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Forest Statistics for Maryland—1976 and 1986

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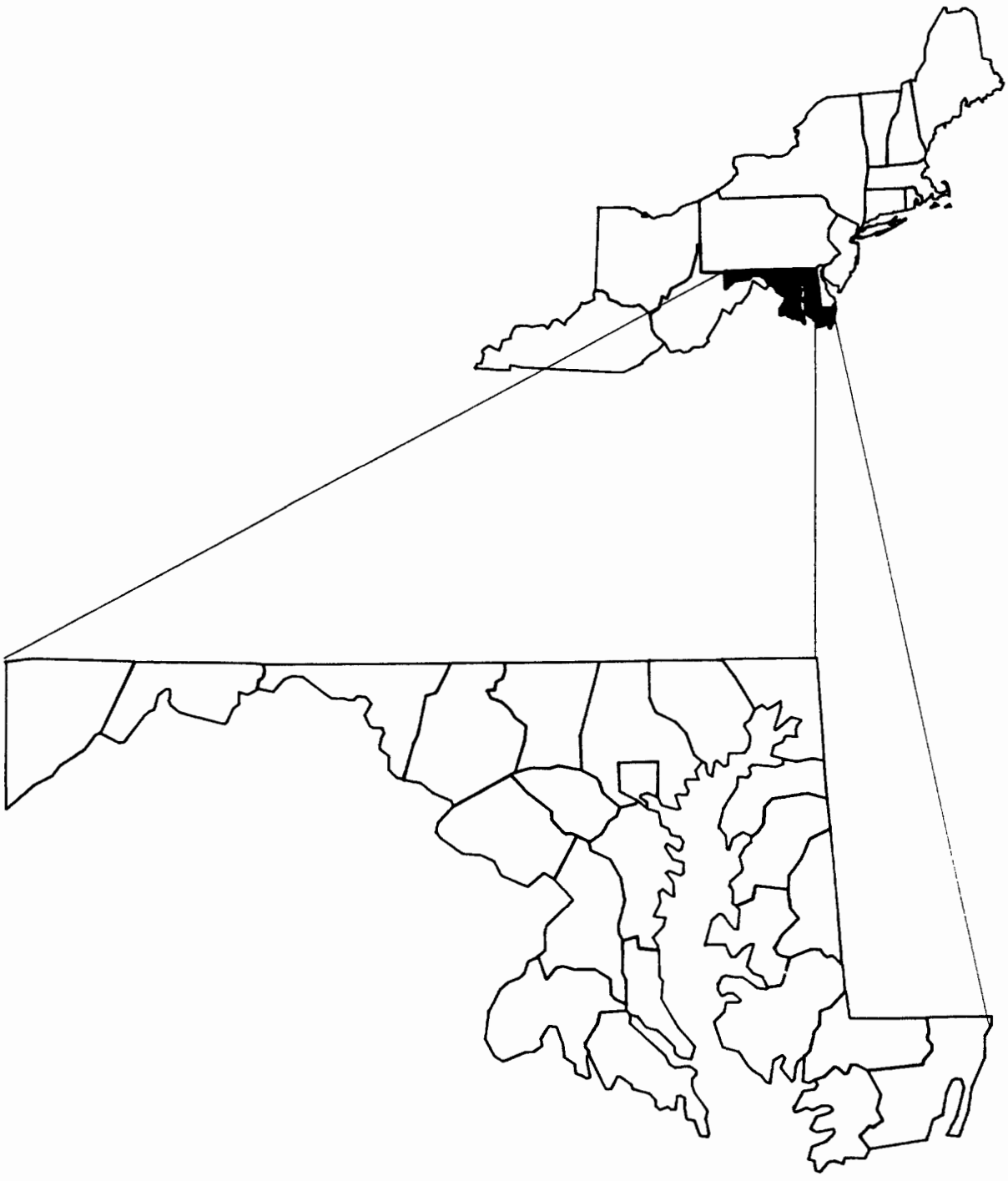

Abstract

A statistical report on the fourth forest survey of Maryland conducted in 1985-86 by the Forest Inventory and Analysis Unit, Northeastern Forest Experiment Station. Statistics for forest area, numbers of trees, timber volume, tree biomass, average annual growth, and timber products output are displayed at the state, and when appropriate at the unit and county levels. The current inventory indicates that the state has approximately 4.5 billion cubic feet of growing-stock volume, or 260.1 million tons of net green weight of live trees, on 2.4 million acres of timberland. For use in trend analysis, this report includes estimates derived from reprocessing the 1976 data using current methods and standards.

Foreword

The fourth inventory of Maryland was under the overall direction of John R. Peters, Project Leader of the Forest Inventory and Analysis Unit. Thomas W. Birch assisted in the development and administration of the operating plan. Charles T. Scott was responsible for the design of the inventory and sample selection. David J. Alerich supervised the interpretation of aerial photos and collection of data. He was assisted by Joseph G. Reddan. Members of the field staff were:

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Thomas S. Frieswyk and Dawn M. DiGiovanni applied FINSYS (Forest INventory SYStem), a generalized data processing system, to the specific needs of the Maryland inventory and produced summary tables for the state and counties. Thomas W. Birch and Dawn M. DiGiovanni were instrumental in assuring that the area estimates were consistent with the two previous inventories. Rosemary K. Venit produced graphics and was involved in rewriting parts of the FINSYS table generating routine.

Robert L. Nevel, Jr., Richard H. Widmann, and Eric H. Wharton, with the assistance of the Maryland Forest, Parks and Wildlife Service collected and compiled the data on timber products output and timber removals.

Carmela M. Hyland was responsible for administrative and secretarial services. Marie Pennestri typed the text for this report.

The Forest Inventory and Analysis Unit would like to thank the landowners of Maryland for their cooperation and assistance during this inventory.

Forest Statistics for Maryland--1976 and 1986

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Highlights

* The report contains both 1986 tables and updated 1976 tables.

Forest Area

* Maryland, with 2.703 million acres of forest land, is 43 percent forested.

* Ninety percent of Maryland's forest land, 2.424 million acres, is classified as timberland (formerly known as commercial forest land).

* There was a slight decrease in land classified as timberland between surveys; however, total forest land has remained fairly stable.

* The area of sawtimber stands has increased 25 percent since the 1976 inventory; sawtimber stands now total 1.724 million acres or 71 percent of the timberland. A 52 percent decrease in the area of seedling and sapling stands has reduced these stands to 231,300 acres, or 10 percent of the timberland.

* Oak/hickory is the dominant forest-type group occupying 60 percent of the timberland and accounting for 64 percent of the growing-stock volume.

* Ninety percent of Maryland's timberland is privately owned.

Biomass

* Dry weight tables are available for the first time.

* The net green weight of all live trees on timberland is 260.1 million tons or 107.3 tons per acre. Softwoods account for 36.9 million tons or 15.3 tons per acre; hardwoods account for 223.1 million tons or 92 tons per acre.

* A little more than 167 million tons, or 64 percent of the net green weight of all live trees, is in growing-stock material. Of the remaining 93 million tons of all-live-tree weight, 63 percent is in growing-stock tops, 21 percent is in saplings, and 16 percent is in cull trees.

* An additional 4.8 million tons of biomass is contained in salvable dead trees.

* The net dry weight of all live trees on timberland is 146.9 million tons or an average of 60.6 tons per acre. Softwoods account for 17.1 million tons or 7.1 tons per acre; hardwoods account for 129.8 million tons or 53.5 tons per acre.

Timber Volume

* Growing-stock volume is 4.5 billion cubic feet, an average of 1,846 cubic feet per acre. This is a 18 percent increase over the 1976 inventory.

* Sawtimber volume is 13.3 billion board feet, an average of 5,501 board feet per acre. This is a 20 percent increase over the 1976 survey.

* Yellow-poplar growing-stock volume has increased 15 percent between inventories, it remains the number one species. With 547 million cubic feet, yellow-poplar accounts for over 12 percent of the growing-stock volume.

* Loblolly pine is the top softwood species with 472 million cubic feet or 10.5 percent of growing stock volume.

* Sawtimber stands contain just over 85 percent of the growing stock volume.

* Hardwood sawlog quality has declined slightly; in 1986, grade 1 and 2 sawlogs account for 25 percent of the sawlog volume while in 1976, grade 1 and 2 sawlogs acounted for 33 percent of the sawlog volume.

Growth/Removals

* Average annual net growth of growing-stock volume in Maryland is 3.8 percent of the inventory.

* Average annual net cubic-foot growth of growing-stock volume exceeded removals on a statewide basis (1.7:1); however, removals exceeded growth on the Lower Eastern Shore for both softwoods and hardwoods.

Introduction

Under the authority of the McSweeny-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 USDA Forest Service conducts periodic forest inventories of all states to provide up-to-date information on the forest resource of the Nation. The initial inventory of Maryland's resources was conducted in 1950. The second inventory was completed in 1964, and the third inventory, which began in 1975, was completed in 1976. This report presents the forest resource data from the fourth inventory completed in 1986. This inventory involved a cooperative effort of the Maryland Forest, Parks and Wildlife Service; the USDA Soil Conservation Service; and the Northeastern Forest Experiment Station.

The Forest Inventory and Analysis Unit of the Northeastern Forest Experiment Station conducted the inventory on all forest land, developed the resource tables, and prepared this report.

The sampling procedure used during the current reinventory utilized aerial photography, the remeasurement of a sample of the ground plots established in the earlier inventories, and establishment of new ground plots. In Maryland this required classification of 18,355 new points and reclassification of 550 points from the third inventory on aerial photographs into land-use and cubic-foot volume classes, establishment of 602 (342 forest and 260 nonforest) new ground plot locations as a subsample of the new photo points, and remeasurement of 550 (296 forest and 254 nonforest) plots from earlier inventories. Eleven hundred and fifty-two plots were measured an average of one plot for every 5465 acres. The data collected were summarized using the FINSYS computer system developed at the Northeastern Forest Experiment Station.

The reinventory of Maryland's forest resources involved several associated studies and considerable analysis. Reports discussing the State's private forest-land owners and its primary forest products industry are being prepared. Additional reports will also be published containing detailed 1986 biomass and wildlife statistics.

The forest area, numbers of trees, timber volume, biomass, and growth statistics shown in this report are but a summary of the information collected. Other information or additional summaries may be developed. **For information about these, contact the Forest Inventory and Analysis Unit, USDA Forest Service, 370 Reed Road, Broomall, PA 19008 (phone 215-690-3037).**

The four eastern Forest Experiment Stations have agreed to include a set of 25 core tables in each of their state resource bulletins. The format of any one 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 and content. A list of the core table numbers and their corresponding numbers as presented in this publication follows the index of tables.

Reliability of the Estimates

The data in this report were based on a carefully designed sample of forest conditions throughout Maryland. However, because the field crews did not measure every tree or every acre in the state, the data are estimates. The reliability of the estimating procedure can be judged by two important statistical measures: accuracy and precision. Among statisticians, 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 mainly interested 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 are sent to other agencies and to outside experts familiar with the resources of Maryland. If questions arise, the data are reviewed and reanalyzed to resolve the differences. Also, great care is taken to keep all sources of procedural error to a minimum by careful 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 reason-

able 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.

Briefly, here is an example of how the sampling error is used to indicate reliability: The estimate of timberland for Maryland is 2,424,000 acres. Its sampling error is 1.1 percent, or 26,664 acres. This means that if there are no errors in the procedure and we repeated the inventory in the same way, the odds are 2 to 1 (66 percent probability) that the estimate would be between 2,397,336 and 2,450,664 acres (2,424,000 +/- 26,664). Similarly, the odds are 19 to 1 (95 percent probability) that the estimate would be within 53,328 acres. It is worth noting that the state estimates have the smallest sampling errors and therefore are the most precise or reliable. County estimates are less reliable. In Maryland for example, the sampling error for timberland at the level is 1.1 percent; while the sampling error for Frederick County is 5.2 percent. Thus, county level estimates are often considerably less reliable than state level estimates. In general, as the size of the estimate decreases in relation to the total, the sampling error, expressed as a percentage of the estimate, increases.

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. However, for the comparisons to be valid, the procedures used in the two inventories must be similar. As a result of our ongoing efforts to improve the efficiency of the inventory, we have made several changes in procedures and definitions since 1976.

Because these changes make the direct comparison of the 1986 estimates with those published by Powell and Kingsley (1980) inappropriate, data collected in 1976 have been reprocessed using the 1986 procedures and standards. State and unit tables containing the recalculated 1976 data have been included in this report. The tables provide area and volume data for comparison and trend analysis. They are printed in italic type to distinguish them from the current tables. Tables of recalculated data at the county level could not be provided because plots were selected at the unit level in 1976; therefore, individual counties do not have enough plots to develop statistically sound data. The changes that have had an effect on the results of our computations follow:

A major change was made in the design of the plots established in 1985-86. In addition to the traditional data gathered to estimate forest area and tree volumes, information was collected to describe forest wildlife habitat, forest soils, and forest tree biomass.

New height and volume equations were developed for both growing stock and sawtimber (Scott 1979, 1981). These equations are derived by nonlinear regression techniques; in 1976 linear regression was used. The nonlinear method is used because it yields estimates with smaller errors between predicted and actual values.

Stand size is a classification of forest land based on the size of the trees that dominate an area, i.e., seedling/sapling, poletimber, sawtimber, or non-stocked. In the 1976 inventory only growing-stock trees were considered in determining stand size; the 1986 procedure considers all live trees. This change caused a shift in acres among classes, especially between seedling/sapling and poletimber.

The procedures used to determine forest type have also been modified. In 1976, plots on which red maple made up the plurality of stocking were put into the elm/ash/red maple group. In 1986, such plots were examined more closely and according to their moisture class and the other species present, were placed in either the northern hardwoods group (red maple/northern hardwoods), oak/hickory group (red maple/central hardwoods) or elm/ash/red maple group.

The basic building block for estimating forest area and timber volume has been changed from the state level or geographic unit level, to the county level. In the past, the statistics were developed at the state or unit level and prorated back to the county level on the basis of distribution of photo-interpretation

points. Direct development of county-level data helps users interested in more precise local data, but can make comparisons with past county estimates developed by the proration technique uncertain.

Definition 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 inventorys. It does not include the growth on trees that were cut during the period, nor those trees that died.

Agricultural/herbaceous land. Land with herbaceous plant cover, both grasses and/or forbs, including cropland, pasture land, and natural grass lands.

Aquatic edge. An edge condition created when a terrestrial land use abuts a lake, pond, river, stream, or major wetland.

Basal area class. A classification of forest land in terms of 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.

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

Bog/Marsh/Swamp. Land that has less than 10.0 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 salty or brackish water during high tides.

Browse. Forage resource; defined here as current twig growth of woody-stemmed plants occurring between 1 and 8 feet in height.

Cabin log. A relatively slender roundwood product that is cut to standard sizes; meets specifications of strength, straightness, and soundness; and is finished for use in constructing cabins, barns, and other buildings.

Coarse residues. Manufacturing residues suitable for chipping, such as slabs, edgings, and veneer cores.

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

Condition class. Classification of trees based on live or dead and condition of top of the tree (i.e. intact, broken, dead).

Cord. See Standard cord.

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 of harvest, and maintained orchards.

Cubic-foot stand-volume class. A classification of forest land in terms of net cubic-foot volume of all live trees per acre.

Cull tree. A rough tree or a rotten tree.

Cull increment. The net volume of growing-stock trees on the previous inventory that became rough or rotten trees in the current inventory, divided by the number of growing seasons between inventorys.

Cultural land. Land with human development as the major land cover; includes industrial, commercial, and residential land uses.

Diameter at breast height (d.b.h.). The diameter outside bark of a standing tree measured at 4-1/2 feet above the ground.

Distribution. Number of plots where a given species occurs expressed as a percentage of the total number of plots.

Dry weight. The weight of wood and bark, oven-dry basis. It is 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 non-farm owners.

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

Fine residues. Manufacturing residues not suitable for chipping, such as sawdust and shavings.

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 1 acre.

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

Forest-type group. A combination of forest types that share closely associated species or site requirements. The many forest types in Maryland were combined into the following major forest-type groups (the descriptions apply to forests in Maryland):

a. *White/red pine*--forests in which white pine, hemlock, or red pine make up the plurality of the stocking, singly or in combination; common associates include maple, oak, and yellow-poplar.

b. *Spruce/fir*--forests in which red spruce, northern white-cedar, balsam fir, white spruce, black spruce, or tamarack, singly or in combination, make up a plurality of the stocking; common associates include paper birch, red maple, aspen, white pine, hemlock, and sugar maple.

c. *Loblolly/shortleaf pine group*--forests in which loblolly, shortleaf or other southern yellow pines (except longleaf or slash pine) singly or in combination, comprise a plurality of the stocking; common associates include oaks, red maple, and blackgum.

d. *Oak/pine*--forests in which northern red oak or white ash, singly or in combination, make up a plurality of the stocking but where pines or eastern red cedar contributes 25 to 50 percent of the stocking; Virginia and loblolly pine, southern red oak, hickory, and blackgum are associates.

e. *Oak/hickory*--forests in which upland oaks, red maple (when associated with central hardwoods), or hawthorn, singly or in combination, make up a plurality of the stocking and in which white pine makes up less than 25 percent of the stocking; common associates include hard pine, ash, yellow-poplar, beech, blackgum, sugar maple, and red maple.

f. *Oak/gum/cypress*--bottomland forests in which wet-site oaks, sweetgum, or baldcypress, singly or in combination, comprise a plurality of the stocking and in which pines comprise less than 25 percent of the stocking; common associates include American elm, red maple, blackgum, and green ash.

g. *Elm/ash/red maple*--forests in which black ash, elm, red maple (when growing on wet sites), willow, or green ash, singly or in combination, make up a plurality of the stocking; common associates include bottomland oaks, blackgum, river birch, and silver maple.

h. *Northern hardwoods*--forests in which sugar maple, beech, yellow birch, red maple (when associated with northern hardwoods), pin cherry, or black cherry, singly or in combination, make up a plurality of the stocking; common associates include red maple, northern red oak, hemlock, white ash, and basswood.

Fuelwood. Round, split, or chipped woody material (with or without bark) that is converted to household, commercial, or industrial energy.

Geographic unit. A county or a group of counties within a state that is large enough to provide an adequate sample that will yield statistically reliable estimates of timberland area, volume, and components of change.

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

Green ton stand-volume class. A classification of forest land in terms of net green weight of the aboveground components of all live trees per unit area. It is usually expressed in green tons per acre.

Green weight. The weight of wood and bark as it would be if it had been recently cut. It is usually expressed in pounds or tons.

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 5.0 inches d.b.h. and larger from a 1-foot stump to a minimum 4.0-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.

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

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

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

Importance value. Average of relative density and relative frequency of a species.

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

Indian lands. (a) Lands held in trust by the United States or States for Indian tribes or individual Indians. (b) Lands owned in fee by Indian tribes whether subject to Federal or State restrictions against alienation or not.

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

Industrial products. All roundwood products except fuelwood.

Ingrowth. The estimated net volume of growing-stock trees that became 5.0 inches d.b.h. or larger during the period between inventories, divided by the number of growing seasons between inventorys.

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 1/8 statute mile wide; and lakes, reservoirs, and ponds less than 40 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 edge. A condition created by the juxtaposition of two differing land uses.

Lesser woody stem. Shrub or vine species, or tree species stem that is less than 5.0 inches d.b.h.

Logging residues. The unused portions of growing-stock trees harvested or killed in the process of logging.

Manufacturing plant residues. Wood materials that are generated when round timber (roundwood) is converted into wood products. This includes slabs, edgings, trimmings, bark, miscuts, sawdust, shavings, veneer cores and clippings, and pulp screening. If these residues are used, they are referred to as plant byproducts.

Mast. Seed produced by woody-stemmed, perennial plants, generally refers to soft (fruit) and hard (nuts) mast.

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

Miscellaneous private lands. Privately owned lands other than forest industry and farmer-owned lands.

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 inventorys.

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 inventorys. Components of net change are ingrowth plus accretion, minus mortality, minus cull increment, minus removals.

Net green weight. The green 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 inventorys, divided by the number of growing seasons. Components of net growth are ingrowth plus accretion, minus mortality, minus cull increment.

Noncensus water. Streams/rivers between 120 feet and 1/8 mile in width, and bodies of water between 1 and 40 acres in size. The Bureau of the Census classifies such water as land.

Noncommercial forest land. Productive-reserved, urban, and unproductive forest land.

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, residential areas, and highways.

Nonsalvable dead tree. A dead tree with most or all of its bark missing that is at least 5.0 inches in diameter at breast height and is at least 10 feet in height.

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

Other cropland. Includes cropland used for cover crops; legumes, soil-improvement.

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

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

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

Pastured cropland. Includes rotation pasture and grazing land that would have been used for crops without additional improvement.

Piling (piles). Relatively slender structural roundwood products that are cut to the maximum length possible (within top circumference and other specifications of strength, straightness, and soundness) that when nearly buried in the ground provide vertical or lateral support for buildings, foundations, bridges, docks, and other structures.

Plant byproducts. Wood products, such as pulp chips, recycled from manufacturing plant residues.

Poletimber stand. A stand-size class of forest land that is stocked with at least 10 percent of full stocking with all 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. Live trees of commercial species meeting regional specifications of soundness and form and at least 5.0 inches in d.b.h., but smaller than sawtimber trees.

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.

Productive-reserved forest land. Forest land sufficiently productive to qualify as timberland, but withdrawn from timber utilization through statute, administrative designation, or exclusive use for Christmas tree production.

Primary manufacturing plant. A plant that converts round timber into wood products such as woodpulp, lumber, veneer, cooperage, and dimension products.

Pulpwood. Roundwood converted into 4- or 5-foot lengths or chips, and chipped plant byproducts that are prepared for manufacture into woodpulp.

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

Relative density. Number of individuals of a given species as a percentage of the total of all species.

Relative frequency. Frequency of a given species as a percentage of the total of all frequencies (Frequency = total number of plots where a given species occurs / total number of plots).

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

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.

Roundwood products. Logs, bolts, total tree chips, or other round timber generated by harvested trees for industrial or consumer uses.

Salvable dead trees. A tree at least 5.0 inches in diameter at breast height that has recently died and still has intact bark. The tree 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 deviation and are calculated as the square root of the variance, divided by the estimate, and multiplied by 100.

Saplings. Live trees 1.0 inch through 4.9 inches d.b.h.

Sapling-seedling stand. A stand-size class of forest land that is stocked with at least 10 percent of full stocking with all 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 diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods. (See specifications under Log-Grade Classification).

Sawlog portion. That part of the bole of a sawtimber tree between the stump and the sawlog top; that is, the merchantable height.

Sawlog top. The point on the bole of a sawtimber tree above which a sawlog cannot be produced. The minimum sawlog top is 7.0 inches diameter outside bark (d.o.b.) for softwoods and 9.0 inches d.o.b. for hardwoods.

Sawtimber stand. A stand-size class of forest land that is stocked with at least 10 percent of full stocking with all 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 trees. Live trees of commercial species at least 9.0 inches d.b.h. for softwoods or 11.0 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.

Seedlings. Live trees less than 1.0-inch d.b.h. and at least 1 foot in height.

Shrub. Woody-stemmed perennial plant, generally with no well-defined main stem and less than 12 feet in height at maturity; defined by species.

Shrub land. Land with shrub and/or tree cover and an obvious herbaceous understory; average canopy height of less than 25 feet and crown closure of less than 70 percent.

Single-family/custom 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 in diameter and at least 10 feet tall (does not include salvable dead).

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

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

Stand area class. The area, contiguous to the plot, that is of the same overall stand size and major type group (hardwood, softwood, or uniform mixture of both).

Stand-size class. A classification of forest land based on the size class (that is, seedlings, saplings, poletimber, or sawtimber) 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.

Standard-lumber log grade. A classification of the quality of sawtimber volume based on standard sawlog grades for hardwoods, white pine, and southern pine. (Note: Red pine was graded using the southern pine guidelines. All specifications are shown under Log-Grade Classification).

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, measured by basal area and/or number of trees in a stand compared to the basal area

and/or number of trees required to fully use the growth potential of the land (or the stocking standard). In the Eastern United States this standard is 75 square feet of basal area per acre for trees 5.0 inches d.b.h. and larger, or its equivalent in numbers of trees per acre for seedlings and saplings.

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 59, moderately stocked = 60 to 99, fully stocked = 100 to 129, and overstocked = 130 to 160.

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 byproducts 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 (See Table 46).

Top. The wood and bark of a tree above the merchantable height (or above the point on the stem 4.0 inches in diameter outside bark). It generally includes the uppermost stem, branches, and twigs of the tree, but not the foliage.

Tract/multiple family. Multiple individual residential units or attached units (e.g. apartment buildings, 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 present condition. Tree class for poletimber trees is a prospective determination--a forecast of their potential quality when they reach sawtimber size (11.0 inches d.b.h. for hardwoods, 9.0 inches d.b.h. for softwoods).

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

Unproductive 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.

Unused manufacturing residues. Plant residues that are dumped or destroyed and not recovered for plant byproducts.

Upper-stem portion. That part of the main stem or fork of a sawtimber tree above the sawlog top to a diameter of 4.0 inches outside bark, or to the point where the main stem or fork breaks into limbs.

Urban forest land. Noncommercial forest land within urban areas that is completely surrounded by urban development (not parks), whether commercial, industrial, or residential.

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

Veneer log or bolt. A roundwood product from which veneer is sliced or sawn that usually meets certain minimum standards of diameter, length, and defect.

Volume suitable for pulpwood. The sound volume (only rotten cull excluded) of growing-stock and rough trees.

Windbreak/hedgerow. Linear areas, less than 120 feet in width; with predominantly tree and/or shrub vegetation.

References

Powell, Douglas S., Kingsley, Neal P. (1980.) **The forest resources of Maryland.** Resour. Bull. NE-61. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 103 p.

Scott, Charles T. 1979. **Northeastern forest survey board-foot volume equations.** Res. Note NE-271. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 3 p.

Scott, Charles T. 1981. **Northeastern forest survey revised cubic-foot volume equations.** Res. Note NE-304. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 3 p.

Oaks of the Northeast

Species Group	Common Name
Select White Oaks	
Q. alba	white oak
Q. bicolor	swamp white oak
Q. macrocarpa	bur oak
Q. michauxii	swamp chestnut oak
Q. muehlenbergii	chinkapin oak
Select Red Oaks	
Q. falcata var. *pagodaefolia*	cherrybark oak
Q. rubra	northern red oak
Q. shumardii	shumard oak
Other White Oaks	
Q. lyrata	overcup oak
Q. prinus	chestnut oak
Q. stellata var. *stellata*	post oak
Other Red Oaks	
Q. coccinea	scarlet oak
Q. ellipsoidalis	northern pin oak
Q. falcata	southern red oak
Q. ilicifolia	bear oak
Q. imbricaria	shingle oak
Q. laurifolia	laurel oak
Q. marilandica	blackjack oak
Q. nigra	water oak
Q. palustris	pin oak
Q. phellos	willow oak
Q. velutina	black oak

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	vr
Juniperus virginiana L.	eastern redcedar	r
Larix spp. Mill.	larch	vr
Picea abies (L.)Karst.	Norway spruce	r
P. rubens Sarg.	red spruce	r
Pinus echinata Mill.	shortleaf pine	vr
P. nigra Arnold	Austrian pine	vr
P. pungens Lamb.	table-mountain pine	vr
P. resinosa Ait.	red pine	c
P. rigida Mill.	pitch pine	r
P. serotina Michx.	pond pine	r
P. strobus L.	eastern white pine	c
P. sylvestris L.	Scotch pine	r
P. taeda L.	loblolly pine	vc
P. virginiana Mill.	Virginia pine	vc
Taxodium distichum (L.) Rich	cypress	vr
Tsuga canadensis (L.) Carr.	eastern hemlock	r
	Hardwoods	
Acer negundo L.*	boxelder	r
A. pensylvanicum L.*	striped maple	vr
A. rubrum L.	red maple	vc
A. saccharinum L.	silver maple	r
A. saccharum Marsh.	sugar maple	c
Ailanthus altissima (Mill.)Swingle*	ailanthus	vr
Betula alleghaniensis Britton	yellow birch	r
B. lenta L.	sweet birch (black)	c
B. nigra L.	river birch	r
B. populifolia Marsh.*	gray birch	vr
Carpinus caroliniana Walt.*	American hornbeam	r
Carya spp. Nutt.	hickory	c
Castanea dentata (Marsh.)Borkh.*	American chestnut	vr
Catalpa spp. Scop.*	catalpa	vr
Celtis occidentalis L.	hackberry	r
Ceris canadensis L.	eastern redbud	r
Cornus spp. L.	dogwood	r
Crataegus spp. L.*	hawthorn	vr
Diospyros virginiana L.*	persimmon	r
Fagus grandifolia Ehrh.	American beech	c
Fraxinus americana L.	white ash	c
F. nigra Marsh.	black ash	vr
F. pennsylvanica Marsh.	green ash	r
Ilex opaca Ait.	American holly	c

Tree Species of Maryland (continued)

Scientific Name ***	Common Name(s)	Occurrence **
Juglans cinerea L.	butternut	r
Liquidambar styraciflua L.	sweetgum	vc
Liriodendron tulipifera L.	yellow-poplar (tulip tree)	vc
Magnolia spp. L.	magnolia	vr
M. acuminata L.	cucumbertree	vr
M. virginiana L.	sweetbay	r
Malus spp. Mill.	apple	vr
Nyssa sylvatica Marsh.	blackgum	c
Ostrya virginiana (Mill.)K. Koch*	eastern hophornbeam	r
Platanus occidentalis L.	sycamore	r
Populus deltoides Bartr. ex Marsh.	eastern cottonwood	vr
P. grandidentata Michx.	bigtooth aspen	c
P. tremuloides Michx.	quaking aspen	vr
Prunus pensylvanica L. f.*	pin cherry	r
P. serotina Ehrh.	black cherry	c
Quercus alba L.	white oak	vc
Q. bicolor Willd.	swamp white oak	r
Q. coccinea Muenchh.	scarlet oak	c
Q. falcata Michx.	southern red oak	c
Q. falcata var.*pagodifolia* Ell.	cherrybark oak	r
Q. imbricaria Michx.	shingle oak	vr
Q. michauxii Nutt.	swamp chestnut oak	r
Q. muehlenbergii Engelm.	chinkapin oak	vr
Q. nigra L.	water oak	c
Q. palustris Muenchh.	pin oak	r
Q. phellos L.	willow oak	c
Q. prinus L.	chestnut oak	vc
Q. rubra L.	northern red oak	c
Q. stellata Wangenh.	post oak	r
Q. velutina Lam.	black oak	c
Robinia pseudoacacia L.	black locust	c
Salix spp. Marsh.*	willow	r
Salix nigra Marsh.	black willow	vr
Sassafras albidum (Nutt.) Nees*	sassafras	c
Tilia americana L.	American basswood	r
Ulmus americana L.	American elm	c
U. rubra Muhl.	slippery elm	r

*** Names according to: Little, Elbert L., Jr. Checklist of United States Trees (native and naturalized). Agric. Handb. 541 Washington, DC: U.S Department of Agriculture, Forest Service; 1979. 375 p.
**Occurrence is based on the proportion of the species among all live trees 5.0 inches d.b.h. or larger 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.

Ecological Importance and Relative Distribution of Lesser Woody-Stemmed Species, Maryland

Species	Relative Density	Relative Frequency	Importance Value	Distribution
Atlantic white cedar	.02	.06	.04	.62
Common juniper	.04	.13	.08	1.38
Eastern redcedar	.04	.29	.16	3.06
Tamarack	.01	.02	.01	.16
Norway spruce	.03	.05	.04	.46
White spruce	.01	.02	.01	.16
Red spruce	.01	.08	.04	.77
Shortleaf pine	.01	.03	.02	.31
Table mountain pine	.01	.03	.02	.31
Red pine	.05	.10	.08	1.08
Pitch pine	.05	.25	.15	2.60
Pond pine	.07	.12	.09	1.23
Eastern white pine	.06	.32	.19	3.37
Scotch pine	.07	.17	.12	1.84
Loblolly pine	1.39	2.74	2.06	29.52
Virginia pine	.83	2.17	1.50	23.40
Austrian pine	.01	.02	.01	.16
Baldcypress	.01	.03	.02	.31
Eastern hemlock	.08	.29	.18	3.06
Boxelder	.11	.13	.12	1.38
Striped maple	.34	.30	.32	3.22
Red maple	6.38	7.24	6.81	78.14
Silver maple	.05	.09	.07	.92
Sugar maple	.67	.85	.76	9.18
Mountain maple	.08	.06	.07	.62
Ailanthus	.02	.09	.06	.92
Alder species	.82	.19	.50	1.99
Hercules club	.38	.56	.47	5.97
Serviceberry	.88	.88	.88	9.49
Evergreen bearberry*	--	--	--	.31
Chokeberry species	.01	.02	.01	.16
Azalea species	1.96	.78	1.37	8.41
Common pawpaw	.98	.50	.74	5.36
Barberry	.02	.02	.02	.16
Birch species	.01	.02	.01	.16
Yellow birch	.07	.17	.12	1.84
Sweet birch	.48	.80	.64	8.57
River birch	.05	.19	.12	1.99
Gray birch	.01	.02	.01	.16
American hornbeam	.24	.70	.47	7.50
Hickory species	.72	2.95	1.84	31.81
Bitternut hickory	.03	.13	.08	1.38
Pignut hickory	.04	.22	.13	2.30

Ecological Importance and Relative Distribution of Lesser Woody-Stemmed Species, Maryland (continued)

Species	Relative Density	Relative Frequency	Importance Value	Distribution
Shagbark hickory	.02	.39	.20	4.13
Mockernut hickory	.03	.26	.15	2.76
American chestnut	.15	.27	.21	2.91
Catalpa	.01	.03	.02	.31
American bittersweet*	--	--	--	.16
Hackberry	.10	.19	.15	1.99
Eastern redbud	.23	.22	.22	2.30
Fringetree	.02	.06	.04	.62
Clematis species*	--	--	--	.92
Yellowwood	.01	.02	.01	.16
Flowering dogwood	1.67	2.21	1.94	23.86
Alternate-leaved dogwood	.02	.06	.04	.62
Silky dogwood	.05	.06	.05	.62
Panicled dogwood	.02	.02	.02	.16
Canadian bunchberry*	--	--	--	.46
Hawthorn species	.34	.57	.45	6.12
American hazelnut	.04	.02	.03	.16
Common persimmon	.06	.43	.25	4.59
American beech	.76	2.24	1.50	24.16
White ash	.94	1.60	1.27	17.28
Black ash	.01	.02	.01	.16
Green ash	.04	.25	.14	2.60
Teaberry*	--	--	--	6.43
Huckleberry	2.29	.53	1.41	5.66
Honeylocust	.01	.02	.01	.16
Witch-hazel	.72	.66	.69	7.04
American holly	1.39	2.54	1.96	27.38
Winterberry holly	.03	.03	.03	.31
Butternut	.02	.16	.09	1.69
Black walnut	.04	.47	.25	5.05
Sheep laurel	.01	.03	.02	.31
Mountain laurel	1.18	.78	.98	8.41
Common spicebush	1.83	1.12	1.48	12.08
Sweetgum	2.60	4.42	3.51	47.71
Yellow-poplar	.95	3.08	2.02	33.19
Bush honeysuckle	.10	.12	.11	1.23
Vine honeysuckle*	--	--	--	37.16
Magnolia	.01	.03	.02	.31
Cucumbertree	.12	.22	.17	2.30
Sweetbay	.32	.56	.44	5.97
Apple species	.02	.08	.05	.77
Partridgeberry	.00	.00	.00	14.38
Water tupelo	.14	.30	.22	3.22

Ecological Importance and Relative Distribution of Lesser Woody-Stemmed Species, Maryland (continued)

Species	Relative Density	Relative Frequency	Importance Value	Distribution
Black tupelo	1.93	4.39	3.16	47.41
Eastern hophornbeam	.32	.63	.47	6.73
Paulownia	.01	.10	.06	1.08
Virginia creeper*	--	--	--	30.89
Ninebark	.01	.02	.02	.16
American sycamore	.03	.47	.25	5.05
Eastern cottonwood	.01	.02	.01	.16
Bigtooth aspen	.08	.34	.21	3.67
Quaking aspen	.01	.02	.02	.16
Cherry species	.03	.15	.09	1.53
Pin cherry	.12	.30	.21	3.22
Black cherry	2.72	3.37	3.05	36.40
Chokecherry	.06	.16	.11	1.69
White oak	1.38	4.66	3.02	50.31
Swamp white oak	.06	.43	.25	4.59
Scarlet oak	.15	1.53	.84	16.52
Southern red oak	.62	2.84	1.73	30.59
Swamp red oak	.01	.10	.06	1.08
Scrub, bear oak	.15	.06	.10	.62
Shingle oak	.01	.02	.01	.16
Blackjack oak	.01	.02	.01	.16
Swamp chestnut oak	.10	.43	.26	4.59
Chinkapin oak	.01	.03	.02	.31
Water oak	.34	.74	.54	7.96
Pin oak	.05	.46	.25	4.90
Willow oak	.21	1.32	.77	14.23
Chestnut oak	.96	1.99	1.47	21.41
Northern red oak	.92	3.52	2.22	37.93
Post oak	.02	.16	.09	1.69
Black oak	.46	2.53	1.49	27.22
Buckthorn species	.03	.03	.03	.31
Rhododendron species	.38	.12	.25	1.23
Smooth sumac	.13	.17	.15	1.84
Staghorn sumac	.07	.15	.11	1.53
Poison ivy*	--	--	--	31.81
Currant species	.11	.12	.12	1.23
Black locust	.66	1.69	1.17	18.20
Rose species	3.77	.77	2.27	8.26
Rubus species	9.54	3.45	6.49	37.16
Willow species	.02	.06	.04	.62
Black willow	.02	.05	.04	.46
American elderberry	.12	.16	.14	1.69
Red-berried alder	.01	.02	.02	.16

Ecological Importance and Relative Distribution of Lesser Woody-Stemmed Species, Maryland (continued)

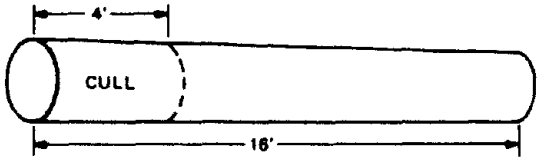
Species	Relative Density	Relative Frequency	Importance Value	Distribution
Sassafras	1.82	2.47	2.15	26.61
Greenbrier*	--	--	--	53.22
American mountain ash	.01	.02	.01	.16
European mountain ash	.01	.02	.01	.16
Spirea species	.06	.03	.05	.31
American basswood	.03	.27	.15	2.91
Elm species	.18	.47	.33	5.05
American elm	.13	.39	.26	4.13
Slippery elm	.13	.30	.22	3.22
American bladdernut	.01	.02	.02	.16
Blueberry	16.14	4.11	10.12	44.35
Viburnum species	.55	.37	.46	3.98
Maple-leaved viburnum	1.24	.81	1.03	8.72
Hobblebush viburnun	.02	.06	.04	.62
Wild raisin	.01	.02	.01	.16
Arrowwood	1.45	1.07	1.26	11.47
Nannyberry	.00	.02	.01	.16
Blackhaw	.09	.10	.10	1.08
Highbush cranberry	.02	.02	.02	.16
Grape*	--	--	--	14.99
Common prickly ash	.01	.02	.01	.16
Unknown vine*	--	--	--	9.03
Unknown dwarf shrub*	--	--	--	9.03
Unknown deciduous shrub	19.23	3.22	11.23	34.71
Unknown evergreen shrub	.01	.02	.01	.16
Unknown tree	.51	1.34	.92	14.38

* Dwarf shrubs and vines not included in Relative Density, Relative Frequency and Importance Value calculations.

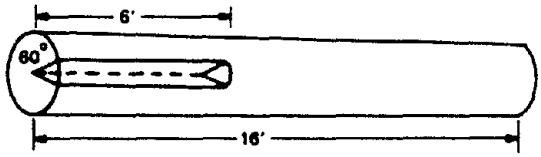
Log-grade Classification

Methods of determining scaling deduction.

