.1	1.6	.4	.9	.0	17.6	29.2
Select white oaks	2.4	4.8	8.5	10.7	12.9	6.8	7.2	3.7	10.3	2.6	69.9	13.4
Select red oaks	.4	.9	1.2	1.0	1.6	2.2	1.3	2.2	2.5	.5	14.0	24.9
Other white oaks	.6	.8	.9	.7	1.7	1.3	1.9	1.4	1.1	.7	11.2	32.2
Other red oaks	4.0	6.7	10.2	13.6	17.5	14.4	10.8	9.8	8.4	6.5	101.9	13.2
Blacklocust	.1	.7	.3	.3	.8	.0	.0	.0	.0	.0	2.2	36.4
Other hardwoods	3.8	3.8	6.1	2.7	3.1	3.9	3.0	.4	4.2	.0	31.2	17.5
Noncommercial hardwoods	2.0	1.8	1.3	.2	.0	.4	.3	.0	.0	.0	6.0	23.9
Total hardwoods	40.4	59.2	84.4	92.1	105.6	85.0	68.1	45.3	87.8	22.7	690.7	6.0
All species	52.7	88.8	121.6	127.7	130.7	95.4	74.8	46.8	90.6	23.3	852.5	4.7
SE	7.5	9.0	8.0	6.6	6.4	7.9	10.8	13.0	13.7	24.7	4.7	

Table 65.--Net volume of live trees on timberland by species and diameter class, Southern Unit, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
Loblolly pine	1.5	5.5	14.5	18.6	18.9	12.3	11.9	10.9	3.0	.0	97.2	33.7
Virginia pine	5.7	12.9	13.8	13.5	12.5	5.7	.4	.0	2.6	.0	67.1	22.4
Other softwoods	.2	.2	.0	.0	.0	.4	.0	.0	.0	.0	.8	52.8
Total softwoods	7.4	18.6	28.3	32.2	31.5	18.4	12.2	10.9	5.6	.0	165.1	21.4
Red maple	7.1	9.5	11.5	10.9	8.8	7.1	7.9	4.7	3.0	.0	70.4	19.0
Hickory	1.3	2.0	6.6	6.2	5.0	1.9	.0	2.0	5.9	.0	30.8	43.1
Beech	3.8	4.1	5.7	7.0	8.0	8.4	1.8	4.4	5.7	5.2	54.0	22.3
Sweetgum	8.4	11.7	28.7	31.8	25.5	20.6	9.4	3.0	1.6	.0	140.7	19.9
Yellow-poplar	4.2	7.6	9.2	19.7	18.0	23.9	35.2	20.4	53.0	9.5	200.8	17.3
Blackgum	3.1	4.4	6.3	1.1	1.2	4.7	.9	.0	.0	.0	21.8	22.7
Ash-walnut-cherry	2.6	4.6	7.1	4.9	1.5	.7	5.8	2.9	.0	.0	30.1	46.6
Select white oaks	4.4	9.1	18.5	19.2	14.4	14.5	10.9	22.4	19.7	8.7	141.8	15.5
Select red oaks	.4	.2	.8	3.8	4.3	3.5	.8	2.3	1.5	6.0	23.6	37.6
Other white oaks	.0	.4	.0	.4	.0	.0	.0	.0	.0	.0	.9	55.5
Other red oaks	2.9	5.3	10.7	15.2	21.8	22.8	6.1	10.1	7.2	7.4	109.3	15.1
Blacklocust	.4	.2	.2	1.6	.9	.0	.0	.0	.0	.0	3.3	58.0
Other hardwoods	2.2	2.3	1.9	1.8	2.2	2.2	2.0	1.4	9.0	.0	25.0	30.7
Noncommercial hardwoods	1.7	1.2	.8	1.6	.6	.0	.0	.0	.0	.0	5.9	45.1
Total hardwoods	42.6	62.5	107.9	125.2	112.1	110.5	80.8	73.6	106.5	36.8	858.4	6.2
All species	50.0	81.1	136.2	157.4	143.6	128.9	93.0	84.5	112.1	36.8	1,023.6	5.6
SE	8.3	9.4	9.5	10.2	9.7	13.7	18.2	21.3	20.7	57.6	5.6	

Table 66.--Net volume of growing-stock trees on timberland by species and diameter class, Southern Unit, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
Loblolly pine	4.9	8.8	11.7	13.8	10.5	5.8	5.6	1.5	2.2	.0	64.9	25.9
Virginia pine	7.1	19.8	24.9	20.8	14.6	4.6	1.0	.0	.3	.0	93.2	17.3
Other yellow pines	.2	.4	.2	.0	.0	.0	.0	.0	.0	.0	.8	68.5
Other softwoods	.1	.5	.2	.5	.0	.0	.0	.0	.0	.6	1.9	42.6
Total softwoods	12.3	29.5	37.0	35.1	25.1	10.4	6.7	1.5	2.5	.6	160.8	14.5
Red maple	6.0	7.4	9.5	14.2	8.5	6.7	6.2	1.7	5.8	1.5	67.5	16.0
Hickory	.4	1.9	5.4	3.4	4.3	4.1	1.6	2.7	1.5	1.5	26.8	19.1
Beech	2.7	3.5	5.1	7.8	9.6	8.2	6.1	5.4	9.0	1.6	59.1	16.1
Sweetgum	9.0	15.4	18.0	20.0	16.3	12.4	8.1	3.6	7.9	.0	110.8	13.1
Yellow-poplar	4.5	7.0	11.1	12.3	19.3	15.8	18.1	13.6	31.0	7.4	140.0	13.8
Blackgum	2.8	1.9	2.5	2.3	3.7	4.0	1.0	.0	2.1	.0	20.4	17.7
Ash-walnut-cherry	1.1	1.7	3.1	1.7	3.6	3.1	1.6	.4	.9	.0	17.4	29.4
Select white oaks	2.3	4.7	8.2	10.5	12.5	6.8	7.1	3.7	9.5	2.6	68.0	13.6
Select red oaks	.4	.9	1.2	1.0	1.6	2.2	1.1	2.2	2.5	.5	13.8	25.1
Other white oaks	.6	.8	.9	.7	1.7	1.3	1.9	1.4	1.1	.7	11.2	32.2
Other red oaks	3.9	6.2	10.2	13.5	17.4	14.4	10.8	9.8	8.4	6.5	101.2	13.3
Black locust	.0	.7	.0	.3	.7	.0	.0	.0	.0	.0	1.7	41.4
Other hardwoods	3.8	3.4	6.1	2.4	3.1	3.6	3.0	.4	4.2	.0	30.0	17.9
Total hardwoods	37.7	55.7	81.4	90.2	102.3	82.7	66.7	44.9	84.1	22.2	667.9	6.0
All species	50.0	85.2	118.4	125.3	127.5	93.1	73.4	46.4	86.6	22.8	828.6	4.7
SE	7.7	9.3	8.3	6.6	6.5	7.8	10.8	13.0	14.0	25.0	4.7	

Table 67.--Net volume of growing-stock trees on timberland by species and diameter class, Southern Unit, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
Loblolly pine	1.5	5.5	14.0	18.6	18.9	11.8	11.9	10.9	3.0	.0	96.1	33.9
Virginia pine	5.7	12.9	13.6	13.5	12.5	5.7	.0	.0	2.6	.0	66.5	22.5
Other softwoods	.2	.2	.0	.0	.0	.4	.0	.0	.0	.0	.8	52.8
Total softwoods	7.4	18.6	27.6	32.2	31.5	17.9	11.9	10.9	5.6	.0	163.5	21.5
Red maple	7.0	9.5	11.5	8.3	8.1	7.1	7.9	4.7	3.0	.0	67.2	19.6
Hickory	1.3	2.0	6.6	6.2	5.0	1.9	.0	2.0	5.9	.0	30.8	43.1
Beech	3.8	4.1	5.7	7.0	7.2	8.4	1.8	4.4	5.7	5.2	53.2	22.3
Sweetgum	8.3	11.7	28.7	31.2	25.5	20.6	9.4	3.0	1.6	.0	140.0	20.0
Yellow-poplar	4.2	7.5	8.7	19.7	18.0	23.9	35.2	20.4	53.0	9.5	200.2	17.3
Blackgum	3.1	4.4	6.2	1.1	1.2	4.7	.9	.0	.0	.0	21.6	22.9
Ash-walnut-cherry	2.2	4.6	6.4	4.9	1.5	.7	5.8	2.9	.0	.0	29.1	45.9
Select white oaks	4.4	9.1	18.5	18.8	13.9	14.5	10.9	22.4	19.7	8.7	140.9	15.5
Select red oaks	.4	.2	.7	3.8	4.3	3.5	.8	2.3	1.5	6.0	23.5	37.8
Other white oaks	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0	.5	55.2
Other red oaks	2.9	5.3	10.4	15.2	21.8	22.8	6.1	10.1	7.2	7.4	109.0	15.0
Black locust	.3	.2	.0	1.6	.9	.0	.0	.0	.0	.0	3.0	62.2
Other hardwoods	2.2	2.3	1.9	1.5	2.2	2.2	2.0	1.4	9.0	.0	24.7	30.7
Total hardwoods	40.1	61.2	105.1	119.4	109.6	110.5	80.8	73.6	106.5	36.8	843.5	6.3
All species	47.5	79.8	132.6	151.6	141.1	128.4	92.6	84.5	112.1	36.8	1,007.0	5.6
SE	8.5	9.6	9.6	10.5	9.8	13.8	18.2	21.3	20.7	57.6	5.6	

Table 68.--Net volume of sawtimber trees on timberland by species and diameter class, Southern Unit, Maryland, 1986

(In millions of board feet)

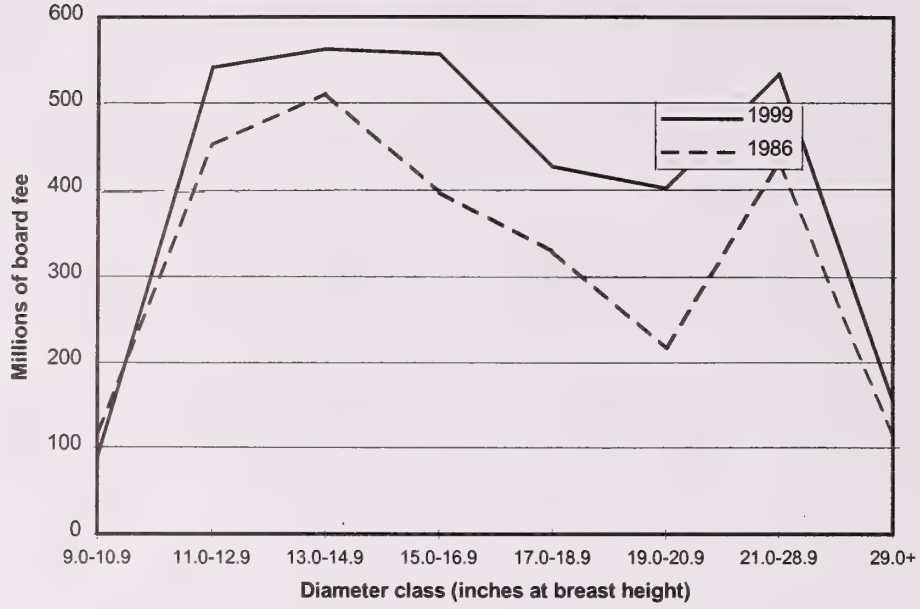
Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Loblolly pine	36.6	53.2	44.4	25.6	25.9	7.1	10.4	.0	203.1	24.1
Virginia pine	78.7	79.8	62.3	20.1	4.9	.0	1.4	.0	247.2	16.9
Other yellow pines	.6	.0	.0	.0	.0	.0	.0	.0	.6	100.0
Other softwoods	.6	1.7	.0	.0	.0	.0	.0	2.7	5.0	58.9
Total softwoods	116.5	134.6	106.6	45.8	30.7	7.1	11.8	2.7	455.8	13.9
Red maple	.0	49.7	33.4	26.0	26.5	7.5	27.5	7.8	178.4	18.1
Hickory	.0	12.2	16.9	16.8	7.1	13.6	7.0	7.0	80.6	22.5
Beech	.0	29.1	38.4	33.9	27.2	24.0	41.4	5.4	199.5	16.9
Sweetgum	.0	69.7	63.7	53.9	35.8	16.8	38.2	.0	278.1	14.1
Yellow-poplar	.0	43.0	77.3	70.2	84.8	66.0	166.5	41.8	549.6	15.5
Blackgum	.0	7.7	14.5	17.1	4.4	.0	10.3	.0	53.9	20.7
Ash-walnut-cherry	.0	6.2	13.8	13.1	7.0	1.6	4.3	.0	46.0	31.5
Select white oaks	.0	37.4	50.2	29.2	32.0	16.4	45.1	13.9	224.1	15.2
Select red oaks	.0	3.7	6.2	9.5	4.9	10.2	13.1	2.2	49.7	27.0
Other white oaks	.0	2.4	6.5	5.1	7.8	5.3	5.0	3.3	35.4	34.0
Other red oaks	.0	46.3	68.1	61.5	47.9	46.3	41.0	31.8	342.9	16.3
Black locust	.0	1.2	2.7	.0	.0	.0	.0	.0	3.9	54.0
Other hardwoods	.0	8.7	12.2	14.9	13.1	1.6	19.1	.0	69.6	23.2
Total hardwoods	.0	317.4	403.9	351.2	298.2	209.3	418.6	113.2	2,111.8	7.4
All species	116.5	451.9	510.5	397.0	329.0	216.4	430.4	115.9	2,567.7	6.0
SE	19.7	6.7	6.5	7.9	10.9	13.2	14.4	26.9	6.0	

Table 69.--Net volume of sawtimber trees on timberland by species and diameter class, Southern Unit, Maryland, 1999

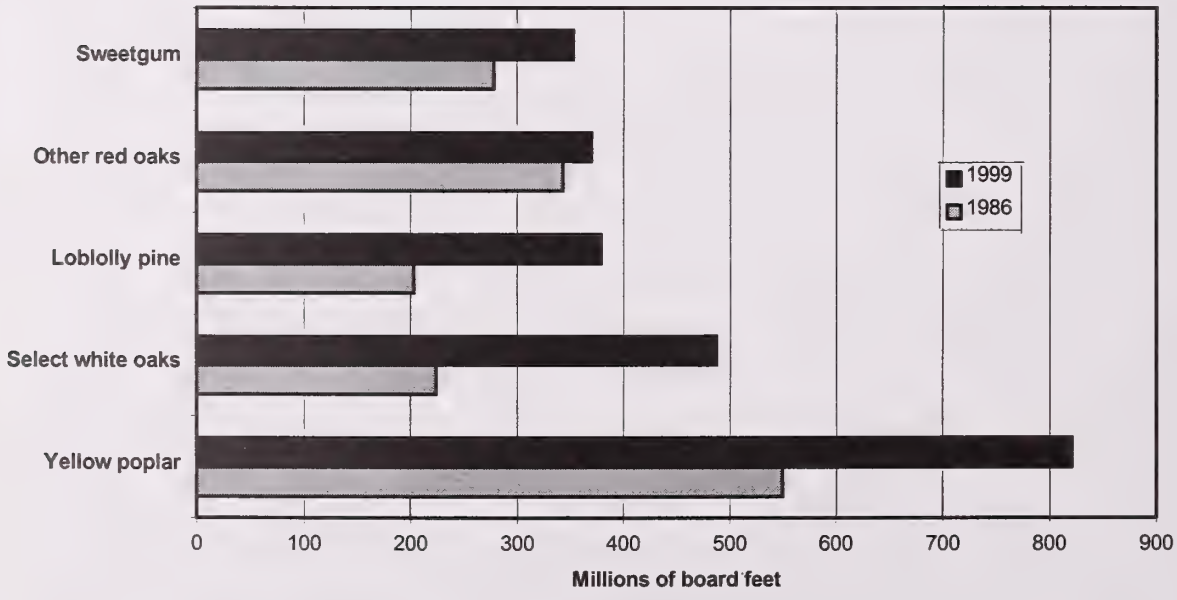
(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	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+		
Loblolly pine	44.8	71.7	82.4	54.3	58.6	52.2	15.1	.0	379.1	36.6
Virginia pine	43.6	53.0	53.3	25.3	.0	.0	12.6	.0	187.8	26.6
Other softwoods	.0	.0	.0	1.2	.0	.0	.0	.0	1.2	100.0
Total softwoods	88.4	124.6	135.7	80.8	58.6	52.2	27.7	.0	568.1	25.5
Red maple	.0	26.4	29.3	29.2	35.1	20.3	10.2	.0	150.5	23.7
Hickory	.0	22.7	20.4	9.6	.0	9.9	30.2	.0	92.9	45.8
Beech	.0	27.1	27.1	39.1	7.7	17.9	21.5	17.5	157.8	27.3
Sweetgum	.0	107.7	96.8	88.1	39.6	13.8	7.0	.0	352.9	23.2
Yellow-poplar	.0	64.7	67.1	104.5	166.5	106.9	274.4	36.4	820.4	18.8
Blackgum	.0	4.1	6.1	19.8	3.2	.0	.0	.0	33.2	41.3
Ash-walnut-cherry	.0	19.7	6.6	3.2	28.1	10.8	.0	.0	68.3	53.1
Select white oaks	.0	71.8	58.0	62.2	49.2	114.5	86.8	44.9	487.4	17.9
Select red oaks	.0	11.0	16.2	15.2	3.7	10.3	8.4	23.4	88.1	38.9
Other red oaks	.0	52.9	86.6	95.4	26.5	40.1	35.7	32.9	370.1	18.5
Black locust	.0	5.3	4.1	.0	.0	.0	.0	.0	9.5	71.2
Other hardwoods	.0	3.2	8.4	9.4	8.8	5.3	31.9	.0	67.0	36.1
Total hardwoods	.0	416.6	426.7	475.5	368.3	349.9	506.1	155.0	2,698.0	7.7
All species	88.4	541.2	562.4	556.3	426.9	402.0	533.8	155.0	3,266.1	7.4
SE	25.2	10.7	10.1	13.7	18.4	22.4	20.8	59.4	7.4	

Net volume of sawtimber trees on timberland, Southern Unit, Maryland, 1986 and 1999



Net volume of sawtimber trees on timberland, top 5 species, Southern Unit, Maryland, 1986 and 1999



MARYLAND
LOWER
EASTERN SHORE UNIT

Table 70.--Area of timberland by forest type, forest-type group, and stand-size class, Lower Eastern Shore Unit, Maryland, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Loblolly pine	64.5	70.7	11.9	.0	147.0	14.9
Virginia pine	.0	.0	1.9	.0	1.9	100.0
Loblolly/shortleaf group	64.5	70.7	13.8	.0	149.0	14.7
Virginia pine/oak	.0	3.5	.0	.0	3.5	100.0
Loblolly pine/hardwood	59.3	17.5	18.0	.0	94.8	18.1
Oak/pine group	59.3	21.0	18.0	.0	98.3	17.8
White oak/red oak/hickory	.0	3.5	.0	.0	3.5	100.0
White oak	4.1	8.7	.0	.0	12.9	56.0
Sweetgum/yellow-poplar	4.1	.0	3.8	.0	7.9	70.8
Scarlet oak	1.9	.0	.0	.0	1.9	100.0
Red maple/central hardwood	.0	13.7	2.1	.0	15.8	47.3
Mixed central hardwoods	54.6	30.1	13.6	.0	98.3	17.2
Oak/hickory group	64.7	56.0	19.5	.0	140.1	12.9
Swamp chsnt oak/cherrybark oak	6.9	13.6	.0	.0	20.5	50.6
Sweetgm/nuttall oak/willow oak	23.1	3.1	9.8	.0	36.0	29.1
Baldcypress/water tupelo	4.2	3.4	.0	.0	7.6	71.1
Sweetbay/swamp tupelo/red mple	14.2	3.0	10.6	.0	27.9	34.7
Oak/gum/cypress group	48.4	23.1	20.4	.0	92.0	18.7
Black ash/Amer. elm/red maple	12.4	.0	.0	.0	12.4	59.4
Red maple(lowland)	.0	3.4	.0	.0	3.4	100.0
Red maple(upland)	3.1	.0	.0	.0	3.1	100.0
Elm/ash/red maple group	15.5	3.4	.0	.0	18.9	45.9
All forest types	252.4	174.1	71.7	.0	498.3	3.0
SE	8.1	11.4	20.7	.0	3.0	

Table 71.--Area of timberland by forest type, forest-type group, and stand-size class, Lower Eastern Shore Unit, Maryland, 1999

(In thousands of acres)

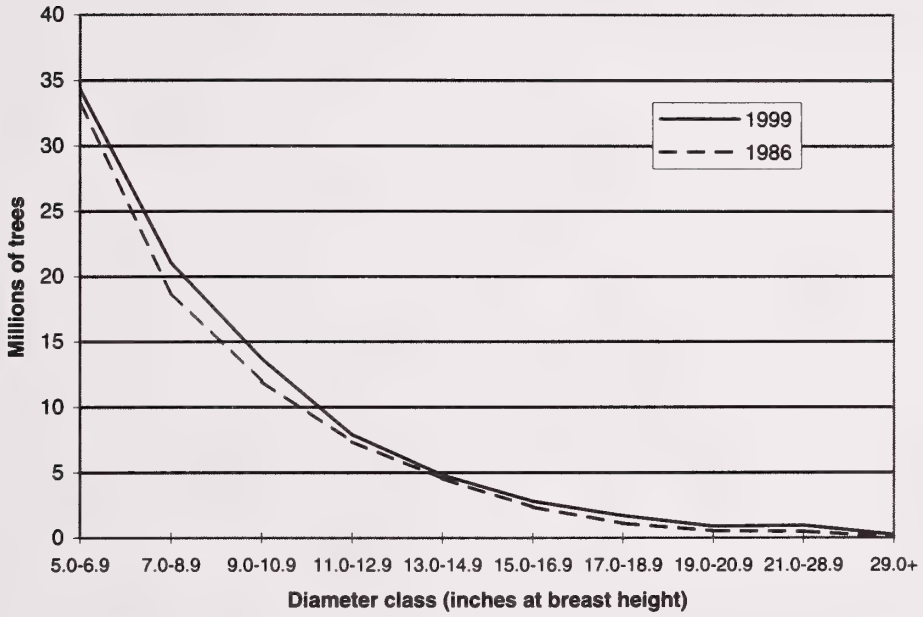
Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Loblolly pine	75.6	58.5	44.6	.0	178.7	13.1
Loblolly/shortleaf group	75.6	58.5	44.6	.0	178.7	13.1
Loblolly pine/hardwood	47.2	53.8	6.6	.0	107.6	20.8
Oak/pine group	47.2	53.8	6.6	.0	107.6	20.8
Post, black, or bear oak	.0	1.3	.0	.0	1.3	100.0
White oak	4.6	1.5	.0	.0	6.0	61.0
Y-poplar/wh. oak/no.red oak	4.0	.0	.0	.0	4.0	100.0
Sweetgum/yellow-poplar	2.5	.0	7.4	.0	9.9	79.0
Hawthorn/reverting field	.0	.0	.3	.0	.3	100.0
Sassafras/persimmon	.0	.0	3.2	.0	3.2	100.0
Red maple/central hardwood	2.6	.0	.0	.0	2.6	100.0
Mixed central hardwoods	68.7	13.3	6.5	1.6	90.1	19.5
Oak/hickory group	82.3	16.1	17.4	1.6	117.5	16.7
Swamp chsnt oak/cherrybark oak	5.4	3.2	3.2	.0	11.7	46.0
Sweetgm/nuttall oak/willow oak	11.4	5.7	5.2	.0	22.3	46.5
Baldcypress/water tupelo	7.0	2.5	.0	.0	9.4	57.8
Sweetbay/swamp tupelo/red mple	25.5	1.6	.0	.0	27.1	44.8
Oak/gum/cypress group	49.2	13.0	8.4	.0	70.6	24.5
Black ash/Amer. elm/red maple	5.6	.0	.0	.0	5.6	100.0
Red maple(lowland)	4.6	.0	2.2	.0	6.8	59.6
Red maple(upland)	4.2	.0	.0	.0	4.2	60.2
American elm/green ash	1.8	.0	.0	.0	1.8	100.0
Elm/ash/red maple group	16.1	.0	2.2	.0	18.4	41.2
All forest types	270.5	141.5	79.2	1.6	492.8	3.4
SE	9.0	17.7	21.5	100.0	3.4	

Table 72.--Number of live trees (1.0+ inches d.b.h.) on forest land by species and diameter group, Lower Eastern Shore Unit, Maryland, 1999

(In thousands of trees)

Species	Diameter				All Classes	SE
	1.0-4.9	5.0-10.9	11.0-20.9	21+		
White/red pine	0	0	36	0	36	100.0
Loblolly pine	76,703	31,017	7,177	120	115,016	18.7
Virginia pine	426	249	82	0	757	63.7
Other softwoods	716	249	167	54	1,186	55.3
Total softwoods	77,845	31,514	7,462	174	116,995	18.4
Red maple	51,977	12,966	3,857	497	69,298	14.2
Hickory	239	466	78	0	783	53.0
Beech	1,422	301	263	0	1,985	50.1
Sweetgum	47,605	8,715	2,553	173	59,047	18.2
Yellow-poplar	1,278	202	374	193	2,047	49.8
Blackgum	14,721	3,203	1,024	66	19,014	16.4
Ash-walnut-cherry	4,204	1,306	258	32	5,799	31.8
Select white oaks	2,096	2,105	1,194	24	5,419	34.1
Select red oaks	588	0	77	0	665	88.7
Other white oaks	197	50	50	0	297	70.7
Other red oaks	13,971	2,867	1,499	105	18,442	23.9
Blacklocust	0	0	36	0	36	100.0
Other hardwoods	55,049	6,878	644	0	62,571	12.8
Noncommercial hardwoods	8,419	677	0	0	9,096	29.8
Total hardwoods	201,768	39,738	11,906	1,091	254,503	9.2
All species	279,614	71,252	19,367	1,265	371,498	9.0
SE	10.7	8.2	7.9	21.3	9.0	

Number of growing-stock trees on timberland, Lower Eastern Shore Unit, Maryland, 1986 and 1999



Number of growing-stock trees on timberland, top 5 species, Lower Eastern Shore Unit, Maryland 1986 and 1999

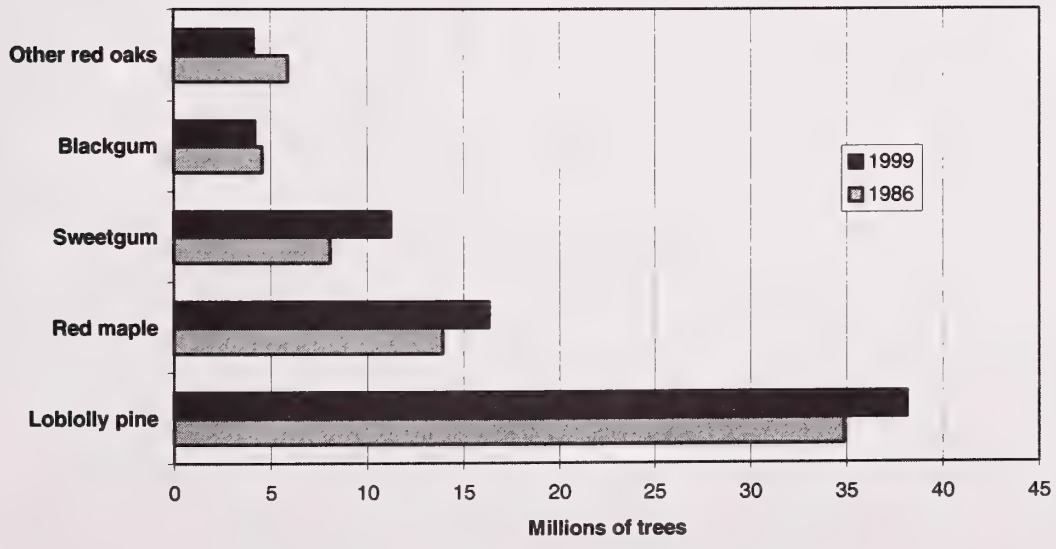


Table 73.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Lower Eastern Shore Unit, Maryland, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
Loblolly pine	14,652	8,529	5,145	3,312	1,849	872	367	73	67	0	34,868	13.6
Virginia pine	106	151	150	89	59	34	0	0	0	0	590	46.9
Other softwoods	58	0	33	14	25	19	34	8	7	0	199	73.4
Total softwoods	14,816	8,681	5,328	3,415	1,934	925	401	81	75	0	35,657	13.3
Red maple	6,110	3,132	1,816	1,180	773	322	238	144	172	45	13,933	10.3
Hickory	262	164	67	30	0	0	0	0	0	0	523	64.1
Beech	140	89	224	138	90	35	0	12	4	0	733	47.3
Sweetgum	3,210	1,917	1,216	747	543	269	100	48	28	2	8,080	12.2
Yellow-poplar	373	55	66	71	14	25	6	23	59	6	698	51.3
Blackgum	1,865	1,118	755	342	221	122	68	52	32	0	4,576	16.4
Ash-walnut-cherry	347	366	231	97	50	14	17	20	0	0	1,142	48.2
Select white oaks	1,717	1,078	1,150	867	441	306	113	77	66	6	5,821	17.1
Select red oaks	33	14	40	18	30	13	9	0	9	0	165	38.1
Other white oaks	0	0	22	0	0	0	0	0	0	0	22	100.0
Other red oaks	1,991	1,272	889	709	445	344	151	58	45	3	5,907	13.5
Other hardwoods	2,369	883	180	122	28	0	7	19	0	0	3,607	19.5
Total hardwoods	18,416	10,087	6,656	4,322	2,636	1,452	707	453	416	62	45,207	6.9
All species	33,232	18,767	11,984	7,737	4,570	2,378	1,108	534	491	62	80,864	6.3
SE	9.7	7.8	7.2	7.7	7.7	10.8	13.0	18.2	16.3	27.8	6.3	

Table 74.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Lower Eastern Shore Unit, Maryland, 1999

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	0	0	0	36	0	0	0	0	0	0	36	100.0
Loblolly pine	14,221	10,297	6,335	3,626	1,905	1,097	389	159	120	0	38,150	13.0
Virginia pine	100	125	24	48	0	34	0	0	0	0	330	47.8
Other softwoods	194	36	0	18	55	0	18	18	54	0	393	45.0
Total softwoods	14,515	10,457	6,359	3,728	1,961	1,131	407	177	174	0	38,909	12.9
Red maple	6,366	3,627	2,581	1,284	777	635	335	305	284	132	16,326	10.2
Hickory	251	119	96	39	39	0	0	0	0	0	544	62.4
Beech	89	100	111	45	13	58	83	0	0	0	501	38.0
Sweetgum	3,953	2,615	1,975	1,046	751	397	237	84	173	0	11,230	16.2
Yellow-poplar	63	107	31	144	125	0	68	0	132	61	733	30.5
Blackgum	1,834	629	665	430	304	89	138	43	66	0	4,199	17.9
Ash-walnut-cherry	542	436	203	85	36	0	42	0	32	0	1,376	30.5
Select white oaks	607	743	737	372	209	221	199	76	24	0	3,187	18.0
Select red oaks	0	0	0	34	43	0	0	0	0	0	77	59.4
Other white oaks	32	18	0	50	0	0	0	0	0	0	101	73.5
Other red oaks	1,351	713	646	467	363	199	133	155	69	36	4,133	16.0
Black locust	0	0	0	0	36	0	0	0	0	0	36	100.0
Other hardwoods	4,724	1,495	318	174	172	105	66	45	0	0	7,099	19.6
Total hardwoods	19,812	10,601	7,362	4,171	2,869	1,705	1,302	709	780	229	49,541	7.8
All species	34,327	21,059	13,721	7,899	4,830	2,837	1,709	886	954	229	88,451	6.8
SE	10.0	10.2	8.8	9.2	11.0	11.8	17.0	22.6	21.5	39.3	6.8	