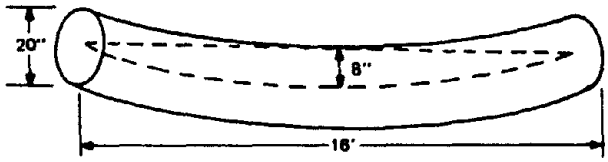
(Examples based on a 16-foot log with 20-inch scaling diameter)



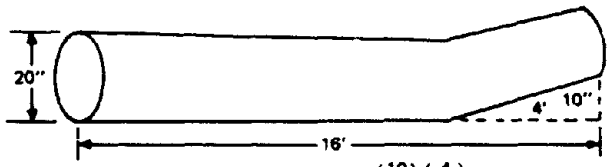
Defect section (rule 1): Percent deduction = $\frac{4}{16}$ = 25%



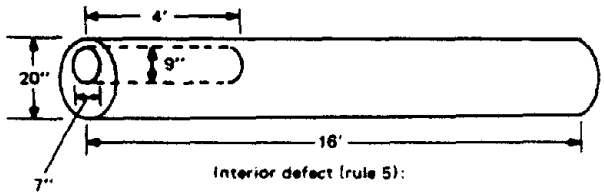
Defect section (rule 2): Percent deduction = $\left(\frac{6}{16}\right)\left(\frac{60}{360}\right)$ = 6-1/4%



Sweep (rule 3): Percent deduction = $\frac{8-2}{20}$ = 30%



Crook (rule 4): Percent deduction = $\left(\frac{10}{20}\right)\left(\frac{4}{16}\right)$ = 12-1/2%



Interior defect (rule 5):

Percent deduction = $\frac{(8)(10)}{(20-1)^2} \times \frac{4}{16}$ = 5-5/9%

In practice each ellipse axis can be divided by (20–1)

Thus $\frac{8}{19}$ = .4. $\frac{10}{19}$ .5, and (.4) (.5) $\left(\frac{4}{16}\right)$ = 5%

From: Grosenbaugh, L.R. 1952. Shortcuts for cruisers and scalers. U.S. Dep. Agric. For. Serv. South For Exp. Stn. Occas. Pap. 126.

STANDARD GRADES FOR HARDWOOD FACTORY LUMBER LOGS

Grading Factors		Log grades							
		F1			F2				F3
Position in tree		Butts only	Butts & uppers		Butts & Uppers				Butts & uppers
Scaling diameter, inches		13-15[a]	16-19	20+	11+[b]	12+			8+
Length without trim, feet		10+			10+	8-9	10-11	12+	8+
Required clear cuttings[c] of each of 3 best faces[d]	Min. length, feet	7	5	3	3	3	3	3	2
	Max. number	2	2	2	2	2	2	3	No limit
	Min. proportion of log length required in clear cutting	5/6	5/6	5/6	2/3	3/4	2/3	2/3	1/2
Maximum sweep & crook allowance	For logs with less than 1/4 of end in sound defects	15%			30%				50%
	For logs with more than 1/4 of end in sound defects	10%			20%				35%
Maximum scaling	deduction	40%[e]			50%[f]				50%

End defects although not visible in standing trees, are important in grading cut logs. Instructions for dealing with this factor are contained in Forest Prod. Lab. Rpt. D 1737.

[a]Ash and basswood butts can be 12 inches if they otherwise meet requirements for small #1's.
[b]Ten-inch logs of all species can be #2 if they otherwise meet requirements for small #1's.
[c]A clear cutting is the portion of a face, extending the width of the face, that is free of defects.
[d]A face is 1/4 of the surface of the log as divided lengthwise.
[e]Otherwise #1 logs with 41-60% deductions can be #2.
[f]Otherwise #2 logs with 51-60% deductions can be #3.

From: Vaughan, C. L., A. C. Wollin, K. A. McDonald, and E. H. Bulgrin. 1966. Hardwood log grades for standard lumber. USDA For. Serv. Res. Pap. FPL-63.

STANDARD SPECIFICATIONS FOR HARDWOOD CONSTRUCTION LOGS.[a]

Position in tree		Butt & upper
Min. diameter, small end		8 inches +
Min. length, without trim		8 feet
Clear cuttings		No requirements.
Sweep allowance, absolute		1/4 diameter small end for each 8 feet of length.
Sound surface defects	Single knots	Any number, if no one knot has an average diameter above the callus in excess of 1/3 of log diameter at point of occurrence.
	Whorled knots	Any number if sum of knot diameters above the callus does not exceed 1/3 of log diameter at point of occurrence.
	Holes	Any number provided none has a diameter over 1/3 of log diameter at point of occurrence, and none extends over 3 inches into included timber.[b]
Unsound surface defects		Same requirements as for sound defects if they extend into included timber.[b] No limit if they do not.
End defects	Sound	No requirements.
	Unsound	None allowed; log must be sound internally, but will admit 1 shake not to exceed 1/4 the scaling diameter and a longitudinal split not extending over 5 inches into the contained timber.

[a]These specifications are minimum for the class. If, from a group of logs, factory logs are selected first, thus leaving only non-factory logs from which to select construction logs, then the quality range of the construction logs so selected is limited, and the class may be considered a grade. If selection for construction logs is given first priority, then it may be necessary to subdivide the class into grades.
[b]Included timber is always square, and dimension is judged from small end.

From: Rast, E. D., D. L. Sonderman, and G. L. Gammon. 1973. A guide to hardwood log grading (Revised). USDA For. Serv. Gen. Tech. Rep. NE-1.

EASTERN WHITE PINE SAWLOG GRADE SPECIFICATIONS

GRADING FACTOR	LOG GRADE 1	LOG GRADE 2	LOG GRADE 3	LOG GRADE 4
(1) MINIMUM SCALING DIAMETER (inches)	14[1]	6	6	6
(2) MINIMUM LOG LENGTH (feet)	10[2]	8	8	8
(3) MAXIMUM WEEVIL INJURY (number)	None	None	2 injuries[4]	No limit
(4) MINIMUM FACE REQUIREMENTS	Two full length or four 50%, length good faces.[3] (In addition, log knots on balance of faces shall not exceed size limitations of grade 2 logs.)	No GOOD FACES REQUIRED. Maximum diameter of log knots on three best faces		Includes all logs not qualifying for No. 3 or better and judged to have at least one-third of their gross volume in sound wood suitable for manufacture into standard lumber.
		SOUND RED KNOTS not to exceed 1/6 scaling diameter and 3 inch maximum DEAD OR BLACK KNOTS including overgrown knots not to exceed 1/12 scaling diameter and 1½ inch maximum.	SOUND RED KNOTS not to exceed 1/3 scaling diameter and 5 inch maximum. DEAD OR BLACK KNOTS including overgrown knots not to exceed 1/6 scaling diameter and 2½ inch maximum.	
(5) MAXIMUM SWEEP OR CROOK ALLOWANCE (percent)	20	30	40	66⅔
(6) MAXIMUM TOTAL SCALING DEDUCTION (percent)	50	50	50	66⅔

After the tentative log grade is established from face examination, the log will be reduced in grade whenever the following defects are evident:

(7) CONKS, PUNK KNOTS, AND PINE BORER DAMAGE ON BARK SURFACE[5]

Degrade one grade if present on one face.
Degrade two grades if present on two faces.
Degrade three grades if present on three or more faces.

(8) LOG END DEFECTS: RED ROT, RING SHAKE, HEAVY STAIN AND PINE BORER DAMAGE OUTSIDE HEART CENTER OF LOG[5]

Consider log as having a total of 8 quarters (4 on each end) and degrade as indicated below:
Degrade one grade if present in 2 quarters of log ends.
Degrade two grades if present in 3 or 4 quarters of log ends.
Degrade three grades if present in 5 or more quarters of log ends.

[1]12 and 13 inch logs with four full length good faces are acceptable.
[2]8 foot logs with four full length good faces are acceptable.
[3]8 foot No. 3 logs limited to one weevil injury.
[4]Minimum 50% length good face must be at least 6 feet.
[5]Factors 7 and 8 are not cumulative (total degrade based on more serious of the two). No log to be degraded below grade 4 if net scale is at least one-third gross log scale.

From: Ostrander, M. D., and R. L. Brisbin, 1971. Sawlog grades for eastern white pine. USDA For. Serv. Res. Pap. NE-205.

SOUTHERN PINE SAWLOGS

Grade 1. Logs with 3 or 4 clear faces.[1] Code 1.

Grade 2. Logs with 1 or 2 clear faces. Code 2.

Grade 3. Logs with no clear faces. Code 3.

After the tentative log grade is established from above, the log will be degraded one grade for each of the following, except that no log can be degraded below grade 3.

1. *Sweep.* Degrade any tentative 1 or 2 log one grade if sweep amounts to 3 or more inches and equals or exceeds one third (1/3) the diameter inside bark at small end. This is the final grade if there is no evidence of heart rot.

2. *Heart rot.* Degrade any tentative 1 or 2 log one grade if conk, massed hyphae, or other evidence of advanced heart rot is found anywhere in it.

[1] A face is one-fourth of the circumference in width extending full length of the log. Clear faces are those free of: knots measuring more than one-half inch in diameter, overgrown knots of any size, holes more than one-fourth inch in diameter. The faces may be rotated if necessary to obtain the maximum number of clear ones.

From: Schroeder, J. G., R. A. Campbell, and R. C. Rodenbach. 1968. Southern pine sawlogs for yard and structural lumber. USDA For. Serv. Res. Pap. SE-39.

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 ton = 907.1848 kilograms
1,000 tons = 907.1848 metric tons
Breast height = 1.4 meters above ground level

Although 1,000 board feet is 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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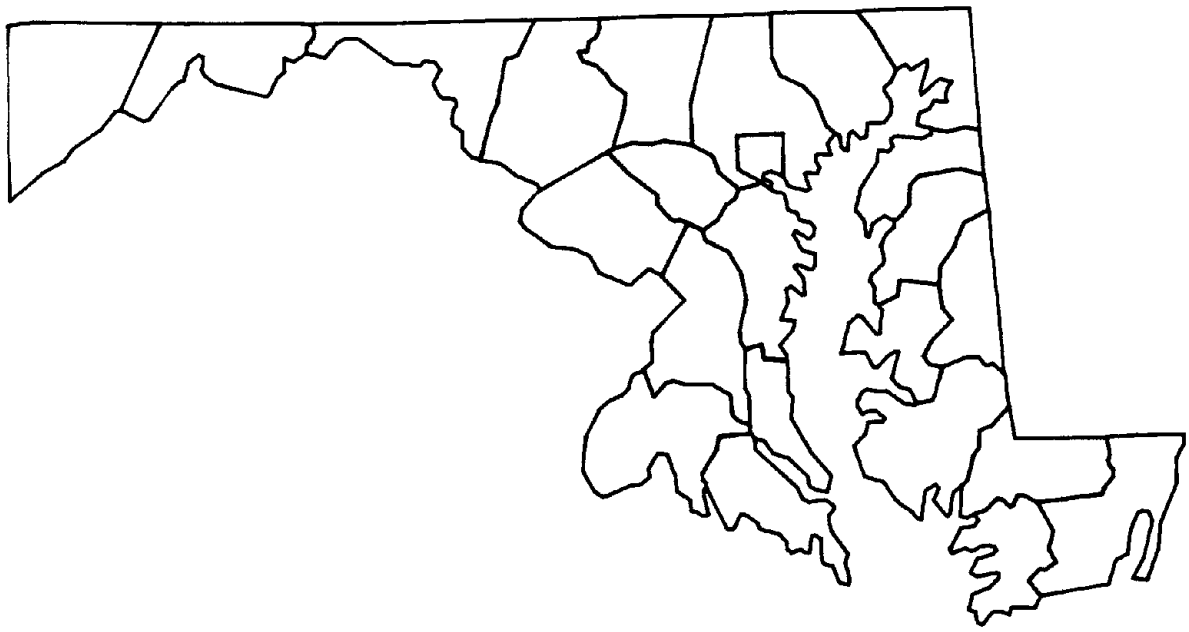


Table 1.--Land area by land class, Maryland, 1986[a]

Land class	Area	
	Thousand acres	Percent
Timberland	2,424.0	39
Noncommercial forest land:		
Christmas tree plantations	2.2	W
Productive reserved	152.9	2
Unproductive	21.2	W
Urban	103.0	2
Total forest	2,703.3	43
Nonforest land:		
Cropland[b]	1,602.0	25
Pasture[b]	309.0	5
Other farmland	256.7	4
Other land	1,424.5	23
Total nonforest	3,592.2	57
Total land area[c]	6,295.5	100

[a] This and every other table may not add up due to rounding.
[b] Source: 1982 Census of Agriculture.
[c] Source: 1981 United States Department of Commerce, Bureau of Census.
W-Less than 0.5 percent.

Table 2.--Area of timberland by forest type, forest-type group, and stand-size class, Maryland, 1976

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Red pine	.0	5.9	.0	.0	5.9
White pine	.0	5.8	12.8	6.0	24.6
White/red pine group	.0	11.7	12.8	6.0	30.4
Norway spruce	.0	5.8	4.4	.0	10.2
Spruce/fir group	.0	5.8	4.4	.0	10.2
Loblolly pine	139.6	54.7	35.4	2.9	232.7
Virginia pine	57.6	81.5	43.0	.0	182.1
Eastern redcedar	.0	2.6	.0	.0	2.6
Pitch pine	6.6	.0	5.9	.0	12.6
Loblolly/shortleaf group	203.8	138.7	84.4	2.9	429.9
Wh. pine/no. red oak/wh. ash	5.3	.0	.0	.0	5.3
Virginia pine/oak	33.2	34.5	31.9	.0	99.6
Loblolly pine/hardwood	59.3	44.7	23.0	.0	126.9
Oak/pine group	97.7	79.2	54.9	.0	231.7
Post, black, or bear oak	15.7	.0	.0	.0	15.7
Chestnut oak	33.8	33.1	6.0	.0	72.9
White oak/red oak/hickory	43.6	28.5	40.8	.0	112.9
White oak	31.8	28.9	26.8	.0	87.4
Northern red oak	23.9	.0	5.9	.0	29.8
Y. poplar/wh. oak/no. red oak	59.5	11.3	.0	.0	70.8
Black locust	.0	.0	13.8	.0	13.8
Sweetgum/yellow-poplar	34.6	20.8	13.7	.0	69.1
Yellow-poplar	97.1	20.7	11.4	.0	129.3
Scarlet oak	31.1	14.4	.0	.0	45.4
Red maple/central hardwoods	9.1	6.3	.0	.0	15.3
Mixed central hardwoods	564.9	178.6	81.5	26.6	851.6
Oak/hickory group	945.0	342.5	200.0	26.6	1,514.1
Swamp chstnt oak/cherrybrk oak	13.3	2.9	2.7	.0	18.9
Sweetgm/nuttall oak/willow oak	21.7	2.7	2.9	.0	27.4
bald cypress/white tupelo	2.5	3.2	.0	.0	5.7
Sweetbay/swamp tupelo/rd maple	12.7	3.0	3.2	.0	18.9
Oak/gum/cypress group	50.2	11.9	8.8	.0	70.9
Black ash/Amer. elm/red maple	12.7	2.9	27.1	.0	42.7
Red maple(lowland)	6.5	3.1	.0	.0	9.6
Red maple(upland)	2.5	.0	.0	.0	2.5
River birch/sycamore	5.0	.0	11.4	.0	16.5
Willow	5.8	.0	6.2	.0	12.0

Table 2.-Continued

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Sycamore/pecan/American elm	5.9	.0	2.6	.0	8.5
American elm/green ash	.0	2.6	2.6	.0	5.2
Elm/ash/red maple group	38.4	8.7	50.0	.0	97.1
Sugar maple/beech/yellow birch	17.4	6.3	18.7	.0	42.4
Black cherry	.0	6.3	13.6	.0	19.9
Red maple/northern hardwoods	6.6	12.5	8.3	.0	27.4
Mixed northern hardwoods	24.5	11.7	23.4	.0	59.6
Northern hardwoods group	48.5	36.7	64.0	.0	149.3
All forest types	1,383.6	635.2	479.3	35.6	2,533.7

PERCENT TIMBERLAND BY FOREST TYPE GROUP

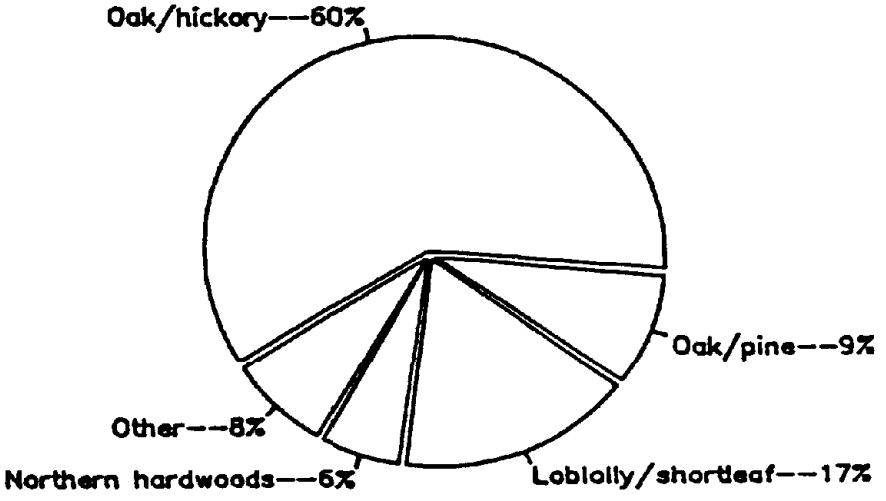


Table 3.--Area of timberland by forest type, forest-type group, and stand-size class, Maryland, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Red pine	3.1	14.6	.0	.0	17.8
White pine	6.4	4.5	.0	.0	10.9
Hemlock	6.9	.0	3.9	.0	10.8
Scotch pine	.0	3.1	10.5	.0	13.6
White/red pine group	16.4	22.3	14.4	.0	53.1
Loblolly pine	128.1	41.3	17.5	.0	186.8
Virginia pine	65.5	22.6	22.0	.0	110.1
Loblolly/shortleaf group	193.6	63.9	39.4	.0	296.9
Wh. pine/no. red oak/wh. ash	9.5	2.4	.0	.0	11.9
Virginia pine/oak	78.6	5.2	11.7	.0	95.5
Loblolly pine/hardwood	122.1	17.6	24.7	.0	164.4
Other oak/pine	5.4	4.7	.0	.0	10.2
Oak/pine group	215.6	29.9	36.4	.0	281.9
Post, black, or bear oak	17.0	6.0	4.5	.0	27.6
Chestnut oak	59.9	3.4	.0	.0	63.3
White oak/red oak/hickory	83.2	24.8	9.5	.0	117.6
White oak	31.8	34.5	6.8	.0	73.1
Northern red oak	31.0	.0	.0	.0	31.0
Y. poplar/wh. oak/no. red oak	66.4	12.4	.0	.0	78.8
Black locust	.0	.0	9.8	.0	9.8
Sweetgum/yellow-poplar	66.6	16.8	15.1	.0	98.5
Yellow-poplar	116.4	.0	7.7	.0	124.1
Hawthorn reverting field	3.2	4.5	.0	.0	7.7
Scarlet oak	8.2	.0	4.1	.0	12.2
Sassafras/persimmon	.0	.0	2.8	.0	2.8
Red maple/central hardwoods	32.6	19.7	4.2	.0	56.5
Mixed central hardwoods	570.9	160.6	19.8	.0	751.3
Oak/hickory group	1,087.3	282.8	84.4	.0	1,454.4
Swamp chstnt oak/cherrybark oak	30.1	10.5	.0	.0	40.6
Sweetgum/nuttall oak/willow oak	40.1	14.0	10.0	.0	64.1
Bald cypress/white tupelo	3.0	.0	.0	.0	3.0
Sweetbay/swamp tupelo/red maple	7.1	2.9	2.5	.0	12.5
Oak/gum/cypress group	80.3	27.4	12.5	.0	120.2
Black ash/Amer. elm/red maple	29.5	.0	1.9	.0	31.4
Red maple(lowland)	8.8	.0	2.2	.0	10.9
Red maple(upland)	.0	.0	3.8	.0	3.8
River birch/sycamore	19.4	4.1	.0	.0	23.5
Willow	.0	2.1	.0	.0	2.1
Sycamore/pecan/American elm	4.6	.0	.0	.0	4.6

Table 3.--Continued

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
American elm/green ash	7.4	.0	.0	.0	7.4
Elm/ash/red maple group	69.6	6.2	7.9	.0	83.7
Sugar maple/beech/yellow birch	30.5	.0	7.3	.0	37.8
Black cherry	6.7	14.2	4.6	.0	25.6
Red maple/northern hardwoods	3.1	6.8	4.2	.0	14.1
Pin cherry/reverting field	.0	5.1	17.5	.0	22.6
Mixed northern hardwoods	20.7	10.3	2.6	.0	33.6
Northern hardwoods group	61.0	36.5	36.3	.0	133.8
All forest types	1,723.8	468.9	231.3	.0	2,424.0

PERCENT TIMBERLAND BY FOREST TYPE GROUP

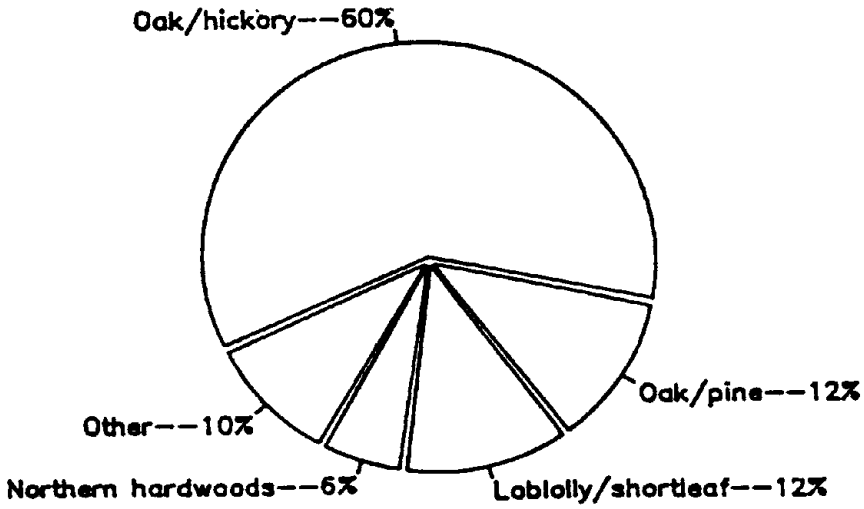


Table 4.--Area of timberland by forest-type group and ownership class, Maryland, 1986

(In thousands of acres)

Forest-type group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
White/red pine	.0	12.0	.0	41.1	53.1
Loblolly/shortleaf	.0	21.7	52.2	223.0	296.9
Oak/pine	.0	14.8	34.1	233.0	281.9
Oak/hickory	.0	154.9	24.5	1,275.0	1,454.4
Oak/gum/cypress	.0	17.0	13.3	89.9	120.2
Elm/ash/red maple	.0	12.4	3.3	68.0	83.7
Northern hardwoods	.0	12.7	3.2	117.9	133.8
Total, all groups	.0	245.5	130.6	2,047.9	2,424.0

Table 5.--Area of timberland by stand-size class and ownership class, Maryland, 1986

(In thousands of acres)

Stand-size class	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
Sawtimber	.0	183.9	64.2	1,475.7	1,723.8
Poletimber	.0	52.4	30.9	385.6	468.9
Sapling and seedling	.0	9.2	35.6	186.5	231.3
Total, all classes	.0	245.5	130.6	2,047.9	2,424.0

Table 6.--Area of timberland by board-foot stand-volume class and ownership class, Maryland, 1986

(In thousands of acres)

Stand-volume class (board feet per acre)	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
0 - 1,999	.0	49.9	63.3	447.5	560.7
2,000 - 3,999	.0	51.3	26.1	415.1	492.5
4,000 - 5,999	.0	53.0	7.7	336.5	397.2
6,000 - 7,999	.0	41.7	22.0	287.3	351.0
8,000 - 9,999	.0	28.5	11.4	232.9	272.8
10,000+	.0	21.1	.0	328.7	349.8
Total, all classes	.0	245.5	130.6	2,047.9	2,424.0

Table 7.--Area of timberland by stocking class of growing-stock trees and ownership class, Maryland, 1986

(In thousands of acres)

Stocking class	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
Nonstocked	.0	.0	.0	4.2	4.2
Poorly stocked	.0	6.1	5.0	77.2	88.3
Moderately stocked	.0	22.0	18.0	307.5	347.5
Fully stocked	.0	72.6	15.0	637.5	725.1
Overstocked	.0	144.8	92.6	1,021.5	1,258.9
Total, all classes	.0	245.5	130.6	2,047.9	2,424.0

Table 8.--Area of timberland by forest-type group and cubic-foot stand-volume class, Maryland, 1986

(In thousands of acres)

Forest-type group	Stand-volume class (cubic feet per acre)						All classes
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+	
White/red pine	25.1	3.9	3.2	4.0	9.5	7.4	53.1
Loblolly/shortleaf	39.0	39.3	41.5	39.1	65.1	72.8	296.9
Oak/pine	35.0	19.7	36.6	50.7	78.5	61.4	281.9
Oak/hickory	82.0	112.5	224.9	313.5	285.3	436.1	1,454.4
Oak/gum/cypress	10.5	26.4	20.3	10.6	17.7	34.7	120.2
Elm/ash/red maple	7.9	13.1	22.9	.0	2.8	37.0	83.7
Northern hardwoods	40.5	20.3	14.8	22.8	17.0	18.3	133.8
Total, all groups	240.0	235.3	364.2	440.9	475.9	667.7	2,424.0

Table 9.--Area of timberland by forest-type group and board-foot stand-volume class, Maryland, 1986

(In thousands of acres)

Forest-type group	Stand-volume class (board feet per acre)						All classes
	0-1999	2000-3999	4000-5999	6000-7999	8000-9999	10000+	
White/red pine	36.7	.0	6.3	6.4	.0	3.7	53.1
Loblolly/shortleaf	91.1	71.8	36.0	55.5	27.4	15.1	296.9
Oak/pine	67.7	66.6	39.8	51.1	41.5	15.1	281.9
Oak/hickory	259.1	263.8	270.2	214.1	178.6	268.6	1,454.4
Oak/gum/cypress	33.8	29.7	22.4	6.4	11.7	16.2	120.2
Elm/ash/red maple	10.0	30.1	3.7	7.0	5.7	27.1	83.7
Northern hardwoods	62.3	30.5	18.7	10.6	7.8	3.9	133.8
Total, all groups	560.7	492.5	397.2	351.0	272.8	349.8	2,424.0

Table 10.--Area of timberland by forest-type group and green ton stand-volume class, Maryland, 1986

(In thousands of acres)

Forest-type group	Stand-volume class (green tons per acre)									All classes
	0-24	25-49	50-74	75-99	100-124	125-149	150-174	175-199	200+	
White/red pine	15.0	10.9	3.2	4.0	6.4	3.1	6.8	.0	3.7	53.1
Loblolly/shortleaf	24.2	49.4	40.8	53.1	49.9	57.5	5.6	8.9	7.5	296.9
Oak/pine	19.4	22.9	38.2	59.8	73.2	37.1	13.2	.0	18.1	281.9
Oak/hickory	65.5	112.3	217.1	235.1	252.5	262.2	100.5	102.4	106.8	1,454.4
Oak/gum/cypress	6.5	19.1	21.5	26.7	10.6	3.8	21.1	3.6	7.4	120.2
Elm/ash/red maple	12.5	14.9	27.7	7.0	7.2	6.4	.0	3.5	4.5	83.7
Northern hardwoods	31.5	18.1	34.8	18.4	4.8	7.3	3.7	.0	15.2	133.8
Total, all groups	174.6	247.5	383.2	404.2	404.6	377.4	150.9	118.4	163.2	2,424.0

Table 11.--Area of timberland by forest-type group and stocking class of all live trees, Maryland, 1976

(In thousands of acres)

Forest-type group	Stocking class					All classes
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked	
White/red pine	*6.0*	*6.9*	*.0*	*5.9*	*11.7*	*30.4*
Spruce/fir	*.0*	*.0*	*.0*	*5.8*	*4.4*	*10.2*
Loblolly/shortleaf	*1.9*	*8.3*	*40.5*	*162.9*	*215.2*	*429.9*
Oak/pine	*.0*	*10.9*	*8.0*	*131.5*	*81.3*	*231.7*
Oak/hickory	*20.3*	*47.1*	*152.9*	*797.4*	*496.3*	*1,514.1*
Oak/gum/cypress	*.0*	*.0*	*9.1*	*24.0*	*37.9*	*70.9*
Elm/ash/red maple	*.0*	*12.1*	*25.9*	*36.5*	*22.6*	*97.1*
Northern hardwoods	*.0*	*11.6*	*26.5*	*87.6*	*23.6*	*149.3*
Total, all groups	*29.3*	*96.7*	*263.0*	*1,251.5*	*893.1*	*2,533.7*

Table 12.--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
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked	
White/red pine	.0	10.5	13.5	8.3	20.8	53.1
Loblolly/shortleaf	.0	10.8	34.0	52.4	199.6	296.9
Oak/pine	.0	1.8	18.4	53.8	207.9	281.9
Oak/hickory	.0	16.5	117.1	526.0	794.8	1,454.4
Oak/gum/cypress	.0	.0	6.5	36.9	76.8	120.2
Elm/ash/red maple	.0	3.3	32.7	11.6	36.1	83.7
Northern hardwoods	.0	12.7	22.2	45.1	53.7	133.8
Total, all groups	.0	55.7	244.5	734.1	1,389.7	2,424.0

Table 13.--Area of timberland by forest-type group and stocking class of growing-stock trees, Maryland, 1976

(In thousands of acres)

Forest-type group	Stocking class					All classes
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked	
White/red pine	6.0	6.9	5.9	5.9	5.8	30.4
Spruce/fir	.0	.0	5.8	4.4	.0	10.2
Loblolly/shortleaf	2.9	18.6	69.2	163.3	175.8	429.9
Oak/pine	.0	10.9	72.1	115.1	33.8	231.7
Oak/hickory	41.7	129.9	480.5	592.8	269.1	1,514.1
Oak/gum/cypress	.0	3.2	12.3	29.8	25.5	70.9
Elm/ash/red maple	6.2	29.7	35.8	13.9	11.4	97.1
Northern hardwoods	.0	42.4	100.7	6.2	.0	149.3
Total, all groups	56.9	241.6	782.3	931.4	521.4	2,533.7

Table 14.--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
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked	
White/red pine	.0	10.6	21,7	7.1	13.7	53.1
Loblolly/shortleaf	.0	14.6	33.1	57.5	191.7	296.9
Oak/pine	.0	3.8	18.8	50.6	208.7	281.9
Oak/hickory	.0	34.3	197.9	510.7	711.5	1,454.4
Oak/gum/cypress	.0	.0	7.3	46.2	66.7	120.2
Elm/ash/red maple	.0	9.5	30.6	15.3	28.3	83.7
Northern hardwoods	4.2	15.5	38.1	37.7	38.3	133.8
Total, all groups	4.2	88.3	347.5	725.1	1,258.9	2,424.0

Table 15.--Area of timberland by forest-type group and basal-area class, Maryland, 1986

(In thousands of acres)

Forest-type group	Basal-area class (square feet per acre)							All classes
	0-49	50-99	100-149	150-199	200-249	250-299	300+	
White/red pine	18.9	17.3	9.5	3.7	3.7	.0	.0	53.1
Loblolly/shortleaf	44.7	81.6	105.5	65.1	.0	.0	.0	296.9
Oak/pine	31.8	72.1	140.0	37.9	.0	.0	.0	281.9
Oak/hickory	97.4	551.3	617.6	185.0	3.2	.0	.0	1,454.4
Oak/gum/cypress	16.0	50.7	27.4	15.6	6.8	3.8	.0	120.2
Elm/ash/red maple	11.2	32.7	26.2	13.7	.0	.0	.0	83.7
Northern hardwoods	42.7	47.0	40.4	3.7	.0	.0	.0	133.8
Total, all groups	262.8	852.7	966.5	324.6	13.6	3.8	.0	2,424.0

Table 16.--Number of live trees on timberland by species and diameter class, Maryland, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)												All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
White/red pine	1,939	1,410	4,243	2,642	626	602	213	44	37	16	0	0	11,773
Loblolly pine	29,262	22,897	15,742	11,118	7,299	5,428	3,043	1,431	704	220	116	0	97,261
Virginia pine	14,214	6,692	8,406	7,969	5,297	3,224	1,556	318	21	0	5	0	47,703
Other yellow pines	1,200	3,179	724	483	328	137	48	38	7	0	0	0	6,144
Other softwoods	6,988	2,235	1,049	1,123	538	315	169	146	125	72	53	3	12,817
Total softwoods	53,603	36,414	30,165	23,336	14,088	9,706	5,029	1,977	894	308	174	3	175,699
Red maple	129,527	40,038	22,440	11,857	6,645	4,485	2,717	1,411	943	494	720	156	221,433
Sugar maple	13,530	3,596	2,064	1,352	729	492	211	211	67	83	79	21	22,435
Hickory	21,121	7,823	4,361	3,012	1,798	1,066	643	448	341	85	75	6	40,780
Beech	17,176	5,314	3,972	1,339	1,311	1,007	775	455	327	230	248	82	32,237
Sweetgum	78,285	24,464	12,049	7,465	4,124	2,710	2,014	994	492	216	198	26	133,039
Yellow-poplar	17,895	5,131	3,923	3,490	2,951	2,721	2,055	1,424	1,280	979	1,452	230	43,530
Blackgum	47,558	19,459	7,120	2,812	2,365	1,429	807	568	219	144	148	11	82,640
Ash-walnut-cherry	38,813	13,567	7,318	4,636	2,891	1,489	1,170	579	276	121	79	28	70,967
Select white oaks	18,654	8,299	10,419	8,158	6,079	3,423	2,110	1,388	809	445	703	113	60,600
Select red oaks	6,723	1,476	2,135	2,790	2,764	2,228	1,794	1,039	548	425	595	111	22,627
Other white oaks	7,235	2,123	4,889	5,284	3,742	2,109	1,836	989	610	267	410	38	29,532
Other red oaks	13,393	11,215	9,240	5,652	4,003	3,535	2,518	1,688	1,097	878	889	159	54,267
Black locust	15,731	7,721	2,965	1,861	1,557	588	385	215	126	51	28	0	31,230
Other commercial hardwoods	138,390	27,119	10,010	5,490	2,562	1,442	884	587	247	253	221	17	187,223
Non-commercial hardwoods	78,248	14,128	5,191	2,237	859	329	171	125	16	0	10	0	101,315
Total hardwoods	642,281	191,473	108,096	67,435	44,380	29,052	20,089	12,123	7,399	4,671	5,857	999	1,133,856
Total, all species	695,885	227,887	138,262	90,771	58,468	38,758	25,119	14,100	8,293	4,979	6,031	1,002	1,309,555

Table 17.--Number of live trees on timberland by diameter class, tree class, and softwoods and hardwoods, Maryland, 1986

(In thousands of trees)

Diameter class	Growing stock		Cull		All classes
	Softwoods	Hardwoods	Softwoods	Hardwoods	
Seedlings	193,209	5,939,435	0	1,494,923	7,627,568
1.0 - 2.9	53,603	560,691	0	81,590	695,885
3.0 - 4.9	36,414	175,513	0	15,961	227,887
Total seedlings and saplings	283,227	6,675,639	0	1,592,474	8,551,340
5.0 - 6.9	29,755	93,748	411	14,348	138,262
7.0 - 8.9	23,170	61,492	166	5,943	90,771
9.0 - 10.9	-	41,764	-	2,616	44,380
Total poletimber	52,924	197,004	577	22,907	273,412
9.0 - 10.9	13,861	-	227	-	14,088
11.0 - 12.9	9,544	27,017	162	2,035	38,758
13.0 - 14.9	5,029	18,774	0	1,315	25,119
Total small sawtimber	28,434	45,791	389	3,350	77,964
15.0 - 16.9	1,969	11,333	8	790	14,100
17.0 - 18.9	894	6,917	0	482	8,293
19.0 - 20.9	308	4,477	0	195	4,979
21.0 - 28.9	170	5,392	4	465	6,031
29.0 and larger	3	760	0	239	1,002
Total large sawtimber	3,344	28,879	13	2,170	34,405
Total, all classes	367,929	6,947,313	979	1,620,901	8,937,123

Table 18.--Number of trees (5.0+ inches d.b.h.) on timberland by species and tree class, Maryland, 1986

(In thousands of trees)

Species	Tree class								All classes
	Preferred	Acceptable	All growing stock	Rough cull	Rotten cull	All live	Salvable dead	Nonsalvable dead	
White/red pine	329	7,981	8,311	113	0	8,424	118	28	8,570
Loblolly pine	1,124	43,806	44,931	156	15	45,102	1,423	1,166	47,691
Virginia pine	150	26,333	26,483	303	11	26,797	1,229	970	28,996
Other yellow pines	183	1,428	1,612	153	0	1,765	159	410	2,334
Other softwoods	112	3,254	3,366	204	24	3,594	52	77	3,723
Total softwoods	1,899	82,803	84,702	929	50	85,682	2,981	2,651	91,314
Red maple	26	47,477	47,503	3,481	883	51,867	705	197	52,770
Sugar maple	50	4,704	4,755	533	21	5,309	28	40	5,377
Hickory	124	11,308	11,432	356	49	11,837	813	561	13,211
Beech	15	9,203	9,218	452	76	9,747	0	194	9,941
Sweetgum	431	29,096	29,528	552	210	30,290	266	584	31,139
Yellow-poplar	1,366	18,718	20,085	343	77	20,505	52	244	20,800
Blackgum	8	13,723	13,731	1,828	65	15,624	241	103	15,967
Ash-walnut-cherry	245	15,698	15,943	2,406	239	16,182	380	998	19,965
Select white oaks	121	31,807	31,929	1,627	91	32,020	1,387	1,339	36,373
Select red oaks	311	13,566	13,878	512	38	13,916	898	587	15,913
Other white oaks	59	18,570	18,629	1,526	19	20,174	997	1,203	22,374
Other red oaks	295	28,385	28,680	756	222	29,658	1,784	811	32,253
Black locust	10	6,033	6,042	1,450	285	6,327	1,246	932	9,955
Other commercial hardwoods	69	19,873	19,942	1,611	161	21,714	622	535	22,871
Non-commercial hardwoods	0	380	380	8,400	159	8,939	1,044	2,522	12,505
Total hardwoods	3,132	268,542	271,673	25,835	2,593	300,100	10,464	10,852	321,417
Total, all species	5,030	351,345	356,376	26,764	2,643	385,783	13,445	13,503	421,731

Table 19.--Number of growing-stock trees on timberland by species and diameter class, Maryland, 1986

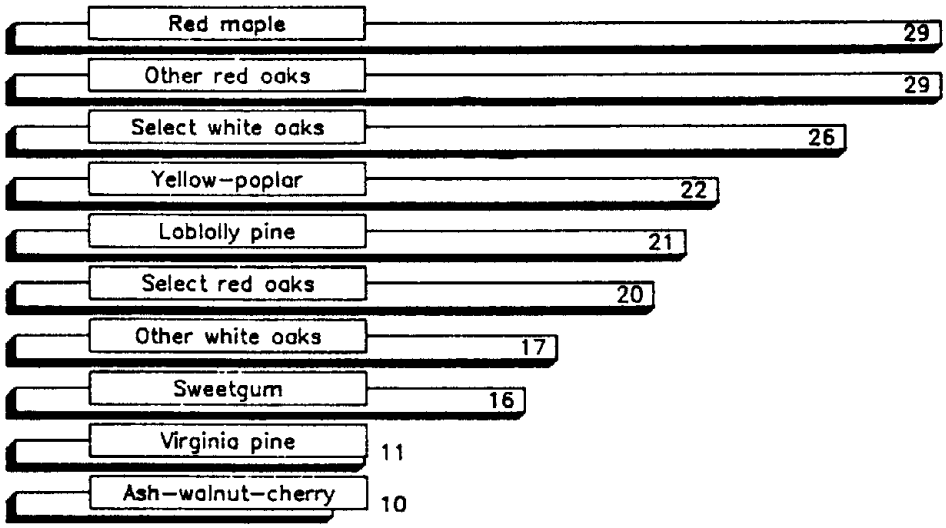
(In thousands of trees)