Table 75.--Net volume of all live trees on timberland by species and diameter class, Lower Eastern Shore Unit, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
Loblolly pine	41.8	56.1	59.1	60.3	48.0	29.2	15.6	4.2	4.9	.0	319.2	10.8
Virginia pine	.2	1.0	1.7	1.6	1.5	1.1	.0	.0	.0	.0	7.1	57.6
Other softwoods	.1	.0	.3	.3	.5	.5	1.6	.4	.5	.0	4.2	80.3
Total softwoods	42.2	57.2	61.2	62.1	49.9	30.8	17.2	4.6	5.3	.0	330.5	10.4
Red maple	15.6	21.4	22.3	25.1	22.1	13.8	13.4	8.4	15.3	8.5	165.8	10.9
Hickory	.7	1.4	.9	.6	.0	.0	.0	.0	.0	.0	3.6	63.2
Beech	.4	.6	3.0	2.9	2.7	1.4	.0	.9	.3	.0	12.1	49.8
Sweetgum	7.7	12.9	14.8	14.8	15.3	10.2	4.6	2.9	2.2	.3	85.6	14.9
Yellow-poplar	1.1	.4	1.1	1.6	.5	1.2	.3	1.7	5.8	1.1	14.9	41.7
Blackgum	5.0	7.7	10.6	9.7	6.5	6.1	3.8	4.3	3.6	.0	57.3	20.5
Ash-walnut-cherry	1.3	2.7	3.0	2.2	1.7	.5	.8	1.5	.0	.0	13.7	48.5
Select white oaks	4.3	6.6	13.6	16.2	11.9	11.0	5.3	4.6	5.1	1.3	79.8	16.4
Select red oaks	.1	.1	.5	.3	.8	.5	.4	.0	.6	.0	3.4	38.1
Other white oaks	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0	.3	100.0
Other red oaks	5.0	7.7	10.7	13.6	12.3	13.2	7.2	3.8	4.2	.9	78.6	13.0
Other hardwoods	5.6	5.2	2.1	2.5	.9	.0	.3	1.2	.0	.0	18.0	24.1
Noncommercial hardwoods	.8	.3	.1	.6	.0	.0	.0	.0	.7	.0	2.6	38.7
Total hardwoods	47.6	66.9	82.9	90.1	74.7	58.0	36.3	29.1	37.8	12.2	535.7	8.6
All species	89.8	124.1	144.1	152.2	124.6	88.9	53.5	33.7	43.1	12.2	866.2	5.9
SE	9.9	7.9	7.2	7.5	7.6	10.8	12.4	18.7	16.8	26.3	5.9	

Table 76.--Net volume of live trees on timberland by species and diameter class, Lower Eastern Shore Unit, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	.0	.0	.0	.6	.0	.0	.0	.0	.0	.0	.6	100.0
Loblolly pine	38.0	62.9	67.7	62.6	45.1	34.4	15.7	8.6	8.8	.0	343.8	11.5
Virginia pine	.1	1.0	.2	.7	.0	.8	.0	.0	.0	.0	2.8	55.4
Other softwoods	.4	.3	.1	.3	1.6	.0	.6	.8	3.7	.0	7.8	55.8
Total softwoods	38.6	64.2	68.0	64.0	46.7	35.2	16.3	9.4	12.5	.0	355.0	11.3
Red maple	14.6	21.5	27.4	27.4	20.6	20.9	14.9	17.3	19.9	20.0	204.7	14.4
Hickory	.5	.8	1.2	.8	1.0	.0	.0	.0	.0	.0	4.3	78.9
Beech	.2	.5	1.1	1.0	.7	2.2	3.5	.0	.0	.0	9.2	44.0
Sweetgum	10.0	16.3	23.9	18.9	18.8	14.8	10.8	4.7	15.8	.0	134.1	15.3
Yellow-poplar	.2	.8	.4	2.8	4.3	.0	3.4	.0	13.8	10.5	36.2	36.4
Blackgum	4.1	3.5	6.8	7.5	8.3	3.4	5.9	2.5	4.8	.0	46.8	23.0
Ash-walnut-cherry	1.3	3.0	2.3	2.6	.9	.0	2.2	.0	2.2	.0	14.4	38.3
Select white oaks	1.3	3.7	8.1	6.4	5.5	8.2	8.6	5.0	1.6	.0	48.4	22.2
Select red oaks	.0	.0	.0	.8	1.1	.0	.0	.0	.0	.0	1.9	59.1
Other white oaks	.1	.1	.0	.8	.0	.0	.0	.0	.0	.0	1.0	73.3
Other red oaks	2.8	3.4	7.0	7.9	8.3	7.2	7.8	9.2	4.5	3.7	61.8	18.3
Blacklocust	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0	.4	100.0
Other hardwoods	9.6	6.2	2.6	2.5	3.7	2.9	2.0	1.9	.0	.0	31.4	26.0
Noncommercial hardwoods	.8	.3	.4	.0	.0	.0	.0	.0	.0	.0	1.4	33.3
Total hardwoods	45.5	60.2	81.2	79.6	73.7	59.5	59.0	40.6	62.5	34.2	596.0	9.8
All species	84.1	124.3	149.2	143.6	120.5	94.8	75.3	50.0	75.0	34.2	951.0	6.4
SE	10.7	10.8	9.1	8.9	10.4	11.5	16.8	23.9	21.4	43.2	6.4	

Table 77.--Net volume of growing-stock trees on timberland by species and diameter class, Lower Eastern Shore Unit, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	.0	.0	.0	.6	.0	.0	.0	.0	.0	.0	.6	100.0
Loblolly pine	38.0	62.9	67.3	62.6	45.1	34.4	15.7	8.6	8.8	.0	343.3	11.5
Virginia pine	.1	1.0	.2	.7	.0	.8	.0	.0	.0	.0	2.8	55.4
Other softwoods	.4	.3	.0	.3	1.2	.0	.6	.8	3.7	.0	7.3	59.1
Total softwoods	38.6	64.2	67.5	64.0	46.4	35.2	16.3	9.4	12.5	.0	354.1	11.4
Red maple	14.4	21.3	27.4	24.0	19.5	20.6	13.9	17.0	19.2	20.0	197.3	14.6
Hickory	.5	.8	1.2	.8	1.0	.0	.0	.0	.0	.0	4.3	78.9
Beech	.2	.5	1.1	1.0	.3	2.2	2.9	.0	.0	.0	8.2	44.2
Sweetgum	9.8	16.3	23.9	18.3	18.8	14.8	10.8	4.7	15.8	.0	133.3	15.4
Yellow-poplar	.2	.8	.4	2.8	3.8	.0	3.4	.0	13.8	10.5	35.7	36.9
Blackgum	4.1	3.4	6.8	7.5	7.9	3.4	5.9	2.5	4.8	.0	46.2	23.3
Ash-walnut-cherry	1.1	2.6	2.3	2.1	.9	.0	2.2	.0	2.2	.0	13.3	40.3
Select white oaks	1.3	3.7	8.1	6.0	5.1	7.8	8.6	5.0	1.6	.0	47.1	22.4
Select red oaks	.0	.0	.0	.8	1.1	.0	.0	.0	.0	.0	1.9	59.1
Other white oaks	.1	.1	.0	.8	.0	.0	.0	.0	.0	.0	1.0	73.3
Other red oaks	2.7	3.4	6.8	7.5	8.3	5.9	6.7	9.2	4.5	3.7	58.5	18.9
Black locust	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0	.4	100.0
Other hardwoods	9.2	6.1	2.6	2.3	3.1	2.9	2.0	1.9	.0	.0	30.0	25.8
Total hardwoods	43.6	59.0	80.5	73.8	70.2	57.6	56.3	40.3	61.8	34.2	577.2	9.9
All species	82.2	123.2	148.0	137.9	116.5	92.8	72.6	49.6	74.3	34.2	931.3	6.4
SE	11.0	10.7	9.2	9.0	10.8	11.6	17.3	24.0	21.7	43.1	6.4	

Table 78.--Net volume of growing-stock trees on timberland by species and diameter class, Lower Eastern Shore Unit, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
Loblolly pine	41.6	56.0	58.9	60.1	48.0	29.2	15.6	4.2	4.9	.0	318.5	10.8
Virginia pine	.2	1.0	1.7	1.6	1.5	1.1	.0	.0	.0	.0	7.0	58.0
Other softwoods	.1	.0	.3	.2	.5	.5	1.6	.4	.5	.0	4.1	81.5
Total softwoods	42.0	57.1	60.9	61.9	49.9	30.8	17.2	4.6	5.3	.0	329.7	10.4
Red maple	15.3	20.8	22.1	23.2	21.0	11.5	11.2	8.2	14.1	7.9	155.3	11.0
Hickory	.7	1.4	.9	.6	.0	.0	.0	.0	.0	.0	3.6	63.2
Beech	.4	.6	2.7	2.9	2.7	1.4	.0	.9	.3	.0	11.9	49.1
Sweetgum	7.6	12.3	14.8	14.3	14.7	10.2	4.6	2.9	2.2	.3	84.0	14.9
Yellow-poplar	1.1	.4	1.1	1.6	.5	1.0	.3	1.7	5.8	1.1	14.7	42.1
Blackgum	4.2	7.2	9.1	6.3	5.6	4.6	3.2	3.3	2.7	.0	46.1	18.2
Ash-walnut-cherry	1.2	2.6	3.0	2.0	1.4	.5	.8	1.5	.0	.0	13.0	49.3
Select white oaks	4.3	6.6	13.6	15.8	11.6	10.8	5.2	4.6	5.1	.8	78.3	16.5
Select red oaks	.1	.1	.5	.3	.8	.5	.4	.0	.6	.0	3.4	38.1
Other white oaks	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0	.3	100.0
Other red oaks	5.0	7.7	10.5	13.4	12.0	12.9	7.2	3.8	4.2	.6	77.2	13.2
Other hardwoods	5.3	5.1	2.0	2.1	.7	.0	.3	1.2	.0	.0	16.8	23.9
Total hardwoods	45.1	64.6	80.6	82.5	71.0	53.5	33.4	28.0	35.1	10.8	504.5	8.3
All species	87.1	121.7	141.5	144.4	120.9	84.3	50.6	32.5	40.4	10.8	834.2	5.7
SE	10.1	7.9	7.2	7.6	7.6	11.1	12.8	18.2	16.9	28.2	5.7	

Table 79.--Net volume of sawtimber trees on timberland by species and diameter class, Lower Eastern Shore Unit, Maryland, 1986

(In millions of board feet)

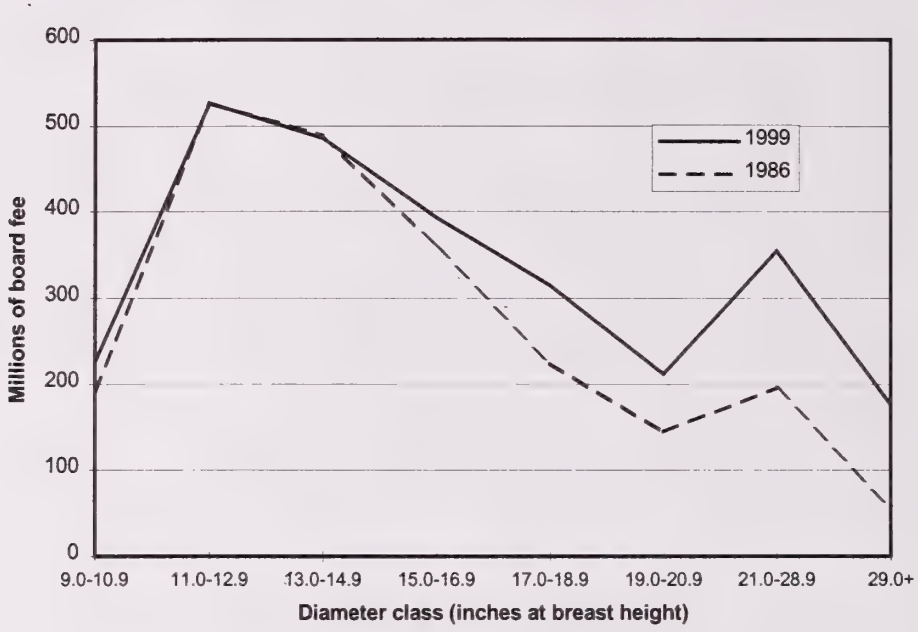
Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Loblolly pine	185.1	231.0	203.3	127.5	72.4	19.6	22.8	.0	861.7	11.6
Virginia pine	5.2	6.0	6.2	4.7	.0	.0	.0	.0	22.1	65.8
Other softwoods	.9	.9	1.7	1.8	6.8	1.6	2.0	.0	15.8	83.9
Total softwoods	191.2	237.9	211.2	134.0	79.3	21.2	24.8	.0	899.6	11.2
Red maple	.0	79.5	81.3	44.6	47.0	35.5	65.5	41.8	395.1	14.7
Hickory	.0	2.1	.0	.0	.0	.0	.0	.0	2.1	81.8
Beech	.0	10.7	11.2	5.6	.0	4.1	1.2	.0	32.8	48.1
Sweetgum	.0	49.3	57.5	43.9	20.4	12.7	10.5	1.4	195.7	19.2
Yellow-poplar	.0	5.6	1.9	4.4	1.5	8.0	31.1	5.5	58.0	47.7
Blackgum	.0	21.3	21.2	19.0	14.2	14.6	13.6	.0	104.0	25.1
Ash-walnut-cherry	.0	7.7	5.2	2.0	3.5	5.3	.0	.0	23.6	51.9
Select white oaks	.0	57.2	46.2	46.9	22.9	20.2	24.1	3.8	221.4	17.9
Select red oaks	.0	1.2	3.3	2.1	1.8	.0	2.8	.0	11.3	44.1
Other red oaks	.0	46.2	46.9	55.6	32.0	17.4	21.8	2.5	222.6	15.2
Other hardwoods	.0	7.4	2.8	.0	1.5	5.1	.0	.0	16.7	44.4
Total hardwoods	.0	288.1	277.6	224.0	144.9	122.9	170.8	55.0	1,283.4	10.4
All species	191.2	526.0	488.8	358.0	224.2	144.2	195.5	55.0	2,183.0	7.0
SE	11.7	7.7	7.7	11.2	13.0	17.9	17.2	28.4	7.0	

Table 80.--Net volume of sawtimber trees on timberland by species and diameter class, Lower Eastern Shore Unit, Maryland, 1999

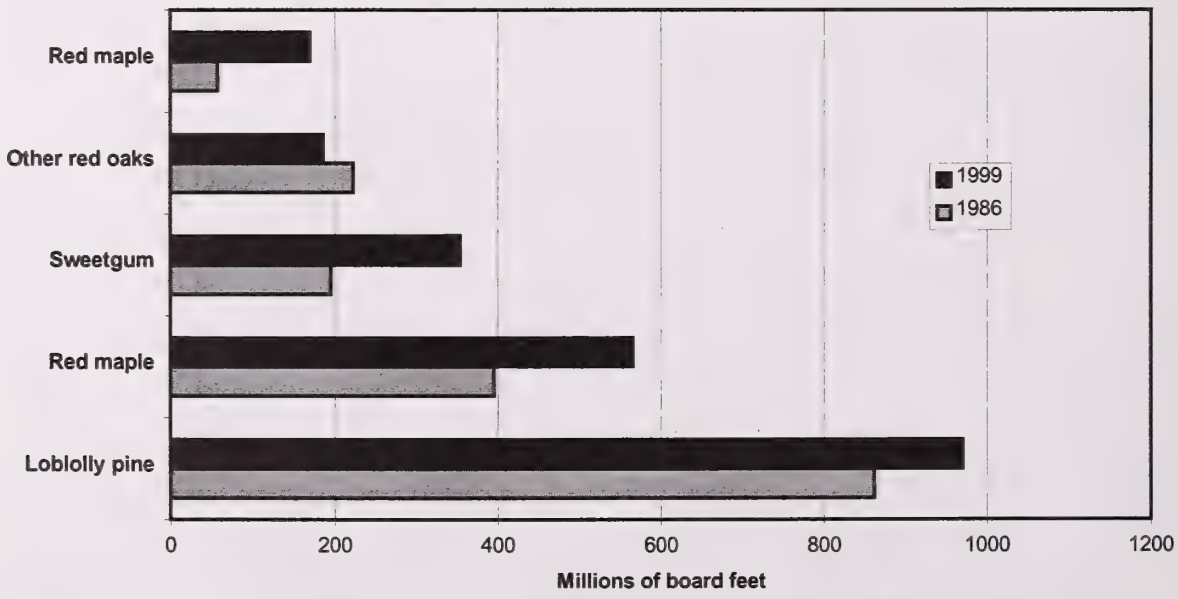
(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	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+		
White/red pine	.0	2.2	.0	.0	.0	.0	.0	.0	2.2	100.0
Loblolly pine	224.6	248.6	192.7	152.5	70.3	39.7	41.6	.0	969.9	13.8
Virginia pine	.8	2.4	.0	3.9	.0	.0	.0	.0	7.1	71.1
Other softwoods	.0	.8	4.9	.0	2.4	3.3	16.8	.0	28.3	65.6
Total softwoods	225.4	254.0	197.6	156.4	72.6	43.0	58.5	.0	1,007.5	13.5
Red maple	.0	87.4	78.3	82.0	55.3	64.6	94.6	103.9	566.1	21.0
Hickory	.0	2.8	4.9	.0	.0	.0	.0	.0	7.7	100.0
Beech	.0	3.5	1.4	7.6	13.2	.0	.0	.0	25.7	49.8
Sweetgum	.0	66.5	79.4	65.2	45.2	21.7	75.9	.0	353.9	19.7
Yellow-poplar	.0	10.0	17.3	.0	18.5	.0	69.2	54.9	169.9	39.5
Blackgum	.0	27.8	31.1	14.7	27.3	13.0	20.2	.0	134.2	29.2
Ash-walnut-cherry	.0	8.7	3.6	.0	9.5	.0	10.8	.0	32.6	52.4
Select white oaks	.0	23.4	20.6	30.1	34.3	23.6	5.4	.0	137.4	30.6
Select red oaks	.0	3.5	4.5	.0	.0	.0	.0	.0	7.9	59.1
Other white oaks	.0	3.1	.0	.0	.0	.0	.0	.0	3.1	72.6
Other red oaks	.0	27.5	31.7	23.0	28.8	37.4	20.1	17.6	186.1	24.1
Black locust	.0	.0	1.9	.0	.0	.0	.0	.0	1.9	100.0
Other hardwoods	.0	8.4	13.5	13.8	10.2	8.0	.0	.0	53.8	45.5
Total hardwoods	.0	272.5	288.3	236.5	242.2	168.4	296.2	176.4	1,680.5	13.9
All species	225.4	526.6	485.9	392.9	314.9	211.4	354.7	176.4	2,688.1	8.9
SE	15.3	9.0	10.8	11.8	17.9	25.9	22.2	42.9	8.9	

Net volume of sawtimber trees on timberland, Lower Eastern Shore Unit, Maryland, 1986 and 1999



Net volume of sawtimber trees on timberland, top 5 species, Lower Eastern Shore Unit, Maryland, 1986 and 1999



MARYLAND
WESTERN UNIT

Table 81.--Area of timberland by forest type, forest-type group, and stand-size class, Western Unit, Maryland, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	3.0	6.3	4.4	.0	13.7	51.0
White pine	.0	3.7	.0	.0	3.7	100.0
Hemlock	6.9	.0	.0	.0	6.9	71.0
White/red pine group	9.9	10.0	4.4	.0	24.3	38.3
Virginia pine	9.0	7.4	.0	.0	16.4	53.6
Loblolly/shortleaf group	9.0	7.4	.0	.0	16.4	53.6
Virginia pine/oak	.0	2.3	.0	.0	2.3	100.0
Oak/pine group	.0	2.3	.0	.0	2.3	100.0
Chestnut oak	16.7	7.3	.0	.0	24.0	37.8
White oak/red oak/hickory	33.9	28.5	.0	.0	62.4	22.6
White oak	6.1	20.0	.0	.0	26.1	37.7
Northern red oak	10.0	.0	.0	.0	10.0	59.0
Black locust	.0	10.3	7.1	.0	17.4	44.8
Sassafras/persimmon	.0	2.5	.0	.0	2.5	100.0
Red maple/central hardwood	6.2	3.1	3.0	.0	12.4	50.5
Mixed central hardwoods	87.5	69.6	22.4	.0	179.5	11.1
Oak/hickory group	160.4	141.4	32.5	.0	334.3	6.1
River birch/sycamore	3.9	.0	.0	.0	3.9	100.0
Elm/ash/red maple group	3.9	.0	.0	.0	3.9	100.0
Sugar maple/beech/yellow birch	27.2	13.3	3.5	.0	44.0	26.7
Black Cherry	3.0	7.4	3.6	4.8	18.8	43.6
Red maple/northern hardwoods	.0	6.8	.0	.0	6.8	71.1
Mixed northern hardwoods	10.6	19.0	14.2	.0	43.8	28.5
Northern hardwoods group	40.8	46.4	21.3	4.8	113.2	15.9
Aspen	.0	3.0	.0	.0	3.0	100.0
Aspen/birch group	.0	3.0	.0	.0	3.0	100.0
All forest types	224.0	210.5	58.2	4.8	497.4	2.0
SE	9.0	9.6	23.9	100.0	2.0	

Table 82.--Area of timberland by forest type, forest-type group, and stand-size class, Western Unit, Maryland, 1999

(In thousands of acres)

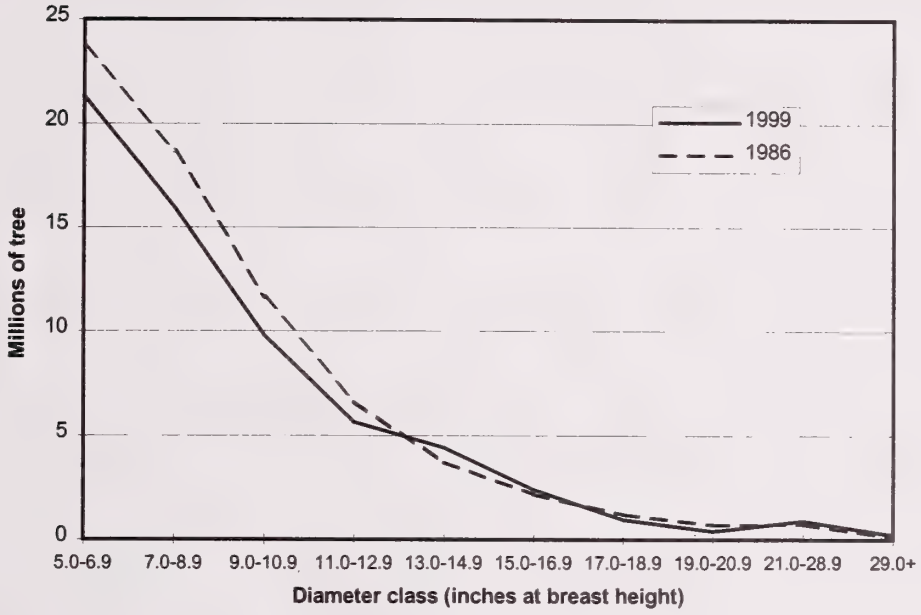
Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	6.1	8.5	.0	.0	14.6	57.5
White pine	.0	.0	.9	.0	.9	100.0
White/red pine group	6.1	8.5	.9	.0	15.5	54.6
Norway spruce	3.2	.0	.0	.0	3.2	100.0
Spruce/fir group	3.2	.0	.0	.0	3.2	100.0
Virginia pine	2.3	.0	.0	.0	2.3	100.0
Loblolly/shortleaf group	2.3	.0	.0	.0	2.3	100.0
Chestnut oak	10.6	4.3	.0	.0	14.8	58.4
White oak/red oak/hickory	47.0	8.1	.0	.0	55.1	32.1
White oak	8.0	18.0	.0	.0	25.9	53.5
Northern red oak	8.1	.0	.0	.0	8.1	100.0
Black locust	3.7	.0	.0	.0	3.7	100.0
Black walnut	.0	1.1	.0	.0	1.1	98.8
Red maple/central hardwood	4.9	.0	.0	.0	4.9	100.0
Mixed central hardwoods	92.8	43.6	29.9	.0	166.4	15.8
Oak/hickory group	175.1	75.1	29.9	.0	280.1	10.5
Black ash/Amer. elm/red maple	.0	11.9	.0	.0	11.9	100.0
Red maple(upland)	8.1	.0	.0	.0	8.1	100.0
River birch/sycamore	6.1	.0	.0	.0	6.1	100.0
Elm/ash/red maple group	14.2	11.9	.0	.0	26.1	59.9
Sugar maple/beech/yellow birch	51.2	4.9	6.0	.0	62.2	32.8
Black cherry	4.3	23.2	5.5	.0	32.9	40.4
Red maple/northern hardwoods	8.1	6.0	.0	.9	15.0	67.6
Pin cherry/reverting field	.0	.0	3.0	.0	3.0	81.1
Mixed northern hardwoods	1.8	8.8	9.8	.0	20.3	45.3
Northern hardwoods group	65.4	42.9	24.3	.9	133.4	19.0
All forest types	266.3	138.4	55.1	.9	460.6	4.0
SE	10.3	18.4	30.6	100.0	4.0	

Table 83.--Number of live trees (1.0+ inches d.b.h.) on forest land by species and diameter group, Western Unit, Maryland, 1999

(In thousands of trees)

Species	Diameter				All Classes	SE
	1.0-4.9	5.0-10.9	11.0-20.9	21+		
White/red pine	1,755	6,017	527	0	8,299	48.3
Virginia pine	1,819	1,175	557	0	3,551	46.0
Other yellow pines	0	227	175	0	402	62.7
Other softwoods	3,528	1,468	407	26	5,429	46.3
Total softwoods	7,102	8,887	1,665	26	17,681	29.8
Red maple	48,898	8,185	2,476	224	59,783	17.3
Sugar maple	15,787	4,266	919	170	21,143	24.4
Hickory	8,623	2,210	517	29	11,379	24.0
Beech	1,063	335	172	0	1,570	68.3
Yellow-poplar	4,092	305	362	55	4,814	72.3
Blackgum	4,066	719	158	0	4,943	49.9
Ash-walnut-cherry	50,953	8,160	1,354	108	60,576	20.1
Select white oaks	5,496	5,481	2,265	268	13,511	21.0
Select red oaks	12,779	2,203	2,202	111	17,295	33.8
Other white oaks	7,259	4,180	1,721	134	13,293	27.2
Other red oaks	8,630	3,247	1,538	170	13,586	27.5
Blacklocust	8,996	2,260	466	36	11,758	32.0
Other hardwoods	31,202	4,132	887	145	36,366	25.7
Noncommercial hardwoods	53,095	1,999	134	0	55,227	21.9
Total hardwoods	260,941	47,682	15,172	1,452	325,247	8.8
All species	268,043	56,569	16,837	1,478	342,928	8.4
SE	11.0	8.0	6.9	19.6	8.4	

Number of growing-stock trees on timberland, Western Unit, Maryland, 1986 and 1999



Number of growing-stock trees on timberland, top 5 species, Western Unit, Maryland, 1986 and 1999

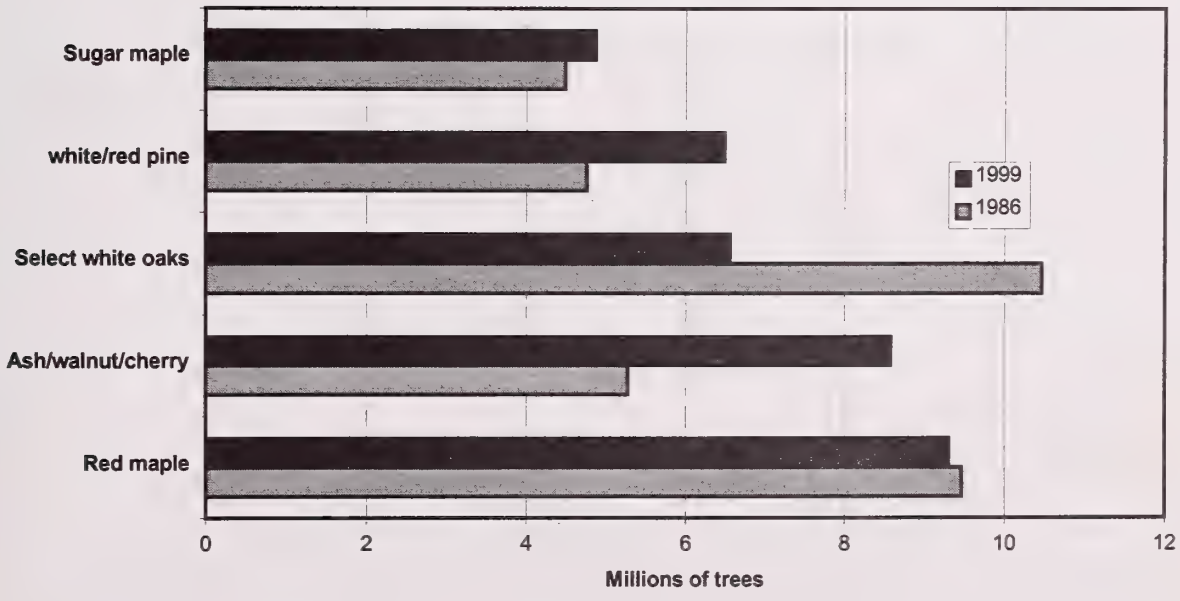


Table 84.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Western Unit, Maryland, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	2,415	1,611	474	185	45	22	0	6	0	0	4,757	57.4
Virginia pine	581	535	487	226	76	7	0	0	0	0	1,910	32.5
Other yellow pines	129	164	120	133	51	24	9	0	0	0	632	34.5
Other softwoods	807	826	255	211	137	120	73	51	42	0	2,523	27.4
Total softwoods	3,932	3,136	1,337	755	309	172	83	57	42	0	9,823	30.1
Red maple	4,194	2,487	1,283	839	325	171	77	65	19	0	9,461	13.3
Sugar maple	1,941	1,055	590	384	171	169	43	83	43	9	4,488	17.4
Hickory	1,337	834	576	301	219	100	56	8	6	0	3,436	16.2
Beech	235	135	137	105	49	22	20	7	0	0	711	52.5
Yellow-poplar	269	45	14	78	85	29	18	0	0	0	537	49.2
Blackgum	283	85	76	12	17	21	41	7	0	0	542	28.6
Ash-walnut-cherry	1,879	1,488	981	352	293	171	65	28	6	13	5,277	23.3
Select white oaks	3,442	3,048	2,026	824	386	302	210	67	145	9	10,460	17.9
Select red oaks	1,338	1,163	1,185	1,144	800	472	209	185	249	33	6,779	10.2
Other white oaks	1,553	2,400	1,601	811	505	253	159	58	112	14	7,465	15.2
Other red oaks	715	1,097	715	488	252	169	135	81	68	24	3,745	19.5
Black locust	967	684	291	113	62	22	55	26	9	0	2,230	30.2
Other hardwoods	1,636	979	830	414	246	119	18	34	48	9	4,333	19.2
Total hardwoods	19,791	15,501	10,304	5,867	3,410	2,019	1,106	651	705	110	59,464	5.4
All species	23,723	18,637	11,641	6,622	3,719	2,192	1,188	708	747	110	69,287	5.7
SE	8.6	9.4	7.1	7.0	8.0	8.1	11.2	13.5	14.2	25.2	5.7	

Table 85.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Western Unit, Maryland, 1999

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	1,912	2,757	1,297	425	77	0	25	0	0	0	6,494	55.9
Virginia pine	231	232	133	97	0	61	0	0	0	0	755	51.2
Other yellow pines	59	118	29	29	37	0	0	0	0	0	272	87.6
Other softwoods	558	563	195	158	81	68	75	0	0	0	1,698	39.9
Total softwoods	2,761	3,670	1,655	711	195	129	99	0	0	0	9,219	40.1
Red maple	4,297	1,846	902	730	942	240	123	49	172	0	9,302	15.0
Sugar maple	1,766	1,415	681	621	134	85	25	0	72	73	4,871	22.4
Hickory	1,033	541	455	224	134	122	37	0	29	0	2,575	22.4
Beech	100	160	0	98	0	0	0	0	0	0	358	70.7
Yellow-poplar	183	37	61	87	88	110	26	26	55	0	671	43.3
Blackgum	451	158	73	37	0	49	0	0	0	0	768	38.4
Ash-walnut-cherry	3,994	2,321	1,292	449	253	202	0	0	0	72	8,583	28.3
Select white oaks	937	1,434	1,729	818	785	330	161	99	268	0	6,561	24.9
Select red oaks	608	849	559	920	487	254	62	100	37	49	3,925	24.1
Other white oaks	1,097	1,449	699	305	502	355	207	37	0	0	4,651	21.8
Other red oaks	1,329	586	817	280	445	404	124	98	134	0	4,217	25.5
Black locust	809	614	272	175	167	29	0	0	36	0	2,102	26.3
Other hardwoods	1,945	860	614	198	305	72	85	0	72	37	4,187	22.0
Total hardwoods	18,550	12,270	8,153	4,941	4,242	2,252	850	408	876	230	52,773	7.2
All species	21,311	15,940	9,808	5,651	4,437	2,381	949	408	876	230	61,991	7.9
SE	9.5	13.5	12.4	11.0	13.6	14.3	24.5	43.1	25.7	46.4	7.9	