Species	Diameter class (inches at breast height)												All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
White/red pine	1,939	1,410	4,192	2,613	611	584	213	44	37	16	0	0	11,660
Loblolly pine	29,262	22,897	15,648	11,100	7,265	5,413	3,043	1,422	704	220	116	0	97,090
Virginia pine	14,214	6,692	8,355	7,865	5,212	3,150	1,556	318	21	0	5	0	47,389
Other yellow pines	1,200	3,179	604	469	313	132	48	38	7	0	0	0	5,991
Other softwoods	6,988	2,235	955	1,123	459	264	169	146	125	72	48	3	12,589
Total softwoods	53,603	36,414	29,755	23,170	13,861	9,544	5,029	1,969	894	308	170	3	174,720
Red maple	129,527	40,038	20,643	10,797	6,402	4,044	2,475	1,238	777	443	583	99	217,069
Sugar maple	13,530	3,596	1,900	1,199	641	432	204	211	41	74	43	10	21,881
Hickory	21,121	7,823	4,176	2,977	1,732	967	634	448	334	85	72	6	40,375
Beech	17,176	5,314	3,826	1,253	1,268	900	740	455	306	209	216	45	31,708
Sweetgum	78,285	24,464	11,729	7,193	4,110	2,669	1,956	962	468	216	198	26	132,277
Yellow-poplar	17,895	5,131	3,850	3,417	2,919	2,690	2,004	1,367	1,267	948	1,430	194	43,111
Blackgum	44,216	17,626	6,256	2,554	2,150	1,155	689	488	199	123	116	0	75,573
Ash-walnut-cherry	38,813	13,567	5,690	4,303	2,603	1,340	968	542	276	121	72	26	68,323
Select white oaks	18,654	8,299	9,447	7,943	5,822	3,380	2,047	1,310	797	435	649	98	58,882
Select red oaks	6,723	1,476	1,931	2,653	2,764	2,228	1,719	1,006	507	416	563	90	22,077
Other white oaks	7,235	2,123	3,946	5,136	3,597	2,019	1,771	915	595	252	380	19	27,987
Other red oaks	13,393	11,215	8,779	5,407	3,943	3,441	2,463	1,677	1,087	867	882	134	53,289
Black locust	15,731	7,721	2,380	1,476	1,265	369	272	149	86	35	9	0	29,495
Other hardwoods	138,390	27,119	9,194	5,184	2,547	1,382	831	563	177	253	177	13	185,831
Total hardwoods	560,691	175,513	93,748	61,492	41,764	27,017	18,774	11,333	6,917	4,477	5,392	760	1,007,877
Total, all species	614,295	211,927	123,502	84,662	55,625	36,561	23,803	13,302	7,811	4,785	5,562	763	1,182,597

MAJOR SPECIES BY WEIGHT

(Millions of tons)

Green Weight



Dry Weight

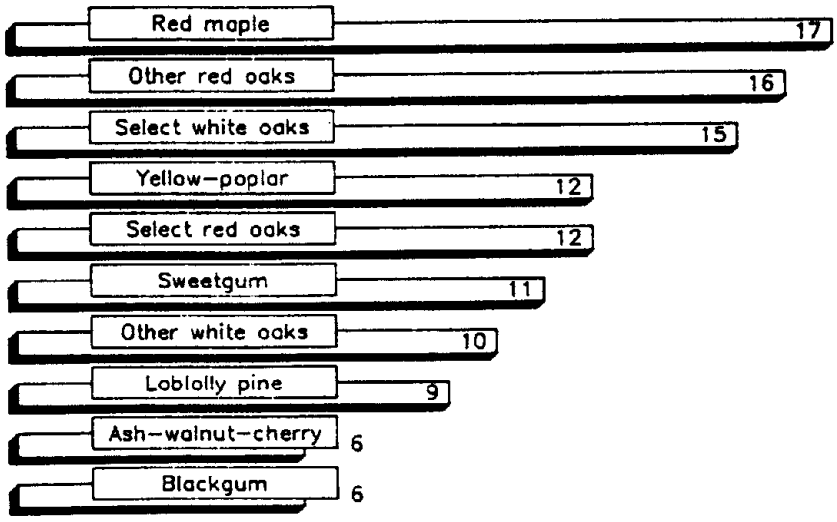


Table 20.--Net green weight of all live trees on timberland by species and diameter class, Maryland, 1986

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+	
White/red pine	136.0	625.9	823.3	320.3	492.5	254.1	69.0	86.0	48.9	.0	2,856.0
Loblolly pine	1,563.3	2,130.7	2,963.2	3,275.7	3,741.1	3,005.8	1,960.4	1,243.2	507.3	378.0	20,768.7
Virginia pine	528.3	1,127.2	2,161.3	2,393.6	2,228.4	1,531.2	436.8	38.6	.0	15.1	10,460.4
Other yellow pines	211.4	100.6	129.2	153.0	97.5	53.7	51.5	11.5	.0	.0	808.4
Other softwoods	178.3	157.8	307.0	242.0	217.9	159.2	201.9	245.0	166.8	207.8	2,083.7
Total softwoods	2,617.4	4,142.2	6,384.0	6,384.5	6,777.3	5,004.0	2,719.7	1,624.2	723.0	601.0	36,977.2
Red maple	3,554.0	3,307.6	3,408.5	3,356.4	3,405.8	2,927.4	2,093.2	1,805.0	1,256.8	3,843.4	28,958.0
Sugar maple	369.6	466.5	561.4	517.4	462.1	300.6	386.5	148.9	241.6	457.0	3,911.6
Hickory	619.0	687.6	1,049.4	1,080.9	1,016.3	944.6	919.8	929.4	321.1	526.8	8,095.0
Beech	563.1	856.8	554.8	932.5	1,067.8	1,115.5	895.6	826.2	734.2	1,724.8	9,271.4
Sweetgum	2,027.7	1,788.1	2,207.7	2,072.0	2,068.4	2,213.0	1,494.1	959.6	566.8	971.6	16,368.9
Yellow-poplar	406.2	551.0	986.8	1,435.2	2,031.5	2,272.1	2,163.2	2,545.4	2,471.0	7,617.5	22,479.8
Blackgum	1,746.0	1,212.6	945.0	1,346.2	1,258.6	1,013.9	997.4	463.3	393.7	725.3	10,102.2
Ash-walnut-cherry	1,183.8	1,310.3	1,511.3	1,560.1	1,249.8	1,351.5	903.7	560.1	314.5	460.2	10,405.3
Select white oaks	412.8	1,395.9	2,488.4	3,352.4	3,096.3	2,893.9	2,735.3	2,196.5	1,581.9	5,964.0	26,117.5
Select red oaks	142.9	384.2	1,013.0	1,793.1	2,321.9	2,816.6	2,348.1	1,655.9	1,740.7	5,835.4	20,052.0
Other white oaks	176.9	752.0	1,802.8	2,227.2	1,988.1	2,522.5	1,961.1	1,621.1	932.9	2,601.2	16,585.7
Other red oaks	772.2	1,554.8	1,894.8	2,366.4	3,325.8	3,420.3	3,256.7	2,775.0	2,885.7	6,589.2	28,841.1
Black locust	772.5	505.8	558.7	819.2	437.1	435.1	328.3	247.6	106.7	49.0	4,260.0
Other commercial hardwoods	2,796.8	1,578.2	1,832.8	1,426.3	1,231.6	1,119.3	1,061.2	601.5	712.1	1,062.2	13,422.2
Non-commercial hardwoods	1,578.2	804.1	679.0	428.2	269.1	197.8	212.8	35.2	.0	53.7	4,258.2
Total hardwoods	17,121.6	17,155.5	21,494.6	24,713.5	25,230.2	25,544.2	21,757.0	17,370.9	14,259.6	38,481.3	223,128.6
Total, all species	19,739.0	21,297.7	27,878.7	31,098.1	32,007.5	30,548.2	24,476.7	18,995.1	14,982.6	39,082.2	260,105.8

Table 21.--Net dry weight of all live trees on timberland by species and diameter class, Maryland, 1986

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+	
White/red pine	60.9	274.9	352.9	134.0	202.2	103.5	28.0	34.9	19.8	.0	1,211.1
Loblolly pine	747.1	966.3	1,302.5	1,405.0	1,573.2	1,242.8	798.3	500.2	201.7	147.7	8,884.8
Virginia pine	274.2	595.3	1,151.8	1,284.3	1,202.2	829.8	237.8	21.1	.0	8.3	5,604.7
Other yellow pines	97.8	50.4	64.2	80.0	50.1	27.7	28.1	6.3	.0	.0	404.6
Other softwoods	88.7	77.3	149.3	117.2	104.8	78.2	100.3	123.9	82.9	105.7	1,028.3
Total softwoods	1,268.7	1,964.2	3,020.7	3,020.5	3,132.5	2,282.1	1,192.5	686.3	304.4	261.7	17,133.4
Red maple	2,041.9	1,922.9	1,992.3	1,970.3	2,006.1	1,729.5	1,240.0	1,072.2	747.9	2,305.0	17,028.1
Sugar maple	229.8	296.5	358.2	330.8	295.8	192.6	247.8	95.5	155.0	293.5	2,495.6
Hickory	402.6	446.4	680.4	700.6	657.0	611.6	595.3	601.3	203.0	327.7	5,225.9
Beech	331.4	499.9	322.6	541.1	618.8	645.9	518.2	477.8	424.4	996.2	5,376.3
Sweetgum	1,239.3	1,139.9	1,433.6	1,364.3	1,377.4	1,488.3	1,013.2	655.4	390.2	679.0	10,780.5
Yellow-poplar	181.4	264.9	491.6	735.3	1,064.5	1,215.1	1,175.9	1,402.8	1,380.0	4,408.3	12,319.7
Blackgum	957.0	681.1	538.2	775.6	732.0	595.3	592.8	278.5	238.7	447.5	5,836.7
Ash-walnut-cherry	693.5	785.7	893.9	945.1	760.3	822.8	556.0	354.8	198.4	295.3	6,305.7
Select white oaks	246.8	814.1	1,435.6	1,913.6	1,747.8	1,649.4	1,539.6	1,225.6	886.4	3,285.4	14,744.5
Select red oaks	80.8	221.3	579.7	1,029.3	1,332.2	1,614.3	1,344.7	947.6	994.0	3,321.8	11,465.6
Other white oaks	107.6	450.9	1,072.0	1,317.1	1,172.3	1,477.4	1,142.3	946.8	543.5	1,507.4	9,737.2
Other red oaks	443.5	928.2	1,100.4	1,355.2	1,895.1	1,923.1	1,812.0	1,536.0	1,595.6	3,537.1	16,126.2
Black locust	301.5	244.9	297.9	479.2	272.9	289.7	230.7	180.8	81.4	39.2	2,418.2
Other commercial hardwoods	1,571.3	837.9	976.6	808.8	708.6	651.5	577.8	332.8	429.7	678.3	7,573.2
Non-commercial hardwoods	789.5	445.0	384.0	253.0	155.3	120.6	128.2	18.1	.0	42.5	2,336.2
Total hardwoods	9,617.8	9,979.6	12,556.8	14,519.4	14,796.0	15,027.2	12,714.3	10,126.0	8,268.3	22,164.2	129,769.6
Total, all species	10,886.4	11,943.7	15,577.5	17,539.9	17,928.5	17,309.3	13,906.8	10,812.3	8,572.6	22,425.9	146,903.0

Table 22.--Net green weight of all trees on timberland by class of material and species group, Maryland, 1986

(In thousands of tons)

Class of material	Weight[a]		All groups
	Softwoods	Hardwoods	
Sawlog portion	15,659.2	83,281.2	98,940.4
Upper stem	2,148.2	18,111.7	20,260.0
Total	17,807.4	101,392.9	119,200.3
Poletimber trees	7,024.7	40,915.9	47,940.6
All growing stock	24,832.1	142,308.8	167,140.9
Rough cull trees[b]	222.2	9,669.8	9,892.0
Rotten cull trees[b]	14.1	1,347.0	1,361.1
Salvable dead trees[c]	549.0	4,227.0	4,776.0
Saplings[c]	2,617.4	17,121.6	19,739.0
Tops - growing stock	9,203.7	48,820.5	58,024.1
Tops - rough and rotten	87.8	3,860.9	3,948.7
All nongrowing stock	12,694.1	85,046.8	97,740.9
Total, all classes	37,526.2	227,355.6	264,881.8

[a] Includes bark and sound cull; excludes rotten cull.
[b] Bole portion of trees 5.0 inches d.b.h. and larger.
[c] Weight of entire tree aboveground.

Table 23.--Net volume of all trees on timberland by class of timber and species group, Maryland, 1986

(In millions of cubic feet)

Class of timber	Volume		All groups
	Softwoods	Hardwoods	
Sawtimber trees:			
Sawlog portion	505.3	2,064.7	2,570.1
Upper stem portion	70.1	457.7	527.8
Total	575.4	2,522.4	3,097.9
Poletimber trees	237.7	1,139.4	1,377.0
Total, all growing stock	813.1	3,661.8	4,474.9
Rough trees:			
Sawtimber size	3.5	103.8	107.4
Poletimber size	1.6	68.9	70.5
Total	5.1	172.7	177.9
Rotten trees:			
Sawtimber size	.4	16.7	17.1
Poletimber size	.0	2.4	2.4
Total	.4	19.1	19.5
Total, all live trees	818.6	3,853.6	4,672.3
Salvable dead trees:			
Sawtimber size	6.1	30.0	36.1
Poletimber size	4.3	28.6	32.9
Total	10.4	58.6	69.0
Total, all classes	829.0	3,912.2	4,741.3

Table 24.--Net volume of all live, growing-stock ,and sawtimber trees by species group and ownership class, Maryland, 1986

Species group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
	All live (In millions of cubic feet)				
Softwoods	.0	68.7	80.4	669.5	818.6
Hardwoods	.0	401.0	105.5	3,347.2	3,853.7
Total, all groups	.0	469.7	185.9	4,016.7	4,672.3
	Growing stock (In millions of cubic feet)				
Softwoods	.0	69.1	80.3	663.7	813.1
Hardwoods	.0	377.1	103.0	3,181.7	3,661.8
Total, all groups	.0	446.2	183.3	3,845.4	4,474.9
	Sawtimber (In millions of board feet)[a]				
Softwoods	.0	213.2	166.0	1,875.1	2,254.3
Hardwoods	.0	1,036.9	256.7	9,786.8	11,080.5
Total, all groups	.0	1,263.2	422.7	11,648.9	13,334.8

[a] International 1/4-inch rule.

Table 25.--Net volume of growing-stock trees on timberland by forest-type group and stand-size class, Maryland, 1986

(In millions of cubic feet)

Forest-type group	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
White/red pine	36.4	25.6	2.4	.0	64.4
Loblolly/shortleaf	437.3	78.7	10.7	.0	526.7
Oak/pine	447.1	42.5	9.3	.0	498.8
Oak/hickory	2,464.8	376.0	27.2	.0	2,868.0
Oak/gum/cypress	172.3	30.2	7.3	.0	209.8
Elm/ash/red maple	149.1	4.9	.5	.0	154.5
Northern hardwoods	108.1	39.5	5.2	.0	152.7
Total, all groups	3,814.9	597.4	62.6	.0	4,474.9

Table 26.--Net volume of growing-stock trees on timberland by forest-type group and basal-area class, Maryland, 1986

(In millions of cubic feet)

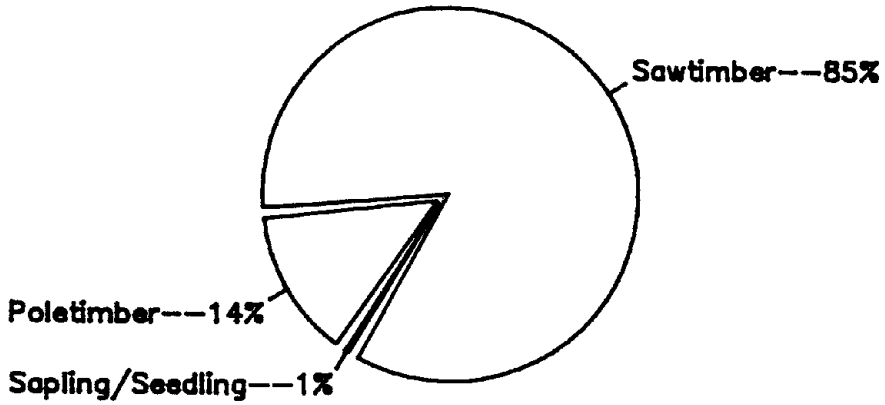
Forest-type group	Basal-area class (square feet per acre)							All classes
	0-49	50-99	100-149	150-199	200-249	250-299	300+	
White/red pine	3.9	14.4	19.4	12.6	14.0	.0	.0	64.4
Loblolly/shortleaf	20.4	86.6	234.6	185.1	.0	.0	.0	526.7
Oak/pine	9.4	80.4	311.2	97.9	.0	.0	.0	498.8
Oak/hickory	36.5	752.6	1,472.8	593.7	12.4	0	.0	2,868.0
Oak/gum/cypress	10.1	53.7	64.4	47.7	21.7	12.2	.0	209.8
Elm/ash/red maple	2.0	33.1	72.9	46.5	.0	.0	.0	154.5
Northern hardwoods	8.6	44.4	89.7	9.9	.0	.0	.0	152.7
Total, all groups	91.1	1,065.1	2,265.0	993.5	48.1	12.2	.0	4,474.9

Table 27.--Net volume of growing-stock trees on timberland by species and forest-type group, Maryland, 1986

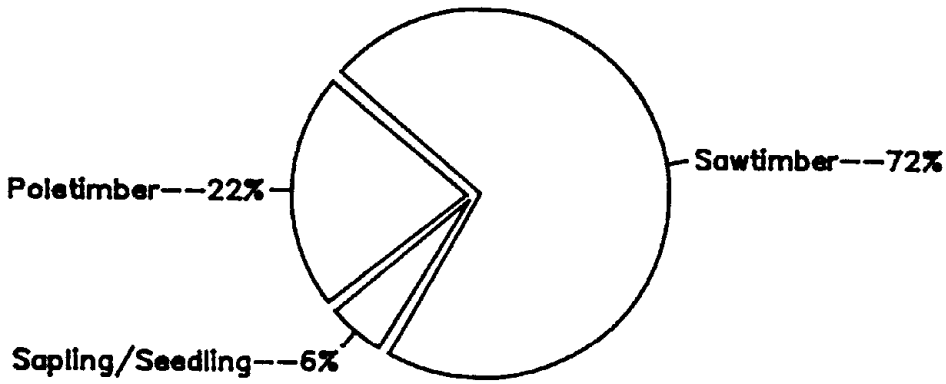
(In millions of cubic feet)

Species	Forest-type group									All groups
	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	39.9	.0	2.8	6.1	1.7	.0	.0	.7	.0	51.2
Loblolly pine	.0	.0	298.3	128.9	37.5	6.9	.3	.0	.0	472.0
Virginia pine	.0	.0	127.6	66.7	46.2	.8	.0	.0	.0	241.3
Other yellow pines	.7	.0	.9	6.1	3.8	.0	.0	.0	.0	11.6
Other softwoods	14.0	.0	.6	2.3	10.9	3.1	.0	6.2	.0	37.0
Total softwoods	54.6	.0	430.2	210.1	100.0	10.8	.3	7.0	.0	813.1
Red maple	3.6	.0	15.7	46.7	295.9	46.5	66.6	17.5	.0	492.4
Sugar maple	.0	.0	.0	.4	26.4	.0	.0	28.5	.0	55.3
Hickory	.0	.0	.7	7.5	118.3	.0	3.2	6.8	.0	136.5
Beech	.7	.0	.2	6.0	130.2	3.3	.1	6.6	.0	147.2
Sweetgum	.0	.0	27.7	34.8	198.9	47.3	8.1	.0	.0	316.7
Yellow-poplar	.0	.0	3.9	35.2	500.8	2.6	4.2	.7	.0	547.4
Blackgum	.2	.0	4.1	15.9	79.9	26.1	6.5	.6	.0	133.3
Ash-walnut-cherry	2.2	.0	1.6	7.0	106.7	1.4	17.7	40.7	.0	177.4
Select white oaks	.0	.0	11.2	45.3	323.2	20.6	3.2	3.1	.0	406.7
Select red oaks	.2	.0	1.7	6.9	259.3	2.1	1.8	10.7	.0	282.7
Other white oaks	.3	.0	4.5	5.6	243.5	.2	.0	.6	.0	254.7
Other red oaks	.0	.0	21.9	70.3	340.1	39.2	5.2	.9	.0	477.7
Black locust	.5	.0	1.3	.4	40.8	.0	1.3	7.0	.0	51.3
Other hardwoods	2.1	.0	2.1	6.7	103.9	9.6	36.1	22.0	.0	182.5
Total hardwoods	9.8	.0	96.5	288.7	2,768.0	199.0	154.1	145.8	.0	3,661.8
Total, all species	64.4	.0	526.7	498.8	2,868.0	209.8	154.5	152.7	.0	4,474.9

PERCENT VOLUME OF GROWING STOCK BY STAND-SIZE CLASS AND INVENTORY



1986



1976

Table 28.--Net volume of growing-stock trees on timberland by species and stand-size class, Maryland, 1976

(In millions of cubic feet)

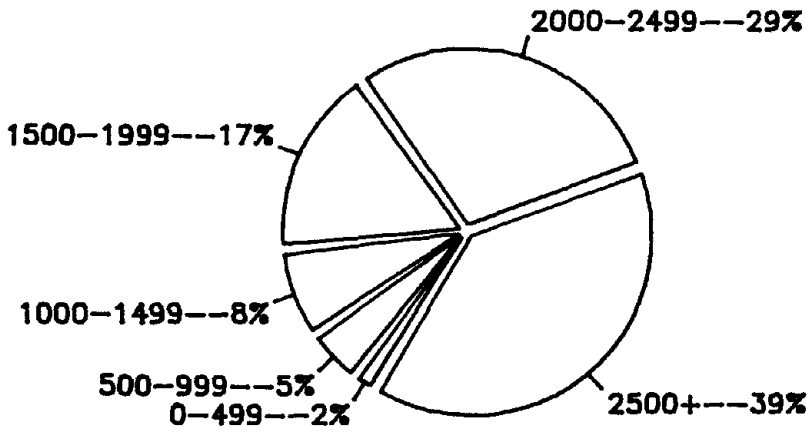
Species	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
White/red pine	3.9	28.5	2.9	.0	35.2
Loblolly pine	341.0	97.6	23.8	.8	463.2
Virginia pine	141.9	97.7	26.1	.0	265.7
Other yellow pines	9.0	1.9	2.9	.0	13.8
Other softwoods	7.8	8.2	2.2	.0	18.2
Total softwoods	503.5	233.9	57.8	.8	796.1
Red maple	229.1	72.0	13.0	.6	314.6
Sugar maple	26.0	6.4	5.3	.0	37.6
Hickory	90.3	22.0	9.1	.4	121.8
Beech	94.1	11.9	5.6	1.3	112.9
Sweetgum	178.9	45.3	11.1	.0	235.3
Yellow-poplar	409.6	48.8	14.3	3.1	475.9
Blackgum	72.6	24.9	4.1	.0	101.6
Ash-walnut-cherry	78.9	34.0	18.3	5.1	136.3
Select white oaks	277.1	93.0	28.3	.0	398.4
Select red oaks	169.0	30.8	10.6	.5	210.9
Other white oaks	133.2	52.0	5.4	.0	190.6
Other red oaks	363.6	106.7	22.9	1.7	494.8
Black locust	21.0	8.9	3.8	.0	33.7
Other hardwoods	90.5	24.6	12.4	.0	127.5
Total hardwoods	2,233.9	581.3	164.1	12.8	2,992.2
Total, all species	2,737.5	815.3	222.0	13.6	3,788.2

Table 29.--Net volume of growing-stock trees on timberland by species and stand-size class, Maryland, 1986

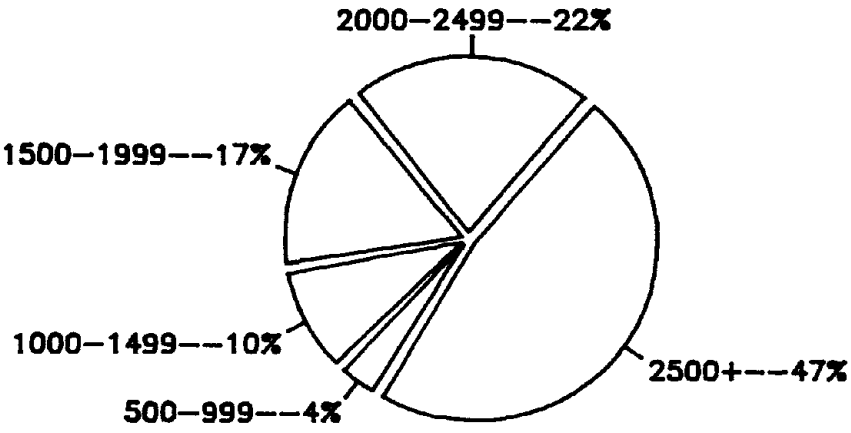
(In millions of cubic feet)

Species	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
White/red pine	25.3	25.5	.4	.0	51.2
Loblolly pine	399.8	66.8	5.4	.0	472.0
Virginia pine	200.1	32.6	8.6	.0	241.3
Other yellow pines	8.5	3.0	.1	.0	11.6
Other softwoods	31.6	4.6	.8	.0	37.0
Total softwoods	665.3	132.6	15.2	.0	813.1
Red maple	423.8	63.5	5.1	.0	492.4
Sugar maple	47.0	7.9	.4	.0	55.3
Hickory	117.4	17.9	1.3	.0	136.5
Beech	138.9	7.0	1.3	.0	147.2
Sweetgum	258.3	50.0	8.5	.0	316.7
Yellow-poplar	525.3	19.4	2.7	.0	547.4
Blackgum	120.3	10.7	2.3	.0	133.3
Ash-walnut-cherry	131.3	38.0	8.0	.0	177.4
Select white oaks	322.3	81.1	3.2	.0	406.7
Select red oaks	240.3	37.5	4.8	.0	282.7
Other white oaks	228.9	24.8	1.0	.0	254.7
Other red oaks	409.8	60.9	7.0	.0	477.7
Black locust	33.7	16.9	.6	.0	51.3
Other hardwoods	152.1	29.2	1.2	.0	182.5
Total hardwoods	3,149.6	464.8	47.4	.0	3,661.8
Total, all species	3,814.9	597.4	62.6	.0	4,474.9

PERCENT GROWING-STOCK VOLUME BY CUBIC-FOOT STAND-VOLUME CLASS AND SPECIES GROUP



Softwood



Hardwood

Table 30.--Net volume of growing-stock trees on timberland by species and cubic-foot stand-volume class, Maryland, 1986

(In millions of cubic feet)

Species	Stand-volume class (cubic feet per acre)						All classes
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+	
White/red pine	4.6	3.0	3.2	6.4	19.4	14.6	51.2
Loblolly pine	4.9	27.4	29.8	71.2	136.7	202.1	472.0
Virginia pine	5.3	7.8	21.7	50.0	71.3	85.2	241.3
Other yellow pines	.8	1.1	4.4	1.1	3.3	1.0	11.6
Other softwoods	.1	1.6	6.7	7.2	7.9	13.5	37.0
Total softwoods	15.7	40.9	65.8	135.9	238.6	316.3	813.1
Red maple	4.8	25.1	52.9	78.7	108.8	222.1	492.4
Sugar maple	.4	2.7	5.1	10.0	22.2	14.9	55.3
Hickory	1.3	5.5	15.5	23.8	36.0	54.4	136.5
Beech	.8	1.9	13.1	18.8	32.5	80.1	147.2
Sweetgum	3.7	10.8	28.5	60.2	46.3	167.3	316.7
Yellow-poplar	1.2	4.5	45.1	55.6	75.2	365.9	547.4
Blackgum	1.7	6.9	9.7	26.0	24.0	64.9	133.3
Ash-walnut-cherry	4.1	13.4	27.6	18.1	40.3	73.8	177.4
Select white oaks	1.4	20.7	53.8	92.6	99.7	138.5	406.7
Select red oaks	4.6	5.5	13.7	56.0	82.0	120.9	282.7
Other white oaks	.7	6.1	16.0	45.1	61.2	125.6	254.7
Other red oaks	3.4	29.4	44.6	87.9	125.1	187.2	477.7
Black locust	1.6	1.6	6.5	21.7	8.8	11.1	51.3
Other hardwoods	1.2	4.3	22.6	29.7	42.2	82.4	182.5
Total hardwoods	30.9	138.6	354.7	624.1	804.3	1,709.2	3,661.8
Total, all species	46.5	179.5	420.5	760.1	1,042.9	2,025.5	4,474.9

Table 31.--Net volume of growing-stock trees on timberland by species and diameter class, Maryland, 1976

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	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	11.8	14.3	6.0	.0	.5	1.6	.6	.6	.0	.0	35.2
Loblolly pine	42.5	73.5	88.0	93.0	81.7	52.6	19.4	8.5	3.6	.5	463.2
Virginia pine	55.9	86.8	62.0	35.1	14.3	8.9	2.2	.5	.0	.0	265.7
Other yellow pines	1.0	.7	1.7	3.9	4.5	1.0	1.0	.0	.0	.0	13.8
Other softwoods	2.7	4.1	3.0	2.1	.8	1.1	.0	.9	1.3	2.1	18.2
Total softwoods	113.7	179.3	160.7	134.1	101.7	65.3	23.2	10.4	5.0	2.7	796.1
Red maple	36.2	53.4	50.8	35.1	36.6	29.8	24.4	14.8	30.6	2.8	314.6
Sugar maple	4.0	4.2	9.2	5.2	4.1	5.4	1.1	2.9	1.6	.0	37.6
Hickory	9.8	13.5	18.9	25.2	17.1	12.1	4.5	7.1	12.3	1.2	121.8
Beech	4.5	5.3	10.5	12.0	14.6	11.1	12.4	10.1	28.4	4.1	112.9
Sweetgum	21.5	37.1	38.9	41.5	31.9	26.1	13.6	7.0	16.4	1.3	235.3
Yellow-poplar	12.0	24.4	39.0	52.6	68.7	71.8	74.3	38.2	79.3	15.7	475.9
Blackgum	8.5	14.0	17.2	11.4	11.9	17.7	9.5	4.7	6.3	.3	101.6
Ash-walnut-cherry	13.8	21.2	30.2	20.7	13.6	13.7	9.9	5.0	8.2	.0	136.3
Select white oaks	29.2	42.2	60.4	58.5	53.2	44.0	33.7	20.3	45.5	11.2	398.4
Select red oaks	10.0	13.8	23.4	23.9	47.8	35.9	23.0	10.7	17.9	4.5	210.9
Other white oaks	12.9	29.4	27.3	31.1	27.4	17.3	17.8	11.7	13.5	2.1	190.6
Other red oaks	26.0	45.7	64.1	73.2	67.4	60.6	46.6	36.0	62.9	12.2	494.8
Black locust	3.8	6.7	7.5	7.3	4.5	1.0	1.5	.8	.6	.0	33.7
Other hardwoods	13.7	19.4	20.3	16.7	15.4	13.2	7.5	7.3	10.9	3.2	127.5
Total hardwoods	206.2	330.3	417.7	414.3	414.4	359.8	279.8	176.4	334.5	58.8	2,992.2
Total, all species	320.0	509.6	578.3	548.4	516.1	425.2	303.0	186.8	339.5	61.5	3,788.2

Table 32.--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
	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	11.5	15.8	6.2	9.4	5.0	1.2	1.3	.9	.0	.0	51.2
Loblolly pine	45.5	72.9	83.6	95.7	75.6	48.5	29.8	11.8	8.6	.0	472.0
Virginia pine	25.9	53.2	59.1	54.1	37.1	10.6	.8	.0	.3	.0	241.3
Other yellow pines	1.3	2.6	3.4	2.0	1.0	1.0	.2	.0	.0	.0	11.6
Other softwoods	2.7	6.4	4.6	3.5	3.9	4.3	4.5	3.1	3.5	.4	37.0
Total softwoods	86.8	150.9	157.0	164.8	122.6	65.8	36.7	15.8	12.4	.4	813.1
Red maple	54.1	68.9	73.9	73.2	62.5	41.5	34.4	24.2	45.7	14.1	492.4
Sugar maple	6.7	8.4	8.6	7.9	5.8	7.5	1.9	4.1	3.0	1.5	55.3
Hickory	11.5	21.5	21.9	18.8	18.1	16.9	15.4	5.4	5.9	1.1	136.5
Beech	8.6	8.1	15.9	18.1	21.1	18.1	15.9	14.2	19.4	7.7	147.2
Sweetgum	32.2	47.9	48.6	48.7	50.9	33.8	21.3	12.9	16.6	3.8	316.7
Yellow-poplar	10.8	24.0	38.3	54.8	60.8	57.5	68.8	60.7	136.3	35.4	547.4
Blackgum	16.3	15.5	24.2	20.3	16.4	16.8	8.1	6.5	9.2	.0	133.3
Ash-walnut-cherry	18.2	28.8	31.9	25.8	25.4	18.8	12.2	6.6	5.9	3.9	177.4
Select white oaks	25.7	49.5	63.5	56.1	49.1	41.8	34.4	22.7	48.5	15.5	406.7
Select red oaks	6.2	18.1	32.5	40.4	43.8	35.3	22.1	24.0	44.4	15.9	282.7
Other white oaks	10.9	33.6	40.0	34.5	41.3	28.4	24.0	12.5	26.8	2.8	254.7
Other red oaks	24.2	34.5	44.8	62.4	62.7	58.2	48.6	49.2	72.6	20.4	477.7
Black locust	6.7	8.7	13.4	5.8	6.5	4.7	3.3	1.7	.5	.0	51.3
Other hardwoods	21.7	31.4	28.9	24.2	20.6	18.6	7.9	12.9	13.8	2.4	182.5
Total hardwoods	253.8	399.1	486.5	490.9	484.9	397.9	318.2	257.3	448.7	124.5	3,661.8
Total, all species	340.6	550.0	643.4	655.7	607.5	463.6	354.9	273.1	461.2	124.9	4,474.9

Table 33.--Net volume of growing-stock in the sawlog portion[a] of sawtimber trees on timberland by species and diameter class, Maryland, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)								All classes
	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	5.2	8.4	4.5	1.1	1.2	.8	.0	.0	21.2
Loblolly pine	70.3	83.3	67.6	44.2	27.5	11.0	8.0	.0	311.9
Virginia pine	49.8	47.7	33.2	9.7	.7	.0	.3	.0	141.4
Other yellow pines	2.9	1.8	.9	1.0	.2	.0	.0	.0	6.7
Other softwoods	3.9	3.0	3.5	4.0	4.2	2.9	3.3	.4	25.1
Total softwoods	132.1	144.2	109.6	59.8	33.8	14.7	11.6	.4	506.2
Red maple	.0	54.2	51.5	35.2	30.5	20.5	39.2	12.9	243.9
Sugar maple	.0	5.8	4.7	6.3	1.6	3.4	2.5	1.3	25.6
Hickory	.0	13.8	14.6	14.2	13.1	4.6	5.1	.9	66.3
Beech	.0	13.6	17.1	15.2	13.5	12.1	16.5	7.5	95.4
Sweetgum	.0	35.8	41.3	28.4	18.2	11.0	14.1	3.2	152.1
Yellow-poplar	.0	40.3	49.4	48.3	58.4	52.0	115.9	30.1	394.5
Blackgum	.0	15.0	13.4	14.2	6.9	5.5	7.8	.0	62.8
Ash-walnut-cherry	.0	19.2	21.0	16.0	10.4	5.6	5.1	3.3	80.5
Select white oaks	.0	41.4	39.8	35.1	29.5	19.3	41.2	13.2	219.5
Select red oaks	.0	29.7	35.4	29.7	18.8	20.4	37.8	13.8	185.6
Other white oaks	.0	25.4	33.6	24.0	20.4	10.6	23.0	2.8	139.9
Other red oaks	.0	45.9	51.0	48.9	41.3	41.9	61.7	17.3	308.0
Black locust	.0	4.6	5.4	4.1	2.9	1.4	.4	.0	19.0
Other hardwoods	.0	18.0	16.7	15.7	6.8	10.9	12.3	2.0	82.5
Total hardwoods	.0	362.7	395.0	335.3	272.3	219.2	382.6	108.3	2,075.4
Total, all species	132.1	506.9	504.7	395.1	306.2	233.8	394.2	108.7	2,581.6

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

MAJOR SPECIES BY VOLUME, MARYLAND, 1976 AND 1986

Millions of board feet

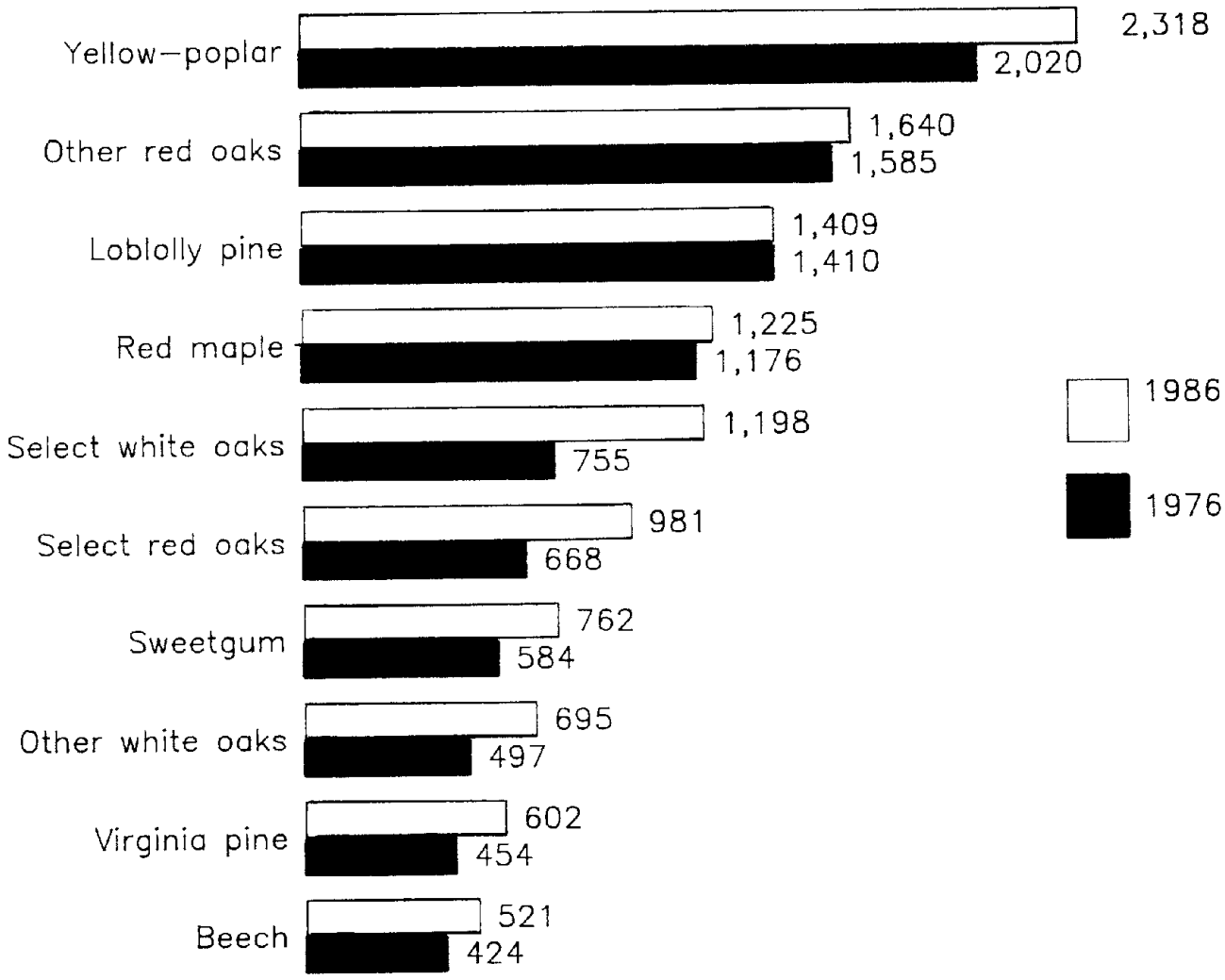


Table 34.--Net volume of sawtimber trees on timberland by species and diameter class, Maryland, 1976

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	21.3	.0	2.1	8.5	2.4	3.3	.0	.0	37.6
Loblolly pine	300.6	368.8	349.9	238.0	91.2	41.1	17.3	3.1	1,409.9
Virginia pine	206.6	135.3	60.9	38.6	10.6	2.0	.0	.0	454.1
Other yellow pines	6.1	16.4	20.8	5.0	5.1	.0	.0	.0	53.4
Other softwoods	9.7	7.1	2.6	4.3	.0	3.9	5.9	11.9	45.3
Total softwoods	544.3	527.5	436.4	294.4	109.3	50.3	23.1	15.0	2,000.3
Red maple	.0	129.7	149.7	130.4	108.6	67.9	153.6	15.3	755.2
Sugar maple	.0	16.1	17.3	19.0	5.3	11.1	5.6	.0	74.4
Hickory	.0	95.4	75.3	55.3	20.4	36.2	66.4	6.9	355.9
Beech	.0	44.1	62.2	50.6	53.8	50.2	140.0	23.2	424.2
Sweetgum	.0	151.5	128.3	114.6	64.0	33.0	84.2	8.1	583.8
Yellow-poplar	.0	209.1	320.3	357.1	392.4	206.0	443.1	91.7	2,019.6
Blackgum	.0	40.1	48.8	78.2	44.7	23.4	29.5	1.9	266.7
Ash-walnut-cherry	.0	75.4	52.2	57.9	40.4	24.8	39.2	.0	289.8
Select white oaks	.0	225.1	216.4	196.2	152.7	94.3	228.3	63.2	1,176.1
Select red oaks	.0	81.7	192.1	148.7	102.2	48.2	73.7	21.1	667.6
Other white oaks	.0	115.7	105.7	70.0	80.1	53.7	60.7	11.3	497.2
Other red oaks	.0	269.5	284.9	264.9	212.9	173.6	311.6	67.2	1,584.7
Black locust	.0	23.0	16.3	4.4	6.4	3.5	2.4	.0	56.0
Other hardwoods	.0	61.6	65.0	59.3	33.6	34.6	56.1	18.2	328.4
Total hardwoods	.0	1,537.9	1,734.2	1,606.8	1,317.5	860.6	1,694.5	328.1	9,079.7
Total, all species	544.3	2,065.4	2,170.6	1,901.2	1,426.7	910.9	1,717.6	343.1	11,080.0

[a] International 1/4-inch rule.