Table 86.--Net volume of all live trees on timberland by species and diameter class, Western Unit, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	8.8	12.3	6.0	3.6	1.0	.7	.0	.3	.0	.0	32.8	54.5
Virginia pine	1.6	3.4	5.5	4.0	1.9	.2	.0	.0	.0	.0	16.6	39.5
Other yellow pines	.4	1.1	1.6	2.4	1.2	.8	.4	.0	.0	.0	7.9	32.5
Other softwoods	2.0	4.8	2.7	3.4	3.5	3.7	3.2	2.9	3.4	.0	29.7	41.5
Total softwoods	12.9	21.7	15.8	13.5	7.6	5.3	3.6	3.3	3.4	.0	87.0	27.4
Red maple	11.2	16.9	17.3	16.7	8.9	6.4	3.7	4.0	2.5	.3	87.9	12.8
Sugar maple	6.5	7.9	9.2	8.2	4.8	6.8	2.9	5.9	4.4	3.4	60.1	18.5
Hickory	3.7	5.8	7.6	6.6	6.6	4.1	3.0	.7	.6	.0	38.6	16.8
Beech	.7	1.0	1.5	2.3	1.4	.9	1.1	.5	.5	.0	9.9	47.9
Yellow-poplar	.9	.3	.2	1.7	2.8	1.3	1.1	.3	.0	.0	8.6	41.9
Blackgum	.7	.5	.9	.3	.5	.9	1.8	.4	.0	.0	6.0	28.5
Ash-walnut-cherry	6.7	10.9	13.5	8.1	9.4	6.4	3.2	1.9	.6	1.6	62.3	17.6
Select white oaks	8.2	17.6	22.2	14.8	9.7	11.8	9.8	3.9	14.3	2.1	114.4	13.8
Select red oaks	3.6	7.7	13.8	21.6	21.7	18.8	10.1	11.6	22.5	6.8	138.1	9.9
Other white oaks	4.2	14.7	18.7	15.1	13.0	9.4	7.3	3.1	9.3	2.5	97.1	14.7
Other red oaks	1.7	6.7	8.2	9.3	6.9	6.3	6.3	5.4	7.0	4.9	62.7	13.6
Blacklocust	2.7	4.4	4.4	3.0	2.1	1.4	3.1	1.8	.8	.0	23.7	18.4
Other hardwoods	5.2	6.9	11.7	8.0	7.4	3.9	.8	2.1	5.2	2.7	53.7	19.9
Noncommercial hardwoods	2.4	3.6	1.6	1.1	1.0	.0	.0	.0	.0	.0	9.7	25.5
Total hardwoods	58.1	105.0	131.0	116.7	96.2	78.4	54.2	41.4	67.6	24.2	772.7	4.4
All species	71.0	126.6	146.8	130.2	103.8	83.7	57.8	44.7	71.0	24.2	859.7	4.2
SE	8.9	9.6	6.6	6.7	7.9	8.0	11.1	13.1	14.0	20.4	4.2	

Table 87.--Net volume of live trees on timberland by species and diameter class, Western Unit, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	7.6	21.3	16.6	8.0	1.8	.0	1.2	.0	.0	.0	56.4	53.0
Virginia pine	.8	1.3	1.9	1.4	.0	1.6	.0	.0	.0	.0	7.0	45.1
Other yellow pines	.2	.8	.3	.4	.8	.0	.0	.0	.0	.0	2.6	75.3
Other softwoods	1.6	3.6	2.3	3.0	2.1	2.1	3.0	.0	.0	.0	17.7	40.4
Total softwoods	10.2	27.0	21.0	12.8	4.7	3.7	4.1	.0	.0	.0	83.6	37.1
Red maple	12.7	14.1	12.1	15.8	26.6	9.0	7.5	2.6	12.9	.0	113.4	21.8
Sugar maple	6.2	10.4	10.7	12.4	3.8	4.6	1.5	.0	7.8	14.8	72.1	28.3
Hickory	3.3	3.9	6.1	4.7	4.1	4.7	2.4	.0	2.4	.0	31.6	23.1
Beech	.4	1.2	.0	2.1	.0	.0	.0	.0	.0	.0	3.7	82.7
Yellow-poplar	.4	.3	.9	2.4	2.9	5.0	1.4	2.0	4.7	.0	20.0	51.6
Blackgum	1.4	.9	.9	.4	.0	1.8	.0	.0	.0	.0	5.5	43.0
Ash-walnut-cherry	14.0	18.7	18.3	11.2	7.4	10.4	.0	1.2	1.5	5.6	88.3	26.4
Select white oaks	3.2	10.5	21.7	15.1	22.0	11.7	8.7	6.4	19.3	.0	118.8	21.4
Select red oaks	1.7	5.5	6.5	15.5	13.1	10.4	3.3	6.6	2.9	7.8	73.4	25.2
Other white oaks	3.2	8.9	7.6	5.0	12.4	10.7	7.6	1.9	.0	.0	57.1	21.5
Other red oaks	3.8	3.7	8.7	5.0	12.5	16.1	5.2	5.6	13.9	.0	74.6	23.7
Blacklocust	2.5	4.3	4.6	3.6	4.5	.5	.0	.0	1.4	.0	21.4	28.4
Other hardwoods	6.0	6.4	8.6	4.0	9.8	2.4	3.8	.4	7.7	6.0	54.9	32.3
Noncommercial hardwoods	2.2	1.7	1.0	.5	.4	1.1	.0	.0	.0	.0	7.0	33.7
Total hardwoods	60.9	90.3	107.7	98.0	119.5	88.5	41.5	26.7	74.5	34.2	741.8	7.8
All species	71.1	117.4	128.7	110.8	124.2	92.2	45.6	26.7	74.5	34.2	825.5	7.1
SE	10.6	14.6	12.4	10.7	13.4	14.3	24.3	39.7	25.5	44.6	7.1	

Table 88.--Net volume of growing-stock trees on timberland by species and diameter class, Western Unit, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	8.8	12.1	5.8	3.5	1.0	.7	.0	.3	.0	.0	32.3	55.1
Virginia pine	1.5	3.3	5.5	3.9	1.9	.2	.0	.0	.0	.0	16.3	40.1
Other yellow pines	.4	1.0	1.4	2.3	1.2	.8	.4	.0	.0	.0	7.6	32.7
Other softwoods	2.0	4.8	2.5	3.2	3.5	3.7	3.2	2.9	3.4	.0	29.3	41.7
Total softwoods	12.8	21.3	15.2	12.9	7.6	5.3	3.6	3.3	3.4	.0	85.4	27.5
Red maple	10.2	15.5	15.2	16.2	8.7	6.2	3.7	3.6	1.7	.0	81.0	13.4
Sugar maple	6.3	7.4	8.4	8.0	4.6	6.8	2.4	5.5	3.5	1.7	54.5	19.1
Hickory	3.6	5.7	7.4	6.5	6.6	4.1	2.9	.7	.6	.0	38.0	17.0
Beech	.6	.8	1.5	2.0	1.4	.9	1.1	.5	.0	.0	8.7	49.2
Yellow-poplar	.9	.3	.2	1.7	2.8	1.3	1.1	.0	.0	.0	8.3	43.1
Blackgum	.6	.5	.9	.3	.5	.7	1.8	.4	.0	.0	5.8	29.6
Ash-walnut-cherry	5.5	9.9	12.2	7.4	8.3	6.4	3.2	1.9	.6	1.6	57.0	18.8
Select white oaks	7.8	17.3	21.6	14.8	9.7	10.6	9.8	3.9	13.0	1.2	109.7	13.8
Select red oaks	3.4	7.3	13.8	21.6	21.2	17.9	9.8	11.2	21.7	5.2	133.2	10.2
Other white oaks	3.9	14.1	17.7	14.5	12.8	8.4	6.8	3.1	7.9	2.0	91.3	14.4
Other red oaks	1.6	6.6	8.1	9.2	6.7	6.3	6.3	4.9	6.5	3.9	60.2	13.9
Black locust	2.2	3.5	3.1	1.9	1.6	.7	2.6	1.5	.6	.0	17.7	20.7
Other hardwoods	4.9	6.4	11.2	8.0	6.9	3.9	.8	2.1	4.3	1.7	50.0	20.5
Total hardwoods	51.4	95.3	121.5	112.0	91.8	74.4	52.2	39.3	60.2	17.4	715.5	4.6
All species	64.2	116.6	136.7	124.9	99.4	79.7	55.8	42.6	63.6	17.4	800.9	4.4
SE	9.8	10.4	7.0	7.0	8.2	8.1	11.1	13.6	14.7	25.1	4.4	

Table 89.--Net volume of growing-stock trees on timberland by species and diameter class, Western Unit, Maryland, 1999

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	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+		
White/red pine	7.5	21.3	16.3	8.0	1.8	.0	1.2	.0	.0	.0	56.1	52.9
Virginia pine	.7	1.3	1.7	1.4	.0	1.6	.0	.0	.0	.0	6.6	44.8
Other yellow pines	.2	.8	.3	.4	.8	.0	.0	.0	.0	.0	2.6	75.3
Other softwoods	1.6	3.5	2.0	3.0	2.1	2.1	3.0	.0	.0	.0	17.3	41.2
Total softwoods	10.0	26.9	20.3	12.8	4.7	3.7	4.1	.0	.0	.0	82.6	37.4
Red maple	12.3	13.2	12.0	14.7	26.1	8.3	5.7	2.6	11.4	.0	106.3	22.0
Sugar maple	6.0	10.1	9.7	12.4	3.8	3.5	1.5	.0	7.8	14.8	69.6	29.0
Hickory	3.2	3.9	6.1	4.7	4.1	4.7	2.4	.0	2.4	.0	31.6	23.2
Beech	.4	1.2	.0	1.6	.0	.0	.0	.0	.0	.0	3.2	80.3
Yellow-poplar	.4	.3	.7	2.2	2.9	5.0	1.4	2.0	4.7	.0	19.6	51.6
Blackgum	1.3	.9	.9	.4	.0	1.8	.0	.0	.0	.0	5.5	43.6
Ash-walnut-cherry	13.5	17.7	17.7	9.3	7.0	7.8	.0	.0	.0	5.6	78.5	27.5
Select white oaks	3.1	10.3	21.7	15.1	22.0	11.7	8.7	6.4	19.3	.0	118.5	21.4
Select red oaks	1.6	5.5	6.5	15.5	13.1	9.3	3.3	6.6	2.9	7.8	72.3	25.2
Other white oaks	3.0	8.8	7.1	5.0	11.8	10.7	7.6	1.9	.0	.0	55.8	21.7
Other red oaks	3.6	3.7	8.7	5.0	11.9	16.1	5.2	5.6	11.0	.0	70.8	24.6
Black locust	2.2	4.2	3.9	3.1	4.2	.5	.0	.0	1.4	.0	19.5	30.4
Other hardwoods	5.5	6.2	8.6	3.8	9.3	2.4	3.8	.0	7.7	6.0	53.2	33.1
Total hardwoods	56.2	85.9	103.7	93.0	116.0	81.9	39.6	25.2	68.6	34.2	704.3	8.0
All species	66.2	112.8	124.0	105.9	120.7	85.5	43.8	25.2	68.6	34.2	786.8	7.3
SE	11.1	15.2	12.7	11.0	13.8	14.2	25.4	42.2	26.8	44.6	7.3	

Table 90.--Net volume of sawtimber trees on timberland by species and diameter class, Western Unit, Maryland, 1986

(In millions of board feet)

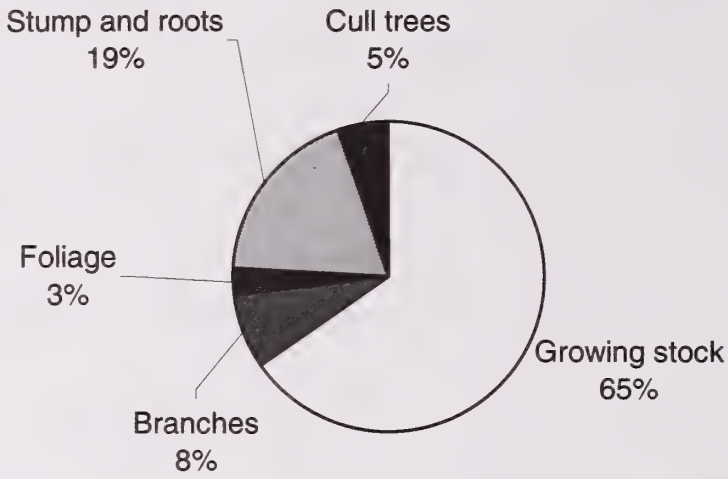
Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
White/red pine	19.2	14.0	4.5	2.9	.0	1.7	.0	.0	42.3	51.1
Virginia pine	17.1	14.9	8.0	.9	.0	.0	.0	.0	40.9	52.1
Other yellow pines	4.6	9.0	5.3	3.4	1.8	.0	.0	.0	24.1	37.6
Other softwoods	6.7	11.6	11.4	15.1	14.7	14.1	16.8	.0	90.4	53.0
Total softwoods	47.7	49.4	29.3	22.3	16.5	15.8	16.8	.0	197.8	30.1
Red maple	.0	55.7	33.6	23.9	15.6	15.5	8.4	.0	152.8	17.8
Sugar maple	.0	28.5	16.3	26.7	9.5	24.6	18.3	7.2	131.1	23.3
Hickory	.0	22.2	25.3	16.4	12.7	3.2	2.6	.0	82.4	20.4
Beech	.0	7.3	5.6	3.6	4.7	2.2	.0	.0	23.5	45.1
Yellow-poplar	.0	6.0	11.3	5.4	5.0	.0	.0	.0	27.9	44.3
Blackgum	.0	.9	1.7	3.1	7.6	1.9	.0	.0	15.3	40.1
Ash-walnut-cherry	.0	25.5	31.6	24.5	13.7	6.8	2.7	8.0	112.8	20.4
Select white oaks	.0	52.2	38.5	45.4	42.9	16.7	60.9	5.8	262.5	15.4
Select red oaks	.0	74.1	81.9	75.8	43.0	50.7	107.9	25.7	459.1	11.9
Other white oaks	.0	50.9	46.5	31.5	27.2	11.8	35.7	9.0	212.6	17.9
Other red oaks	.0	30.9	25.7	26.4	27.0	22.2	32.5	17.8	182.6	15.1
Black locust	.0	6.6	6.3	2.8	11.1	6.6	2.6	.0	35.9	26.7
Other hardwoods	.0	29.8	28.6	17.7	3.6	9.2	18.7	8.3	115.8	22.3
Total hardwoods	.0	390.7	352.9	303.4	223.7	171.4	290.4	81.8	1,814.3	6.0
All species	47.7	440.1	382.3	325.7	240.2	187.2	307.2	81.8	2,012.2	5.9
SE	29.2	7.1	8.2	8.0	11.2	13.7	15.0	25.0	5.9	

Table 91.--Net volume of sawtimber trees on timberland by species and diameter class, Western Unit, Maryland, 1999

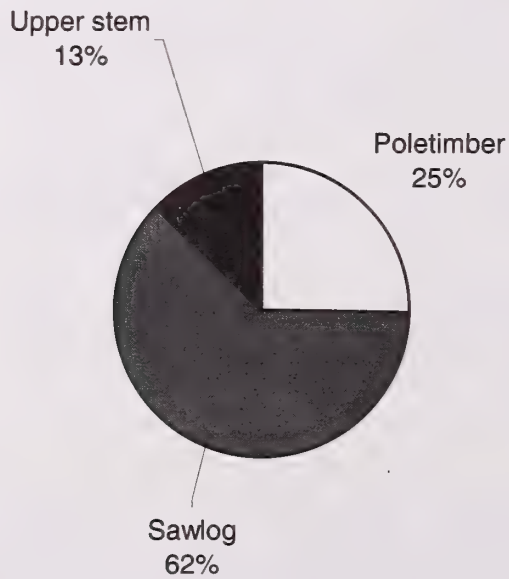
(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	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+		
White/red pine	56.0	34.6	8.1	.0	6.2	.0	.0	.0	104.9	45.2
Virginia pine	5.5	5.9	.0	6.2	.0	.0	.0	.0	17.6	45.5
Other yellow pines	1.0	1.7	3.5	.0	.0	.0	.0	.0	6.2	71.5
Other softwoods	6.3	11.8	9.3	9.6	12.6	.0	.0	.0	49.6	46.0
Total softwoods	68.8	53.9	21.0	15.8	18.8	.0	.0	.0	178.3	32.7
Red maple	.0	58.2	108.3	30.7	29.5	10.3	57.8	.0	294.8	30.6
Sugar maple	.0	48.0	13.4	13.9	5.5	.0	37.3	48.9	167.1	40.6
Hickory	.0	19.3	16.4	21.7	9.3	.0	11.9	.0	78.4	30.6
Beech	.0	6.1	.0	.0	.0	.0	.0	.0	6.1	100.0
Yellow-poplar	.0	8.5	12.2	20.4	4.5	8.6	19.0	.0	73.1	54.5
Blackgum	.0	1.5	.0	9.0	.0	.0	.0	.0	10.5	87.3
Ash-walnut-cherry	.0	32.9	28.9	32.5	.0	.0	.0	30.9	125.1	32.7
Select white oaks	.0	60.1	95.7	55.0	33.9	29.1	80.9	.0	354.8	22.7
Select red oaks	.0	59.1	52.9	38.3	16.1	32.0	14.4	44.4	257.3	30.0
Other white oaks	.0	18.4	42.8	41.3	26.7	6.7	.0	.0	136.0	27.5
Other red oaks	.0	19.7	48.6	67.3	21.4	28.2	58.7	.0	243.9	31.6
Black locust	.0	10.7	12.9	2.1	.0	.0	6.6	.0	32.2	36.9
Other hardwoods	.0	14.9	41.4	11.9	15.8	.0	36.7	30.7	151.4	42.7
Total hardwoods	.0	357.4	473.3	344.2	162.7	115.0	323.3	154.9	1,930.7	10.6
All species	68.8	411.3	494.3	359.9	181.5	115.0	323.3	154.9	2,109.0	9.4
SE	48.7	11.3	14.1	14.5	26.1	42.2	27.4	46.0	9.4	

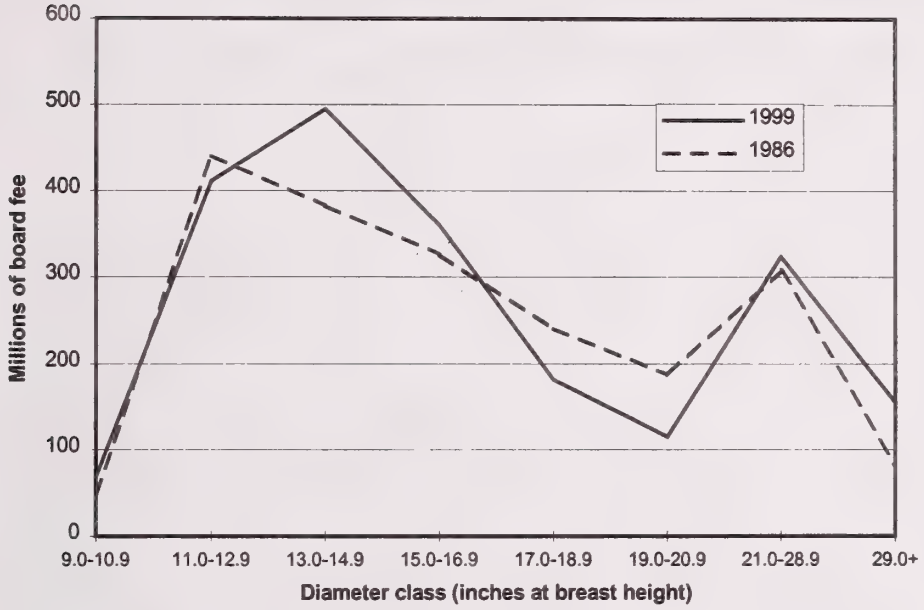
Biomass of all timber on timberland by class of timber and component, Maryland, 1999



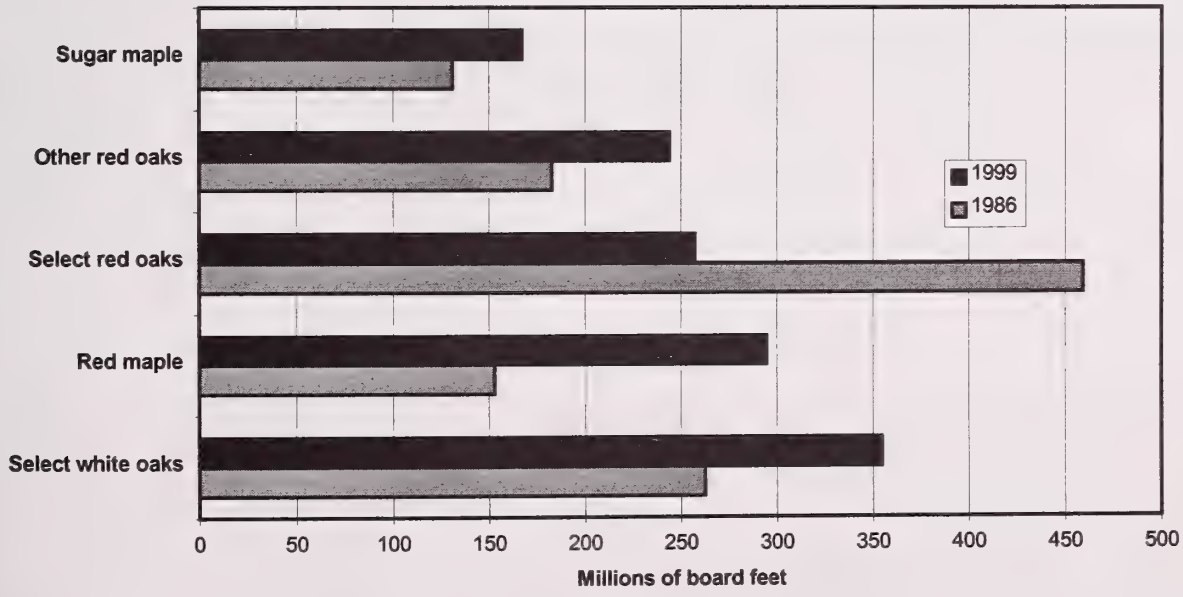
Biomass of growing stock on timberland by component, Maryland, 1999



Net volume of sawtimber trees on timberland, Western Unit, Maryland, 1986 and 1999



Net volume of sawtimber trees on timberland, top 5 species, Western Unit, Maryland, 1986 and 1999



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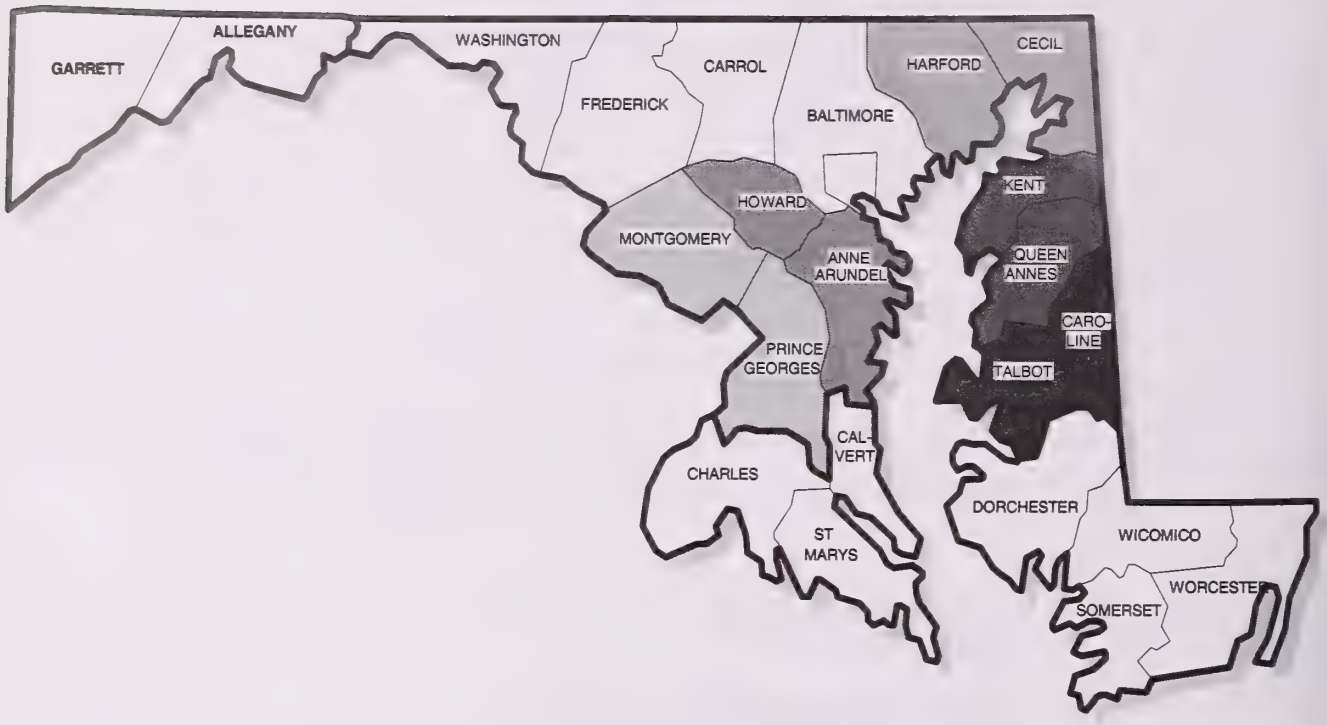

Table 92.--Land area by county and land class, Maryland, 1999

(In thousands of acres)

County	Land class								All classes
	Timberland: Rural	Timberland: Urban	Timberland: Total	Reserved productive	Other forest	Reserved other forest	Total forest land	Nonforest land	
Baltimore	75.1	23.7	98.7	18.5	.0	.0	117.3	317.6	434.8
Carroll	52.3	10.9	63.2	.0	.0	.0	63.2	224.2	287.5
Frederick	93.7	.0	93.7	33.6	.0	.0	127.3	297.0	424.3
Washington	86.1	.0	86.1	21.4	.0	.0	107.5	185.7	293.2
Anne Arundel/Howard	95.9	26.6	122.6	19.6	.0	.0	142.1	285.5	427.6
Caroline/Talbot	107.3	.0	107.3	.0	.0	.0	107.3	269.9	377.2
Cecil/Harford	151.4	22.8	174.2	.0	1.7	.0	176.0	328.7	504.7
Kent/Queen Annes	101.8	.0	101.8	.0	.0	.0	101.8	315.2	417.1
Montgomery/Prince Georges	154.2	35.3	189.5	38.2	7.5	.0	235.2	392.7	627.8
Central Unit	917.9	119.3	1,037.2	131.3	9.2	.0	1,177.7	2,616.4	3,794.1
Calvert	63.3	12.6	75.8	.0	.0	.0	75.8	61.9	137.7
Charles	195.0	2.0	197.0	.0	.0	.0	197.0	98.1	295.1
St. Mary's	103.9	4.6	108.5	.0	.0	.0	108.5	122.7	231.2
Southern Unit	362.2	19.1	381.3	.0	.0	.0	381.3	282.7	664.0
Dorchester	132.8	.0	132.8	.0	4.8	.0	137.6	219.2	356.9
Somerset	87.8	.0	87.8	.0	.0	.0	87.8	121.6	209.4
Wicomico	115.4	.0	115.4	.0	.0	.0	115.4	126.0	241.4
Worcester	156.7	.0	156.7	.0	.0	.0	156.7	146.2	302.9
Lower Eastern Shore	492.8	.0	492.8	.0	4.8	.0	497.6	613.0	1,110.6
Allegany	175.2	.0	175.2	36.1	.0	.0	211.4	60.9	272.2
Garrett	285.4	.0	285.4	12.4	.0	.0	297.8	117.0	414.8
Western Unit	460.6	.0	460.6	48.5	.0	.0	509.1	177.9	687.0
All counties	2,233.5	138.5	2,371.9	179.8	14.1	.0	2,565.8	3,690.0	6,255.8

Table 93.--Area of all forest land by county and forest-type group, Maryland, 1999

(In thousands of acres)

County	Forest-type group									All type groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Baltimore	.0	.0	5.8	.0	85.9	.0	1.8	21.9	1.8	117.3	9.3
Carroll	2.9	.0	.0	.0	46.2	.0	.0	14.2	.0	63.2	14.3
Frederick	.0	.0	.0	.0	120.4	.0	6.9	.0	.0	127.3	5.8
Washington	5.3	.0	.0	10.7	70.2	.0	5.3	16.1	.0	107.5	7.4
Anne Arundel/Howard	1.0	.0	18.6	4.3	100.3	.0	13.9	4.1	.0	142.1	9.3
Caroline/Talbot	.0	.0	35.4	16.0	45.9	5.3	4.8	.0	.0	107.3	7.6
Cecil/Harford	.0	.0	.0	3.0	145.0	.0	10.5	17.4	.0	176.0	7.4
Kent/Queen Annes	.0	.0	3.0	15.8	65.4	6.5	8.9	2.2	.0	101.8	7.0
Montgomery/Prince Georges	.0	1.2	1.4	23.3	176.3	17.4	15.6	.0	.0	235.2	5.3
Central Unit	9.2	1.2	64.1	73.1	855.5	29.3	67.7	76.0	1.8	1,177.7	2.6
Calvert	.0	.0	.0	5.1	56.0	6.0	8.7	.0	.0	75.8	6.5
Charles	.0	.0	7.9	24.2	130.2	20.1	4.1	10.5	.0	197.0	4.2
St. Mary's	.0	.0	29.5	19.5	53.0	6.4	.0	.0	.0	108.5	6.0
Southern Unit	.0	.0	37.4	48.9	239.2	32.5	12.8	10.5	.0	381.3	3.1
Dorchester	.0	.0	50.8	27.7	20.7	29.9	8.6	.0	.0	137.6	5.5
Somerset	.0	.0	67.5	1.3	16.3	.0	2.6	.0	.0	87.8	8.2
Wicomico	.0	.0	23.2	20.4	56.8	15.2	.0	.0	.0	115.4	4.9
Worcester	.0	.0	37.2	58.2	23.7	25.6	12.0	.0	.0	156.7	7.4
Lower Eastern Shore	.0	.0	178.7	107.6	117.5	70.6	23.2	.0	.0	497.6	3.3
Allegany	.0	.0	14.4	.0	144.3	.0	12.1	40.5	.0	211.4	4.5
Garrett	15.5	3.2	.0	.0	161.9	.0	20.1	97.1	.0	297.8	2.3
Western Unit	15.5	3.2	14.4	.0	306.2	.0	32.2	137.7	.0	509.1	2.3
All counties	24.7	4.4	294.6	229.6	1,518.4	132.3	135.8	224.2	1.8	2,565.8	1.5
SE	42.3	78.2	10.9	14.4	3.8	19.4	19.8	14.8	100.0	1.5	

Table 94.--Area of all forest land by county and stand-size class, Maryland, 1999

(In thousands of acres)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Baltimore	89.1	12.1	16.1	.0	117.3	9.3
Carroll	54.6	8.6	.0	.0	63.2	14.3
Frederick	100.1	20.8	.0	6.4	127.3	5.8
Washington	85.4	5.3	10.0	6.8	107.5	7.4
Anne Arundel/Howard	93.2	33.3	12.8	2.8	142.1	9.3
Caroline/Talbot	40.4	29.8	35.5	1.5	107.3	7.6
Cecil/Harford	134.6	32.6	8.7	.0	176.0	7.4
Kent/Queen Annes	76.0	17.4	8.4	.0	101.8	7.0
Montgomery/Prince Georges	169.3	34.9	22.1	8.9	235.2	5.3
Central Unit	842.7	194.8	113.8	26.5	1,177.7	2.6
Calvert	62.0	4.6	9.2	.0	75.8	6.5
Charles	140.3	38.8	17.8	.0	197.0	4.2
St. Mary's	97.3	10.3	.9	.0	108.5	6.0
Southern Unit	299.7	53.7	27.9	.0	381.3	3.1
Dorchester	79.7	39.0	19.0	.0	137.6	5.5
Somerset	36.4	27.0	24.4	.0	87.8	8.2
Wicomico	79.6	9.0	25.3	1.6	115.4	4.9
Worcester	74.9	66.4	15.4	.0	156.7	7.4
Lower Eastern Shore	270.5	141.5	84.0	1.6	497.6	3.3
Allegany	118.3	62.5	30.5	.0	211.4	4.5
Garrett	184.4	87.9	24.6	.9	297.8	2.3
Western Unit	302.8	150.4	55.1	.9	509.1	2.3
All counties	1,715.6	540.5	280.7	28.9	2,565.8	1.5
SE	3.2	9.1	12.9	34.6	1.5	

Table 95.--Area of timberland by county and ownership class, Maryland, 1999

(In thousands of acres)

County	Ownership class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
Baltimore	.0	22.5	.0	76.2	98.7	12.5
Carroll	.0	4.4	.0	58.9	63.2	14.3
Frederick	.0	11.4	.0	82.3	93.7	15.3
Washington	.0	12.2	5.3	68.6	86.1	13.6
Anne Arundel/Howard	.0	14.1	.0	108.4	122.6	12.1
Caroline/Talbot	.0	.0	4.4	102.9	107.3	7.6
Cecil/Harford	.0	26.5	.0	147.7	174.2	7.5
Kent/Queen Annes	.0	9.7	.0	92.1	101.8	7.0
Montgomery/Prince Georges	.0	52.6	.0	136.9	189.5	8.9
Central Unit	.0	153.4	9.7	874.1	1,037.2	3.6
Calvert	.0	.0	.0	75.8	75.8	6.5
Charles	.0	33.5	.0	163.4	197.0	4.2
St. Mary's	.0	22.4	.0	86.1	108.5	6.0
Southern Unit	.0	55.9	.0	325.4	381.3	3.1
Dorchester	.0	7.9	31.8	93.1	132.8	6.3
Somerset	.0	8.3	25.5	54.1	87.8	8.2
Wicomico	.0	10.8	3.2	101.5	115.4	4.9
Worcester	.0	13.4	17.8	125.4	156.7	7.4
Lower Eastern Shore	.0	40.4	78.3	374.0	492.8	3.4
Allegany	.0	65.0	.0	110.2	175.2	8.4
Garrett	.0	106.8	.0	178.6	285.4	3.9
Western Unit	.0	171.8	.0	288.8	460.6	4.0
All counties	.0	421.6	88.0	1,862.3	2,371.9	1.9
SE	.0	10.7	24.6	3.2	1.9	