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

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	19.6	37.2	21.5	6.0	7.1	4.5	.0	.0	95.8
Loblolly pine	277.3	369.6	316.9	216.5	132.3	55.2	41.4	.0	1,409.2
Virginia pine	191.6	205.6	153.2	46.2	3.7	.0	1.6	.0	601.9
Other yellow pines	11.6	7.8	4.3	4.4	1.1	.0	.0	.0	29.2
Other softwoods	14.1	13.0	15.9	19.4	21.1	15.1	17.5	2.1	118.2
Total softwoods	514.1	633.2	511.8	292.5	165.2	74.9	60.5	2.1	2,254.3
Red maple	.0	253.2	243.0	173.2	154.7	109.6	217.9	73.0	1,224.7
Sugar maple	.0	26.0	22.9	32.0	8.2	17.8	13.4	8.4	128.8
Hickory	.0	66.2	75.5	77.0	74.3	27.4	31.6	6.8	358.9
Beech	.0	64.6	86.4	80.4	75.5	69.6	98.0	46.0	520.5
Sweetgum	.0	164.5	199.3	140.6	93.4	60.7	82.2	21.6	762.2
Yellow-poplar	.0	200.4	254.0	261.2	331.9	311.4	739.2	220.3	2,318.4
Blackgum	.0	67.6	61.9	69.9	34.3	27.7	40.3	.0	301.6
Ash-walnut-cherry	.0	93.3	100.8	81.3	54.1	29.5	30.6	21.6	411.4
Select white oaks	.0	204.6	200.8	186.3	160.0	109.2	251.0	85.8	1,197.8
Select red oaks	.0	136.0	169.9	148.6	98.4	112.2	226.3	89.4	980.9
Other white oaks	.0	115.5	157.8	117.3	102.7	56.1	129.8	16.0	695.2
Other red oaks	.0	211.4	241.1	247.9	221.4	236.3	371.5	110.3	1,640.0
Black locust	.0	19.1	25.2	20.8	16.4	7.9	2.9	.0	92.3
Other hardwoods	.0	90.6	87.1	83.9	35.6	66.1	69.8	14.7	447.8
Total hardwoods	.0	1,713.1	1,925.7	1,720.3	1,461.1	1,241.4	2,304.7	714.1	11,080.4
Total, all species	514.1	2,346.4	2,437.5	2,012.9	1,626.3	1,316.2	2,365.2	716.2	13,334.8

[a] International 1/4-inch rule.

Table 36.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Maryland, 1976

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
White/red pine	2.4	4.6	24.2	6.4	37.6	2.4	3.8	6.4	1.6	14.2
Loblolly pine	405.3	200.8	803.8	.0	1,409.9	127.8	48.4	214.4	.0	390.6
Virginia pine	9.3	15.3	429.4	.0	454.1	3.0	1.9	46.4	.0	51.3
Other yellow pines	.0	5.8	47.6	.0	53.4	.0	1.1	9.0	.0	10.1
Other softwoods	37.7	.8	6.9	.1	45.3	19.3	.8	5.8	.0	25.9
Total softwoods	454.8	227.3	1,311.9	6.4	2,000.3	152.5	56.0	282.0	1.6	492.1
Red maple	44.9	91.9	449.6	168.8	755.2	44.4	74.1	271.5	85.8	475.8
Sugar maple	8.7	8.1	27.3	30.3	74.4	7.4	6.2	13.0	14.5	41.1
Hickory	31.8	92.7	154.4	77.0	355.9	31.4	57.1	57.9	38.8	185.2
Beech	16.4	16.8	216.8	174.1	424.1	16.1	15.0	170.7	116.1	317.9
Sweetgum	83.4	91.3	233.9	175.2	583.8	71.0	46.7	99.3	87.0	304.0
Yellow-poplar	380.5	442.3	779.1	417.8	2,019.7	368.0	376.0	500.3	245.9	1,490.2
Blackgum	53.2	60.3	126.1	27.0	266.6	51.2	44.2	67.0	15.4	177.8
Ash-walnut-cherry	35.5	75.2	132.7	46.4	289.8	33.6	49.9	60.4	18.3	162.2
Select white oaks	151.0	234.6	478.6	312.1	1,176.3	145.4	180.1	240.4	168.8	734.6
Select red oaks	74.6	178.8	315.2	99.0	667.6	73.4	134.9	136.9	48.7	393.9
Other white oaks	58.0	106.0	212.4	120.8	497.2	58.0	89.5	89.3	39.1	275.9
Other red oaks	217.2	338.5	597.1	431.9	1,584.7	210.6	273.6	333.8	212.2	1,030.2
Black locust	2.1	5.3	35.7	12.9	56.0	2.1	5.4	8.2	1.2	16.9
Other hardwoods	39.4	71.7	167.3	50.0	328.4	37.8	46.5	97.7	19.9	201.9
Total hardwoods	1,196.7	1,813.5	3,926.2	2,143.3	9,079.7	1,150.4	1,399.2	2,146.3	1,111.7	5,807.6
Percent of hardwood in each grade	13	20	43	24	100	20	24	37	19	100

[a] International 1/4-inch rule.

Table 37.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Maryland, 1986

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
White/red pine	.0	11.6	62.4	21.8	95.8	.0	3.0	9.0	5.5	17.6
Loblolly pine	335.9	212.0	861.3	.0	1,409.2	117.8	59.0	268.6	.0	445.4
Virginia pine	4.4	22.6	574.9	.0	601.9	.0	1.8	49.7	.0	51.5
Other yellow pines	.8	1.3	27.1	.0	29.2	.5	.1	4.9	.0	5.5
Other softwoods	105.4	1.6	11.1	.1	118.2	63.4	1.3	10.6	.0	75.2
Total softwoods	446.5	249.1	1,536.8	21.9	2,254.3	181.7	65.2	342.8	5.5	595.2
Red maple	17.6	134.2	510.2	562.6	1,224.7	16.0	86.4	300.4	325.6	728.4
Sugar maple	9.4	32.3	39.3	47.9	128.8	7.1	24.3	23.3	25.2	79.9
Hickory	5.5	90.2	155.2	108.1	358.9	5.1	64.9	83.6	63.6	217.2
Beech	.8	1.9	157.7	360.0	520.5	.6	.6	118.2	250.3	369.5
Sweetgum	43.7	155.8	289.7	273.0	762.2	40.3	84.4	130.7	143.1	398.4
Yellow-poplar	283.8	535.3	888.8	610.5	2,318.4	266.7	457.5	695.7	444.1	1,864.0
Blackgum	14.0	51.3	153.9	82.5	301.6	14.0	24.7	88.9	44.5	172.1
Ash-walnut-cherry	26.2	96.8	202.7	85.6	411.4	19.5	60.0	102.3	35.6	217.3
Select white oaks	83.4	210.6	455.2	448.5	1,197.8	81.4	159.6	264.9	286.4	792.3
Select red oaks	114.1	186.1	421.1	259.5	980.9	108.3	132.8	277.5	156.3	674.9
Other white oaks	24.3	136.5	308.1	226.3	695.2	24.3	79.8	172.4	145.4	421.9
Other red oaks	110.6	252.1	637.6	639.6	1,640.0	109.0	219.4	455.7	403.3	1,187.4
Black locust	1.9	8.8	54.1	27.5	92.3	1.9	7.0	23.6	15.5	48.0
Other hardwoods	20.2	90.9	204.6	132.1	447.8	18.6	76.0	119.3	56.2	270.1
Total hardwoods	755.7	1,982.7	4,478.3	3,863.8	11,080.4	712.7	1,477.2	2,856.6	2,395.0	7,441.5
Percent of hardwood in each grade	7	18	40	35	100	10	20	38	32	100

[a] International 1/4-inch rule.

Table 38.--Average annual net change of growing-stock volume on timberland by species and component, Maryland, 1976-86

(In thousands of cubic feet)

Species	Ingrowth	Accretion	Gross growth	Mortality	Cull increment	Net growth	Removals	Net change
Loblolly pine	8,352	8,945	17,298	-3,249	-105	13,944	-13,058	886
Other softwoods	2,012	12,769	14,781	-4,972	-245	9,564	-8,740	824
Total softwoods	10,364	21,714	32,079	-8,221	-350	23,508	-21,798	1,710
Red Maple	7,735	22,751	30,486	-2,011	-947	27,528	-9,640	17,888
Hickory	732	4,023	4,755	-790	-137	3,827	-2,348	1,479
Beech	353	3,959	4,312	0	-218	4,093	-648	3,445
Sweetgum	3,133	12,247	15,380	-1,157	-421	13,802	-5,615	8,187
Yellow-poplar	5,406	26,037	31,443	-1,010	-639	29,794	-22,601	7,193
Ash-walnut-cherry	2,585	7,391	9,976	-778	-592	8,605	-4,478	4,127
Select white oaks	2,346	11,815	14,160	-1,340	0	12,820	-11,983	837
Select red oaks	273	10,433	10,706	-402	0	10,304	-3,084	7,220
Other hardwoods	9,787	37,663	47,451	-11,178	-1,844	34,428	-17,436	16,992
Total hardwoods	32,350	136,319	168,669	-18,666	-4,798	145,201	-77,833	67,368
Total, all species	42,714	158,033	200,748	-26,887	-5,148	168,709	-99,631	69,078

Table 39.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Maryland, 1976-86

(In thousands of cubic feet)

Species	Growth	Removals
Loblolly pine	13,944	-13,058
Other softwoods	9,564	-8,740
Total softwoods	23,508	-21,798
Red maple	27,528	-9,640
Hickory	3,827	-2,348
Beech	4,093	-648
Sweetgum	13,802	-5,615
Yellow-poplar	29,794	-22,601
Ash-walnut-cherry	8,605	-4,478
Select white oaks	12,820	-11,983
Select red oaks	10,304	-3,084
Other hardwoods	34,428	-17,436
Total hardwoods	145,201	-77,833
Total, all species	168,709	-99,631

Table 40.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Maryland, 1976-86

(In thousands of cubic feet)

Ownership class	Growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Public	2,257	11,761	14,018	-2,289	-5,137	-7,426
Private	21,251	133,440	154,691	-19,509	-72,696	-92,205
Total, all classes	23,508	145,201	168,709	-21,798	-77,833	-99,631

Table 41.--Average annual mortality of growing-stock and sawtimber volume on timberland by species, Maryland, 1976-86

Species	Growing stock	Sawtimber
	(In thousands of cubic feet)	(In thousands of board feet)[a]
Loblolly pine	-3,249	-5,199
Other softwoods	-4,972	-9,100
Total softwoods	-8,221	-14,299
Red maple	-2,011	-7,888
Hickory	-790	-2,120
Beech	0	0
Sweetgum	-1,157	-1,280
Yellow poplar	-1,010	-1,318
Ash-walnut-cherry	-778	-1,778
Select white oaks	-1,340	-3,716
Select red oaks	-402	-1,209
Other hardwoods	-11,178	-34,473
Total hardwoods	-18,666	-53,782
Total, all species	-26,887	-68,081

[a] International 1/4-inch rule.

Table 42.--Average annual net growth and average annual removals of sawtimber volume on timberland by species, Maryland, 1976-86

(In thousands of board feet)[a]

Species	Growth	Removals
Loblolly pine	46,875	-46,945
Other softwoods	35,359	-9,734
Total softwoods	82,234	-56,679
Red maple	80,622	-33,392
Hickory	6,222	-5,913
Beech	11,099	-1,407
Sweetgum	34,123	-16,175
Yellow-poplar	140,334	-110,277
Ash-walnut-cherry	27,252	-15,019
Select white oaks	40,172	-37,995
Select red oaks	42,923	-11,409
Other hardwoods	100,217	-50,094
Total hardwoods	482,964	-281,681
Total, all species	565,198	-338,360

[a] International 1/4-inch rule.

Table 43.--Average annual net growth and average annual removals of sawtimber volume by ownership class and species group, Maryland, 1976-86

(In thousands of board feet)[a]

Ownership class	Growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Public	11,266	37,188	48,454	-5,441	-12,675	-18,117
Private	70,968	445,744	516,744	-51,238	-269,005	-320,243
Total, all classes	82,234	482,964	565,198	-56,579	-281,681	-338,360

[a] International 1/4-inch rule.

Table 44.--Output[a] of timber products by product, softwoods and hardwoods, and source of material, Maryland, 1985

(In standard units and thousands of cubic feet)

Product and species	Standard units[b]	Output from roundwood		Output from plant byproducts		Total output	
		Number of units	Thousand cubic feet	Number of units	Thousand cubic feet	Number of units	Thousand cubic feet
Sawlogs				INDUSTRIAL PRODUCTS			
Softwoods	M board feet	36,673	6,055	0	0	36,673	6,055
Hardwoods	M board feet	106,972	16,219	0	0	106,972	16,219
Total	M board feet	143,645	22,274	0	0	143,645	22,274
Veneer							
Softwoods	M board feet	26,005	4,293	0	0	26,005	4,293
Hardwoods	M board feet	9,080	1,373	0	0	9,080	1,373
Total	M board feet	35,085	5,666	0	0	35,085	5,666
Pulpwood[c]							
Softwoods	Standard cords	101,796	8,653	70,282	5,974	172,078	14,627
Hardwoods	Standard cords	70,079	5,957	37,247	3,166	107,326	9,123
Total	Standard cords	171,875	14,610	107,529	9,140	279,404	23,750
Other products[d]							
Softwoods	M board feet	5,784	1,223	3,594	760	9,378	1,983
Hardwoods	M board feet	606	112	1,272	235	1,878	347
Total	M board feet	6,390	1,335	4,866	995	11,256	2,330
				TOTAL, INDUSTRIAL PRODUCTS			
Softwoods			20,224		6,734		26,958
Hardwoods			23,661		3,401		27,062
Total			43,885		10,135		54,020
Fuelwood[e]				NONINDUSTRIAL PRODUCTS			
Softwoods	Standard cords	54,753	4,380	700	56	55,453	4,436
Hardwoods	Standard cords	727,426	58,194	15,838	1,267	743,264	59,461
Total	Standard cords	782,179	62,574	16,538	1,323	798,717	63,897
				TOTAL, ALL PRODUCTS[f]			
Softwoods			24,604		6,790		31,394
Hardwoods			81,855		4,668		86,523
Total			106,459		11,458		117,917

[a] The volume of wood received at manufacturing plants that used roundwood products.
[b] Board feet is expressed on the International 1/4-inch rule basis and standard cords is expressed on a rough wood basis (includes both roundwood and chips).
[c] A standard cord of pulpwood is equivalent to 85 cubic feet of solid wood.
[d] Includes posts, poles, and piling.
[e] A standard cord of fuelwood is equivalent to 80 cubic feet of solid wood.
[f] Does not include 1,855,000 cubic feet of softwood and 5,035,000 cubic feet of hardwood residues used for agricultural bedding.

Table 45.--Output of roundwood products by product, softwoods and hardwoods, and source of material,[a] Maryland, 1985

(In thousands of cubic feet)

Product and species	Growing-stock trees			Rough or rotten cull trees	Salvable dead trees	Other sources	All sources
	Poletimber	Sawtimber	Total				
			INDUSTRIAL PRODUCTS				
Sawlogs							
Softwoods	0	4,901	4,901	12	0	1,142	6,055
Hardwoods	34	14,579	14,613	860	162	584	16,219
Total	34	19,480	19,514	872	162	1,726	22,274
Veneer							
Softwoods	0	3,482	3,482	0	0	811	4,293
Hardwoods	3	1,317	1,320	0	0	53	1,373
Total	3	4,799	4,802	0	0	864	5,666
Pulpwood							
Softwoods	120	8,293	8,413	133	87	20	8,653
Hardwoods	2,519	3,018	5,537	190	60	170	5,957
Total	2,639	11,311	13,950	323	147	190	14,610
Other products							
Softwoods	0	990	990	2	0	231	1,223
Hardwoods	0	101	101	6	1	4	112
Total	0	1,091	1,091	8	1	235	1,335
			TOTAL, INDUSTRIAL PRODUCTS				
Softwoods	120	17,666	17,786	147	87	2,204	20,224
Hardwoods	2,556	19,015	21,571	1,056	223	811	23,661
Total	2,676	36,681	39,357	1,203	310	3,015	43,885
			NONINDUSTRIAL PRODUCTS				
Fuelwood							
Softwoods	141	227	368	1,158	1,281	1,573	4,380
Hardwoods	669	4,225	4,894	15,386	17,016	20,898	58,194
Total	810	4,452	5,262	16,544	18,297	22,471	62,574
			TOTAL, ALL PRODUCTS				
Softwoods	261	17,893	18,154	1,305	1,368	3,777	24,604
Hardwoods	3,225	23,240	26,465	16,442	17,239	21,709	81,855
Total	3,486	41,133	44,619	17,747	18,607	25,486	106,459

[a] Growing-stock trees, rough or rotten cull trees, and salvable dead trees are from timberland only. Other sources include trees less than 5.0 inches in diameter at breast height and tree tops and limbs from timberland, as well as any material from nontimberland or nonforest land such as fencerows, pastureland, and urban areas.

Table 46.--Timber removals from growing stock and sawtimber on timberland by component[a] and softwoods and hardwoods, Maryland, 1985

Components of timber removals	Growing stock			Sawtimber		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	----- Thousand cubic feet -----			----- Thousand board feet[b] -----		
Roundwood products						
Sawlogs	4,901	14,613	19,514	21,764	76,413	98,177
Veneer	3,482	1,320	4,802	15,462	6,903	22,365
Pulpwood	8,413	5,537	13,950	24,439	12,308	36,747
Other products	990	101	1,091	4,396	529	4,925
Fuelwood	368	4,894	5,262	669	17,234	17,903
All products	18,154	26,465	44,619	66,730	113,387	180,117
Logging residue	394	3,856	4,250	103	3,239	3,342
Land use change	1,274	6,478	7,752	4,622	13,160	17,782
Total removals	19,822	36,799	56,621	71,455	129,786	201,241

[a] Logging residue does not include material from tree tops and limbs. Land use change includes land sufficiently productive to be classified as timberland, but withdrawn from production through administative designation, such as for wilderness or parks.
[b] International 1/4-inch rule.

Table 47.--Volume of unused residues from primary manufacturing plants by softwoods and hardwoods, type of residue, and industry, Maryland, 1985

(In thousands of cubic feet)

Species and type of residue	Lumber	Veneer	Other industries	All industries
Softwoods				
Coarse[a]	0	0	0	0
Fine[b]	0	0	0	0
Total	0	0	0	0
Hardwoods				
Coarse	8	0	0	8
Fine	5	0	0	5
Total	13	0	0	13
All species				
Coarse	8	0	0	8
Fine	5	0	0	5
Total	13	0	0	13

[a] Includes slabs, edgings, trimmings, veneer cores, and other material suitable for chipping.
[b] Includes sawdust, shavings, and other materials considered unsuitable for chipping.

Table 48.--Change in area of timberland between inventories by forest-type group and stand-size class, Maryland, 1976-86

(In thousands of acres)

Group or class	1976	1986	Change	Change
				Percent
		FOREST-TYPE GROUP		
White/red pine	30.4	53.1	22.7	75
Spruce/fir	10.2	.0	-10.2	-100
Loblolly/shortleaf	429.9	296.9	-133.0	-31
Oak/pine	231.7	281.9	50.2	22
Oak/hickory	1,514.1	1,454.4	-59.7	-4
Oak/gum/cypress	70.9	120.2	49.3	70
Elm/ash/red maple	97.1	83.7	-13.4	-14
Northern hardwoods	149.3	133.8	-15.5	-10
Total, all groups	2,533.7	2,424.0	-109.7	-4
		STAND-SIZE CLASS		
Sawtimber	1,383.6	1,723.8	340.2	25
Poletimber	635.2	468.9	-166.3	-26
Sapling and seedling	479.3	231.3	-248.2	-52
Nonstocked	35.6	.0	-35.6	-100
Total, all classes	2,533.7	2,424.0	-109.7	-4

Table 49.--Change in volume between inventories, Maryland, 1976-86

Species	Growing-stock volume				Sawtimber volume			
	1976	1986	Change	Change	1976	1986	Change	Change
	--- Millions of cubic feet ---			Percent	--- Millions of board feet[a] ---			Percent
Loblolly pine	463.2	472.0	8.8	2	1,409.9	1,409.2	-.7	0
Virginia pine	265.7	241.3	-24.4	-9	454.1	601.9	147.8	33
Other softwoods	67.2	99.8	32.6	49	136.3	243.2	106.9	78
Total softwoods	796.0	813.1	16.9	2	2,000.3	2,254.3	254.0	13
Red maple	314.6	492.4	177.8	57	755.2	1,224.7	469.5	62
Hickory	121.8	136.5	14.7	12	355.9	358.9	3.0	1
Beech	112.9	147.2	34.3	30	424.2	520.5	96.3	23
Sweetgum	235.3	316.7	81.4	35	583.8	762.2	178.4	31
Yellow-poplar	475.9	547.4	71.5	15	2,019.6	2,318.4	298.8	15
Ash-walnut-cherry	136.3	177.4	41.1	30	289.8	411.4	121.6	42
Select white oaks	398.4	406.7	8.3	2	1,176.1	1,197.8	21.7	2
Select red oaks	210.9	282.7	71.8	34	667.9	980.9	313.0	47
Other hardwoods	986.1	1,154.8	168.7	17	2,807.2	3,305.6	498.4	18
Total hardwoods	2,992.2	3,661.8	669.6	22	9,079.7	11,080.4	2,000.7	22
Total, all species	3,788.2	4,474.9	686.7	18	11,080.0	13,334.8	2,254.8	20

[a] International 1/4-inch rule.

Table 50.--Sampling errors for various state level tables, Maryland, 1976 and 1986

(In percent)

Area by forest-type group (Table 3)	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
White/red pine	52	41	65	0	29
Loblolly/shortleaf	13	24	32	0	10
Oak/pine	14	39	32	0	12
Oak/hickory	5	12	21	0	3
Oak/gum/cypress	21	42	50	0	17
Elm/ash/red maple	26	74	60	0	23
Northern hardwoods	23	32	32	0	15
All groups	2.7	8.2	11.9	0	1.1

Species	Number of trees	Growing-stock volume		Sawtimber volume	
	(Table 19)	Tables		Tables	
	(5"+)	(30)	(31)	(34)	(35)
White/red pine	41	66	39	52	45
Loblolly pine	11	7	9	9	9
Virginia pine	14	12	13	15	13
Other yellow pines	36	39	31	41	36
Other softwoods	23	32	31	37	39
Total softwoods	9	7	7	7	8
Red maple	6	8	7	12	9
Sugar maple	18	31	19	41	22
Hickory	12	11	11	15	13
Beech	16	16	12	19	13
Sweetgum	10	9	9	13	11
Yellow-poplar	10	10	13	10	14
Blackgum	10	11	10	16	12
Ash-walnut-cherry	13	14	10	16	12
Select white oaks	8	7	7	8	8
Select red oaks	9	13	8	14	9
Other white oaks	11	13	11	16	13
Other red oaks	7	8	6	9	8
Black locust	20	25	20	41	21
Other hardwoods	10	14	12	17	18
Total hardwoods	3	3	3	2	5
Total, all species	2.9	2.3	2.8	1.8	3.9

CENTRAL UNIT TABLES

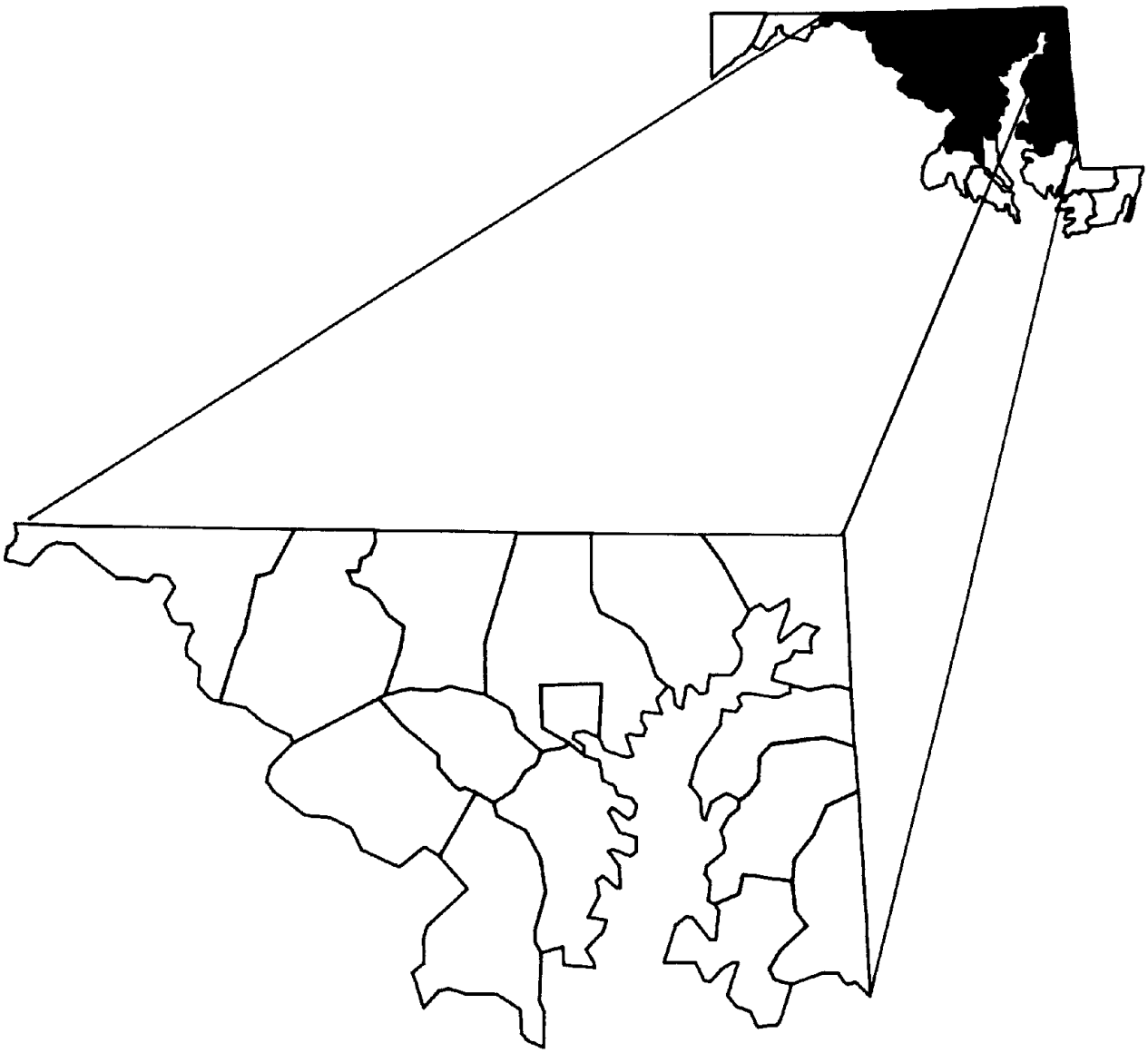


Table 51.--Area of timberland by forest type, forest-type group, and stand-size class, Central Unit, 1976

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
White pine	.0	5.8	6.9	.0	12.7
White/red pine group	.0	5.8	6.9	.0	12.7
Norway spruce	.0	.0	4.4	.0	4.4
Spruce/fir group	.0	.0	4.4	.0	4.4
Loblolly pine	10.6	.0	5.3	.0	16.0
Virginia pine	29.1	50.5	5.9	.0	85.4
Pitch pine	.0	.0	5.9	.0	5.9
Loblolly/shortleaf group	39.7	50.5	17.2	.0	107.3
Virginia pine/oak	19.8	15.1	26.5	.0	61.4
Loblolly pine/hardwood	6.6	.0	4.2	.0	10.9
Oak/pine group	26.4	15.1	30.7	.0	72.3
Post, black, or bear oak	15.7	.0	.0	.0	15.7
Chestnut oak	16.0	17.3	6.0	.0	39.3
White oak/red oak/hickory	31.1	10.3	11.6	.0	53.0
White oak	5.6	10.9	.0	.0	16.4
Northern red oak	6.0	.0	.0	.0	6.0
Y. poplar/wh. oak/no. red oak	54.0	6.0	.0	.0	60.0
Sweetgum/yellow-poplar	21.5	12.0	.0	.0	33.5
Yellow-poplar	83.2	18.1	5.9	.0	107.1
Scarlet oak	21.7	11.1	.0	.0	32.8
Mixed central hardwoods	335.0	60.3	24.7	26.6	446.6
Oak/hickory group	589.8	145.9	48.1	26.6	810.5
Sweetgm/nuttall oak/willow oak	12.8	.0	.0	.0	12.8
Oak/gum/cypress group	12.8	.0	.0	.0	12.8
Black ash/Amer. elm/red maple	5.0	.0	23.9	.0	28.9
River birch/sycamore	5.0	.0	11.4	.0	16.5
Willow	5.8	.0	6.2	.0	12.0
Sycamore/pecan/American elm	5.9	.0	.0	.0	5.9
Elm/ash/red maple group	21.7	.0	41.5	.0	63.3
Black cherry	.0	.0	10.9	.0	10.9
Red maple/northern hardwoods	6.6	.0	.0	.0	6.6
Mixed northern hardwoods	12.0	5.9	11.6	.0	29.5
Northern hardwoods group	18.6	5.9	22.5	.0	47.0
All forest types	709.1	223.2	171.4	26.6	1,130.3

Table 52.--Area of timberland by forest type, forest-type group, and stand-size class, Central Unit, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Red pine	.0	4.0	.0	.0	4.0
White pine	6.4	4.5	.0	.0	10.9
Scotch pine	.0	.0	10.5	.0	10.5
White/red pine group	6.4	8.5	10.5	.0	25.4
Loblolly pine	23.2	.0	.0	.0	23.2
Virginia pine	26.2	11.8	11.0	.0	49.0
Loblolly/shortleaf group	49.4	11.8	11.0	.0	72.2
Wh. pine/no. red oak/wh. ash	5.9	2.4	.0	.0	8.3
Virginia pine/oak	42.1	.0	1.8	.0	43.9
Loblolly pine/hardwood	31.4	3.2	.0	.0	34.6
Other oak/pine	5.4	.0	.0	.0	5.4
Oak/pine group	84.8	5.6	1.8	.0	92.3
Post, black, or bear oak	10.0	3.7	.0	.0	13.7
Chestnut oak	45.4	.0	.0	.0	45.4
White oak/red oak/hickory	32.2	7.1	7.9	.0	47.2
White oak	13.4	11.6	3.7	.0	28.7
Northern red oak	14.2	.0	.0	.0	14.2
Y. poplar/wh. oak/no. red oak	41.7	12.4	.0	.0	54.1
Black locust	.0	.0	6.2	.0	6.2
Sweetgum/yellow-poplar	37.0	11.6	8.3	.0	56.8
Yellow-poplar	100.7	.0	3.9	.0	104.7
Hawthorn reverting field	3.2	.0	.0	.0	3.2
Sassafras/persimmon	.0	.0	2.8	.0	2.8
Red maple/central hardwoods	11.7	8.7	.0	.0	20.4
Mixed central hardwoods	289.1	75.0	4.9	.0	369.0
Oak/hickory group	598.6	130.1	37.8	.0	766.5
Swamp chstnt oak/cherrybark oak	11.4	.0	.0	.0	11.4
Sweetgum/nuttall oak/willow oak	8.7	.0	.0	.0	8.7
Sweetbay/swamp tupelo/red maple	.8	.0	.0	.0	.8
Oak/gum/cypress group	20.8	.0	.0	.0	20.8
Black ash/Amer. elm/red maple	14.0	.0	1.9	.0	16.0
Red maple(lowland)	8.8	.0	.0	.0	8.8
River birch/sycamore	15.7	4.1	.0	.0	19.8
Willow	.0	2.1	.0	.0	2.1
Sycamore/pecan/American elm	4.6	.0	.0	.0	4.6
Elm/ash/red maple group	43.1	6.2	1.9	.0	51.2
Black cherry	3.1	3.7	4.6	.0	11.4
Pin cherry/reverting field	.0	5.1	13.2	.0	18.3
Mixed northern hardwoods	1.4	.0	.0	.0	1.4
Northern hardwoods group	4.5	8.8	17.8	.0	31.2
All forest types	807.6	171.1	80.9	.0	1,059.6

Table 53.--Number of growing-stock trees on timberland by species and diameter class, Central Unit, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)												All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
White/red pine	625	0	1,394	794	183	426	162	21	37	10	0	0	3,651
Loblolly pine	432	655	683	1,370	1,120	1,141	713	385	196	118	24	0	6,838
Virginia pine	8,512	2,554	4,756	4,336	2,428	1,477	829	143	2	0	0	0	25,038
Other yellow pines	568	2,548	228	190	246	43	11	12	0	0	0	0	3,847
Other softwoods	3,252	0	32	137	143	55	26	0	17	14	1	0	3,678
Total softwoods	13,390	5,758	7,093	6,827	4,119	3,141	1,743	562	251	142	25	0	43,052
Red maple	35,723	12,172	6,560	3,736	2,496	1,373	997	557	325	215	317	44	64,515
Sugar maple	0	0	68	295	29	11	9	22	0	0	0	0	435
Hickory	12,845	4,884	2,411	1,706	685	417	266	262	248	45	49	0	23,819
Beech	5,564	2,334	2,182	555	558	342	285	159	178	121	127	33	12,439
Sweetgum	30,941	10,708	4,896	3,292	1,313	1,053	846	345	197	111	73	25	53,801
Yellow-poplar	14,470	4,590	2,011	2,374	2,061	2,021	1,317	1,009	960	747	1,102	160	32,823
Blackgum	22,178	10,924	3,113	1,048	1,066	614	309	265	72	64	52	0	39,707
Ash-walnut-cherry	17,708	8,409	3,444	2,551	1,180	759	479	265	166	62	52	12	35,087
Select white oaks	4,963	4,627	3,302	2,904	2,030	1,193	667	530	348	228	301	62	21,156
Select red oaks	655	81	300	1,199	1,170	857	829	468	280	201	272	45	6,359
Other white oaks	1,611	927	1,852	2,806	2,013	1,273	1,213	651	414	164	249	6	13,176
Other red oaks	3,521	3,639	3,543	2,188	1,313	1,568	1,037	807	580	574	674	56	19,503
Black locust	14,541	3,597	1,733	746	1,022	254	153	124	23	8	0	0	22,201
Other hardwoods	55,941	10,529	3,281	2,262	1,035	757	413	325	90	197	79	7	74,917
Total hardwoods	220,662	77,420	38,697	27,663	17,973	12,493	8,820	5,790	3,883	2,738	3,349	451	419,938
Total, all species	234,052	83,178	45,791	34,490	22,092	15,634	10,563	6,353	4,134	2,879	3,374	451	462,991

Table 54.--Net green weight of all live trees on timberland by species and diameter class, Central Unit, Maryland, 1986

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+	
White/red pine	11.8	211.9	247.0	89.9	347.5	193.9	31.9	86.0	31.1	.0	1,251.0
Loblolly pine	21.7	103.9	379.1	520.8	775.5	702.8	546.1	347.2	271.1	73.4	3,741.6
Virginia pine	266.2	669.6	1,199.4	1,087.7	1,054.5	814.4	204.3	2.8	.0	.0	5,299.0
Other yellow pines	134.9	56.1	48.7	111.1	27.9	12.8	15.0	.0	.0	.0	406.6
Other softwoods	38.1	17.8	44.8	63.2	39.5	23.1	.0	33.6	35.2	3.1	298.3
Total softwoods	472.6	1,059.3	1,918.9	1,872.8	2,245.0	1,747.1	797.4	469.6	337.4	76.5	10,996.4
Red maple	992.6	1,103.9	1,189.0	1,286.8	1,168.3	1,221.3	949.1	739.3	659.8	2,040.3	11,350.4
Sugar maple	.0	17.1	111.9	20.7	11.7	12.2	41.1	.0	.0	56.6	271.2
Hickory	409.8	408.2	624.9	435.1	462.3	404.1	537.2	673.2	161.7	314.3	4,430.9
Beech	272.7	450.2	234.5	403.2	433.0	458.5	310.3	465.6	456.8	1,084.5	4,569.2
Sweetgum	882.2	757.2	973.1	668.7	796.7	935.6	573.1	418.7	300.7	494.5	6,800.5
Yellow-poplar	348.7	281.0	698.8	1,008.4	1,522.3	1,452.3	1,619.1	1,936.1	1,940.2	5,917.6	16,724.5
Blackgum	986.6	603.1	355.3	590.4	615.2	412.8	466.3	156.0	192.6	367.6	4,745.9
Ash-walnut-cherry	717.6	720.7	837.1	692.4	660.8	624.8	469.6	343.3	167.3	303.5	5,537.0
Select white oaks	203.5	523.4	886.8	1,175.4	1,104.0	953.7	1,072.0	973.5	871.7	2,968.7	10,732.8
Select red oaks	7.8	61.8	436.9	764.1	928.6	1,394.8	1,040.9	876.2	837.7	2,785.8	9,134.7
Other white oaks	43.8	362.1	961.5	1,221.3	1,204.0	1,748.5	1,343.1	1,101.6	621.1	1,542.7	10,149.6
Other red oaks	216.9	647.8	749.4	788.7	1,508.4	1,417.2	1,534.7	1,479.7	1,884.6	4,500.2	14,727.4
Black locust	425.8	335.1	235.5	579.8	265.8	247.1	248.9	64.3	31.0	4.1	2,437.5
Other commercial hardwoods	1,112.9	598.5	826.5	539.1	668.9	527.6	660.4	395.3	560.1	475.4	6,364.7
Non-commercial hardwoods	666.3	391.9	276.2	261.4	147.2	143.4	171.3	13.1	.0	.0	2,070.8
Total hardwoods	7,287.2	7,262.0	9,397.6	10,435.5	11,497.2	11,953.8	11,037.0	9,635.8	8,685.3	22,855.7	110,047.2
Total, all species	7,759.9	8,321.3	11,316.5	12,308.3	13,742.2	13,700.8	11,834.4	10,105.4	9,022.7	22,932.1	121,043.6

Table 55.--Net green weight of all trees on timberland by class of material and species group, Central Unit, Maryland, 1986

(In thousands of tons)

Class of material	Weight[a]		All groups
	Softwoods	Hardwoods	
Sawlog portion	4,964.0	44,995.9	49,959.9
Upper stem	680.0	9,530.8	10,210.8
Total	5,643.9	54,526.8	60,170.7
Poletimber trees	1,968.4	17,719.8	19,688.2
All growing stock	7,612.3	72,246.6	79,859.0
Rough cull trees[b]	68.5	4,075.1	4,143.6
Rotten cull trees[b]	9.5	499.3	508.8
Salvable dead trees[c]	252.2	2,000.8	2,253.0
Saplings[c]	472.6	7,287.2	7,759.9
Tops - growing stock	2,801.5	24,354.2	27,155.7
Tops - rough and rotten	31.9	1,584.7	1,616.6
All nongrowing stock	3,636.3	39,801.3	43,437.6
Total, all classes	11,248.6	112,048.0	123,296.6

[a] Includes bark and sound cull; excludes rotten cull.
[b] Bole portion of trees 5.0 inches d.b.h. and larger.
[c] Weight of entire tree aboveground.