Table 96.--Area of timberland by county and forest-type group, Maryland, 1999

(In thousands of acres)

County	Forest-type group									All type groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Baltimore	.0	.0	5.8	.0	67.3	.0	1.8	21.9	1.8	98.7	12.5
Carroll	2.9	.0	.0	.0	46.2	.0	.0	14.2	.0	63.2	14.3
Frederick	.0	.0	.0	.0	89.1	.0	4.6	.0	.0	93.7	15.3
Washington	5.3	.0	.0	10.7	64.9	.0	.0	5.3	.0	86.1	13.6
Anne Arundel/Howard	1.0	.0	18.6	4.3	80.7	.0	13.9	4.1	.0	122.6	12.1
Caroline/Talbot	.0	.0	35.4	16.0	45.9	5.3	4.8	.0	.0	107.3	7.6
Cecil/Harford	.0	.0	.0	3.0	145.0	.0	8.7	17.4	.0	174.2	7.5
Kent/Queen Annes	.0	.0	3.0	15.8	65.4	6.5	8.9	2.2	.0	101.8	7.0
Montgomery/Prince Georges	.0	.0	1.4	23.3	146.7	10.0	8.2	.0	.0	189.5	8.9
Central Unit	9.2	.0	64.1	73.1	751.1	21.8	50.9	65.2	1.8	1,037.2	3.6
Calvert	.0	.0	.0	5.1	56.0	6.0	8.7	.0	.0	75.8	6.5
Charles	.0	.0	7.9	24.2	130.2	20.1	4.1	10.5	.0	197.0	4.2
St. Mary's	.0	.0	29.5	19.5	53.0	6.4	.0	.0	.0	108.5	6.0
Southern Unit	.0	.0	37.4	48.9	239.2	32.5	12.8	10.5	.0	381.3	3.1
Dorchester	.0	.0	50.8	27.7	20.7	29.9	3.8	.0	.0	132.8	6.3
Somerset	.0	.0	67.5	1.3	16.3	.0	2.6	.0	.0	87.8	8.2
Wicomico	.0	.0	23.2	20.4	56.8	15.2	.0	.0	.0	115.4	4.9
Worcester	.0	.0	37.2	58.2	23.7	25.6	12.0	.0	.0	156.7	7.4
Lower Eastern Shore	.0	.0	178.7	107.6	117.5	70.6	18.4	.0	.0	492.8	3.4
Allegany	.0	.0	2.3	.0	126.3	.0	6.1	40.5	.0	175.2	8.4
Garrett	15.5	3.2	.0	.0	153.8	.0	20.1	92.9	.0	285.4	3.9
Western Unit	15.5	3.2	2.3	.0	280.1	.0	26.1	133.4	.0	460.6	4.0
All counties	24.7	3.2	282.6	229.6	1,387.9	124.8	108.2	209.1	1.8	2,371.9	1.9
SE	42.3	100.0	10.9	14.4	4.3	19.6	22.7	15.5	100.0	1.9	

Table 97.--Area of timberland by county and stand-size class, Maryland, 1999

(In thousands of acres)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Baltimore	70.5	12.1	16.1	.0	98.7	12.5
Carroll	54.6	8.6	.0	.0	63.2	14.3
Frederick	73.6	13.7	.0	6.4	93.7	15.3
Washington	69.3	5.3	10.0	1.5	86.1	13.6
Anne Arundel/Howard	79.9	27.1	12.8	2.8	122.6	12.1
Caroline/Talbot	40.4	29.8	35.5	1.5	107.3	7.6
Cecil/Harford	134.6	30.8	8.7	.0	174.2	7.5
Kent/Queen Annes	76.0	17.4	8.4	.0	101.8	7.0
Montgomery/Prince Georges	139.5	27.6	14.6	7.8	189.5	8.9
Central Unit	738.5	172.4	106.3	20.0	1,037.2	3.6
Calvert	62.0	4.6	9.2	.0	75.8	6.5
Charles	140.3	38.8	17.8	.0	197.0	4.2
St. Mary's	97.3	10.3	.9	.0	108.5	6.0
Southern Unit	299.7	53.7	27.9	.0	381.3	3.1
Dorchester	79.7	39.0	14.1	.0	132.8	6.3
Somerset	36.4	27.0	24.4	.0	87.8	8.2
Wicomico	79.6	9.0	25.3	1.6	115.4	4.9
Worcester	74.9	66.4	15.4	.0	156.7	7.4
Lower Eastern Shore	270.5	141.5	79.2	1.6	492.8	3.4
Allegany	94.3	50.5	30.5	.0	175.2	8.4
Garrett	172.0	87.9	24.6	.9	285.4	3.9
Western Unit	266.3	138.4	55.1	.9	460.6	4.0
All counties	1,575.0	506.1	268.4	22.5	2,371.9	1.9
SE	3.6	9.5	13.1	37.9	1.9	

Table 98.--Area of timberland by county and cubic-foot stand-volume class of growing-stock trees, Maryland, 1999

(In thousands of acres)

County	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
Baltimore	15.5	.0	12.4	15.7	15.7	39.4	98.7	12.5
Carroll	1.4	4.4	13.2	5.8	8.5	30.0	63.2	14.3
Frederick	6.4	.0	11.4	19.9	11.4	44.5	93.7	15.3
Washington	6.3	18.3	5.3	8.1	26.8	21.5	86.1	13.6
Anne Arundel/Howard	6.7	8.9	23.4	10.3	20.8	52.4	122.6	12.1
Caroline/Talbot	35.7	3.1	22.1	18.5	3.3	24.5	107.3	7.6
Cecil/Harford	8.7	19.7	16.1	14.2	26.8	88.7	174.2	7.5
Kent/Queen Annes	13.8	10.8	10.2	13.2	9.8	44.0	101.8	7.0
Montgomery/Prince Georges	30.0	20.1	24.8	29.0	32.7	52.8	189.5	8.9
Central Unit	124.6	85.2	139.0	134.7	155.8	397.9	1,037.2	3.6
Calvert	4.7	6.0	6.0	12.0	15.7	31.4	75.8	6.5
Charles	16.6	18.7	8.8	33.8	12.7	106.4	197.0	4.2
St. Mary's	.9	4.6	5.0	14.4	20.9	62.8	108.5	6.0
Southern Unit	22.1	29.3	19.9	60.2	49.3	200.6	381.3	3.1
Dorchester	23.2	17.8	21.0	16.0	24.4	30.5	132.8	6.3
Somerset	24.4	.0	22.7	15.1	5.3	20.4	87.8	8.2
Wicomico	22.9	3.6	10.6	21.0	26.3	31.1	115.4	4.9
Worcester	25.8	16.4	1.3	47.6	15.6	50.0	156.7	7.4
Lower Eastern Shore	96.3	37.8	55.6	99.7	71.5	131.9	492.8	3.4
Allegany	14.5	67.7	28.9	22.2	18.9	23.1	175.2	8.4
Garrett	38.3	24.0	33.4	60.3	39.7	89.6	285.4	3.9
Western Unit	52.8	91.7	62.4	82.5	58.5	112.8	460.6	4.0
All counties	295.7	244.0	276.8	377.2	335.1	843.2	2,371.9	1.9
SE	12.1	14.3	13.6	11.1	12.5	6.3	1.9	

Table 99.--Area of timberland by county and stocking class of growing-stock trees, Maryland, 1999

(In thousands of acres)

County	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
Baltimore	.0	13.3	44.4	35.5	5.6	98.7	12.5
Carroll	.0	11.8	22.8	24.2	4.4	63.2	14.3
Frederick	6.4	.0	33.7	47.6	6.0	93.7	15.3
Washington	6.3	13.0	24.2	42.8	.0	86.1	13.6
Anne Arundel/Howard	2.8	11.7	41.2	65.2	1.8	122.6	12.1
Caroline/Talbot	1.5	.0	39.8	53.5	12.4	107.3	7.6
Cecil/Harford	.0	15.3	59.4	96.2	3.4	174.2	7.5
Kent/Queen Annes	.9	13.2	33.3	49.0	5.4	101.8	7.0
Montgomery/Prince Georges	7.8	43.8	59.1	74.5	4.3	189.5	8.9
Central Unit	25.7	122.1	357.8	488.4	43.2	1,037.2	3.6
Calvert	.0	10.5	18.0	47.4	.0	75.8	6.5
Charles	.0	16.6	62.9	114.9	2.5	197.0	4.2
St. Mary's	.0	4.6	26.4	57.1	20.5	108.5	6.0
Southern Unit	.0	31.7	107.3	219.4	23.0	381.3	3.1
Dorchester	.0	18.3	28.3	75.6	10.6	132.8	6.3
Somerset	.0	3.5	20.8	35.4	28.2	87.8	8.2
Wicomico	1.6	6.1	25.9	74.2	7.6	115.4	4.9
Worcester	.0	10.4	39.0	105.0	2.3	156.7	7.4
Lower Eastern Shore	1.6	38.2	114.0	290.3	48.7	492.8	3.4
Allegany	1.5	29.7	63.0	74.9	6.1	175.2	8.4
Garrett	6.4	39.8	76.8	145.9	16.4	285.4	3.9
Western Unit	7.9	69.6	139.8	220.8	22.5	460.6	4.0
All counties	35.2	261.5	718.9	1,218.9	137.5	2,371.9	1.9
SE	30.1	14.2	7.4	5.0	16.6	1.9	

Table 100.--Area of timberland by county and site-productivity class, Maryland, 1999

(In thousands of acres)

County	Productivity class(cuft/a/yr)				All classes	SE
	Very good (120+)	Good (85-119)	Fair (50-84)	Poor (20-49)		
Baltimore	23.2	16.2	47.6	11.7	98.7	12.5
Carroll	.0	14.3	40.3	8.6	63.2	14.3
Frederick	.0	37.4	45.4	10.9	93.7	15.3
Washington	10.7	13.0	40.2	22.2	86.1	13.6
Anne Arundel/Howard	8.9	40.9	43.0	29.7	122.6	12.1
Caroline/Talbot	7.4	14.4	55.7	29.8	107.3	7.6
Cecil/Harford	27.7	37.5	71.0	38.0	174.2	7.5
Kent/Queen Annes	.9	19.2	32.3	49.5	101.8	7.0
Montgomery/Prince Georges	27.1	46.5	49.0	66.9	189.5	8.9
Central Unit	105.9	239.4	424.5	267.4	1,037.2	3.6
Calvert	4.5	2.2	9.0	60.2	75.8	6.5
Charles	.0	20.8	54.0	122.2	197.0	4.2
St. Mary's	11.0	19.8	22.4	55.3	108.5	6.0
Southern Unit	15.5	42.8	85.4	237.7	381.3	3.1
Dorchester	9.2	9.7	52.3	61.6	132.8	6.3
Somerset	3.9	17.6	37.0	29.3	87.8	8.2
Wicomico	.0	15.8	53.6	46.0	115.4	4.9
Worcester	28.2	14.2	46.8	67.5	156.7	7.4
Lower Eastern Shore	41.3	57.3	189.8	204.4	492.8	3.4
Allegany	.0	25.7	61.0	88.5	175.2	8.4
Garrett	28.4	50.7	128.9	77.4	285.4	3.9
Western Unit	28.4	76.4	189.9	165.9	460.6	4.0
All counties	191.0	415.9	889.6	875.4	2,371.9	1.9
SE	17.5	10.3	6.4	6.3	1.9	

Table 101.--Biomass of all timber on forest land, by county, class of timber, and component, Maryland, 1999

(In thousands of dry tons)

County	Growing stock trees					Total timber	SE
	Growing stock	Branches	Foliage	Stump and roots	Cull trees		
Baltimore	7,864	874	238	2,221	473	11,670	12.7
Carroll	3,488	399	110	1,009	318	5,323	15.9
Frederick	9,088	1,005	256	2,585	472	13,406	11.6
Washington	4,989	571	169	1,423	1,127	8,279	13.9
Anne Arundel/Howard	9,223	1,084	334	2,685	511	13,838	13.6
Caroline/Talbot	3,739	500	214	1,133	270	5,857	21.1
Cecil/Harford	10,761	1,206	317	3,081	1,084	16,450	9.5
Kent/Queen Annes	5,780	663	201	1,646	808	9,097	12.1
Montgomery/Prince Georges	12,690	1,428	389	3,634	1,273	19,415	9.3
Central Unit	67,622	7,729	2,227	19,419	6,336	103,335	4.2
Calvert	4,811	547	146	1,391	248	7,143	15.5
Charles	11,361	1,344	415	3,328	400	16,847	7.3
St. Mary's	6,432	847	336	1,951	187	9,753	8.1
Southern Unit	22,604	2,737	898	6,670	835	33,743	5.4
Dorchester	5,193	709	316	1,584	396	8,198	13.4
Somerset	2,995	426	214	923	60	4,617	16.2
Wicomico	5,397	671	241	1,597	475	8,381	12.0
Worcester	7,249	939	374	2,175	548	11,285	14.2
Lower Eastern Shore	20,834	2,744	1,146	6,279	1,479	32,482	7.1
Allegany	7,851	931	285	2,306	997	12,370	9.3
Garrett	14,142	1,713	559	4,196	1,831	22,442	6.5
Western Unit	21,993	2,644	844	6,502	2,828	34,812	5.3
All counties	133,054	15,854	5,115	38,871	11,479	204,373	2.7
SE	2.9	2.7	2.9	2.8	8.3	2.7	

Table 102.--Biomass of all timber on timberland, by county, class of timber, and component, Maryland, 1999

(In thousands of dry tons)

County	Growing stock trees					Total timber	SE
	Growing stock	Branches	Foliage	Stump and roots	Cull trees		
Baltimore	6,397	716	197	1,814	382	9,507	16.7
Carroll	3,488	399	110	1,009	318	5,323	15.9
Frederick	6,309	707	183	1,813	222	9,234	20.3
Washington	4,014	464	142	1,150	663	6,433	17.6
Anne Arundel/Howard	7,844	922	288	2,279	502	11,835	16.4
Caroline/Talbot	3,739	500	214	1,133	270	5,857	21.1
Cecil/Harford	10,761	1,206	317	3,081	1,084	16,450	9.5
Kent/Queen Annes	5,780	663	201	1,646	808	9,097	12.1
Montgomery/Prince Georges	9,896	1,124	314	2,848	727	14,909	13.3
Central Unit	58,228	6,701	1,965	16,775	4,975	88,645	5.2
Calvert	4,811	547	146	1,391	248	7,143	15.5
Charles	11,361	1,344	415	3,328	400	16,847	7.3
St. Mary's	6,432	847	336	1,951	187	9,753	8.1
Southern Unit	22,604	2,737	898	6,670	835	33,743	5.4
Dorchester	5,193	709	316	1,584	396	8,198	13.4
Somerset	2,995	426	214	923	60	4,617	16.2
Wicomico	5,397	671	241	1,597	475	8,381	12.0
Worcester	7,249	939	374	2,175	548	11,285	14.2
Lower Eastern Shore	20,834	2,744	1,146	6,279	1,479	32,482	7.1
Allegany	6,469	754	219	1,888	777	10,107	12.9
Garrett	13,342	1,618	530	3,964	1,501	20,956	7.7
Western Unit	19,811	2,371	749	5,852	2,278	31,063	6.7
All counties	121,477	14,554	4,758	35,577	9,568	185,934	3.1
SE	3.3	3.1	3.2	3.2	8.1	3.1	

Table 103.--Biomass of growing stock on timberland, by county and component, Maryland, 1999

(In thousands of dry tons)

County	Growing stock			Total growing stock	SE
	Poletimber	Sawlog	Upper stem		
Baltimore	964	4,560	874	6,397	17.4
Carroll	821	2,186	481	3,488	17.2
Frederick	1,210	4,220	879	6,309	20.7
Washington	669	2,763	581	4,014	18.6
Anne Arundel/Howard	1,702	5,141	1,001	7,844	17.8
Caroline/Talbot	1,282	2,048	409	3,739	21.5
Cecil/Harford	2,301	7,018	1,442	10,761	10.3
Kent/Queen Annes	937	4,046	797	5,780	12.2
Montgomery/Prince Georges	1,865	6,697	1,334	9,896	13.9
Central Unit	11,750	38,680	7,798	58,228	5.4
Calvert	974	3,205	632	4,811	16.4
Charles	2,964	6,923	1,475	11,361	7.5
St. Mary's	1,558	4,056	818	6,432	8.2
Southern Unit	5,496	14,183	2,925	22,604	5.6
Dorchester	1,781	2,870	542	5,193	14.4
Somerset	1,032	1,648	314	2,995	16.9
Wicomico	1,535	3,220	642	5,397	12.1
Worcester	2,450	4,003	795	7,249	13.8
Lower Eastern Shore	6,799	11,742	2,293	20,834	7.2
Allegany	2,156	3,550	763	6,469	13.9
Garrett	4,421	7,310	1,611	13,342	8.2
Western Unit	6,578	10,859	2,374	19,811	7.2
All counties	30,622	75,465	15,390	121,477	3.3
SE	3.7	4.1	3.8	3.3	

Table 104.--Biomass of all trees and shrubs on timberland, by county and class of material, Maryland, 1999

(In thousands of dry tons)

County	Non-timber					Total trees and shrubs	SE
	Timber	Salvable dead trees	Saplings	Seedlings	Shrubs		
Baltimore	9,507	7	351	50	43	9,959	16.0
Carroll	5,323	17	279	55	17	5,691	15.8
Frederick	9,234	59	292	82	19	9,686	20.0
Washington	6,433	22	183	111	16	6,765	17.4
Anne Arundel/Howard	11,835	95	591	47	35	12,603	15.7
Caroline/Talbot	5,857	16	804	80	24	6,781	18.4
Cecil/Harford	16,450	8	787	63	49	17,357	9.1
Kent/Queen Annes	9,097	68	557	41	15	9,778	11.3
Montgomery/Prince Georges	14,909	73	608	99	52	15,741	12.8
Central Unit	88,645	366	4,452	627	271	94,362	4.9
Calvert	7,143	60	449	63	19	7,734	14.8
Charles	16,847	89	1,122	123	81	18,263	6.7
St. Mary's	9,753	39	499	96	53	10,441	7.4
Southern Unit	33,743	188	2,071	283	153	36,438	5.1
Dorchester	8,198	38	963	66	13	9,278	12.5
Somerset	4,617	32	982	56	4	5,691	14.4
Wicomico	8,381	47	866	58	7	9,361	11.3
Worcester	11,285	18	1,054	84	40	12,481	13.2
Lower Eastern Shore	32,482	135	3,865	264	65	36,811	6.6
Allegany	10,107	62	1,231	127	20	11,548	11.7
Garrett	20,956	127	1,817	263	121	23,284	7.1
Western Unit	31,063	189	3,049	391	141	34,832	6.1
All counties	185,934	878	13,437	1,565	630	202,443	2.9
SE	3.1	14.2	5.3	6.0	9.8	2.9	

Table 105.--Net volume of growing-stock trees on timberland by county and forest-type group, Maryland, 1999

(In millions of cubic feet)

County	Forest-type group									All type groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Baltimore	.0	.0	17.3	.0	207.0	.0	18.0	16.3	3.8	262.3	18.5
Carroll	10.2	.0	.0	.0	113.6	.0	.0	18.8	.0	142.6	17.3
Frederick	.0	.0	.0	.0	238.8	.0	17.6	.0	.0	256.4	22.1
Washington	7.3	.0	.0	15.3	143.2	.0	.0	4.1	.0	170.0	19.5
Anne Arundel/Howard	1.0	.0	42.9	9.1	202.6	.0	55.7	12.0	.0	323.3	18.4
Caroline/Talbot	.0	.0	59.1	19.5	60.5	13.4	1.5	.0	.0	154.0	17.6
Cecil/Harford	.0	.0	.0	9.9	389.2	.0	7.8	35.3	.0	442.2	10.5
Kent/Queen Annes	.0	.0	9.0	43.2	132.9	21.2	9.3	1.2	.0	216.8	12.6
Montgomery/Prince Georges	.0	.0	4.4	32.4	304.8	26.4	11.5	.0	.0	379.4	14.1
Central Unit	18.5	.0	132.7	129.4	1,792.4	61.0	121.3	87.8	3.8	2,347.0	5.6
Calvert	.0	.0	.0	13.0	150.1	18.0	8.8	.0	.0	189.9	12.6
Charles	.0	.0	10.9	61.7	324.5	52.2	7.3	33.8	.0	490.5	8.2
St. Mary's	.0	.0	106.1	61.3	146.6	12.7	.0	.0	.0	326.7	9.8
Southern Unit	.0	.0	117.0	136.0	621.2	82.9	16.2	33.8	.0	1,007.0	5.6
Dorchester	.0	.0	70.8	58.1	50.3	50.3	3.6	.0	.0	233.0	10.9
Somerset	.0	.0	85.2	8.0	41.6	.0	9.8	.0	.0	144.6	13.3
Wicomico	.0	.0	41.9	30.5	126.2	27.4	.0	.0	.0	226.0	11.8
Worcester	.0	.0	64.4	113.5	29.7	82.5	37.5	.0	.0	327.7	13.1
Lower Eastern Shore	.0	.0	262.4	210.1	247.8	160.2	50.8	.0	.0	931.3	6.4
Allegany	.0	.0	2.0	.0	174.3	.0	6.1	62.6	.0	244.9	14.6
Garrett	50.7	9.9	.0	.0	318.6	.0	27.8	134.9	.0	541.9	8.4
Western Unit	50.7	9.9	2.0	.0	492.9	.0	33.9	197.5	.0	786.8	7.3
All counties	69.2	9.9	514.0	475.5	3,154.3	304.0	222.3	319.1	3.8	5,072.2	3.3
SE	48.2	100.0	14.5	16.0	5.3	22.8	30.6	20.5	100.0	3.3	

Table 106.--Net volume of growing-stock trees on timberland by county and stand-size class, Maryland, 1999

(In millions of cubic feet)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Baltimore	238.5	18.2	5.6	.0	262.3	18.5
Carroll	128.2	14.5	.0	.0	142.6	17.3
Frederick	221.7	33.2	.0	1.5	256.4	22.1
Washington	163.9	2.7	3.4	.0	170.0	19.5
Anne Arundel/Howard	273.1	40.3	9.0	.9	323.3	18.4
Caroline/Talbot	102.4	45.6	5.7	.2	154.0	17.6
Cecil/Harford	385.7	52.5	4.0	.0	442.2	10.5
Kent/Queen Annes	204.5	11.7	.6	.0	216.8	12.6
Montgomery/Prince Georges	351.8	26.3	1.3	.0	379.4	14.1
Central Unit	2,069.7	245.1	29.7	2.6	2,347.0	5.6
Calvert	176.5	8.7	4.7	.0	189.9	12.6
Charles	411.8	72.3	6.4	.0	490.5	8.2
St. Mary's	312.4	14.1	.1	.0	326.7	9.8
Southern Unit	900.8	95.1	11.1	.0	1,007.0	5.6
Dorchester	185.2	43.8	4.0	.0	233.0	10.9
Somerset	94.1	47.7	2.8	.0	144.6	13.3
Wicomico	209.6	10.4	5.8	.2	226.0	11.8
Worcester	221.9	103.4	2.4	.0	327.7	13.1
Lower Eastern Shore	710.8	205.2	15.0	.2	931.3	6.4
Allegany	171.0	59.4	14.5	.0	244.9	14.6
Garrett	379.2	161.3	1.4	.0	541.9	8.4
Western Unit	550.2	220.8	15.8	.0	786.8	7.3
All counties	4,231.4	766.3	71.7	2.8	5,072.2	3.3
SE	4.3	11.6	21.3	63.8	3.3	

Table 107.--Net volume of growing-stock and sawtimber trees on timberland by county and species group, Maryland, 1999

(In millions of cubic/board feet)

County	Growing stock and sawtimber									
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total
Baltimore	13.5	4.4	147.1	97.3	262.3	44.4	21.9	569.0	381.2	1,016.5
Carroll	3.6	.0	49.0	90.0	142.6	14.1	.0	161.2	281.3	456.6
Frederick	.2	.0	100.6	155.6	256.4	.0	.0	395.1	504.8	899.9
Washington	13.7	5.4	50.7	100.2	170.0	56.9	10.0	188.6	309.8	565.4
Anne Arundel/Howard	39.8	.0	194.5	89.0	323.3	107.4	.0	697.7	305.4	1,110.5
Caroline/Talbot	58.8	2.5	56.2	36.5	154.0	178.6	5.9	142.5	113.6	440.6
Cecil/Harford	4.5	.1	264.8	172.9	442.2	15.0	.0	844.4	654.6	1,514.0
Kent/Queen Annes	31.2	.0	120.6	65.0	216.8	99.7	.0	441.8	239.3	780.7
Montgomery/Prince Georges	22.0	1.1	189.8	166.4	379.4	55.5	.4	669.8	588.4	1,314.1
Central Unit	187.2	13.6	1,173.3	972.9	2,347.0	571.6	38.2	4,110.2	3,378.4	8,098.4
Calvert	7.7	.0	92.3	89.8	189.9	29.2	.0	298.8	318.7	646.7
Charles	43.7	.8	249.9	196.1	490.5	128.0	1.2	771.2	658.3	1,558.8
St. Mary's	111.3	.0	131.8	83.5	326.7	409.6	.0	408.7	242.3	1,060.6
Southern Unit	162.7	.8	474.1	369.5	1,007.0	566.9	1.2	1,478.6	1,219.4	3,266.1
Dorchester	108.6	.1	69.8	54.4	233.0	324.4	.0	165.6	169.3	659.3
Somerset	80.8	.0	56.5	7.3	144.6	177.6	.0	186.2	16.1	379.9
Wicomico	56.9	.5	124.1	44.6	226.0	194.2	1.6	414.2	104.7	714.6
Worcester	100.5	6.7	177.5	43.0	327.7	283.1	26.7	495.5	129.1	934.3
Lower Eastern Shore	346.7	7.3	428.0	149.2	931.3	979.2	28.3	1,261.4	419.1	2,688.1
Allegany	10.9	.2	45.4	188.4	244.9	33.6	.0	126.2	490.0	649.8
Garrett	54.4	17.1	204.7	265.7	541.9	95.2	49.6	513.5	801.0	1,459.2
Western Unit	65.3	17.3	250.1	454.1	786.8	128.7	49.6	639.7	1,291.0	2,109.0
All counties	761.9	39.1	2,325.5	1,945.7	5,072.2	2,246.4	117.3	7,490.0	6,307.9	16,161.5

Table 108.--Net volume of sawtimber trees on timberland by county and forest-type group, Maryland, 1999

(In millions of board feet)

County	Forest-type group									All type groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Baltimore	.0	.0	56.0	.0	831.1	.0	79.9	45.4	4.2	1,016.5	21.0
Carroll	42.4	.0	.0	.0	368.7	.0	.0	45.5	.0	456.6	19.3
Frederick	.0	.0	.0	.0	820.5	.0	79.4	.0	.0	899.9	25.4
Washington	23.6	.0	.0	50.8	476.3	.0	.0	14.7	.0	565.4	23.3
Anne Arundel/Howard	3.7	.0	106.0	28.5	712.5	.0	208.0	51.8	.0	1,110.5	22.2
Caroline/Talbot	.0	.0	163.6	51.2	182.9	42.8	.0	.0	.0	440.6	22.7
Cecil/Harford	.0	.0	.0	40.6	1,356.2	.0	3.2	114.0	.0	1,514.0	14.2
Kent/Queen Annes	.0	.0	16.5	149.0	496.9	78.7	34.2	5.3	.0	780.7	14.5
Montgomery/Prince Georges	.0	.0	2.7	80.0	1,063.1	124.3	43.9	.0	.0	1,314.1	16.1
Central Unit	69.7	.0	344.9	400.2	6,308.2	245.9	448.5	276.8	4.2	8,098.4	6.7
Calvert	.0	.0	.0	33.2	532.7	54.4	26.3	.0	.0	646.7	16.7
Charles	.0	.0	19.1	208.6	1,087.6	169.7	7.1	66.8	.0	1,558.8	10.3
St. Mary's	.0	.0	357.0	206.6	470.0	26.9	.0	.0	.0	1,060.6	13.8
Southern Unit	.0	.0	376.1	448.5	2,090.4	251.0	33.4	66.8	.0	3,266.1	7.4
Dorchester	.0	.0	174.4	151.0	156.0	168.2	9.6	.0	.0	659.3	13.5
Somerset	.0	.0	174.9	36.9	135.2	.0	32.9	.0	.0	379.9	18.7
Wicomico	.0	.0	124.0	86.4	424.9	79.3	.0	.0	.0	714.6	15.2
Worcester	.0	.0	189.6	238.5	93.9	287.7	124.5	.0	.0	934.3	19.3
Lower Eastern Shore	.0	.0	662.9	512.9	810.0	535.2	167.0	.0	.0	2,688.1	8.9
Allegany	.0	.0	4.4	.0	445.4	.0	30.7	169.3	.0	649.8	19.2
Garrett	72.1	39.0	.0	.0	928.0	.0	99.7	320.3	.0	1,459.2	10.5
Western Unit	72.1	39.0	4.4	.0	1,373.4	.0	130.5	489.6	.0	2,109.0	9.4
All counties	141.8	39.0	1,388.2	1,361.6	10,582.1	1,032.2	779.4	833.1	4.2	16,161.5	4.2
SE	46.0	100.0	17.7	17.7	6.1	25.0	33.8	22.2	100.0	4.2	

Table 109.--Net volume of sawtimber trees on timberland by county and stand-size class, Maryland, 1999

(In millions of board feet)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Baltimore	971.2	26.1	19.3	.0	1,016.5	21.0
Carroll	431.4	25.2	.0	.0	456.6	19.3
Frederick	834.0	60.5	.0	5.4	899.9	25.4
Washington	555.1	1.7	8.5	.0	565.4	23.3
Anne Arundel/Howard	1,034.5	47.1	28.9	.0	1,110.5	22.2
Caroline/Talbot	358.5	74.6	7.5	.0	440.6	22.7
Cecil/Harford	1,445.3	68.7	.0	.0	1,514.0	14.2
Kent/Queen Annes	765.5	15.2	.0	.0	780.7	14.5
Montgomery/Prince Georges	1,280.5	32.2	1.4	.0	1,314.1	16.1
Central Unit	7,676.1	351.4	65.6	5.4	8,098.4	6.7
Calvert	625.3	17.0	4.4	.0	646.7	16.7
Charles	1,426.0	116.6	16.1	.0	1,558.8	10.3
St. Mary's	1,029.5	31.1	.0	.0	1,060.6	13.8
Southern Unit	3,080.9	164.6	20.6	.0	3,266.1	7.4
Dorchester	572.4	75.5	11.4	.0	659.3	13.5
Somerset	330.4	46.1	3.3	.0	379.9	18.7
Wicomico	692.0	9.8	12.8	.0	714.6	15.2
Worcester	778.7	152.0	3.6	.0	934.3	19.3
Lower Eastern Shore	2,373.5	283.4	31.1	.0	2,688.1	8.9
Allegany	537.5	87.4	24.9	.0	649.8	19.2
Garrett	1,221.5	237.7	.0	.0	1,459.2	10.5
Western Unit	1,759.0	325.1	24.9	.0	2,109.0	9.4
All counties	14,889.5	1,124.5	142.1	5.4	16,161.5	4.2
SE	4.7	13.3	31.1	100.0	4.2	

*U.S. GPO:2001-750-245/20027

Frieswyk, Thomas S. 2001. **Forest statistics for Maryland: 1986 and 1999**. Resour. Bull. NE-154. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 164 p.

A statistical report on the fifth forest inventory of Maryland (1998-1999). Findings are displayed in 109 tables containing estimates of forest area, numbers of trees, wildlife habitat, timber volume, growth, change, and biomass. Data are presented at three levels: state, geographic unit and county.

Keywords: Forest survey; inventory; area; volume; growth; change; biomass

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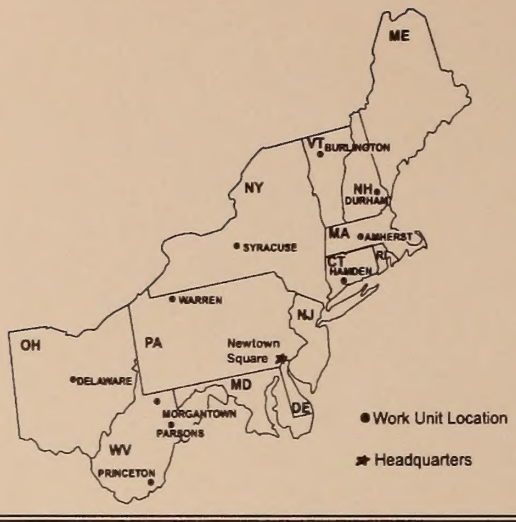

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