MAJOR SPECIES BY VOLUME, CENTRAL UNIT, 1976 AND 1986

Millions of board feet

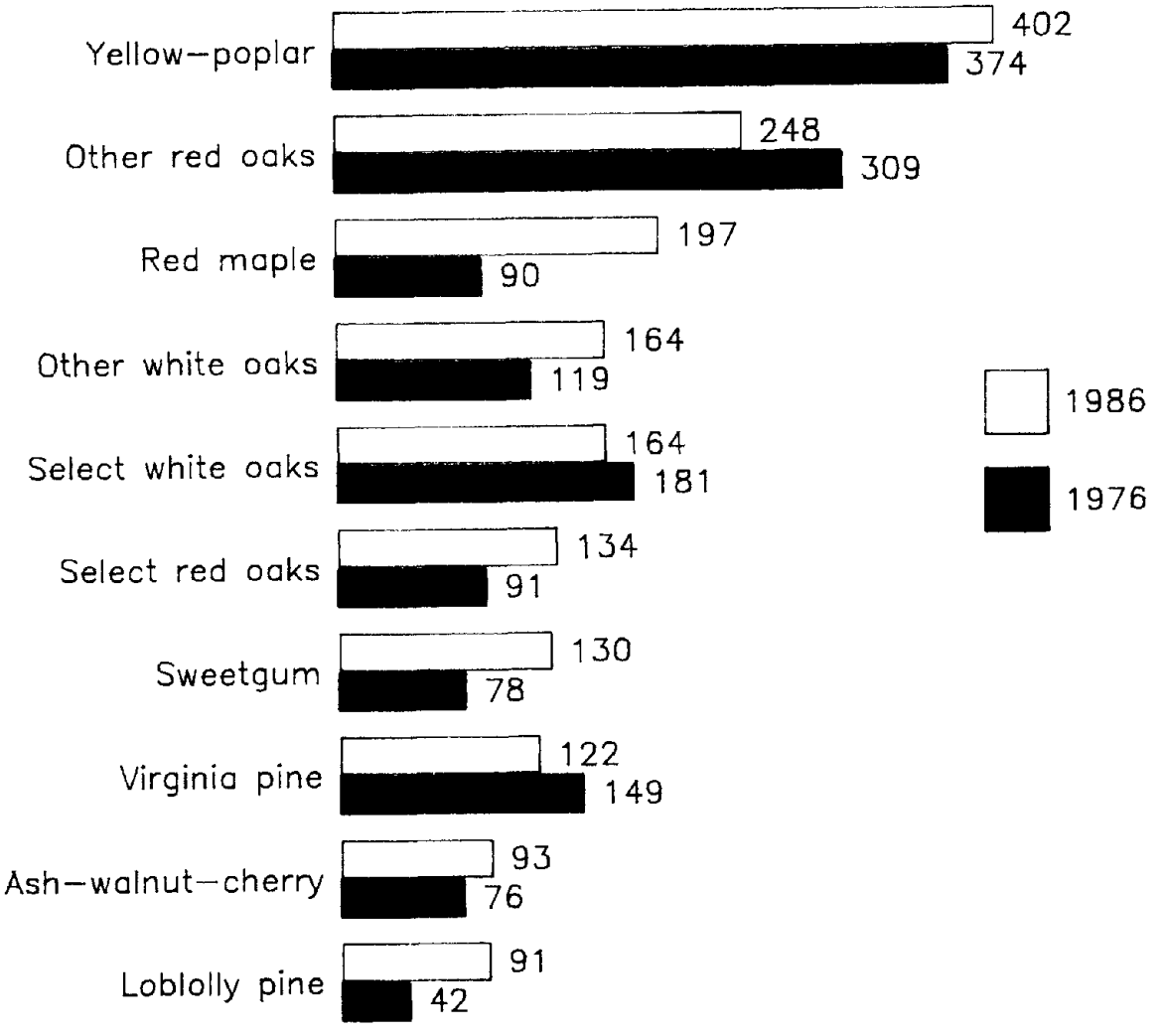


Table 56.--Net volume of growing-stock trees on timberland by species and diameter class, Central Unit, 1976

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	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	8.5	10.4	3.8	.0	.0	1.6	.0	.6	.0	.0	25.1
Loblolly pine	.8	5.3	6.6	9.6	6.7	7.7	2.7	1.1	.5	.5	41.6
Virginia pine	34.0	49.2	34.6	17.5	8.7	4.1	1.5	.0	.0	.0	149.4
Other yellow pines	.5	.7	.4	2.5	3.4	1.0	1.0	.0	.0	.0	9.4
Other softwoods	.3	1.1	.3	.3	.0	.0	.0	.0	.0	1.5	3.5
Total softwoods	44.2	66.7	45.7	29.9	18.7	14.4	5.2	1.7	.5	2.0	229.0
Red maple	9.8	15.3	13.0	9.0	9.8	10.5	7.3	4.8	10.8	.0	90.3
Sugar maple	.0	.4	.9	.0	.0	.0	.4	.4	.0	.0	2.1
Hickory	7.2	10.4	10.2	16.3	13.2	8.1	1.3	5.3	8.8	.6	81.4
Beech	.9	3.0	4.7	4.9	8.4	6.3	6.6	4.0	20.8	3.5	63.1
Sweetgum	6.3	12.6	8.0	16.1	10.0	10.5	5.5	.6	7.1	1.3	78.1
Yellow-poplar	8.3	15.5	29.0	36.8	54.3	58.3	62.8	30.1	67.1	11.6	373.8
Blackgum	3.0	5.6	6.6	4.2	6.0	11.9	6.2	3.0	2.5	.0	49.0
Ash-walnut-cherry	7.3	13.1	15.6	10.4	5.0	8.7	6.3	4.2	5.7	.0	76.3
Select white oaks	8.6	13.2	22.6	25.2	24.6	22.6	17.2	12.0	28.7	6.2	181.0
Select red oaks	3.4	6.5	6.6	10.9	17.6	17.6	13.7	9.0	4.8	1.1	91.3
Other white oaks	8.8	17.2	13.8	19.9	15.1	8.9	14.4	9.9	8.7	2.1	118.8
Other red oaks	13.3	23.5	35.3	38.7	41.7	40.2	29.2	30.0	47.4	9.3	308.6
Black locust	.5	3.7	2.7	5.4	3.4	1.0	1.2	.5	.6	.0	18.9
Other hardwoods	5.9	7.9	9.5	6.9	8.6	9.2	4.3	3.5	8.7	2.9	67.4
Total hardwoods	83.1	148.1	178.4	204.9	217.7	213.8	176.5	117.3	221.6	38.7	1,600.1
Total all species	127.3	214.8	224.1	234.8	236.4	228.2	181.7	119.0	222.2	40.7	1,829.2

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

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	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	4.2	5.1	2.1	7.0	3.9	.6	1.3	.6	.0	.0	24.7
Loblolly pine	2.4	9.7	13.3	19.5	17.2	13.0	8.1	6.2	1.6	.0	91.0
Virginia pine	15.6	29.3	26.9	25.4	19.7	5.0	.1	.0	.0	.0	122.0
Other yellow pines	.4	1.0	2.8	.7	.2	.3	.0	.0	.0	.0	5.3
Other softwoods	.1	1.0	1.5	.4	.7	.0	.1	.1	.1	.0	3.9
Total softwoods	22.7	46.1	46.4	53.0	41.8	18.9	9.5	6.9	1.7	.0	247.0
Red maple	16.9	23.4	28.6	24.3	25.7	19.0	14.4	12.1	25.9	6.5	196.7
Sugar maple	.3	1.9	.4	.3	.3	.8	.0	.0	.0	.0	4.0
Hickory	6.7	12.8	8.6	8.0	7.7	10.0	11.3	2.7	4.1	.0	71.9
Beech	4.5	3.6	7.1	7.2	8.3	6.5	9.2	8.4	10.8	5.9	71.5
Sweetgum	13.9	21.9	15.9	18.8	22.0	12.4	8.9	6.7	6.4	3.6	130.5
Yellow-poplar	5.3	16.6	26.4	40.9	39.0	42.8	52.2	47.3	103.5	27.9	401.9
Blackgum	8.0	6.2	12.0	11.2	7.3	9.1	3.0	3.6	3.9	.0	64.3
Ash-walnut-cherry	10.5	16.4	14.4	14.0	12.2	8.9	7.2	3.6	4.1	1.9	93.2
Select white oaks	9.6	18.0	21.9	19.9	16.5	17.3	15.6	12.3	22.1	10.6	163.6
Select red oaks	.9	8.3	14.1	16.6	22.3	16.7	12.4	12.1	21.6	9.1	134.0
Other white oaks	5.1	18.7	23.2	22.5	29.1	20.7	17.1	8.2	18.7	.8	164.1
Other red oaks	10.0	14.4	15.6	29.0	27.0	28.5	26.8	32.6	55.1	8.7	247.8
Black locust	4.8	4.4	11.0	3.9	3.6	4.1	.9	.2	.0	.0	33.0
Other hardwoods	7.2	14.0	11.4	13.7	10.7	10.8	4.2	10.1	6.1	1.3	89.4
Total hardwoods	103.6	180.7	210.7	230.3	231.5	207.6	183.1	160.0	282.2	76.2	1,865.9
Total, all species	126.3	226.8	257.1	283.2	273.3	226.5	192.6	166.9	283.9	76.2	2,112.8

Table 58.--Net volume of sawtimber trees on timberland by species and diameter class, Central Unit, 1976

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	14.3	.0	.0	8.5	.0	3.3	.0	.0	26.1
Loblolly pine	24.4	40.9	30.7	37.7	14.0	5.9	2.9	3.1	159.6
Virginia pine	120.8	71.6	39.9	19.1	7.6	.0	.0	.0	258.9
Other yellow pines	1.5	11.0	15.9	5.0	5.1	.0	.0	.0	38.4
Other softwoods	.8	1.2	.0	.0	.0	.0	.0	9.2	11.2
Total softwoods	161.8	124.7	86.5	70.3	26.7	9.2	2.9	12.3	494.3
Red maple	.0	35.5	45.4	50.7	35.6	22.8	60.9	.0	250.8
Sugar maple	.0	.0	.0	.0	2.7	1.8	.0	.0	4.4
Hickory	.0	65.7	60.5	39.4	7.7	28.1	51.0	3.6	256.1
Beech	.0	19.7	38.9	30.3	31.5	23.4	104.0	20.1	267.9
Sweetgum	.0	64.0	41.4	49.4	26.9	3.7	39.9	8.1	233.3
Yellow-poplar	.0	156.6	263.9	298.4	342.0	171.8	385.0	69.3	1,687.1
Blackgum	.0	16.2	25.7	53.4	30.8	15.7	13.2	.0	155.1
Ash-walnut-cherry	.0	42.0	20.6	38.8	27.0	21.4	28.1	.0	178.1
Select white oaks	.0	102.3	105.3	106.8	85.4	60.0	156.9	37.1	654.0
Select red oaks	.0	40.5	77.2	80.2	64.9	42.4	25.0	5.8	335.9
Other white oaks	.0	77.5	62.2	40.5	67.4	47.3	43.1	11.3	349.2
Other red oaks	.0	151.7	184.6	179.9	140.8	147.6	243.6	53.9	1,102.0
Black locust	.0	17.0	11.9	4.4	5.4	2.3	2.4	.0	43.5
Other hardwoods	.0	26.0	39.5	45.0	20.3	18.3	48.1	17.0	214.3
Total hardwoods	.0	814.9	977.2	1,017.2	888.4	606.6	1,201.3	226.3	5,731.9
Total all species	161.8	939.6	1,063.7	1,087.5	915.1	615.8	1,204.2	238.5	6,226.2

[a] International 1/4-inch rule.

Table 59.--Net volume of sawtimber trees on timberland by species and diameter class, Central Unit, 1986

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	6.3	27.4	16.8	2.9	7.1	3.0	.0	.0	63.5
Loblolly pine	42.9	74.3	70.7	58.0	34.7	28.9	7.4	.0	316.9
Virginia pine	87.4	96.3	82.1	22.1	.3	.0	.0	.0	288.2
Other yellow pines	9.1	2.5	.9	1.0	.0	.0	.0	.0	13.6
Other softwoods	4.4	1.5	2.5	.0	.6	.7	.2	.0	10.0
Total softwoods	150.0	202.0	173.1	84.1	42.7	32.5	7.6	.0	692.1
Red maple	.0	82.2	98.8	78.0	65.4	57.6	128.9	35.9	546.9
Sugar maple	.0	1.1	1.0	3.4	.0	.0	.0	.0	5.5
Hickory	.0	26.9	31.1	45.2	53.9	14.5	21.8	.0	193.4
Beech	.0	24.4	32.9	29.0	45.0	43.4	55.4	35.5	265.6
Sweetgum	.0	64.0	85.6	53.2	39.6	32.7	32.3	20.3	327.6
Yellow-poplar	.0	148.3	162.1	196.5	254.8	246.5	562.6	173.4	1,744.2
Blackgum	.0	37.1	27.8	38.2	11.7	15.2	17.2	.0	147.2
Ash-walnut-cherry	.0	49.9	47.1	39.6	33.0	17.2	21.9	11.7	220.2
Select white oaks	.0	70.7	68.4	78.4	72.1	62.1	114.1	61.6	527.4
Select red oaks	.0	56.2	86.6	70.5	56.3	57.5	110.2	54.1	491.3
Other white oaks	.0	74.5	111.1	86.1	74.4	36.8	92.3	4.7	479.9
Other red oaks	.0	99.2	104.9	122.9	124.5	160.0	286.2	48.6	946.3
Black locust	.0	12.5	13.4	17.8	4.2	1.2	.0	.0	49.2
Other hardwoods	.0	52.3	46.5	49.2	18.8	53.6	31.1	8.3	259.8
Total hardwoods	.0	799.4	917.1	908.0	853.6	798.4	1,474.0	453.9	6,204.4
Total, all species	150.0	1,001.5	1,090.3	992.0	896.3	830.9	1,481.6	453.9	6,896.5

[a] International 1/4-inch rule.

Table 60.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Central Unit, 1976

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
White/red pine	2.4	3.4	15.0	5.3	26.1	2.4	2.6	5.4	1.3	11.7
Loblolly pine	55.5	10.8	93.3	.0	159.6	26.7	4.9	32.0	.0	63.6
Virginia pine	7.8	9.7	241.4	.0	258.9	3.0	.4	23.4	.0	26.8
Other yellow pines	.0	3.4	35.1	.0	38.5	.0	1.1	9.0	.0	10.1
Other softwoods	11.2	.0	.0	.0	11.2	9.2	.0	.0	.0	9.2
Total softwoods	76.9	27.3	384.8	5.3	494.3	41.3	9.0	69.8	1.3	121.4
Red maple	5.9	28.4	166.8	49.7	250.8	5.9	24.5	107.1	32.4	169.9
Sugar maple	2.8	.8	.6	.2	4.4	2.8	.8	.6	.2	4.4
Hickory	26.5	63.5	115.6	50.5	256.1	26.5	40.2	39.6	23.5	129.8
Beech	15.8	13.8	129.2	109.1	267.9	15.7	12.0	110.1	71.5	209.3
Sweetgum	32.1	33.1	97.6	70.5	233.3	27.2	18.0	45.4	37.2	127.8
Yellow-poplar	338.7	375.4	656.1	316.9	1,687.1	327.6	323.8	429.6	185.5	1,266.5
Blackgum	30.5	37.5	70.9	16.2	155.1	30.5	30.3	41.4	11.0	113.2
Ash-walnut-cherry	20.5	48.4	84.7	24.5	178.1	20.5	37.8	43.5	13.6	115.4
Select white oaks	89.3	148.3	260.9	155.5	654.0	87.6	122.3	139.1	97.5	446.5
Select red oaks	51.9	105.0	144.9	34.2	335.9	50.6	84.1	64.1	19.3	218.1
Other white oaks	52.0	85.7	157.2	54.3	349.2	52.0	72.2	62.6	22.7	209.5
Other red oaks	169.5	248.9	417.9	265.7	1,102.0	165.1	207.9	244.3	148.6	765.9
Black locust	1.5	4.3	29.6	8.1	43.5	1.5	4.3	7.7	1.1	14.6
Other hardwoods	26.0	50.9	114.3	23.2	214.3	24.4	36.1	71.6	16.7	148.8
Total hardwoods	863.0	1,244.0	2,244.3	1,178.6	5,731.9	837.9	1,014.3	1,406.7	680.8	3,939.7
Percent of hardwood in each grade	15	22	43	20	100	21	26	36	17	100

[a] International 1/4-inch rule.

Table 61.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Central Unit, 1986

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
White/red pine	.0	9.4	36.1	17.9	63.5	.0	3.0	7.7	2.3	13.0
Loblolly pine	37.3	34.6	244.9	.0	316.9	15.8	13.9	99.2	.0	129.0
Virginia pine	1.1	6.7	280.4	.0	288.2	.0	.0	22.4	.0	22.4
Other yellow pines	.0	.4	13.2	.0	13.6	.0	.0	1.0	.0	1.0
Other softwoods	10.0	.0	.0	.0	10.0	1.5	.0	.0	.0	1.5
Total softwoods	48.3	51.2	574.6	17.9	692.1	17.3	16.9	130.3	2.3	166.8
Red maple	3.4	37.2	198.0	308.3	546.9	3.4	33.2	131.5	197.8	365.9
Sugar maple	.0	1.2	2.0	2.3	5.5	.0	1.1	.5	1.8	3.4
Hickory	.8	51.9	85.9	54.8	193.4	.8	45.7	51.8	37.1	135.4
Beech	.4	.0	82.4	182.8	265.6	.3	.0	65.2	142.8	208.3
Sweetgum	21.1	66.9	121.9	117.7	327.6	21.1	40.7	53.9	62.3	178.0
Yellow-poplar	195.6	393.5	652.0	503.1	1,744.2	189.5	350.7	523.6	370.0	1,433.8
Blackgum	3.3	15.0	78.8	50.2	147.2	3.3	8.0	47.8	23.3	82.3
Ash-walnut-cherry	.3	40.8	129.1	50.0	220.2	.3	30.9	68.1	23.9	123.2
Select white oaks	28.0	86.9	196.4	216.1	527.4	28.0	69.8	129.8	160.6	388.3
Select red oaks	27.9	79.5	230.3	153.7	491.3	27.0	65.0	164.8	91.8	348.5
Other white oaks	9.7	89.2	221.8	159.1	479.9	9.7	51.6	132.5	100.5	294.3
Other red oaks	58.2	133.1	379.3	375.8	946.3	58.2	123.5	287.0	273.5	742.1
Black locust	.0	1.0	29.8	18.4	49.2	.0	.0	12.5	10.7	23.2
Other hardwoods	12.6	62.0	103.2	81.9	259.8	11.2	56.1	59.6	34.1	161.0
Total hardwoods	361.4	1,058.0	2,510.9	2,274.1	6,204.4	352.9	876.3	1,728.6	1,530.1	4,487.8
Percent of hardwood in each grade	6	17	40	37	100	8	20	38	34	100

[a] International 1/4-inch rule.

Table 62.--Sampling errors for various tables, Central Unit, 1976 and 1986

(In percent)

Species and diameter class	Number of trees	Growing-stock volume		Sawtimber volume	
	(Table 53)	Tables		Tables	
	(5"+)	(56)	(57)	(58)	(59)
White/red pine	54	89	53	67	61
Loblolly pine	21	38	22	38	23
Virginia pine	23	19	21	23	22
Other yellow pines	57	51	55	53	63
Other softwoods	58	51	64	83	63
Total softwoods	16	16	15	18	16
Red maple	12	15	13	18	16
Sugar maple	51	73	54	101	84
Hickory	17	15	16	19	19
Beech	29	26	20	28	22
Sweetgum	20	22	16	27	20
Yellow-poplar	14	13	16	12	18
Blackgum	16	19	14	25	18
Ash-walnut-cherry	18	19	13	21	17
Select white oaks	14	11	11	12	13
Select red oaks	15	19	13	20	13
Other white oaks	16	18	16	20	17
Other red oaks	13	11	10	12	11
Black locust	28	41	29	52	31
Other hardwoods	16	21	21	24	29
Total hardwoods	5	5	6	3	7
Total, all species	5	4	5	2	7
D.B.H. class (inches)					
5.0 to 6.9	8	11	9	-	-
7.0 to 8.9	7	9	7	-	-
9.0 to 10.9	7	7	7	23	19
11.0 to 12.9	7	7	7	7	8
13.0 to 14.9	7	7	7	7	7
15.0 to 16.9	7	7	7	6	8
17.0 to 18.9	9	9	10	7	10
19.0 to 20.9	10	11	11	10	11
21.0 to 28.9	10	11	11	9	11
29 +	18	20	20	20	21

SOUTHERN UNIT TABLES

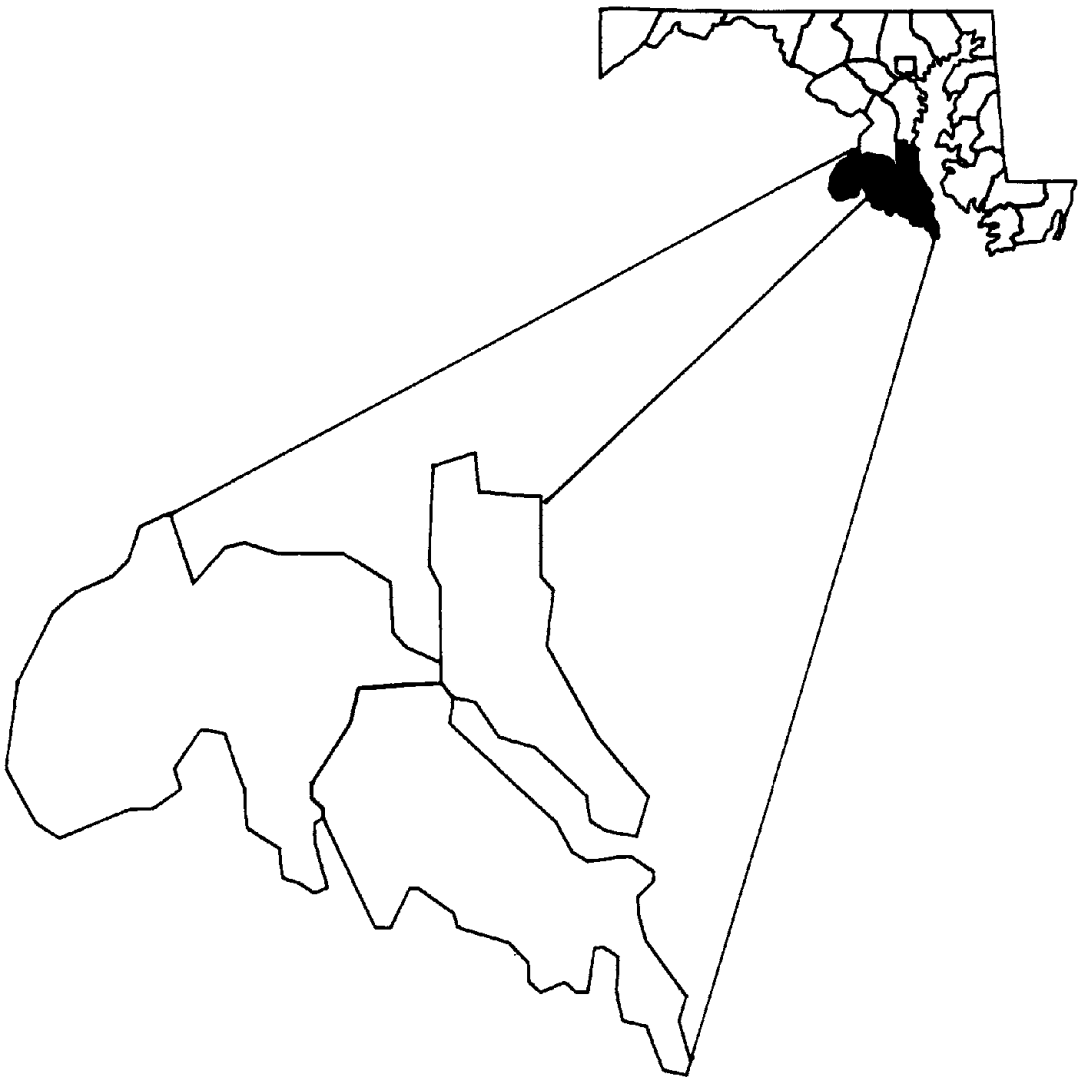


Table 63.--Area of timberland by forest type, forest-type group, and stand-size class, Southern Unit, 1976

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Loblolly pine	10.8	8.0	.0	.0	18.9
Virginia pine	21.5	16.5	17.2	.0	55.2
Eastern red cedar	.0	2.6	.0	.0	2.6
Loblolly/shortleaf group	32.4	27.1	17.2	.0	76.7
Virginia pine/oak	13.4	16.4	5.4	.0	35.2
Loblolly pine/hardwood	4.7	5.5	.0	.0	10.1
Oak/pine group	18.1	21.8	5.4	.0	45.3
Chestnut oak	.0	2.9	.0	.0	2.9
White oak/red oak/hickory	.0	.0	5.6	.0	5.6
White oak	8.0	.0	5.3	.0	13.3
Y. poplar/wh. oak/no. red oak	5.5	5.3	.0	.0	10.8
Black locust	.0	.0	2.6	.0	2.6
Sweetgum/yellow-poplar	13.1	2.6	10.5	.0	26.2
Yellow-poplar	7.7	2.6	5.6	.0	15.9
Scarlet oak	2.7	.0	.0	.0	2.7
Mixed central hardwoods	107.6	28.4	17.2	.0	153.2
Oak/hickory group	144.6	41.8	46.8	.0	233.2
Sweetgm/nuttall oak/willow oak	2.6	2.7	.0	.0	5.4
bald cypress/white tupelo	2.5	.0	.0	.0	2.5
Oak/gum/cypress group	5.1	2.7	.0	.0	7.9
Black ash/Amer. elm/red maple	4.7	.0	.0	.0	4.7
Red maple(upland)	2.5	.0	.0	.0	2.5
Sycamore/pecan/American elm	.0	.0	2.6	.0	2.6
American elm/green ash	.0	2.6	2.6	.0	5.2
Elm/ash/red maple group	7.2	2.6	5.2	.0	15.1
Red maple/northern hardwoods	.0	.0	2.5	.0	2.5
Northern hardwoods group	.0	.0	2.5	.0	2.5
All forest types	207.4	96.1	77.1	.0	380.6

Table 64.--Area of timberland by forest type, forest-type group, and stand-size class, Southern Unit, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Loblolly pine	22.6	.8	.0	.0	23.4
Virginia pine	30.5	3.7	9.1	.0	43.3
Loblolly/shortleaf group	53.1	4.5	9.1	.0	66.7
Virginia pine/oak	29.3	2.9	.0	.0	32.2
Loblolly pine/hardwood	12.6	.0	1.4	.0	14.0
Other oak/pine	.0	4.7	.0	.0	4.7
Oak/pine group	41.9	7.6	1.4	.0	50.9
White oak/red oak/hickory	2.6	.0	.0	.0	2.6
White oak	5.8	.0	.0	.0	5.8
Y. poplar/wh. oak/no. red oak	11.6	.0	.0	.0	11.6
Sweetgum/yellow-poplar	26.0	3.1	4.6	.0	33.8
Yellow-poplar	15.7	.0	3.8	.0	19.5
Scarlet oak	6.1	.0	4.1	.0	10.1
Mixed central hardwoods	123.6	15.3	1.7	.0	140.6
Oak/hickory group	191.4	18.4	14.2	.0	224.1
Swamp chstnt oak/cherrybark oak	5.1	.0	.0	.0	5.1
Sweetgum/nuttall oak/willow oak	14.2	7.5	.0	.0	21.7
Oak/gum/cypress group	19.3	7.5	.0	.0	26.8
Black ash/Amer. elm/red maple	5.7	.0	.0	.0	5.7
American elm/green ash	3.7	.0	.0	.0	3.7
Elm/ash/red maple group	9.4	.0	.0	.0	9.4
All forest types	315.1	38.1	24.7	.0	377.9

Table 65.--Number of growing-stock trees on timberland by species and diameter class, Southern Unit, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)												All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Loblolly pine	1,268	770	1,742	1,156	1,122	785	488	168	140	26	29	0	7,693
Virginia pine	5,702	2,961	2,873	2,945	2,215	1,339	610	134	20	0	5	0	18,803
Other yellow pines	0	0	233	94	6	0	0	0	0	0	0	0	333
Other softwoods	0	0	134	88	31	27	0	0	0	0	0	3	284
Total softwoods	6,970	3,730	4,983	4,283	3,373	2,152	1,098	302	159	26	34	3	27,114
Red maple	19,891	7,954	2,778	1,069	782	672	317	180	133	26	68	7	33,879
Hickory	3,343	636	232	287	408	232	161	85	27	33	18	6	5,468
Beech	7,789	2,598	1,187	423	374	375	301	239	109	71	85	11	13,562
Sweetgum	19,700	6,214	3,571	2,248	1,540	887	512	347	171	55	93	0	35,340
Yellow-poplar	1,804	541	1,320	953	774	520	576	307	285	179	274	30	7,564
Blackgum	8,447	2,764	1,032	312	220	94	123	99	27	0	21	0	13,141
Ash-walnut-cherry	582	702	517	222	221	61	144	78	31	6	13	0	2,576
Select white oaks	3,139	759	895	892	780	551	537	175	144	61	112	15	8,061
Select red oaks	2,005	490	125	200	88	44	47	44	23	34	28	2	3,132
Other white oaks	369	739	628	195	135	42	58	43	37	29	17	2	2,295
Other red oaks	4,662	3,422	2,353	813	947	663	686	359	207	148	92	46	14,399
Black locust	0	0	7	167	0	26	42	0	0	0	0	0	242
Other hardwoods	29,037	9,549	1,751	798	584	145	107	121	61	9	51	0	42,213
Total hardwoods	100,768	36,368	16,398	8,581	6,853	4,313	3,611	2,078	1,257	651	872	120	181,872
Total, all species	107,738	40,098	21,381	12,864	10,227	6,465	4,709	2,380	1,416	677	907	123	208,986

Table 66.--Net green weight of all live trees on timberland by species and diameter class, Southern Unit, Maryland, 1986

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+	
Loblolly pine	44.1	240.3	312.3	481.0	541.0	473.4	237.0	242.6	60.4	103.3	2,735.5
Virginia pine	200.8	373.3	805.9	1,049.1	921.8	602.3	178.0	35.7	.0	15.1	4,182.2
Other yellow pines	.0	21.8	25.1	4.6	.0	.0	.0	.0	.0	.0	51.5
Other softwoods	.0	17.2	23.9	48.6	43.4	.0	.0	.0	.0	40.8	173.9
Total softwoods	244.8	652.7	1,167.2	1,583.3	1,506.2	1,075.8	415.0	278.3	60.4	159.3	7,143.1
Red maple	749.1	433.8	323.3	409.1	517.8	381.4	273.5	303.4	65.6	436.9	3,893.9
Hickory	63.4	37.4	87.2	252.3	226.5	237.4	179.9	78.0	130.0	176.9	1,469.1
Beech	231.8	268.6	188.8	272.5	435.7	433.7	471.7	313.9	225.9	595.4	3,438.0
Sweetgum	565.2	548.5	685.7	776.1	696.4	576.0	515.1	351.1	144.7	352.6	5,211.1
Yellow-poplar	33.6	188.4	264.0	379.2	395.1	697.1	461.6	567.6	466.8	1,484.9	4,938.4
Blackgum	306.7	181.8	146.3	171.3	99.2	252.9	228.0	61.3	.0	133.4	1,580.9
Ash-walnut-cherry	40.4	97.1	81.1	126.1	54.5	175.6	124.5	62.4	18.6	43.4	823.6
Select white oaks	24.0	137.6	297.2	482.7	500.7	764.2	349.5	386.7	213.4	982.8	4,138.8
Select red oaks	38.5	20.2	73.7	53.4	42.8	71.0	103.4	106.4	138.3	253.9	901.4
Other white oaks	70.3	83.3	67.2	75.0	35.5	92.4	88.8	101.9	98.6	121.3	834.3
Other red oaks	243.9	397.7	308.7	579.2	639.1	954.2	706.8	532.3	488.2	955.6	5,805.8
Black locust	.0	4.4	62.0	9.0	21.0	68.9	.0	.0	.0	.0	165.2
Other commercial hardwoods	839.7	271.6	256.6	342.6	139.6	160.3	211.9	147.8	21.7	209.1	2,600.9
Non-commercial hardwoods	279.3	165.9	192.7	92.7	29.2	.0	41.5	22.2	.0	.0	823.4
Total hardwoods	3,486.0	2,836.4	3,034.4	4,021.3	3,833.0	4,864.9	3,756.0	3,034.8	2,011.7	5,746.2	36,624.8
Total, all species	3,730.8	3,489.1	4,201.6	5,604.7	5,339.3	5,940.7	4,171.0	3,313.1	2,072.2	5,905.5	43,767.9

Table 67.--Net green weight of all trees on timberland by class of material and species group, Southern Unit, Maryland, 1986

(In thousands of tons)

Class of material	Weight[a]		All groups
	Softwoods	Hardwoods	
Sawlog portion	3,286.6	13,927.0	17,213.6
Upper stem	467.5	3,029.2	3,496.7
Total	3,754.1	16,956.2	20,710.3
Poletimber trees	1,222.4	6,467.8	7,690.2
All growing stock	4,976.5	23,424.0	28,400.5
Rough cull trees[b]	76.6	1,053.7	1,130.3
Rotten cull trees[b]	2.0	208.9	210.9
Salvable dead trees[c]	101.0	608.9	709.9
Saplings[c]	244.8	3,486.0	3,730.8
Tops - growing stock	1,818.0	8,000.8	9,818.9
Tops - rough and rotten	25.1	451.5	476.6
All nongrowing stock	2,267.6	13,809.8	16,077.4
Total, all classes	7,244.1	37,233.7	44,477.8

[a] Includes bark and sound cull; excludes rotten cull.
[b] Bole portion of trees 5.0 inches d.b.h. and larger.
[c] Weight of entire tree aboveground.

MAJOR SPECIES BY VOLUME, SOUTHERN UNIT, 1976 AND 1986

Millions of board feet

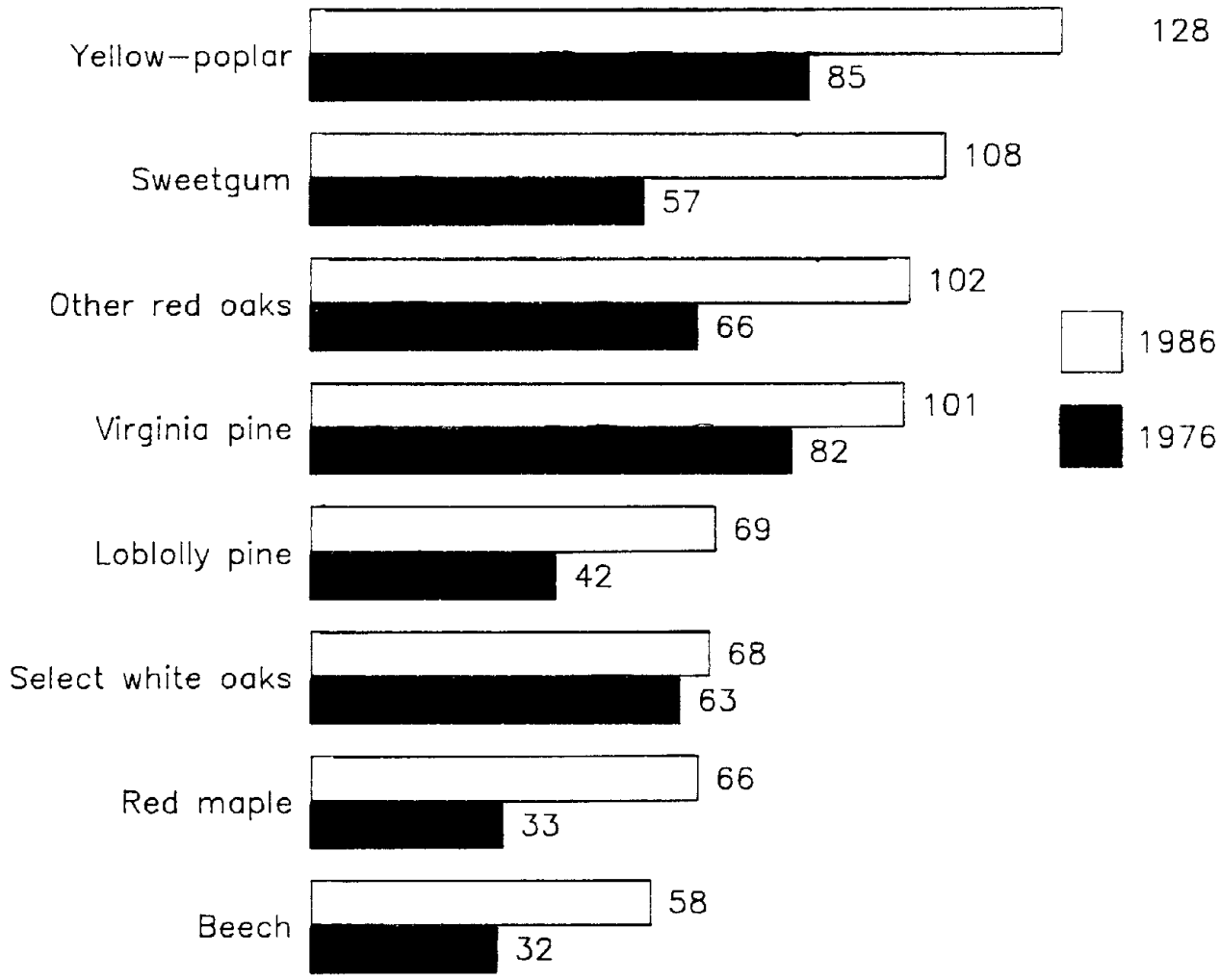


Table 68.--Net volume of growing-stock trees on timberland by species and diameter class, Southern Unit, 1976

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	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	4.4	7.5	6.3	8.6	7.6	4.9	1.2	.3	.7	.0	41.5
Virginia pine	15.2	23.1	19.3	14.4	5.1	4.0	.5	.5	.0	.0	82.1
Other yellow pines	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.2
Other softwoods	.8	.8	.2	.0	.0	.0	.0	.0	.8	.7	3.3
Total softwoods	20.4	31.5	25.8	23.2	12.7	8.9	1.7	.7	1.5	.7	127.0
Red maple	2.6	3.9	5.1	3.6	6.0	3.5	3.5	1.8	2.2	.6	32.9
Sugar maple	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3
Hickory	.5	1.6	2.2	4.2	1.6	2.9	1.7	1.8	1.7	.7	18.9
Beech	1.1	1.9	3.6	4.2	4.7	2.9	4.5	4.2	4.6	.7	32.3
Sweetgum	4.9	6.7	9.2	11.4	7.4	7.5	3.0	2.1	4.4	.0	56.6
Yellow-poplar	3.5	7.5	10.0	15.7	9.1	8.2	10.1	7.2	10.1	3.2	84.7
Blackgum	.5	2.4	2.3	2.4	.7	1.0	1.6	.2	.6	.0	11.9
Ash-walnut-cherry	1.4	1.8	5.7	3.8	3.5	3.1	1.5	.0	.0	.0	20.8
Select white oaks	3.5	5.3	7.9	7.4	8.6	7.0	6.2	6.0	8.2	2.6	62.6
Select red oaks	.1	.2	.9	.9	1.3	1.2	1.7	.9	1.4	.0	8.7
Other white oaks	.5	1.5	1.2	1.8	1.4	1.4	1.9	1.8	1.4	.0	12.9
Other red oaks	4.1	6.0	6.2	12.1	10.5	8.5	7.5	3.8	7.0	.6	66.4
Black locust	.5	.3	1.5	1.3	.7	.0	.2	.3	.0	.0	4.8
Other hardwoods	1.6	3.3	3.2	3.6	1.8	1.5	1.4	1.2	1.3	.3	19.0
Total hardwoods	25.2	42.5	59.1	72.5	57.3	48.8	44.6	31.3	42.8	8.7	432.9
Total all species	45.7	73.9	85.0	95.7	70.0	57.7	46.3	32.0	44.3	9.3	559.9

Table 69.--Net volume of growing-stock trees on timberland by species and diameter class, Southern Unit, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	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	5.7	8.1	12.8	14.3	12.4	6.1	5.7	1.5	2.3	.0	68.9
Virginia pine	8.9	20.7	26.8	23.6	15.1	4.3	.7	.0	.3	.0	100.6
Other yellow pines	.5	.7	.1	.0	.0	.0	.0	.0	.0	.0	1.2
Other softwoods	.3	.5	.4	.2	.0	.0	.0	.0	.0	.4	1.8
Total softwoods	15.4	30.0	40.1	38.1	27.4	10.5	6.4	1.5	2.7	.4	172.5
Red maple	6.8	6.7	9.4	12.7	8.4	6.5	6.4	1.7	6.1	1.1	65.9
Hickory	.7	1.7	5.3	4.7	4.8	3.4	1.5	2.3	1.4	1.1	27.0
Beech	2.8	2.7	5.0	7.9	8.7	9.8	6.0	4.8	8.3	1.9	57.9
Sweetgum	10.1	15.3	18.9	17.4	13.9	12.6	8.1	3.7	8.0	.0	108.1
Yellow-poplar	3.9	6.9	10.8	11.1	18.5	13.0	15.5	12.2	28.7	6.8	127.5
Blackgum	2.9	1.9	2.7	1.8	3.4	3.7	1.3	.0	2.0	.0	19.5
Ash-walnut-cherry	1.6	1.5	2.8	1.3	4.0	3.2	1.4	.4	1.1	.0	17.3
Select white oaks	2.1	5.7	9.0	9.5	13.5	6.1	6.4	3.6	9.6	2.6	68.0
Select red oaks	.3	1.4	.9	.8	1.2	1.7	1.2	2.2	2.8	.4	13.0
Other white oaks	1.1	1.2	1.3	.6	1.6	1.3	1.6	1.4	1.2	.5	11.9
Other red oaks	6.2	5.3	11.2	12.5	18.4	13.4	9.9	9.1	8.2	7.3	101.6
Black locust	.0	1.2	.0	.5	1.1	.0	.0	.0	.0	.0	2.8
Other hardwoods	4.2	4.7	6.5	2.6	2.9	4.2	2.7	.5	4.2	.0	32.5
Total hardwoods	42.8	56.3	83.9	83.4	100.4	79.0	62.0	41.8	81.6	21.7	652.9
Total, all species	58.2	86.3	124.0	121.5	127.8	89.5	68.4	43.3	84.2	22.1	825.4

Table 70.--Net volume of sawtimber trees on timberland by species and diameter class, Southern Unit, 1976

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	18.7	29.6	29.2	20.2	5.1	1.3	2.8	.0	106.8
Virginia pine	57.0	50.9	18.9	15.8	1.9	2.0	.0	.0	146.5
Other yellow pines	.0	.8	.0	.0	.0	.0	.0	.0	.8
Other softwoods	.5	.0	.0	.0	.0	.0	3.2	2.7	6.4
Total softwoods	76.1	81.3	48.1	36.0	7.0	3.3	6.0	2.7	260.5
Red maple	.0	11.0	20.9	13.8	13.0	7.3	9.4	2.9	78.4
Hickory	.0	13.6	6.2	11.9	6.9	8.1	7.8	3.3	57.8
Beech	.0	13.7	16.7	10.8	16.2	16.8	20.1	3.0	97.4
Sweetgum	.0	36.6	26.6	29.7	13.0	9.3	19.3	.0	134.5
Yellow-poplar	.0	52.5	33.6	33.6	43.6	31.1	47.7	17.0	259.2
Blackgum	.0	6.2	2.6	3.5	6.0	.7	2.4	.0	21.5
Ash-walnut-cherry	.0	12.3	12.8	11.7	5.8	.0	.0	.0	42.6
Select white oaks	.0	24.2	31.5	28.4	25.5	24.2	33.9	11.4	179.0
Select red oaks	.0	2.9	4.4	4.0	6.5	3.8	5.7	.0	27.4
Other white oaks	.0	4.9	4.8	5.3	6.9	6.5	6.5	.0	34.8
Other red oaks	.0	35.8	37.0	32.9	28.3	15.9	29.8	2.5	182.2
Black locust	.0	4.1	2.4	.0	1.0	1.2	.0	.0	8.8
Other hardwoods	.0	11.4	6.6	5.2	5.7	5.3	5.8	1.2	41.1
Total hardwoods	.0	229.2	206.1	191.0	178.3	130.2	188.4	41.4	1,164.7
Total all species	76.1	310.5	254.2	227.0	185.3	133.6	194.4	44.1	1,425.2

[a] International 1/4-inch rule.

Table 71.--Net volume of sawtimber trees on timberland by species and diameter class, Southern Unit, 1986

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	39.8	54.4	51.3	27.3	26.6	7.1	11.5	.0	218.1
Virginia pine	86.8	89.7	61.9	18.7	3.4	.0	1.6	.0	262.1
Other yellow pines	.3	.0	.0	.0	.0	.0	.0	.0	.3
Other softwoods	1.4	.5	.0	.0	.0	.0	.0	2.1	3.9
Total softwoods	128.3	144.6	113.2	46.0	30.0	7.1	13.1	2.1	484.5
Red maple	.0	38.6	31.7	25.2	28.0	6.4	27.0	6.2	163.1
Hickory	.0	16.3	19.5	15.5	7.6	11.2	7.1	6.8	84.2
Beech	.0	27.9	34.1	43.3	26.8	21.0	41.5	10.6	205.2
Sweetgum	.0	57.0	53.9	51.4	34.9	17.3	40.0	.0	254.6
Yellow-poplar	.0	40.7	77.4	57.1	71.9	59.2	154.3	43.3	504.0
Blackgum	.0	5.7	12.9	15.2	5.5	.0	10.0	.0	49.3
Ash-walnut-cherry	.0	4.5	16.9	12.5	5.9	1.8	5.6	.0	47.1
Select white oaks	.0	32.3	52.7	26.4	29.3	16.1	49.6	12.9	219.2
Select red oaks	.0	2.6	4.7	6.8	5.1	10.0	14.3	2.2	45.7
Other white oaks	.0	1.8	5.8	5.4	6.2	6.1	4.8	3.0	33.1
Other red oaks	.0	41.1	68.8	54.7	42.6	41.0	39.9	37.8	325.9
Black locust	.0	1.6	4.2	.0	.0	.0	.0	.0	5.8
Other hardwoods	.0	8.6	11.1	17.9	12.1	2.4	20.6	.0	72.7
Total hardwoods	.0	278.6	393.8	331.5	276.0	192.4	414.8	122.9	2,010.0
Total, all species	128.3	423.2	507.0	377.5	306.0	199.6	427.9	124.9	2,494.4

[a] International 1/4-inch rule.

Table 72.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Southern Unit, 1976

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
Loblolly pine	24.1	13.7	69.0	.0	106.8	7.9	2.5	19.0	.0	29.4
Virginia pine	1.5	5.0	139.0	.0	146.5	.0	.9	18.8	.0	19.7
Other yellow pines	.0	.0	.8	.0	.8	.0	.0	.0	.0	.0
Other softwoods	4.6	.3	1.5	.0	6.4	4.1	.3	1.5	.0	5.9
Total softwoods	30.2	19.0	211.3	.0	260.5	12.0	3.6	39.4	.0	55.0
Red maple	4.6	16.3	46.3	11.1	78.4	4.6	12.2	24.3	5.3	46.4
Hickory	3.7	14.8	25.7	13.6	57.8	3.3	11.1	14.2	9.4	38.0
Beech	.2	.9	55.2	41.1	97.4	.1	.9	36.5	29.5	67.0
Sweetgum	12.8	25.8	53.9	41.9	134.5	12.8	17.1	21.2	20.1	71.2
Yellow-poplar	34.0	57.8	104.9	62.5	259.2	33.3	45.7	59.8	34.1	172.9
Blackgum	4.2	2.7	11.7	2.9	21.5	4.2	2.0	4.9	1.6	12.7
Ash-walnut-cherry	4.0	16.9	15.9	5.8	42.6	4.0	7.7	4.4	1.4	17.5
Select white oaks	22.5	40.0	74.9	41.7	179.0	22.5	32.1	43.2	25.5	123.3
Select red oaks	2.7	7.6	12.9	4.2	27.4	2.7	5.7	8.1	3.5	20.0
Other white oaks	5.1	7.0	14.4	8.2	34.8	5.1	5.7	8.4	5.9	25.1
Other red oaks	14.1	38.0	79.6	50.5	182.2	13.7	30.1	42.2	23.4	109.4
Black locust	.6	1.0	6.1	1.0	8.8	.6	1.0	.5	.1	2.2
Other hardwoods	6.3	10.3	20.7	3.8	41.1	6.3	6.5	9.0	1.3	23.1
Total hardwoods	114.9	239.1	522.3	288.4	1,164.7	113.2	177.8	276.7	161.1	728.8
Percent of hardwood in each grade	10	20	45	25	100	16	24	38	22	100

[a] International 1/4-inch rule.

Table 73.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Southern Unit, 1986

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
Loblolly pine	22.7	54.1	141.2	.0	218.1	7.4	15.6	49.6	.0	72.6
Virginia pine	3.0	14.4	244.7	.0	262.1	.0	1.4	22.3	.0	23.7
Other yellow pines	.0	.2	.2	.0	.3	.0	.0	.0	.0	.0
Other softwoods	2.7	.1	1.0	.1	3.9	1.1	.1	.8	.0	2.1
Total softwoods	28.5	68.9	387.1	.1	484.5	8.5	17.1	72.8	.0	98.3
Red maple	.0	3.6	66.3	93.2	163.1	.0	3.6	35.1	54.2	92.8
Hickory	.0	18.3	41.5	24.4	84.2	.0	14.2	20.9	13.3	48.3
Beech	.2	.0	57.0	148.0	205.2	.1	.0	44.1	98.9	143.2
Sweetgum	13.6	47.7	102.2	91.1	254.6	11.9	28.8	51.2	51.8	143.7
Yellow-poplar	73.9	123.3	216.0	90.9	504.0	65.5	96.6	158.1	65.6	385.8
Blackgum	.0	5.9	29.1	14.3	49.3	.0	2.0	19.0	9.7	30.7
Ash-walnut-cherry	2.4	9.3	28.7	6.6	47.1	.7	6.0	15.9	3.1	25.8
Select white oaks	8.3	22.5	96.5	91.9	219.2	8.3	18.6	52.6	54.7	134.3
Select red oaks	.7	7.5	29.8	7.7	45.7	.7	7.1	23.9	6.7	38.4
Other white oaks	.0	.0	14.9	18.2	33.1	.0	.0	9.9	15.5	25.5
Other red oaks	10.2	52.7	132.9	130.1	325.9	10.2	46.1	90.9	68.9	216.1
Black locust	.0	.0	4.1	1.7	5.8	.0	.0	.0	.0	.0
Other hardwoods	3.1	6.9	45.4	17.3	72.7	3.1	6.9	29.9	13.1	53.0
Total hardwoods	112.4	297.9	864.2	735.5	2,010.0	100.5	230.1	551.5	455.5	1,337.6
Percent of hardwood in each grade	5	15	43	37	100	8	17	41	34	100

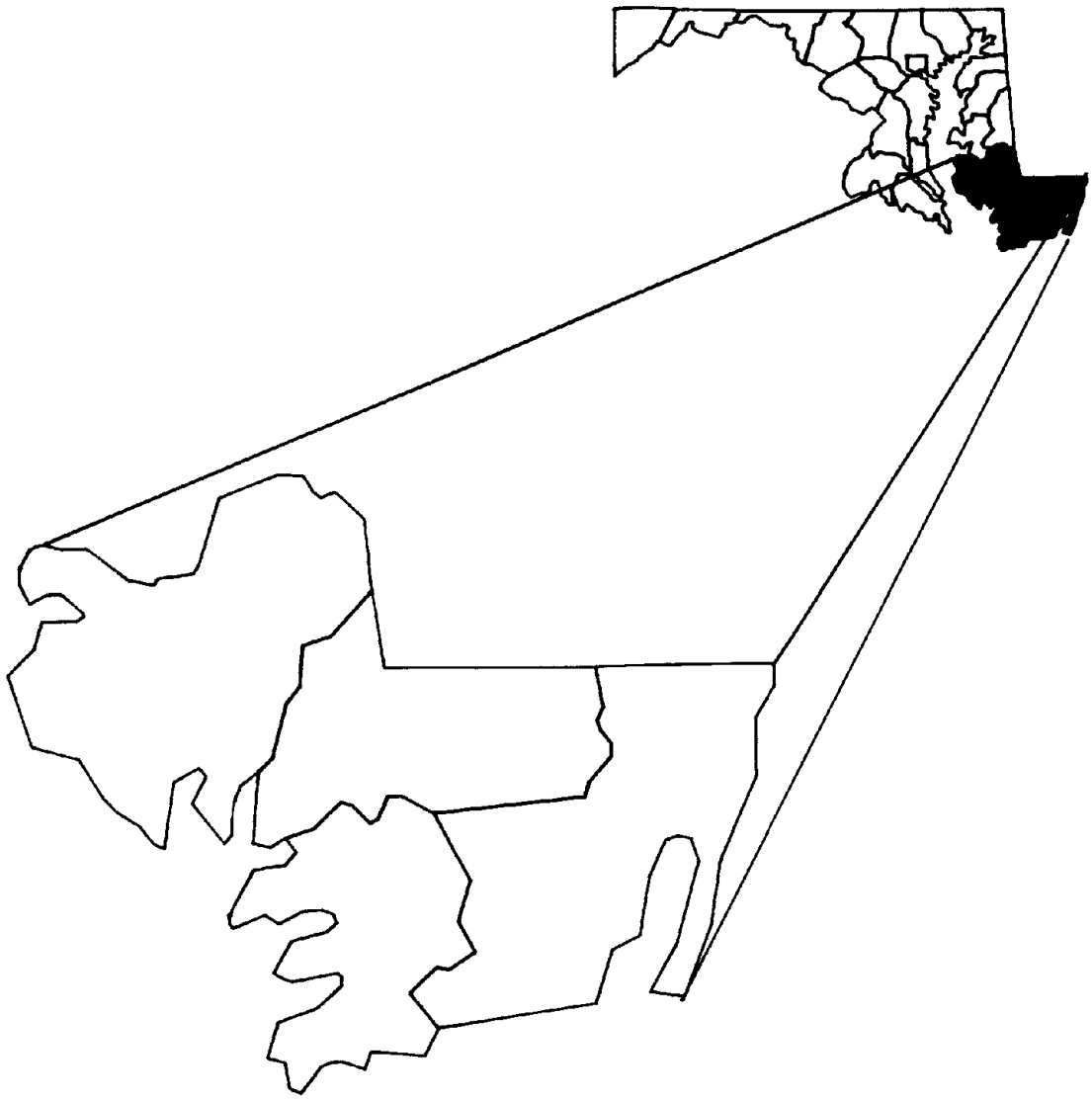
[a] International 1/4-inch rule.

Table 74.--Sampling errors for various tables, Southern Unit, 1976 and 1986

(In percent)

Species and diameter class	Number of trees	Growing-stock volume		Sawtimber volume	
	(Table 65)	Tables		Tables	
	(5"+)	(68)	(69)	(70)	(71)
Loblolly pine	32	22	25	27	24
Virginia pine	17	14	16	18	16
Other yellow pines	95	100	88	100	100
Other softwoods	50	49	41	69	62
Total softwoods	16	12	13	16	14
Red maple	14	19	16	22	19
Sugar maple	0	100	0	0	0
Hickory	24	18	20	21	23
Beech	16	19	16	22	17
Sweetgum	13	13	13	16	15
Yellow-poplar	16	14	14	16	16
Blackgum	19	17	19	23	23
Ash-walnut-cherry	40	35	35	34	35
Select white oaks	14	13	14	16	16
Select red oaks	28	28	27	31	29
Other white oaks	39	30	32	34	35
Other red oaks	13	10	13	12	16
Black locust	52	31	45	37	57
Other hardwoods	23	20	21	27	26
Total hardwoods	5	5	6	6	8
Total, all species	5	4	4	6	6
D.B.H. class (inches)					
5.0 to 6.9	8	10	8	-	-
7.0 to 8.9	9	8	10	-	-
9.0 to 10.9	8	7	8	18	18
11.0 to 12.9	7	7	7	9	7
13.0 to 14.9	7	8	7	9	7
15.0 to 16.9	8	8	8	9	8
17.0 to 18.9	11	9	11	9	11
19.0 to 20.9	13	13	14	12	14
21.0 to 28.9	14	11	14	11	15
29 +	27	33	28	34	28

LOWER EASTERN SHORE UNIT TABLES



LOWER EASTERN SHORE UNIT

Table 75.--Area of timberland by forest type, forest-type group, and stand-size class, Lower Eastern Shore Unit, 1976

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Loblolly pine	118.1	46.6	30.1	2.9	197.8
Loblolly/shortleaf group	118.1	46.6	30.1	2.9	197.8
Virginia pine/oak	.0	3.0	.0	.0	3.0
Loblolly pine/hardwood	47.9	39.2	18.8	.0	105.9
Oak/pine group	47.9	42.2	18.8	.0	108.9
White oak	6.3	6.4	9.0	.0	21.7
Sweetgum/yellow-poplar	.0	6.2	3.2	.0	9.4
Scarlet oak	.0	3.3	.0	.0	3.3
Red maple/central hardwoods	3.3	.0	.0	.0	3.3
Mixed central hardwoods	53.3	34.4	15.8	.0	103.5
Oak/hickory group	62.8	50.2	28.0	.0	141.1
Swamp chstnt oak/cherrybrk oak	13.3	2.9	2.7	.0	18.9
Sweetgm/nuttall oak/willow oak	6.3	.0	2.9	.0	9.2
bald cypress/white tupelo	.0	3.2	.0	.0	3.2
Sweetbay/swamp tupelo/rd maple	12.7	3.0	3.2	.0	18.9
Oak/gum/cypress group	32.2	9.2	8.8	.0	50.2
Black ash/Amer. elm/red maple	2.9	2.9	3.2	.0	9.1
Red maple(lowland)	6.5	3.1	.0	.0	9.6
Elm/ash/red maple group	9.4	6.1	3.2	.0	18.7
Black cherry	.0	.0	2.8	.0	2.8
Northern hardwoods group	.0	.0	2.8	.0	2.8
All forest types	270.5	154.4	91.7	2.9	519.5

Table 76.--Area of timberland by forest type, forest-type group, and stand-size class, Lower Eastern Shore Unit, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Loblolly pine	82.3	40.5	17.5	.0	140.2
Virginia pine	.0	.0	1.8	.0	1.8
Loblolly/shortleaf group	82.3	40.5	19.3	.0	142.1
Virginia pine/oak	3.5	.0	.0	.0	3.5
Loblolly pine/hardwood	78.1	14.4	23.3	.0	115.8
Oak/pine group	81.6	14.4	23.3	.0	119.3
White oak/red oak/hickory	.0	3.5	1.6	.0	5.1
White oak	3.6	3.6	.0	.0	7.3
Y. poplar/wh. oak/no. red oak	5.2	.0	.0	.0	5.2
Sweetgum/yellow-poplar	3.6	2.1	2.2	.0	7.9
Scarlet oak	2.1	.0	.0	.0	2.1
Red maple/central hardwoods	14.0	4.1	4.2	.0	22.3
Mixed central hardwoods	62.5	20.5	2.9	.0	85.8
Oak/hickory group	91.0	33.8	10.9	.0	135.7
Swamp chstnt oak/cherrybark oak	13.5	10.5	.0	.0	24.0
Sweetgum/nuttall oak/willow oak	17.3	6.5	10.0	.0	33.8
Bald cypress/white tupelo	3.0	.0	.0	.0	3.0
Sweetbay/swamp tupelo/red maple	6.3	2.9	2.5	.0	11.7
Oak/gum/cypress group	40.1	19.9	12.5	.0	72.6
Black ash/Amer. elm/red maple	9.7	.0	.0	.0	9.7
Red maple(lowland)	.0	.0	2.2	.0	2.2
Red maple(upland)	.0	.0	3.8	.0	3.8
American elm/green ash	3.7	.0	.0	.0	3.7
Elm/ash/red maple group	13.4	.0	6.0	.0	19.3
All forest types	308.5	108.6	72.0	.0	489.0

Table 77.--Number of growing-stock trees on timberland by species and diameter class, Lower Eastern Shore Unit, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)												All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Loblolly pine	27,562	21,472	13,223	8,573	5,023	3,487	1,841	869	369	76	63	0	82,559
Virginia pine	0	720	164	140	140	106	49	36	0	0	0	0	1,356
Other softwoods	869	0	33	0	21	11	19	17	33	8	6	0	1,017
Total softwoods	28,432	22,192	13,420	8,713	5,185	3,604	1,910	922	401	84	69	0	84,931
Red maple	48,602	12,879	6,790	3,283	1,780	1,171	804	329	243	136	179	48	76,244
Hickory	811	0	492	140	85	21	0	0	0	0	0	0	1,548
Beech	1,466	383	154	61	230	125	86	35	0	11	5	0	2,554
Sweetgum	27,644	7,542	3,261	1,654	1,256	729	598	269	99	49	32	1	43,136
Yellow-poplar	1,621	0	324	36	64	65	19	28	6	22	53	4	2,242
Blackgum	10,488	3,284	1,639	1,146	787	440	228	109	70	52	42	0	18,286
Ash-walnut-cherry	1,576	0	283	329	225	70	41	11	17	20	0	0	2,571
Select white oaks	3,585	1,992	2,069	1,016	1,114	938	457	308	109	78	69	10	11,745
Select red oaks	438	0	19	9	41	20	29	15	9	0	7	0	588
Other white oaks	0	0	0	0	19	0	0	0	0	0	0	0	19
Other red oaks	4,306	3,660	1,955	1,376	875	656	460	345	153	62	46	7	13,900
Other hardwoods	35,452	3,791	2,781	1,018	160	108	37	0	6	18	0	0	43,372
Total hardwoods	135,988	33,530	19,767	10,068	6,634	4,343	2,761	1,449	712	448	434	71	216,206
Total, all species	164,420	55,722	33,187	18,781	11,819	7,947	4,671	2,371	1,113	532	503	71	301,137

Table 78.--Net green weight of all live trees on timberland by species and diameter class, Lower Eastern Shore Unit, Maryland, 1986

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+	
Loblolly pine	1,497.6	1,786.5	2,271.9	2,273.8	2,424.5	1,829.6	1,177.3	653.4	175.8	201.3	14,291.6
Virginia pine	40.9	15.7	37.6	64.3	75.4	46.2	48.1	.0	.0	.0	328.3
Other softwoods	20.6	4.0	.0	5.0	6.4	11.8	23.3	65.4	16.7	17.3	170.5
Total softwoods	1,559.1	1,806.1	2,309.5	2,343.1	2,506.4	1,887.6	1,248.7	718.8	192.5	218.6	14,790.4
Red maple	1,158.2	979.4	1,008.8	882.9	1,011.1	936.0	591.1	602.3	342.9	1,181.7	8,694.4
Hickory	1.9	76.9	57.8	47.9	18.6	.0	.0	.0	.0	.0	203.1
Beech	31.0	44.3	26.7	180.2	133.4	127.3	68.4	.0	32.9	14.6	658.7
Sweetgum	580.3	482.4	548.8	627.2	575.4	701.4	405.9	189.8	121.5	124.5	4,357.3
Yellow-poplar	23.8	47.4	9.1	35.5	52.1	22.4	47.5	10.9	52.6	215.0	516.4
Blackgum	408.2	339.4	427.1	538.0	537.0	311.0	270.5	182.6	184.3	224.3	3,422.5
Ash-walnut-cherry	15.0	59.7	114.7	119.3	63.2	71.9	16.3	31.2	44.3	.0	535.7
Select white oaks	70.6	276.1	320.9	630.5	862.0	658.9	607.5	294.1	259.6	478.2	4,458.3
Select red oaks	4.0	3.3	3.1	28.5	18.4	43.5	35.2	21.0	.0	34.9	191.9
Other white oaks	.0	.0	.0	12.3	.0	.0	.0	.0	.0	.0	12.3
Other red oaks	280.6	355.3	474.5	526.2	642.2	664.7	696.1	397.2	212.9	345.4	4,595.3
Other commercial hardwoods	580.0	454.9	329.3	87.7	112.8	45.1	.0	15.0	48.9	.0	1,673.8
Non-commercial hardwoods	168.1	63.7	28.3	7.4	47.7	10.1	.0	.0	.0	53.7	378.9
Total hardwoods	3,321.8	3,182.8	3,349.1	3,723.7	4,074.0	3,592.4	2,738.5	1,744.1	1,300.1	2,672.2	29,698.5
Total, all species	4,880.9	4,988.9	5,658.6	6,066.8	6,580.4	5,480.0	3,987.1	2,462.9	1,492.6	2,890.8	44,488.9

Table 79.--Net green weight of all trees on timberland by class of material and species group, Lower Eastern Shore Unit, Maryland, 1986

(In thousands of tons)

Class of material	Weight[a]		All groups
	Softwoods	Hardwoods	
Sawlog portion	6,038.4	9,036.3	15,074.8
Upper stem	820.4	2,101.8	2,922.1
Total	6,858.8	11,138.1	17,996.9
Poletimber trees	2,762.8	6,831.0	9,593.8
All growing stock	9,621.6	17,969.1	27,590.7
Rough cull trees[b]	26.5	1,169.7	1,196.2
Rotten cull trees[b]	1.7	291.5	293.2
Salvable dead trees[c]	170.0	405.8	575.8
Saplings[c]	1,559.1	3,321.8	4,880.9
Tops - growing stock	3,570.4	6,440.6	10,010.9
Tops - rough and rotten	11.1	505.9	517.0
All nongrowing stock	5,338.8	12,135.2	17,474.0
Total, all classes	14,960.4	30,104.3	45,064.7

[a] Includes bark and sound cull; excludes rotten cull.
[b] Bole portion of trees 5.0 inches d.b.h. and larger.
[c] Weight of entire tree aboveground.

MAJOR SPECIES BY VOLUME, LOWER EASTERN SHORE UNIT, 1976 AND 1986

Millions of board feet

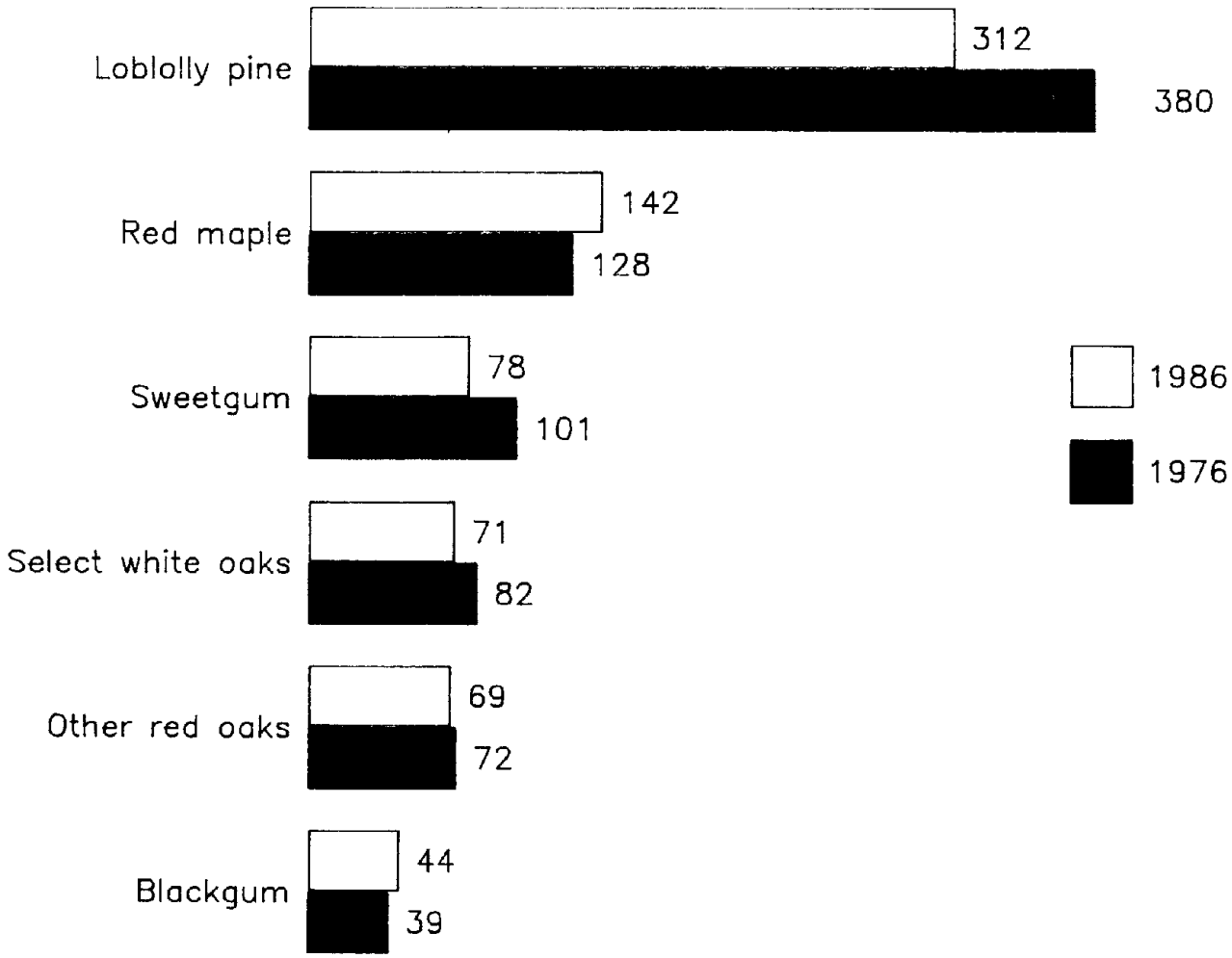


Table 80.--Net volume of growing-stock trees on timberland by species and diameter class, Lower Eastern Shore Unit, 1976

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	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	37.3	60.7	75.0	74.8	67.4	40.1	15.5	7.1	2.4	.0	380.2
Virginia pine	.9	1.5	1.2	1.0	.5	.2	.3	.0	.0	.0	5.6
Other yellow pines	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.2
Other softwoods	.4	.4	.0	.0	.3	.5	.0	.9	.5	.0	3.1
Total softwoods	38.5	62.6	76.3	76.0	68.2	40.8	15.8	7.9	3.0	.0	389.1
Red maple	15.7	20.9	21.8	15.3	11.9	10.6	11.9	6.3	11.3	2.2	128.0
Hickory	.6	.2	1.2	.8	.0	.3	.0	.0	.0	.0	3.1
Beech	.8	.4	1.0	2.3	1.4	1.9	1.4	1.9	3.0	.0	14.1
Sweetgum	10.3	17.8	21.6	13.9	14.6	8.1	5.2	4.2	5.0	.0	100.6
Yellow-poplar	.2	.5	.0	.0	1.0	1.6	.6	.0	1.1	.9	5.9
Blackgum	4.1	6.0	8.3	4.9	5.1	4.8	1.7	1.4	2.2	.3	38.8
Ash-walnut-cherry	2.2	1.7	.6	.6	1.3	1.0	.4	.0	.4	.0	8.1
Select white oaks	8.2	12.2	13.6	14.6	12.4	7.0	4.1	1.5	5.6	2.4	81.7
Select red oaks	.0	.4	.8	.5	.3	.0	.0	.0	.4	.0	2.3
Other white oaks	.3	.6	.0	.0	.3	.0	.2	.0	.0	.0	1.3
Other red oaks	6.6	11.4	12.7	12.1	9.8	6.1	4.9	1.3	5.5	1.3	71.8
Black locust	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
Other hardwoods	3.7	1.7	1.6	1.1	1.1	.8	.3	.3	.0	.0	10.6
Total hardwoods	52.9	73.8	83.2	66.1	59.2	42.2	30.6	17.0	34.4	7.1	466.5
Total all species	91.5	136.4	159.5	142.1	127.4	83.0	46.4	24.9	37.4	7.1	855.6

Table 81.--Net volume of growing-stock trees on timberland by species and diameter class, Lower Eastern Shore Unit, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	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	37.4	55.0	57.6	61.9	46.0	29.4	16.0	4.1	4.6	.0	312.1
Virginia pine	.3	.9	1.4	1.9	1.0	1.1	.0	.0	.0	.0	6.6
Other softwoods	.1	.0	.2	.2	.4	.5	1.5	.4	.4	.0	3.6
Total softwoods	37.7	56.0	59.2	63.9	47.4	31.1	17.5	4.5	5.0	.0	322.4
Red maple	16.3	20.5	19.4	20.6	19.2	9.9	10.1	6.9	12.1	6.5	141.5
Hickory	1.3	1.2	.9	.4	.0	.0	.0	.0	.0	.0	3.7
Beech	.5	.3	2.5	2.1	2.5	1.1	.0	.7	.3	.0	10.0
Sweetgum	8.2	10.8	13.7	12.5	15.0	8.8	4.2	2.5	2.2	.2	78.2
Yellow-poplar	.8	.2	.8	1.2	.5	.8	.2	1.2	4.1	.7	10.7
Blackgum	3.8	7.1	8.6	7.2	5.0	3.5	2.7	2.6	3.3	.0	43.9
Ash-walnut-cherry	1.0	2.4	2.6	1.3	1.1	.3	.5	1.0	.0	.0	10.3
Select white oaks	5.1	5.9	12.0	15.0	10.5	9.0	4.1	3.7	4.2	1.1	70.6
Select red oaks	.1	.0	.5	.3	.7	.5	.3	.0	.4	.0	2.9
Other white oaks	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.2
Other red oaks	5.5	8.0	9.0	11.2	10.6	10.8	6.2	3.1	3.8	.9	69.0
Other hardwoods	6.2	5.5	1.6	1.4	.7	.0	.3	.8	.0	.0	16.6
Total hardwoods	48.8	62.0	71.8	73.3	65.8	44.8	28.7	22.4	30.6	9.3	457.6
Total, all species	86.6	117.9	131.0	137.2	113.2	75.9	46.2	26.9	35.6	9.3	779.9

Table 82.--Net volume of sawtimber trees on timberland by species and diameter class, Lower Eastern Shore Unit, 1976

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	257.4	298.3	290.1	180.1	72.1	33.8	11.6	.0	1,143.4
Virginia pine	4.4	3.6	2.2	1.0	1.1	.0	.0	.0	12.3
Other yellow pines	.0	.9	.0	.0	.0	.0	.0	.0	.9
Other softwoods	.0	.0	1.0	2.3	.0	3.9	2.7	.0	9.9
Total softwoods	261.8	302.8	293.2	183.5	73.2	37.7	14.2	.0	1,166.5
Red maple	.0	57.8	47.7	45.2	51.8	30.1	56.5	12.4	301.5
Hickory	.0	3.0	.0	1.4	.0	.0	.0	.0	4.4
Beech	.0	8.8	6.7	9.6	6.2	10.0	15.8	.0	57.0
Sweetgum	.0	50.9	60.2	35.5	24.2	20.1	25.0	.0	216.0
Yellow-poplar	.0	.0	4.0	7.1	2.9	.0	5.9	5.3	25.2
Blackgum	.0	17.7	20.4	21.3	7.8	6.9	10.7	1.9	86.8
Ash-walnut-cherry	.0	2.5	4.6	3.9	1.4	.0	1.8	.0	14.2
Select white oaks	.0	56.7	53.0	31.9	19.5	6.9	26.3	14.7	208.9
Select red oaks	.0	1.5	1.3	.0	.0	.0	1.6	.0	4.4
Other white oaks	.0	.0	.7	.0	.6	.0	.0	.0	1.4
Other red oaks	.0	43.4	41.0	26.9	23.7	6.5	27.3	7.4	176.2
Other hardwoods	.0	4.3	4.7	3.9	1.2	1.4	.0	.0	15.4
Total hardwoods	.0	246.6	244.3	186.7	139.4	81.8	171.0	41.7	1,111.4
Total all species	261.8	549.4	537.5	370.1	212.6	119.5	185.2	41.7	2,277.9

[a] International 1/4-inch rule.

Table 83.--Net volume of sawtimber trees on timberland by species and diameter class, Lower Eastern Shore Unit, 1986

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	194.6	240.9	194.8	131.2	71.0	19.2	22.5	.0	874.2
Virginia pine	4.4	7.0	3.8	4.8	.0	.0	.0	.0	19.9
Other softwoods	.5	.5	1.4	2.2	6.6	1.8	1.9	.0	14.8
Total softwoods	199.5	248.4	200.0	138.2	77.5	21.0	24.4	.0	909.0
Red maple	.0	73.1	73.7	41.9	44.1	29.0	53.0	30.9	345.7
Hickory	.0	1.6	.0	.0	.0	.0	.0	.0	1.6
Beech	.0	8.6	11.8	4.5	.0	3.3	1.2	.0	29.4
Sweetgum	.0	43.5	59.8	36.0	18.9	10.7	9.9	1.3	180.0
Yellow-poplar	.0	5.2	2.3	3.8	1.2	5.6	22.4	3.6	44.1
Blackgum	.0	24.3	18.5	13.9	12.4	11.4	13.0	.0	93.6
Ash-walnut-cherry	.0	5.6	3.6	1.3	1.3	2.9	.0	.0	14.7
Select white oaks	.0	57.5	43.5	39.5	19.1	16.4	19.0	3.9	198.8
Select red oaks	.0	1.2	2.7	2.1	1.6	.0	1.9	.0	9.6
Other red oaks	.0	38.9	41.2	46.8	27.5	14.6	19.2	4.4	192.6
Other hardwoods	.0	5.2	3.0	.0	1.0	3.0	.0	.0	12.2
Total hardwoods	.0	264.6	260.1	189.8	127.1	97.1	139.5	44.1	1,122.3
Total, all species	199.5	513.0	460.1	327.9	204.6	118.1	163.9	44.1	2,031.3

[a] International 1/4-inch rule.

Table 84.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Lower Eastern Shore Unit, 1976

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
Loblolly pine	325.8	176.3	641.3	.0	1,143.4	93.2	41.1	163.3	.0	297.6
Virginia pine	.0	.6	11.7	.0	12.3	.0	.6	1.6	.0	2.2
Other yellow pines	.0	.4	.5	.0	.9	.0	.0	.0	.0	.0
Other softwoods	4.0	.5	5.4	.0	9.9	4.0	.5	4.3	.0	8.8
Total softwoods	329.8	177.8	658.9	.0	1,166.5	97.2	42.2	169.2	.0	308.6
Red maple	27.0	34.4	181.5	59.5	301.5	25.5	29.0	107.5	34.0	196.0
Hickory	.0	.5	2.5	1.4	4.4	.0	.0	1.1	.3	1.4
Beech	.3	2.1	30.8	23.8	57.0	.3	2.1	24.1	15.0	41.5
Sweetgum	38.5	32.3	82.3	62.9	216.0	31.0	11.6	32.7	29.6	104.9
Yellow-poplar	7.8	7.4	6.4	3.6	25.2	7.0	6.4	4.7	3.0	21.1
Blackgum	16.6	19.5	43.1	7.6	86.8	14.5	11.3	20.3	2.7	48.8
Ash-walnut-cherry	5.7	2.8	4.6	1.1	14.2	3.8	.7	2.2	.5	7.2
Select white oaks	33.2	33.4	87.3	55.0	208.9	29.2	16.2	31.4	22.4	99.2
Select red oaks	.0	.8	3.2	.4	4.4	.0	.0	1.5	.2	1.7
Other white oaks	.0	.5	.7	.2	1.4	.0	.0	.5	.1	.6
Other red oaks	24.9	34.4	71.5	45.4	176.2	23.2	19.8	30.5	18.2	91.7
Other hardwoods	2.4	4.1	7.5	1.4	15.4	2.4	1.6	2.0	.4	6.4
Total hardwoods	155.5	172.2	521.4	262.3	1,111.4	136.9	98.7	258.5	126.4	620.5
Percent of hardwood in each grade	14	15	47	24	100	22	16	42	20	100

[a] International 1/4-inch rule.

Table 85.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Lower Eastern Shore Unit, 1986

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
Loblolly pine	275.9	123.2	475.1	.0	874.2	94.6	29.5	119.8	.0	243.9
Virginia pine	.3	1.5	18.2	.0	19.9	.0	.5	4.3	.0	4.8
Other softwoods	3.2	1.5	10.1	.0	14.8	1.5	1.1	9.8	.0	12.5
Total softwoods	279.5	126.1	503.4	.0	909.0	96.2	31.1	133.9	.0	261.1
Red maple	4.7	54.6	172.4	114.0	345.7	4.5	34.7	102.8	56.9	198.9
Hickory	.0	.1	1.1	.3	1.6	.0	.0	.0	.0	.0
Beech	.1	.0	10.1	19.3	29.4	.0	.0	5.8	3.2	9.0
Sweetgum	9.1	41.2	65.5	64.2	180.0	7.3	14.8	25.6	29.0	76.7
Yellow-poplar	9.6	9.1	12.6	12.8	44.1	9.6	8.0	11.3	7.7	36.6
Blackgum	10.7	28.7	39.0	15.2	93.6	10.7	13.8	15.8	10.5	50.7
Ash-walnut-cherry	1.4	5.7	5.7	2.0	14.7	1.4	1.9	1.9	.3	5.5
Select white oaks	11.7	44.0	74.2	68.9	198.8	11.2	27.9	31.5	27.3	97.8
Select red oaks	.5	1.2	2.9	4.9	9.6	.5	.2	2.1	2.9	5.7
Other red oaks	16.2	36.5	66.8	73.1	192.6	15.9	24.5	40.4	31.8	112.5
Other hardwoods	.0	.3	5.3	6.6	12.2	.0	.0	2.1	1.9	4.1
Total hardwoods	63.9	221.4	455.7	381.4	1,122.3	61.0	125.9	239.3	171.4	597.6
Percent of hardwood in each grade	6	20	40	34	100	10	21	40	29	100

[a] International 1/4-inch rule.

Table 86.--Sampling errors for various tables, Lower Eastern Shore Unit, 1976 and 1986

(In percent)

Species and diameter class	Number of trees	Growing-stock volume		Sawtimber volume	
	(Table 77)	Tables		Tables	
	(5"+)	(80)	(81)	(82)	(83)
Loblolly pine	13	8	11	9	11
Virginia pine	42	43	53	57	61
Other yellow pines	0	100	0	101	0
Other softwoods	75	61	86	65	89
Total softwoods	13	7	10	9	11
Red maple	11	11	11	17	15
Hickory	72	44	67	51	88
Beech	46	35	43	39	45
Sweetgum	13	11	15	14	19
Yellow-poplar	44	42	42	47	48
Blackgum	16	16	19	21	26
Ash-walnut-cherry	45	51	49	52	55
Select white oaks	23	13	17	17	18
Select red oaks	37	41	40	52	47
Other white oaks	100	42	100	71	0
Other red oaks	14	11	13	15	16
Black locust	0	101	0	0	0
Other hardwoods	20	24	24	44	45
Total hardwoods	7	6	8	9	11
Total, all species	6	4	6	5	7
D.B.H. class (inches)					
5.0 to 6.9	10	9	10	-	-
7.0 to 8.9	8	7	8	-	-
9.0 to 10.9	7	6	7	12	12
11.0 to 12.9	8	6	8	7	8
13.0 to 14.9	8	7	8	7	8
15.0 to 16.9	11	9	11	9	12
17.0 to 18.9	12	12	13	12	13
19.0 to 20.9	18	16	18	16	17
21.0 to 28.9	15	17	17	16	17
29 +	26	34	32	35	32

WESTERN UNIT TABLES

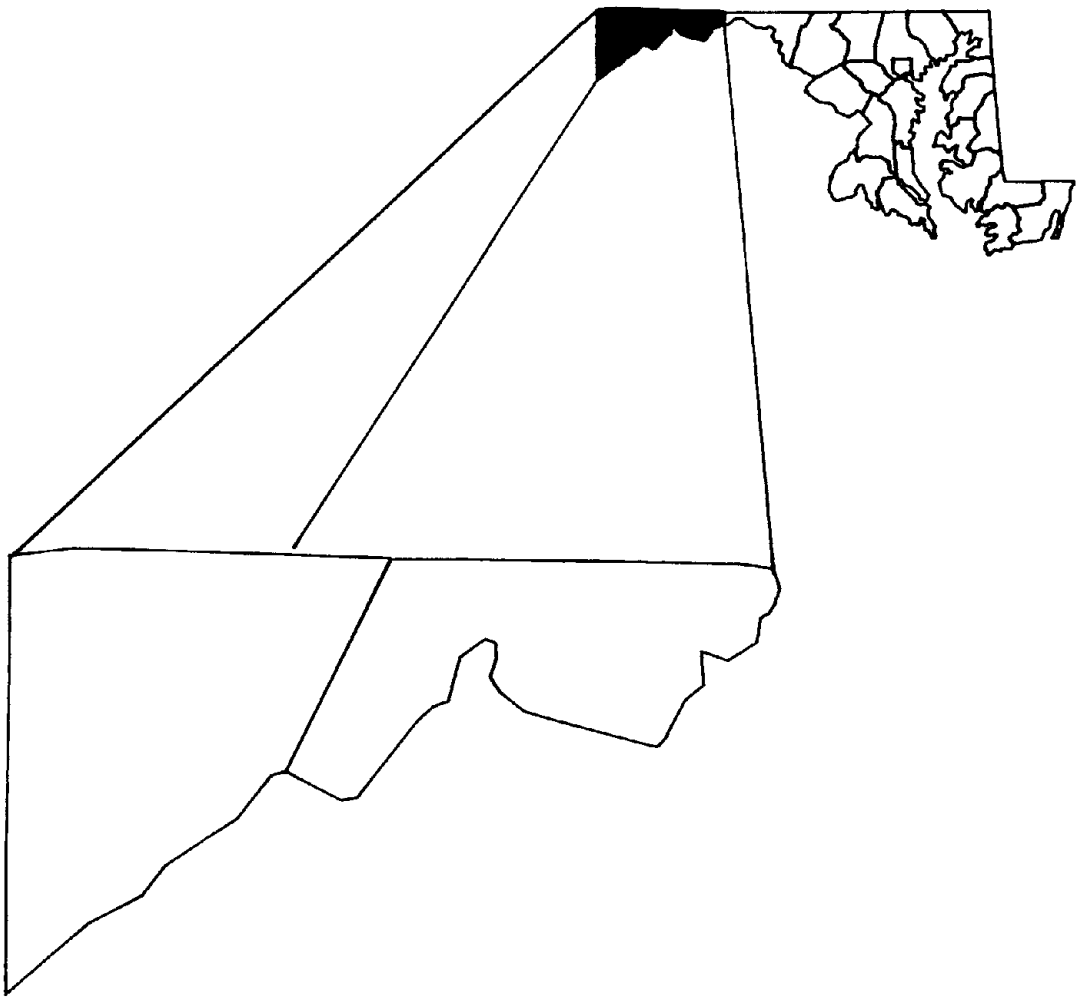


Table 87.--Area of timberland by forest type, forest-type group, and stand-size class, Western Unit, 1976

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Red pine	.0	5.9	.0	.0	5.9
White pine	.0	.0	5.9	6.0	11.9
White/red pine group	.0	5.9	5.9	6.0	17.8
Norway spruce	.0	5.8	.0	.0	5.8
Spruce/fir group	.0	5.8	.0	.0	5.8
Virginia pine	7.0	14.5	19.9	.0	41.5
Pitch pine	6.6	.0	.0	.0	6.6
Loblolly/shortleaf group	13.6	14.5	19.9	.0	48.1
Wh. pine/no. red oak/wh. ash	5.3	.0	.0	.0	5.3
Oak/pine group	5.3	.0	.0	.0	5.3
Chestnut oak	17.8	12.9	.0	.0	30.7
White oak/red oak/hickory	12.4	18.2	23.6	.0	54.3
White oak	11.9	11.6	12.5	.0	36.0
Northern red oak	17.8	.0	5.9	.0	23.7
Black locust	.0	.0	11.1	.0	11.1
Yellow-poplar	6.3	.0	.0	.0	6.3
Scarlet oak	6.6	.0	.0	.0	6.6
Red maple/central hardwoods	5.8	6.3	.0	.0	12.1
Mixed central hardwoods	69.1	55.4	23.8	.0	148.3
Oak/hickory group	147.8	104.5	77.0	.0	329.2
Sugar maple/beech/yellow birch	17.4	6.3	18.7	.0	42.4
Black cherry	.0	6.3	.0	.0	6.3
Red maple/northern hardwoods	.0	12.5	5.8	.0	18.3
Mixed northern hardwoods	12.5	5.8	11.8	.0	30.1
Northern hardwoods group	29.9	30.8	36.3	.0	97.0
All forest types	196.6	161.6	139.1	6.0	503.2

Table 88.--Area of timberland by forest type, forest-type group, and stand-size class, Western Unit, 1986

(In thousands of acres)

Forest type	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Red pine	3.1	10.6	.0	.0	13.8
Hemlock	6.9	.0	3.9	.0	10.8
Scotch pine	.0	3.1	.0	.0	3.1
White/red pine group	10.0	13.8	3.9	.0	27.7
Virginia pine	8.9	7.1	.0	.0	15.9
Loblolly/shortleaf group	8.9	7.1	.0	.0	15.9
Wh. pine/no. red oak/wh. ash	3.6	.0	.0	.0	3.6
Virginia pine/oak	3.7	2.3	9.9	.0	15.9
Oak/pine group	7.3	2.3	9.9	.0	19.5
Post, black, or bear oak	7.1	2.3	4.5	.0	13.9
Chestnut oak	14.4	3.4	.0	.0	17.8
White oak/red oak/hickory	48.4	14.2	.0	.0	62.6
White oak	8.9	19.3	3.1	.0	31.3
Northern red oak	16.8	.0	.0	.0	16.8
Y. poplar/wh. oak/no. red oak	7.9	.0	.0	.0	7.9
Black locust	.0	.0	3.6	.0	3.6
Hawthorn reverting field	.0	4.5	.0	.0	4.5
Red maple/central hardwoods	6.9	6.9	.0	.0	13.8
Mixed central hardwoods	95.7	49.8	10.3	.0	155.8
Oak/hickory group	206.2	100.4	21.5	.0	328.2
River birch/sycamore	3.7	.0	.0	.0	3.7
Elm/ash/red maple group	3.7	.0	.0	.0	3.7
Sugar maple/beech/yellow birch	30.5	.0	7.3	.0	37.8
Black cherry	3.6	10.5	.0	.0	14.1
Red maple/northern hardwoods	3.1	6.8	4.2	.0	14.1
Pin cherry/reverting field	.0	.0	4.3	.0	4.3
Mixed northern hardwoods	19.2	10.3	2.6	.0	32.2
Northern hardwoods group	56.5	27.6	18.5	.0	102.6
All forest types	292.7	151.1	53.8	.0	497.6

Table 89.--Number of growing-stock trees on timberland by species and diameter class, Western Unit, 1986

(In thousands of trees)

Species	Diameter class (inches at breast height)												All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
White/red pine	1,314	1,410	2,798	1,820	429	158	51	23	0	6	0	0	8,009
Virginia pine	0	457	561	445	429	228	67	5	0	0	0	0	2,192
Other yellow pines	631	631	143	185	61	90	37	26	7	0	0	0	1,811
Other softwoods	2,866	2,235	756	897	265	171	124	129	75	51	41	0	7,611
Total softwoods	4,811	4,734	4,258	3,346	1,184	647	279	183	82	57	41	0	19,622
Red maple	25,311	7,033	4,516	2,708	1,345	827	357	172	76	66	19	0	42,431
Sugar maple	13,530	3,596	1,831	903	611	421	195	189	41	74	43	10	21,446
Hickory	4,122	2,303	1,042	843	554	298	207	101	58	7	5	0	9,541
Beech	2,358	0	303	213	107	58	67	22	19	6	0	0	3,153
Yellow-poplar	0	0	195	53	20	84	92	23	15	0	0	0	481
Blackgum	3,103	653	472	48	76	7	29	14	30	6	0	0	4,438
Ash-walnut-cherry	18,947	4,456	1,445	1,202	977	451	305	187	63	33	8	14	28,089
Select white oaks	6,967	921	3,181	3,130	1,897	698	386	297	196	68	167	11	17,920
Select red oaks	3,625	904	1,486	1,245	1,465	1,307	813	479	194	181	255	42	11,997
Other white oaks	5,255	457	1,466	2,135	1,431	704	500	221	144	58	113	11	12,497
Other red oaks	904	495	927	1,029	808	553	279	166	147	82	70	24	5,486
Black locust	1,190	4,124	640	563	243	89	77	26	63	27	9	0	7,052
Other hardwoods	17,961	3,251	1,381	1,106	769	371	274	117	19	29	46	6	25,330
Total hardwoods	103,273	28,194	18,885	15,180	10,303	5,868	3,582	2,015	1,065	640	737	118	189,861
Total, all species	108,085	32,928	23,144	18,526	11,487	6,515	3,861	2,198	1,147	697	778	118	209,484

Table 90.--Net green weight of all live trees on timberland by species and diameter class, Western Unit, Maryland, 1986

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+	
White/red pine	124.2	413.9	576.4	230.4	144.9	60.2	37.1	.0	17.8	.0	1,604.9
Virginia pine	20.4	68.6	118.4	192.4	176.7	68.2	6.3	.0	.0	.0	651.0
Other yellow pines	76.6	22.7	55.3	37.3	69.6	40.9	36.5	11.5	.0	.0	350.3
Other softwoods	119.6	118.8	238.4	125.2	128.5	124.3	178.6	146.0	114.9	146.6	1,441.0
Total softwoods	340.8	624.1	988.4	585.3	519.7	293.6	258.6	157.5	132.7	146.6	4,047.3
Red maple	654.1	790.5	887.4	777.6	708.6	388.7	279.5	160.0	188.4	184.5	5,019.3
Sugar maple	369.6	449.4	449.6	496.7	450.4	288.4	345.4	148.9	241.6	400.4	3,640.3
Hickory	143.9	165.0	279.5	345.6	308.8	303.1	202.8	178.3	29.4	35.6	1,992.0
Beech	27.5	93.7	104.8	76.6	65.8	96.0	45.3	46.8	18.6	30.4	605.4
Yellow-poplar	.0	34.1	14.8	12.1	62.0	100.3	35.0	30.8	11.3	.0	300.5
Blackgum	44.5	88.3	16.3	46.4	7.2	37.1	32.7	63.5	16.8	.0	352.9
Ash-walnut-cherry	410.8	432.8	478.5	622.3	471.2	479.3	293.3	123.2	84.4	113.3	3,508.9
Select white oaks	114.8	458.9	983.5	1,063.8	629.6	517.1	706.3	542.3	237.1	1,534.3	6,787.6
Select red oaks	92.6	298.9	499.3	947.1	1,332.1	1,307.3	1,168.7	652.4	764.7	2,760.9	9,824.0
Other white oaks	62.8	306.6	774.1	918.6	748.6	681.6	529.3	417.6	213.2	937.2	5,589.6
Other red oaks	30.8	154.0	362.2	472.3	536.1	384.2	319.1	365.9	299.9	787.9	3,712.5
Black locust	346.6	166.3	261.2	230.4	150.4	119.2	79.3	183.3	75.7	44.9	1,657.3
Other commercial hardwoods	264.2	253.2	420.4	456.9	310.3	386.3	188.9	43.4	81.4	377.7	2,782.8
Non-commercial hardwoods	464.6	182.6	181.9	66.7	45.0	44.3	.0	.0	.0	.0	985.1
Total hardwoods	3,026.7	3,874.3	5,713.6	6,533.0	5,826.0	5,133.1	4,225.6	2,956.2	2,262.5	7,207.1	46,758.1
Total, all species	3,367.5	4,498.4	6,702.0	7,118.4	6,345.8	5,426.6	4,484.2	3,113.7	2,395.2	7,353.7	50,805.4

Table 91.--Net green weight of all trees on timberland by class of material and species group, Western Unit, Maryland, 1986

(In thousands of tons)

Class of material	Weight[a]		All groups
	Softwoods	Hardwoods	
Sawlog portion	1,370.2	15,322.0	16,692.1
Upper stem	180.4	3,449.9	3,630.3
Total	1,550.6	18,771.8	20,322.4
Poletimber trees	1,071.1	9,897.3	10,968.4
All growing stock	2,621.7	28,669.1	31,290.8
Rough cull trees[b]	50.6	3,371.2	3,421.8
Rotten cull trees[b]	.8	347.4	348.1
Salvable dead trees[c]	25.8	1,211.5	1,237.3
Saplings[c]	340.8	3,026.7	3,367.5
Tops - growing stock	1,013.8	10,024.8	11,038.6
Tops - rough and rotten	19.7	1,318.9	1,338.5
All nongrowing stock	1,451.4	19,300.5	20,751.9
Total, all classes	4,073.1	47,969.6	52,042.7

[a] Includes bark and sound cull; excludes rotten cull.
[b] Bole portion of trees 5.0 inches d.b.h. and larger.
[c] Weight of entire tree aboveground.

MAJOR SPECIES BY VOLUME, WESTERN UNIT, 1976 AND 1986

Millions of board feet

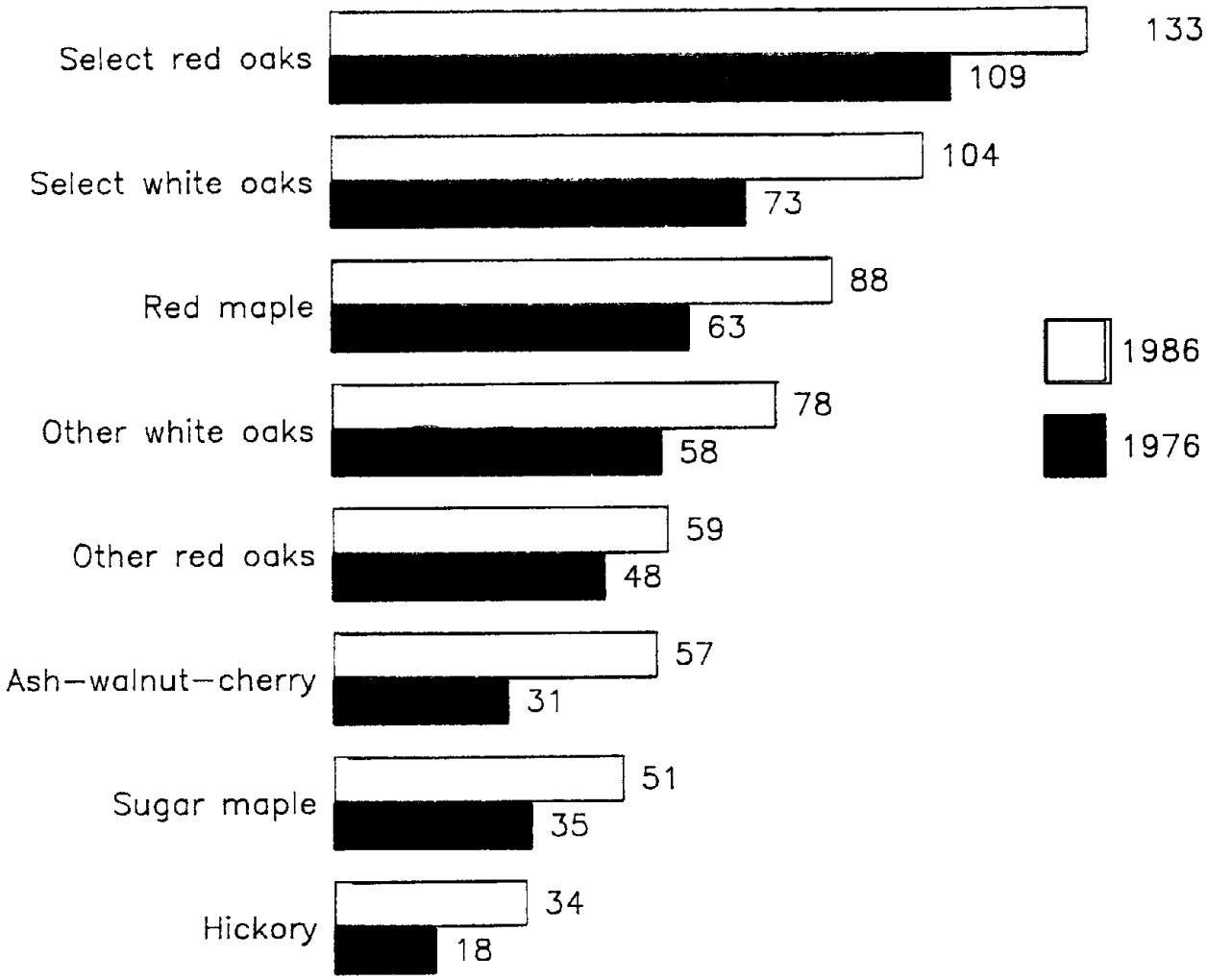


Table 92.--Net volume of growing-stock trees on timberland by species and diameter class, Western Unit, 1976

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	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	3.2	3.8	2.1	.0	.5	.0	.6	.0	.0	.0	10.2
Virginia pine	5.8	13.0	6.9	2.2	.0	.6	.0	.0	.0	.0	28.6
Other yellow pines	.4	.0	1.4	1.0	1.1	.0	.0	.0	.0	.0	3.9
Other softwoods	1.1	1.7	2.5	1.8	.5	.6	.0	.0	.0	.0	8.3
Total softwoods	10.6	18.6	12.9	5.0	2.1	1.2	.6	.0	.0	.0	50.9
Red maple	8.1	13.3	10.8	7.1	9.0	5.1	1.8	1.9	6.3	.0	63.4
Sugar maple	3.8	3.7	8.3	5.2	4.1	5.4	.7	2.5	1.6	.0	35.2
Hickory	1.5	1.3	5.3	3.8	2.3	.8	1.5	.0	1.9	.0	18.4
Beech	1.7	.0	1.1	.6	.0	.0	.0	.0	.0	.0	3.4
Yellow-poplar	.0	1.0	.0	.0	4.2	3.8	.8	.9	.9	.0	11.6
Blackgum	.8	.0	.0	.0	.0	.0	.0	.0	1.0	.0	1.8
Ash-walnut-cherry	2.9	4.5	8.3	5.9	3.9	.9	1.8	.8	2.1	.0	31.1
Select white oaks	8.9	11.5	16.4	11.3	7.6	7.4	6.2	.8	3.1	.0	73.1
Select red oaks	6.5	6.7	15.0	11.5	28.6	17.1	7.5	.8	11.3	3.4	108.6
Other white oaks	3.4	10.1	12.3	9.4	10.7	7.0	1.4	.0	3.4	.0	57.6
Other red oaks	2.1	4.7	10.0	10.2	5.4	5.8	4.9	.9	3.1	.9	48.0
Black locust	2.8	2.7	3.3	.6	.5	.0	.0	.0	.0	.0	9.8
Other hardwoods	2.5	6.5	6.0	5.1	3.9	1.8	1.4	2.3	.9	.0	30.5
Total hardwoods	44.9	65.9	96.9	70.8	80.2	55.0	28.0	10.9	35.6	4.4	492.7
Total all species	55.5	84.5	109.8	75.8	82.3	56.2	28.6	10.9	35.6	4.4	543.6

Table 93.--Net volume of growing-stock trees on timberland by species and diameter class, Western Unit, 1986

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	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	7.3	10.6	4.1	2.4	1.1	.6	.0	.3	.0	.0	26.5
Virginia pine	1.1	2.3	4.0	3.3	1.4	.1	.0	.0	.0	.0	12.1
Other yellow pines	.4	1.0	.6	1.4	.8	.7	.2	.0	.0	.0	5.0
Other softwoods	2.2	4.9	2.5	2.7	2.8	3.8	3.0	2.6	3.0	.0	27.6
Total softwoods	10.9	18.8	11.2	9.8	6.0	5.3	3.2	2.9	3.0	.0	71.2
Red maple	14.0	18.3	16.4	15.6	9.2	6.1	3.6	3.5	1.6	.0	88.4
Sugar maple	6.4	6.5	8.2	7.6	5.5	6.7	1.9	4.1	3.0	1.5	51.3
Hickory	2.9	5.8	7.2	5.6	5.7	3.5	2.6	.3	.5	.0	34.0
Beech	.8	1.4	1.3	.9	1.7	.7	.7	.3	.0	.0	7.8
Yellow-poplar	.7	.3	.3	1.6	2.7	.8	.8	.0	.0	.0	7.4
Blackgum	1.5	.3	.9	.2	.7	.5	1.1	.3	.0	.0	5.6
Ash-walnut-cherry	5.1	8.4	12.0	9.2	8.1	6.4	3.1	1.6	.7	2.0	56.6
Select white oaks	9.0	19.9	20.7	11.7	8.7	9.4	8.3	3.1	12.6	1.2	104.5
Select red oaks	4.9	8.4	17.0	22.7	19.6	16.4	8.1	9.7	19.6	6.5	132.8
Other white oaks	4.7	13.7	15.3	11.3	10.6	6.4	5.3	2.8	6.8	1.5	78.5
Other red oaks	2.5	6.8	9.0	9.7	6.7	5.4	5.8	4.4	5.6	3.5	59.3
Black locust	1.9	3.0	2.4	1.4	1.8	.6	2.5	1.4	.5	.0	15.5
Other hardwoods	4.1	7.3	9.3	6.5	6.3	3.6	.7	1.5	3.6	1.1	44.0
Total hardwoods	58.5	100.2	120.0	103.9	87.2	66.5	44.4	33.1	54.4	17.3	685.4
Total, all species	69.4	118.9	131.3	113.7	93.2	71.8	47.6	36.0	57.4	17.3	756.7

Table 94.--Net volume of sawtimber trees on timberland by species and diameter class, Western Unit, 1976

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	7.0	.0	2.1	.0	2.4	.0	.0	.0	11.5
Virginia pine	24.5	9.2	.0	2.6	7.6	.0	.0	.0	36.3
Other yellow pines	4.7	3.7	4.9	.0	.0	.0	.0	.0	13.3
Other softwoods	8.4	5.9	1.6	2.0	.0	.0	.0	.0	17.9
Total softwoods	44.6	18.8	8.6	4.6	2.4	.0	.0	.0	79.0
Red maple	.0	25.3	35.7	20.8	8.3	7.7	26.8	.0	124.6
Sugar maple	.0	16.1	17.3	19.0	2.6	9.3	5.6	.0	70.0
Hickory	.0	13.1	8.6	2.5	5.8	.0	7.6	.0	37.6
Beech	.0	1.8	.0	.0	.0	.0	.0	.0	1.8
Yellow-poplar	.0	.0	18.7	17.9	4.0	3.1	4.4	.0	48.1
Blackgum	.0	.0	.0	.0	.0	.0	3.3	.0	3.3
Ash-walnut-cherry	.0	18.5	14.1	3.5	6.1	3.4	9.2	.0	54.9
Select white oaks	.0	41.9	26.5	29.1	22.2	3.2	11.2	.0	134.2
Select red oaks	.0	36.7	109.1	64.5	30.8	2.1	41.4	15.3	299.9
Other white oaks	.0	33.3	38.0	24.2	5.2	.0	11.2	.0	111.9
Other red oaks	.0	38.6	22.4	25.3	20.1	3.6	10.9	3.4	124.2
Black locust	.0	1.8	2.0	.0	.0	.0	.0	.0	3.8
Other hardwoods	.0	19.9	14.2	5.2	6.4	9.6	2.3	.0	57.5
Total hardwoods	.0	247.2	306.6	212.0	111.4	42.0	133.8	18.7	1,071.7
Total all species	44.6	265.9	315.2	216.7	113.7	42.0	133.8	18.7	1,150.7

[a] International 1/4-inch rule.

Table 95.--Net volume of sawtimber trees on timberland by species and diameter class, Western Unit, 1986

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	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	13.3	9.8	4.7	3.0	.0	1.5	.0	.0	32.4
Virginia pine	13.1	12.6	5.4	.6	.0	.0	.0	.0	31.7
Other yellow pines	2.1	5.3	3.4	3.4	1.1	.0	.0	.0	15.3
Other softwoods	7.9	10.4	12.0	17.2	13.9	12.7	15.4	.0	89.5
Total softwoods	36.4	38.1	25.5	24.3	15.0	14.2	15.4	.0	168.9
Red maple	.0	59.4	38.8	28.0	17.2	16.6	9.0	.0	169.0
Sugar maple	.0	24.9	21.9	28.6	8.2	17.8	13.4	8.4	123.3
Hickory	.0	21.4	24.9	16.3	12.8	1.6	2.7	.0	79.7
Beech	.0	3.7	7.6	3.5	3.6	1.9	.0	.0	20.3
Yellow-poplar	.0	6.1	12.2	3.9	4.0	.0	.0	.0	26.1
Blackgum	.0	.4	2.7	2.5	4.7	1.0	.0	.0	11.4
Ash-walnut-cherry	.0	33.4	33.3	28.0	14.0	7.5	3.2	10.0	129.4
Select white oaks	.0	44.1	36.3	42.0	39.5	14.7	68.4	7.4	252.3
Select red oaks	.0	76.1	75.9	69.2	35.4	44.7	99.8	33.1	434.3
Other white oaks	.0	39.2	40.9	25.7	22.2	13.2	32.7	8.4	182.2
Other red oaks	.0	32.3	26.2	23.5	26.8	20.7	26.2	19.5	175.1
Black locust	.0	5.0	7.6	3.0	12.2	6.7	2.9	.0	37.3
Other hardwoods	.0	24.6	26.5	16.8	3.7	7.1	18.1	6.5	103.1
Total hardwoods	.0	370.5	354.7	291.1	204.4	153.5	276.4	93.2	1,743.7
Total, all species	36.4	408.6	380.2	315.4	219.4	167.7	291.8	93.2	1,912.6

[a] International 1/4-inch rule.

Table 96.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Western Unit, 1976

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
White/red pine	.0	1.2	9.3	1.0	11.5	.0	1.2	.9	.2	2.3
Virginia pine	.0	.0	36.3	.0	36.3	.0	.0	2.6	.0	2.6
Other yellow pines	.0	2.0	11.3	.0	13.3	.0	.0	.0	.0	.0
Other softwoods	17.9	.0	.0	.0	17.9	2.0	.0	.0	.0	2.0
Total softwoods	17.9	3.2	56.9	1.0	79.0	2.0	1.2	3.5	.2	6.9
Red maple	8.4	12.7	55.0	48.5	124.6	8.4	8.3	32.7	14.2	63.6
Sugar maple	5.9	7.3	26.7	30.1	70.0	4.6	5.3	12.4	14.2	36.5
Hickory	1.6	13.9	10.6	11.5	37.6	1.6	5.8	3.0	5.5	15.9
Beech	.0	.0	1.6	.2	1.8	.0	.0	.0	.0	.0
Yellow-poplar	.0	1.8	11.5	34.8	48.1	.0	.0	6.0	23.3	29.3
Blackgum	2.0	.7	.5	.1	3.3	2.0	.7	.4	.1	3.2
Ash-walnut-cherry	5.3	7.1	27.5	15.0	54.9	5.3	3.7	10.3	2.9	22.2
Select white oaks	6.0	12.7	55.5	60.0	134.2	6.0	9.6	26.6	23.5	65.7
Select red oaks	20.0	65.4	154.2	60.3	299.9	20.0	45.1	63.2	25.8	154.1
Other white oaks	1.0	12.8	40.1	58.0	111.9	1.0	11.6	17.7	10.3	40.6
Other red oaks	8.5	17.4	28.0	70.3	124.2	8.5	15.8	16.8	22.1	63.2
Black locust	.0	.0	.0	3.8	3.8	.0	.0	.0	.0	.0
Other hardwoods	4.7	6.3	24.9	21.6	57.5	4.7	2.3	15.2	1.4	23.6
Total hardwoods	63.4	158.1	436.1	414.1	1,071.7	62.1	108.2	204.3	143.3	517.9
Percent of hardwood in each grade	6	15	41	38	100	12	21	39	28	100

[a] International 1/4-inch rule.

Table 97.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Western Unit, 1986

(In millions of board feet)[a]

Species	All size classes				All grades	>15" Diameter at breast height				All grades
	Grade 1	Grade 2	Grade 3	Grade 4		Grade 1	Grade 2	Grade 3	Grade 4	
White/red pine	.0	2.2	26.3	3.9	32.4	.0	.0	1.3	3.2	4.6
Virginia pine	.0	.0	31.7	.0	31.7	.0	.0	.6	.0	.6
Other yellow pines	.8	.7	13.8	.0	15.3	.5	.1	3.9	.0	4.4
Other softwoods	89.5	.0	.0	.0	89.5	59.2	.0	.0	.0	59.2
Total softwoods	90.3	2.9	71.8	3.9	168.9	59.7	.1	5.8	3.2	68.9
Red maple	9.6	38.9	73.5	47.1	169.0	8.1	14.9	30.9	16.8	70.8
Sugar maple	9.3	31.1	37.3	45.6	123.3	7.1	23.2	22.8	23.4	76.5
Hickory	4.7	19.8	26.7	28.6	79.7	4.2	5.0	11.0	13.3	33.5
Beech	.2	1.9	8.2	10.0	20.3	.1	.6	3.1	5.3	9.1
Yellow-poplar	4.8	9.5	8.3	3.6	26.1	2.1	2.2	2.7	.9	7.8
Blackgum	.0	1.6	7.0	2.8	11.4	.0	.9	6.4	1.0	8.3
Ash-walnut-cherry	22.1	41.0	39.2	27.0	129.4	17.1	21.1	16.3	8.2	62.7
Select white oaks	35.4	57.2	88.1	71.6	252.3	33.9	43.2	51.0	43.8	172.0
Select red oaks	85.1	97.8	158.2	93.3	434.3	80.2	60.5	86.7	54.9	282.3
Other white oaks	14.5	47.3	71.4	49.0	182.2	14.5	28.2	30.0	29.4	102.1
Other red oaks	26.0	29.9	58.7	60.5	175.1	24.8	25.4	37.5	29.1	116.7
Black locust	1.9	7.8	20.2	7.4	37.3	1.9	7.0	11.1	4.8	24.7
Other hardwoods	4.5	21.7	50.7	26.3	103.1	4.3	12.9	27.8	7.1	52.1
Total hardwoods	218.1	405.4	647.5	472.8	1,743.7	198.3	245.0	337.2	238.0	1,018.5
Percent of hardwood in each grade	13	23	37	27	100	19	24	33	24	100

[a] International 1/4-inch rule.

Table 98.--Sampling errors for various tables, Western Unit, 1976 and 1986

(In percent)

Species and diameter class	Number of trees	Growing-stock volume		Sawtimber volume	
	(Table 89)	Tables		Tables	
	(5"+)	(92)	(93)	(94)	(95)
White/red pine	57	66	57	72	56
Virginia pine	25	43	34	41	47
Other yellow pines	45	58	35	64	41
Other softwoods	28	60	38	66	49
Total softwoods	32	28	28	34	30
Red maple	14	27	13	47	17
Sugar maple	19	33	20	43	22
Hickory	16	28	18	37	22
Beech	49	52	56	102	56
Yellow-poplar	56	83	51	91	52
Blackgum	36	64	29	101	40
Ash-walnut-cherry	22	31	19	39	23
Select white oaks	16	21	13	26	15
Select red oaks	11	19	10	21	12
Other white oaks	16	23	14	31	18
Other red oaks	19	27	15	30	16
Black locust	25	34	20	74	30
Other hardwoods	20	30	22	33	25
Total hardwoods	5	5	5	7	6
Total, all species	6	4	4	7	6
D.B.H. class (inches)					
5.0 to 6.9	10	14	9	-	-
7.0 to 8.9	10	15	10	-	-
9.0 to 10.9	7	10	7	38	28
11.0 to 12.9	7	10	7	11	7
13.0 to 14.9	9	12	9	12	9
15.0 to 16.9	8	12	8	12	8
17.0 to 18.9	11	20	12	18	12
19.0 to 20.9	14	30	14	30	14
21.0 to 28.9	14	23	15	22	15
29 +	25	45	26	47	26

COUNTY TABLES

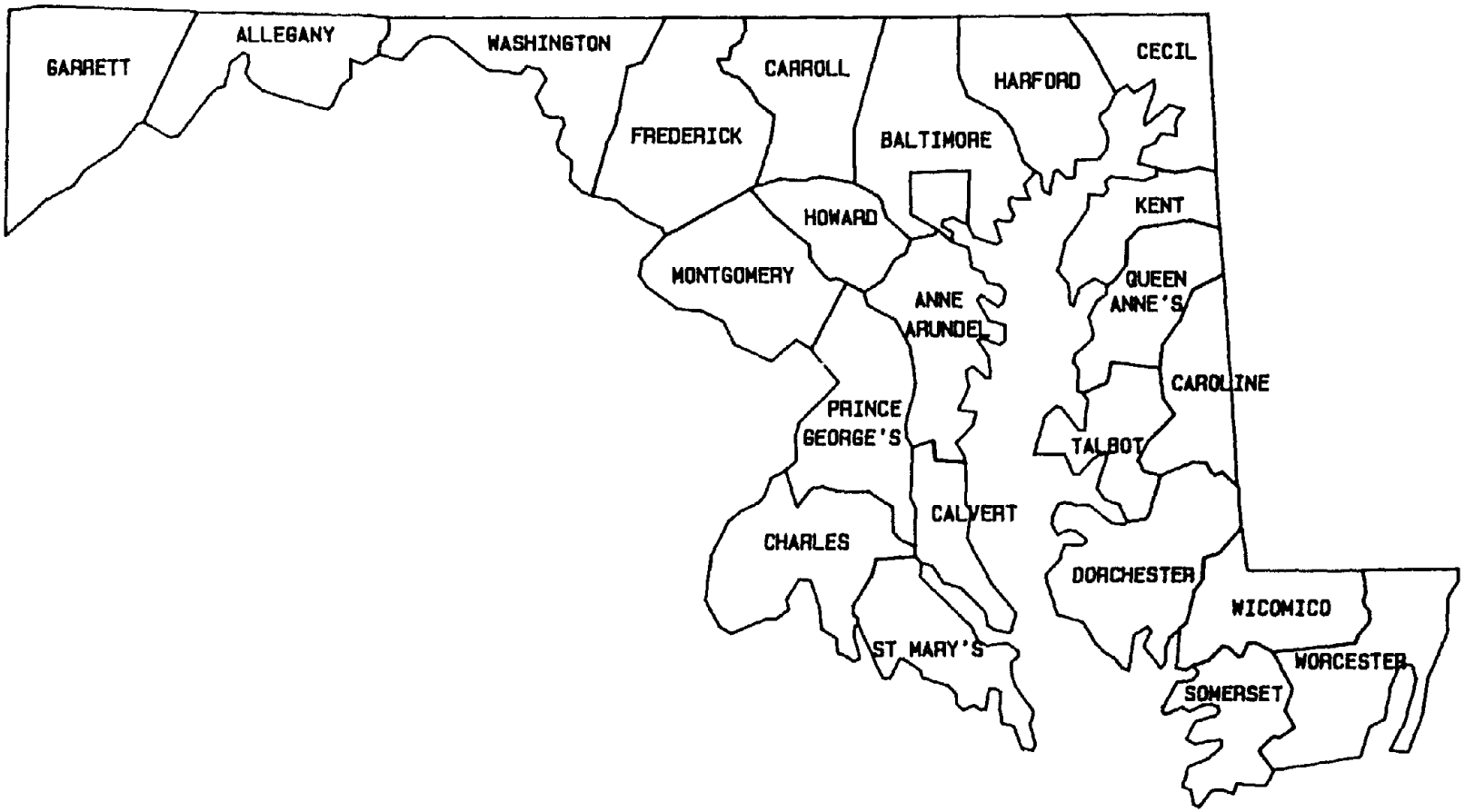


Table 99.--Land area by county and land class, Maryland, 1986

(In thousands of acres)

County	Land class									
	Timberland	Christmas tree plantation	Productive reserved	Unproductive	Urban	Cropland[a]	Pasture[a]	Other farmland	Other land	Total[b] area
Baltimore	104.9	.0	15.2	.0	25.3	59.3	21.8	19.2	188.2	433.9
Carroll	70.7	.0	2.0	.0	.0	119.6	27.5	.0	69.5	289.3
Frederick	116.8	.0	16.0	.0	4.2	149.7	55.1	36.0	46.3	424.1
Washington	90.4	.0	19.8	12.9	5.1	85.0	33.7	.0	44.3	291.2
Anne Arundel/Howard	147.9	.0	11.1	.0	30.9	56.6	17.4	8.9	155.6	428.4
Caroline/Talbot	100.0	.0	1.5	.0	.0	201.4	6.4	.0	61.5	370.8
Cecil/Harford	163.5	.0	15.7	.0	10.4	129.1	37.6	38.6	121.7	516.6
Kent/Queen Annes	112.3	.0	2.1	.0	.0	241.5	9.4	50.8	.0	416.1
Montgomery/Prince Georges	153.0	.0	48.2	.0	27.1	94.6	30.7	22.1	253.1	628.8
Central Unit	1,059.5	.0	131.6	12.9	103.0	1,136.8	239.6	175.6	940.2	3,799.2
Calvert	73.9	.0	1.2	.0	.0	23.8	4.8	6.0	26.8	136.5
Charles	175.5	.0	1.2	.0	.0	38.6	7.7	2.8	63.2	289.0
St. Marys	128.5	.0	2.0	.0	.0	46.3	7.9	16.3	37.4	238.4
Southern Unit	377.9	.0	4.4	.0	.0	108.7	20.4	25.1	127.4	663.9
Dorchester	141.1	.0	3.7	.0	.0	100.4	1.9	13.7	118.9	379.7
Somerset	87.2	.0	.0	.0	.0	40.8	2.0	7.9	78.7	216.6
Wicomico	104.6	.0	.0	.0	.0	78.9	2.6	6.4	50.1	242.6
Worcester	156.1	.0	1.4	.0	.0	81.6	2.2	2.2	60.4	303.9
Lower Eastern Shore Unit	489.0	.0	5.1	.0	.0	301.7	8.7	30.2	308.1	1,142.8
Allegany	198.3	.0	9.2	4.0	.0	12.6	11.3	11.7	22.2	269.3
Garrett	299.3	2.2	2.8	4.3	.0	42.0	29.2	13.9	26.7	420.4
Western Unit	497.6	2.2	12.0	8.3	.0	54.6	40.5	25.6	48.9	689.7
State total	2,424.0	2.2	152.9	21.2	103.0	1,602.0	309.0	256.7	1,424.5	6,295.5

[a] Source: 1982 Census of Agriculture.
[b] Source: 1981 United States Department of Commerce, Bureau of Census.

Table 100.--Area of timberland by county and ownership class[a], Maryland, 1986

(In thousands of acres)

County	Ownership class							All classes
	National Forest	Other federal	State forest	Other state	County and municipal	Forest industry	Other Private	
Baltimore	.0	.0	.0	.7	12.9	.0	91.3	104.9
Carroll	.0	.0	.0	1.0	2.7	.0	67.0	70.7
Frederick	.0	.0	.0	1.1	8.8	.0	106.9	116.8
Washington	.0	.0	.0	11.1	1.4	.0	77.9	90.4
Anne Arundel/Howard	.0	9.6	.0	2.4	3.0	.0	156.8	147.9
Caroline/Talbot	.0	.0	.1	2.4	.0	3.7	93.8	100.0
Cecil/Harford	.0	5.2	3.6	2.7	.0	.0	152.0	163.5
Kent/Queen Annes	.0	.0	.0	4.7	.0	.0	107.6	112.3
Montgomery/Prince Georges	.0	4.5	.9	4.3	1.2	.0	142.1	153.0
Central Unit	.0	19.3	4.6	30.4	30.1	3.7	964.7	1,059.6
Calvert	.0	.1	.0	.6	.0	.0	73.2	73.9
Charles	.0	3.0	4.2	4.2	.0	7.3	156.8	175.5
St. Marys	.0	1.7	.0	.8	.0	.0	126.0	128.5
Southern Unit	.0	4.8	4.2	5.6	.0	7.3	347.8	377.9
Dorchester	.0	.0	.0	1.3	.0	36.0	103.8	141.1
Somerset	.0	.0	.0	1.5	.0	25.8	59.9	87.2
Wicomico	.0	.0	1.2	.5	.0	23.3	79.6	104.6
Worcester	.0	.0	13.3	.9	.0	27.5	114.4	156.1
Lower Eastern Shore Unit	.0	.0	14.5	4.2	.0	112.6	363.7	489.0
Allegany	.0	.9	38.4	13.6	.9	.0	144.7	198.3
Garrett	.0	.0	69.5	3.2	1.6	6.9	218.1	299.3
Western Unit	.0	.9	107.9	16.8	2.5	6.9	361.2	497.6
State total	.0	25.0	131.3	56.6	32.6	130.6	2,047.9	2,424.0

[a]Further refinement of the private ownership estimates will be available in the forthcoming publication - Forest Landowners of Maryland.

Table 101.--Area of timberland by county and forest-type group, Maryland, 1986

(In thousands of acres)

County	Forest-type group									All groups
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch	
Baltimore	10.4	.0	4.0	11.5	76.0	.0	.0	3.1	.0	104.9
Carroll	.0	.0	7.5	.0	58.6	.0	4.6	.0	.0	70.7
Frederick	15.0	.0	.0	2.4	82.2	.0	4.5	12.6	.0	116.8
Washington	.0	.0	.0	11.3	68.0	.0	6.1	5.1	.0	90.4
Anne Arundel/Howard	.0	.0	17.5	11.7	103.1	.0	15.7	.0	.0	147.9
Caroline/Talbot	.0	.0	7.4	15.7	77.0	.0	.0	.0	.0	100.0
Cecil/Harford	.0	.0	7.9	9.1	134.3	.8	5.3	6.2	.0	163.5
Kent/Queen Annes	.0	.0	9.3	14.5	65.4	12.1	11.0	.0	.0	112.3
Montgomery/Prince Georges	.0	.0	18.7	16.2	102.0	8.0	4.1	4.1	.0	153.0
Central Unit	25.4	.0	72.2	92.3	766.5	20.8	51.2	31.2	.0	1,059.6
Calvert	.0	.0	1.6	11.5	47.6	10.3	2.8	.0	.0	73.9
Charles	.0	.0	34.5	21.5	108.3	7.5	3.7	.0	.0	175.5
St. Marys	.0	.0	30.6	17.9	68.2	8.9	2.9	.0	.0	128.5
Southern Unit	.0	.0	66.7	50.9	224.1	26.8	9.4	.0	.0	377.9
Dorchester	.0	.0	44.1	39.0	12.4	36.6	9.1	.0	.0	141.1
Somerset	.0	.0	29.9	24.7	25.5	3.4	3.7	.0	.0	87.2
Wicomico	.0	.0	32.7	21.8	30.4	19.6	.0	.0	.0	104.6
Worcester	.0	.0	35.4	33.7	67.5	13.0	6.5	.0	.0	156.1
Lower Eastern Shore Unit	.0	.0	142.1	119.3	135.7	72.6	19.3	.0	.0	489.0
Allegany	.0	.0	15.9	15.9	133.8	.0	3.7	29.0	.0	198.3
Garrett	27.7	.0	.0	3.6	194.4	.0	.0	73.6	.0	299.3
Western Unit	27.7	.0	15.9	19.5	328.2	.0	3.7	102.6	.0	497.6
State total	53.1	.0	296.9	281.9	1,454.4	120.2	83.7	133.8	.0	2,424.0

Table 102.--Area of timberland by county and stand-size class, Maryland, 1986

(In thousands of acres)

County	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Baltimore	82.1	22.8	.0	.0	104.9
Carroll	66.9	3.7	.0	.0	70.7
Frederick	65.5	28.2	23.2	.0	116.8
Washington	71.5	18.9	.0	.0	90.4
Anne Arundel/Howard	118.9	21.3	7.8	.0	147.9
Caroline/Talbot	73.5	21.6	4.9	.0	100.0
Cecil/Harford	112.8	23.9	26.8	.0	163.5
Kent/Queen Annes	108.2	2.1	1.9	.0	112.3
Montgomery/Prince Georges	108.2	28.5	16.3	.0	153.0
Central Unit	807.6	171.1	80.9	.0	1,059.6
Calvert	68.4	3.7	1.7	.0	73.9
Charles	127.5	27.5	20.4	.0	175.5
St. Marys	119.1	6.8	2.5	.0	128.5
Southern Unit	315.1	38.1	24.7	.0	377.9
Dorchester	84.5	34.9	21.8	.0	141.1
Somerset	54.2	13.4	19.5	.0	87.2
Wicomico	76.2	21.1	7.3	.0	104.6
Worcester	93.6	39.2	23.4	.0	156.1
Lower Eastern Shore Unit	308.5	108.6	72.0	.0	489.0
Allegany	107.2	66.7	24.4	.0	198.3
Garrett	185.5	84.4	29.4	.0	299.3
Western Unit	292.7	151.1	53.8	.0	497.6
State total	1,723.8	468.9	231.3	.0	2,424.0

Table 103.--Area of timberland by county and cubic-foot stand-volume class, Maryland, 1986

(In thousands of acres)

County	Stand-volume class (cubic feet per acre)						All classes
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+	
Baltimore	.0	13.6	19.8	11.9	21.4	38.1	104.9
Carroll	3.2	14.9	6.9	16.1	9.1	20.4	70.7
Frederick	27.0	4.6	5.1	15.5	25.8	38.9	116.8
Washington	5.1	1.4	26.0	21.8	.0	36.1	90.4
Anne Arundel/Howard	7.8	9.3	38.6	20.8	20.3	51.1	147.9
Caroline/Talbot	3.2	6.4	9.4	28.1	11.7	41.2	100.0
Cecil/Harford	23.6	7.9	24.9	37.1	26.3	43.7	163.5
Kent/Queen Annes	1.9	2.1	25.4	10.4	11.7	60.7	112.3
Montgomery/Prince Georges	16.3	8.3	24.7	33.3	15.7	54.7	153.0
Central Unit	88.1	68.7	180.7	195.1	142.1	384.8	1,059.6
Calvert	1.7	2.8	7.6	16.8	17.2	27.8	73.9
Charles	8.8	16.4	25.8	24.7	35.0	64.8	175.5
St. Marys	.0	8.0	7.2	21.7	50.0	41.6	128.5
Southern Unit	10.5	27.2	40.5	63.3	102.1	134.2	377.9
Dorchester	23.2	32.2	13.5	23.5	25.4	23.4	141.1
Somerset	19.5	6.3	4.6	18.8	21.3	16.6	87.2
Wicomico	4.7	23.2	18.7	21.1	26.9	10.0	104.6
Worcester	22.4	28.5	19.9	34.8	11.9	38.6	156.1
Lower Eastern Shore Unit	69.8	90.1	56.8	98.3	85.5	88.5	489.0
Allegany	32.3	28.4	42.4	39.4	42.1	13.7	198.3
Garrett	39.3	20.8	43.8	44.8	104.1	46.6	299.3
Western Unit	71.5	49.2	86.2	84.2	146.2	60.3	497.6
State total	240.0	235.3	364.2	440.9	475.9	667.7	2,424.0

Table 104.--Area of timberland by county and green ton stand-volume class, Maryland, 1986

(In thousands of acres)

County	Stand-volume class (green tons per acre)									All classes
	0-24	25-49	50-74	75-99	100-124	125-149	150-174	175-199	200+	
Baltimore	.0	7.4	14.5	23.5	13.5	10.3	4.0	23.8	8.0	104.9
Carroll	7.8	14.9	7.8	10.5	8.8	5.3	11.5	4.0	.0	70.7
Frederick	27.0	2.7	2.4	9.8	31.8	11.7	12.9	.0	18.5	116.8
Washington	8.0	7.2	17.3	21.8	.0	5.9	18.9	5.9	5.4	90.4
Anne Arundel/Howard	7.8	17.2	20.1	29.0	33.7	12.1	10.2	5.3	12.5	147.9
Caroline/Talbot	3.2	.0	16.8	9.4	21.8	27.8	9.3	3.2	8.6	100.0
Cecil/Harford	17.3	.0	46.4	15.7	23.3	28.5	7.6	14.7	10.1	163.5
Kent/Queen Annes	1.9	.0	27.2	14.2	15.1	19.0	8.4	10.8	15.6	112.3
Montgomery/Prince Georges	12.4	8.1	7.6	40.1	24.3	30.2	8.4	8.4	13.4	153.0
Central Unit	85.3	57.6	160.2	174.0	172.4	150.8	91.3	76.0	92.2	1,059.6
Calvert	2.9	2.8	17.9	10.3	27.5	8.8	.0	.0	3.6	73.9
Charles	5.3	31.2	28.6	33.4	17.8	40.3	3.8	3.8	11.3	175.5
St. Marys	.0	8.0	10.4	30.3	47.9	14.3	.0	14.7	2.9	128.5
Southern Unit	8.3	42.1	56.8	74.0	93.1	63.4	3.8	18.5	17.9	377.9
Dorchester	12.6	25.0	27.9	32.1	19.9	10.3	9.6	3.6	.0	141.1
Somerset	12.7	8.5	10.9	16.9	16.5	14.8	3.4	3.4	.0	87.2
Wicomico	2.9	19.6	21.3	26.3	16.0	13.0	2.9	.0	2.5	104.6
Worcester	12.1	34.6	8.8	28.5	25.5	32.6	10.9	3.1	.0	156.1
Lower Eastern Shore Unit	40.3	87.7	68.9	103.9	78.0	70.8	26.8	10.0	2.5	489.0
Allegany	15.8	35.9	44.3	34.8	8.0	34.9	8.0	2.5	14.0	198.3
Garrett	25.0	24.1	53.0	17.5	53.1	57.5	21.1	11.4	36.6	299.3
Western Unit	40.8	60.1	97.3	52.3	61.1	92.5	29.1	13.8	50.7	497.6
State total	174.6	247.5	383.2	404.2	404.6	377.4	150.9	118.4	163.2	2,424.0

Table 105.--Area of timberland by county and stocking class of growing-stock trees, Maryland, 1986

(In thousands of acres)

County	Stocking class					All classes
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked	
Baltimore	.0	.0	22.1	27.3	55.6	104.9
Carroll	.0	14.0	12.2	15.3	29.3	70.7
Frederick	.0	14.5	18.7	38.1	45.5	116.8
Washington	.0	11.3	21.4	16.4	41.3	90.4
Anne Arundel/Howard	.0	4.7	18.5	56.0	68.7	147.9
Caroline/Talbot	.0	.0	.0	31.7	68.3	100.0
Cecil/Harford	.0	.0	35.9	45.0	82.5	163.5
Kent/Queen Annes	.0	.0	9.4	28.6	74.2	112.3
Montgomery/Prince Georges	4.2	.0	33.9	43.8	71.1	153.0
Central Unit	4.2	44.5	172.1	302.3	536.4	1,059.5
Calvert	.0	.0	11.7	26.5	35.7	73.9
Charles	.0	.0	11.4	47.3	116.8	175.5
St. Marys	.0	3.7	4.3	51.0	69.5	128.5
Southern Unit	.0	3.7	27.4	124.8	222.0	377.9
Dorchester	.0	3.3	18.2	35.4	84.2	141.1
Somerset	.0	1.6	11.0	10.1	64.4	87.2
Wicomico	.0	.0	13.0	23.6	68.0	104.6
Worcester	.0	4.2	20.3	52.9	78.8	156.1
Lower Eastern Shore Unit	.0	9.1	62.5	122.0	295.4	489.0
Allegany	.0	13.8	43.3	76.0	65.1	198.3
Garrett	.0	17.2	42.2	99.9	140.0	299.3
Western Unit	.0	31.0	85.5	176.0	205.1	497.6
State total	4.2	88.3	347.5	725.1	1,258.9	2,424.0

Table 106.--Area of timberland by county and site productivity class, Maryland, 1986

(In thousands of acres)

County	Site productivity class (cubic feet/acre/year)				All classes
	Very good (120+)	Good (85-119)	Fair (50- 84)	Poor (20- 49)	
Baltimore	28.4	30.5	29.8	16.2	104.9
Carroll	9.4	11.2	37.2	12.9	70.7
Frederick	6.1	14.2	42.8	53.7	116.8
Washington	5.9	19.7	23.7	41.3	90.4
Anne Arundel/Howard	21.3	34.4	32.7	59.5	147.9
Caroline/Talbot	6.6	19.0	43.8	30.7	100.0
Cecil/Harford	17.0	49.4	64.5	32.6	163.5
Kent/Queen Annes	.0	26.9	39.4	45.9	112.3
Montgomery/Prince Georges	20.2	51.6	40.5	40.7	153.0
Central Unit	114.7	257.0	354.3	333.5	1,059.6
Calvert	9.5	22.1	36.0	6.3	73.9
Charles	18.9	35.5	45.9	75.2	175.5
St. Marys	9.5	26.7	66.2	26.1	128.5
Southern Unit	37.9	84.3	148.1	107.6	377.9
Dorchester	6.3	16.0	74.1	44.8	141.1
Somerset	.0	20.9	39.3	27.0	87.2
Wicomico	5.2	23.1	40.5	35.8	104.6
Worcester	19.2	34.7	44.8	57.5	156.1
Lower Eastern Shore Unit	30.7	94.6	198.6	165.1	489.0
Allegany	.0	19.1	74.4	104.8	198.3
Garrett	24.8	32.2	115.0	127.2	299.3
Western Unit	24.8	51.4	189.5	231.9	497.6
State total	208.1	487.3	890.5	838.1	2,424.0

Table 107.--Net volume of growing-stock trees on timberland by county and forest-type group, Maryland, 1986

(In millions of cubic feet)

County	Forest-type group									All groups
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch	
Baltimore	18.2	.0	8.7	11.6	164.9	.0	.0	2.4	.0	205.8
Carroll	.0	.0	10.1	.0	139.5	.0	11.8	.0	.0	161.4
Frederick	1.5	.0	.0	3.2	194.2	.0	15.0	9.8	.0	223.7
Washington	.0	.0	.0	12.8	135.1	.0	4.5	1.0	.0	153.5
Anne Arundel/Howard	.0	.0	20.5	19.0	202.4	.0	30.4	.0	.0	272.3
Caroline/Talbot	.0	.0	25.8	40.2	194.2	.0	.0	.0	.0	260.2
Cecil/Harford	.0	.0	.0	27.1	257.1	.7	7.9	2.1	.0	294.8
Kent/Queen Annes	.0	.0	23.3	25.2	122.0	23.6	20.3	.0	.0	214.4
Montgomery/Prince Georges	.0	.0	43.3	41.3	216.7	21.7	3.7	.0	.0	326.7
Central Unit	19.7	.0	131.5	180.5	1,626.1	46.1	93.6	15.3	.0	2,112.8
Calvert	.0	.0	4.0	24.7	107.4	24.1	7.4	.0	.0	167.6
Charles	.0	.0	65.1	39.4	242.8	13.8	13.8	.0	.0	374.9
St. Marys	.0	.0	70.5	40.3	149.8	13.5	8.8	.0	.0	282.9
Southern Unit	.0	.0	139.6	104.4	500.0	51.4	30.0	.0	.0	825.4
Dorchester	.0	.0	78.9	69.4	14.4	44.4	5.7	.0	.0	212.8
Somerset	.0	.0	55.8	33.0	38.4	10.2	14.4	.0	.0	151.8
Wicomico	.0	.0	55.7	35.5	41.3	26.0	.0	.0	.0	158.4
Worcester	.0	.0	51.3	61.1	105.2	31.7	7.6	.0	.0	256.9
Lower Eastern Shore Unit	.0	.0	241.6	199.0	199.3	112.3	27.8	.0	.0	779.9
Allegany	.0	.0	14.0	8.8	197.3	.0	3.1	33.4	.0	256.6
Garrett	44.6	.0	.0	6.1	345.3	.0	.0	104.0	.0	500.1
Western Unit	44.6	.0	14.0	14.9	542.6	.0	3.1	137.5	.0	756.7
State total	64.4	.0	526.7	498.8	2,868.0	209.8	154.5	152.7	.0	4,474.9

Table 108.--Net volume of growing-stock trees on timberland by county and stand-size class, Maryland, 1986

(In millions of cubic feet)

County	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Baltimore	181.7	24.1	.0	.0	205.8
Carroll	156.3	5.1	.0	.0	161.4
Frederick	166.5	52.8	4.3	.0	223.7
Washington	139.9	13.6	.0	.0	153.5
Anne Arundel/Howard	246.5	24.9	.9	.0	272.3
Caroline/Talbot	224.8	31.1	4.3	.0	260.2
Cecil/Harford	255.9	32.3	6.6	.0	294.8
Kent/Queen Annes	213.2	1.2	.0	.0	214.4
Montgomery/Prince Georges	282.5	43.5	.7	.0	326.7
Central Unit	1,867.3	228.7	16.8	.0	2,112.8
Calvert	159.7	7.3	.7	.0	167.6
Charles	316.0	45.6	13.3	.0	374.9
St. Marys	273.1	7.4	2.4	.0	282.9
Southern Unit	748.8	60.3	16.4	.0	825.4
Dorchester	166.7	38.5	7.6	.0	212.8
Somerset	127.3	21.0	3.5	.0	151.8
Wicomico	132.7	23.8	1.9	.0	158.4
Worcester	215.8	36.5	4.6	.0	256.9
Lower Eastern Shore Unit	642.5	119.8	17.6	.0	779.9
Allegany	180.5	68.0	8.0	.0	256.6
Garrett	375.7	120.6	3.8	.0	500.1
Western Unit	556.3	188.6	11.8	.0	756.7
State total	3,814.9	597.4	62.6	.0	4,474.9

Table 109.--Net volume of growing-stock trees on timberland by county and species, Maryland, 1986

(In millions of cubic feet)

County	Species							
	White/ red pine	Loblolly pine	Virginia pine	Other yellow pines	Other softwoods	Total softwoods	Red maple	Sugar maple
Baltimore	16.9	.0	12.1	.9	.0	29.9	13.4	.0
Carroll	2.8	7.3	.1	.0	.0	10.1	14.1	.0
Frederick	2.3	.0	2.8	.7	.0	5.9	22.4	.0
Washington	2.0	.0	1.1	2.6	3.5	9.2	9.0	4.0
Anne Arundel/Howard	.0	5.5	22.9	.0	.0	28.4	28.9	.0
Caroline/Talbot	.0	45.1	12.7	.0	.1	57.8	23.6	.0
Cecil/Harford	.0	.0	18.3	1.0	.3	19.6	25.0	.0
Kent/Queen Annes	.7	26.7	4.9	.0	.0	32.3	36.2	.0
Montgomery/Prince Georges	.0	6.5	47.2	.1	.0	53.8	24.0	.0
Central Unit	24.7	91.0	122.0	5.3	3.9	247.0	196.7	4.0
Calvert	.0	3.8	14.9	.0	.5	19.2	15.8	.0
Charles	.0	20.5	49.5	1.1	1.3	72.5	32.9	.0
St. Marys	.0	44.6	36.2	.1	.0	80.9	17.2	.0
Southern Unit	.0	68.9	100.6	1.2	1.8	172.5	65.9	.0
Dorchester	.0	103.7	1.6	.0	.0	105.3	16.9	.0
Somerset	.0	68.6	.2	.0	.0	68.7	22.4	.0
Wicomico	.0	66.6	1.6	.0	.0	68.2	30.5	.0
Worcester	.0	73.3	3.2	.0	3.6	80.1	71.7	.0
Lower Eastern Shore Unit	.0	312.1	6.6	.0	3.6	322.4	141.5	.0
Allegany	1.2	.0	12.1	3.1	2.8	19.2	9.9	23.5
Garrett	25.3	.0	.0	1.9	24.8	52.0	78.4	27.8
Western Unit	26.5	.0	12.1	5.0	27.6	71.2	88.4	51.3
State total	51.2	472.0	241.3	11.6	37.0	813.1	492.4	55.3

Table 109.Continued

(In millions of cubic feet)

County	Species							
	Hickory	Beech	Sweetgum	Yellow-poplar	Blackgum	Ash-walnut-cherry	Select white oaks	Select red oaks
Baltimore	4.0	4.9	1.8	73.1	2.1	4.7	13.8	9.2
Carroll	6.5	1.0	.0	18.2	1.2	9.3	6.9	14.6
Frederick	10.1	2.4	.0	24.8	4.4	22.3	9.4	29.5
Washington	5.3	3.3	.0	14.8	1.4	7.0	9.4	27.4
Anne Arundel/Howard	6.4	12.7	23.0	59.2	8.5	14.1	14.5	6.8
Caroline/Talbot	6.9	13.3	35.2	23.4	15.4	.6	30.2	8.6
Cecil/Harford	9.3	10.8	24.8	80.2	4.0	16.3	21.7	19.8
Kent/Queen Annes	5.3	13.7	17.2	34.9	16.0	4.6	27.8	7.7
Montgomery/Prince Georges	18.2	9.5	28.5	73.4	11.4	14.2	29.8	10.4
Central Unit	71.9	71.5	130.5	401.9	64.3	93.2	163.6	134.0
Calvert	6.0	18.3	20.3	37.0	3.3	4.7	7.0	5.9
Charles	12.3	26.0	57.7	52.7	6.4	8.8	35.2	3.7
St. Marys	8.7	13.6	30.1	37.8	9.8	3.8	25.8	3.4
Southern Unit	27.0	57.9	108.1	127.5	19.5	17.3	68.0	13.0
Dorchester	3.5	.4	17.3	2.1	9.1	1.6	27.6	1.1
Somerset	.0	2.7	10.2	.0	13.1	4.1	15.6	.3
Wicomico	.1	2.7	17.9	2.7	8.8	.3	7.2	.8
Worcester	.2	4.2	32.7	5.9	12.9	4.2	20.1	.7
Lower Eastern Shore Unit	3.7	10.0	78.2	10.7	43.9	10.3	70.6	2.9
Allegany	13.9	.5	.0	1.5	3.7	14.1	44.8	43.3
Garrett	20.1	7.3	.0	5.9	1.9	42.5	59.7	89.5
Western Unit	34.0	7.8	.0	7.4	5.6	56.6	104.5	132.8
State total	136.5	147.2	316.7	547.4	133.3	177.4	406.7	282.7

Table 109.Continued

(In millions of cubic feet)

County	Species					
	Other white oaks	Other red oaks	Black locust	Other hardwoods	Total hardwoods	All species
Baltimore	16.1	30.3	.0	2.6	175.9	205.8
Carroll	19.5	48.4	.5	11.1	151.3	161.4
Frederick	59.1	8.8	8.1	16.4	217.8	223.7
Washington	39.2	12.2	3.2	7.9	144.3	153.5
Anne Arundel/Howard	8.7	35.5	1.8	23.9	243.9	272.3
Caroline/Talbot	.0	37.9	.3	7.0	202.3	260.2
Cecil/Harford	17.6	24.9	16.1	4.8	275.2	294.8
Kent/Queen Annes	.0	11.9	2.1	4.8	182.1	214.4
Montgomery/Prince Georges	3.9	37.8	.9	10.9	272.9	326.7
Central Unit	164.1	247.8	33.0	89.4	1,865.9	2,112.8
Calvert	5.2	15.1	.0	9.9	148.5	167.6
Charles	1.4	49.6	1.6	14.3	302.4	374.9
St. Marys	5.3	36.9	1.3	8.4	202.0	282.9
Southern Unit	11.9	101.6	2.8	32.5	652.9	825.4
Dorchester	.2	26.3	.0	1.3	107.5	212.8
Somerset	.0	13.4	.0	1.1	83.1	151.8
Wicomico	.0	14.0	.0	5.3	90.2	158.4
Worcester	.0	15.3	.0	8.9	176.8	256.9
Lower Eastern Shore Unit	.2	69.0	.0	16.6	457.6	779.9
Allegany	30.2	28.4	6.5	16.9	237.3	256.6
Garrett	48.2	30.9	8.9	27.0	448.1	500.1
Western Unit	78.5	59.3	15.5	44.0	685.4	756.7
State total	254.7	477.7	51.3	182.5	3,661.8	4,474.9

Table 110.--Net volume of growing-stock and sawtimber trees on timberland by county and species group, Maryland, 1986

County	Growing stock			Sawtimber		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
	Million cubic feet			Million board feet[a]		
Baltimore	29.9	175.9	205.8	77.3	689.8	767.1
Carroll	10.1	151.3	161.4	43.1	511.7	554.9
Frederick	5.9	217.8	223.7	12.9	670.2	683.1
Washington	9.2	144.3	153.5	24.2	460.7	484.8
Anne Arundel/Howard	28.4	243.9	272.3	71.7	824.7	896.4
Caroline/Talbot	57.8	202.3	260.2	197.0	583.9	780.9
Cecil/Harford	19.6	275.2	294.8	55.1	900.0	955.1
Kent/Queen Annes	32.3	182.1	214.4	112.0	617.5	729.4
Montgomery/Prince Georges	53.8	272.9	326.7	98.8	945.9	1,044.7
Central Unit	247.0	1,865.9	2,112.8	692.1	6,204.4	6,896.5
Calvert	19.2	148.5	167.6	52.1	510.7	562.7
Charles	72.5	302.4	374.9	183.4	877.3	1,060.7
St. Marys	80.9	202.0	282.9	249.0	622.0	871.0
Southern Unit	172.5	652.9	825.4	484.5	2,010.0	2,494.4
Dorchester	105.3	107.5	212.8	270.4	254.6	525.0
Somerset	68.7	83.1	151.8	191.5	210.6	402.1
Wicomico	68.2	90.2	158.4	205.8	205.5	411.3
Worcester	80.1	176.8	256.9	241.3	451.6	692.8
Lower Eastern Shore Unit	322.4	457.6	779.9	909.0	1,122.3	2,031.3
Allegany	19.2	237.3	256.6	53.9	581.8	635.7
Garrett	52.0	448.1	500.1	114.9	1,162.0	1,276.9
Western Unit	71.2	685.4	756.7	168.9	1,743.7	1,912.6
State total	813.1	3,661.8	4,474.9	2,254.3	11,080.4	13,334.8

[a] International 1/4-inch rule.

Table 111.--Net volume of sawtimber trees on timberland by county and forest-type group, Maryland, 1986

(In millions of board feet)[a]

County	Forest-type group									All groups
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch	
Baltimore	41.2	.0	27.3	25.4	667.8	.0	.0	5.4	.0	767.1
Carroll	.0	.0	42.9	.0	467.9	.0	44.1	.0	.0	554.9
Frederick	.0	.0	.0	2.5	586.7	.0	71.0	22.9	.0	683.1
Washington	.0	.0	.0	30.2	441.3	.0	13.4	.0	.0	484.8
Anne Arundel/Howard	.0	.0	47.0	46.0	680.5	.0	122.9	.0	.0	896.4
Caroline/Talbot	.0	.0	96.6	108.1	576.2	.0	.0	.0	.0	780.9
Cecil/Harford	.0	.0	.0	92.1	834.0	3.1	17.4	8.5	.0	955.1
Kent/Queen Annes	.0	.0	67.6	62.8	457.8	91.5	49.7	.0	.0	729.4
Montgomery/Prince Georges	.0	.0	67.1	115.5	767.3	81.8	13.0	.0	.0	1,044.7
Central Unit	41.2	.0	348.6	482.6	5,479.5	176.3	331.6	36.8	.0	6,896.5
Calvert	.0	.0	7.4	68.3	383.5	78.0	25.5	.0	.0	562.7
Charles	.0	.0	153.6	89.5	761.7	12.8	43.2	.0	.0	1,060.7
St. Marys	.0	.0	193.2	128.1	491.0	31.7	27.1	.0	.0	871.0
Southern Unit	.0	.0	354.1	285.9	1,636.2	122.4	95.8	.0	.0	2,494.4
Dorchester	.0	.0	176.4	177.8	24.5	127.7	18.6	.0	.0	525.0
Somerset	.0	.0	128.6	106.4	91.4	36.2	39.5	.0	.0	402.1
Wicomico	.0	.0	147.7	95.8	108.6	59.2	.0	.0	.0	411.3
Worcester	.0	.0	127.1	160.1	288.8	84.0	32.9	.0	.0	692.8
Lower Eastern Shore Unit	.0	.0	579.8	540.1	513.2	307.2	91.0	.0	.0	2,031.3
Allegany	.0	.0	25.3	14.8	510.8	.0	13.9	70.9	.0	635.7
Garrett	99.2	.0	.0	9.6	892.3	.0	.0	275.8	.0	1,276.9
Western Unit	99.2	.0	25.3	24.4	1,403.1	.0	13.9	346.7	.0	1,912.6
State total	140.4	.0	1,307.8	1,332.9	9,032.0	606.0	532.3	383.5	.0	13,334.8

[a] International 1/4-inch rule.

Table 112.--Net volume of sawtimber trees on timberland by county and stand-size class, Maryland, 1986

(In millions of board feet)[a]

County	Stand-size class				All classes
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked	
Baltimore	730.2	37.0	.0	.0	767.1
Carroll	554.0	.9	.0	.0	554.9
Frederick	584.5	80.1	18.4	.0	683.1
Washington	467.5	17.3	.0	.0	484.8
Anne Arundel/Howard	872.2	23.9	.3	.0	896.4
Caroline/Talbot	734.0	36.0	10.9	.0	780.9
Cecil/Harford	896.5	37.3	21.3	.0	955.1
Kent/Queen Annes	728.5	1.0	.0	.0	729.4
Montgomery/Prince Georges	995.8	47.0	1.9	.0	1,044.7
Central Unit	6,563.2	280.5	52.8	.0	6,896.5
Calvert	546.7	14.9	1.2	.0	562.7
Charles	970.8	56.1	33.8	.0	1,060.7
St. Marys	852.9	12.4	5.7	.0	871.0
Southern Unit	2,370.4	83.4	40.7	.0	2,494.4
Dorchester	463.3	46.7	14.9	.0	525.0
Somerset	376.6	19.4	6.1	.0	402.1
Wicomico	381.0	26.5	3.9	.0	411.3
Worcester	633.0	51.6	8.2	.0	692.8
Lower Eastern Shore Unit	1,854.0	144.2	33.1	.0	2,031.3
Allegany	546.4	80.1	9.1	.0	635.7
Garrett	1,129.7	138.5	8.7	.0	1,276.9
Western Unit	1,676.1	218.7	17.8	.0	1,912.6
State total	12,463.7	726.8	144.3	.0	13,334.8

[a]International 1/4-inch rule.

Table 113.--Net volume of sawtimber trees on timberland by county and species, Maryland, 1986

(In millions of board feet)[a]

County	Species							
	White/ red pine	Loblolly pine	Virginia pine	Other yellow pines	Other softwoods	Total softwoods	Red maple	Sugar maple
Baltimore	35.5	.0	38.7	3.1	.0	77.3	21.7	.0
Carroll	13.3	29.6	.3	.0	.0	43.1	27.6	.0
Frederick	3.0	.0	9.9	.0	.0	12.9	84.2	.0
Washington	8.7	.0	.3	7.4	7.8	24.2	24.0	5.5
Anne Arundel/Howard	.0	18.0	53.7	.0	.0	71.7	86.0	.0
Caroline/Talbot	.0	158.1	38.7	.0	.2	197.0	70.5	.0
Cecil/Harford	.0	.0	50.1	3.1	1.9	55.1	53.7	.0
Kent/Queen Annes	3.0	92.8	16.2	.0	.0	112.0	111.9	.0
Montgomery/Prince Georges	.0	18.4	80.4	.0	.0	98.8	67.3	.0
Central Unit	63.5	316.9	288.2	13.6	10.0	692.1	546.9	5.5
Calvert	.0	12.0	37.9	.0	2.3	52.1	37.0	.0
Charles	.0	58.8	122.8	.3	1.4	183.4	81.3	.0
St. Marys	.0	147.4	101.4	.0	.2	249.0	44.8	.0
Southern Unit	.0	218.1	262.1	.3	3.9	484.5	163.1	.0
Dorchester	.0	266.4	4.0	.0	.0	270.4	32.4	.0
Somerset	.0	191.5	.0	.0	.0	191.5	61.3	.0
Wicomico	.0	201.4	4.4	.0	.0	205.8	74.5	.0
Worcester	.0	214.9	11.5	.0	14.8	241.3	177.5	.0
Lower Eastern Shore Unit	.0	874.2	19.9	.0	14.8	909.0	345.7	.0
Allegany	4.5	.0	31.7	12.7	5.0	53.9	20.8	53.2
Garrett	27.9	.0	.0	2.6	84.5	114.9	148.2	70.1
Western Unit	32.4	.0	31.7	15.3	89.5	168.9	169.0	123.3
State total	95.8	1,409.2	601.9	29.2	118.2	2,254.3	1,224.7	128.8

[a]International 1/4-inch rule.

Table 113.Continued

(In millions of board feet)[a]

County	Species							
	Hickory	Beech	Sweetgum	Yellow-poplar	Blackgum	Ash-walnut-cherry	Select white oaks	Select red oaks
Baltimore	3.2	15.5	3.1	341.2	1.8	11.7	63.3	41.3
Carroll	16.7	2.2	.0	90.0	1.9	12.9	20.2	52.2
Frederick	13.5	9.0	.0	115.5	11.5	62.6	27.1	99.8
Washington	18.2	13.0	.0	69.9	.5	11.9	26.3	99.1
Anne Arundel/Howard	20.3	47.3	71.1	248.1	18.7	32.4	44.3	18.1
Caroline/Talbot	24.7	36.5	92.3	77.9	36.1	1.7	78.6	22.1
Cecil/Harford	32.3	46.5	47.7	345.8	5.3	32.7	75.3	84.5
Kent/Queen Annes	15.2	59.3	50.8	143.5	39.0	13.4	96.8	28.0
Montgomery/Prince Georges	49.4	36.3	62.6	312.3	32.5	40.9	95.6	46.1
Central Unit	193.4	265.6	327.6	1,744.2	147.2	220.2	527.4	491.3
Calvert	21.2	66.9	56.9	151.6	9.8	15.1	25.7	25.3
Charles	35.6	84.2	125.8	203.5	11.3	19.1	109.8	11.9
St. Marys	27.4	54.0	71.9	148.9	28.3	12.9	83.6	8.5
Southern Unit	84.2	205.2	254.6	504.0	49.3	47.1	219.2	45.7
Dorchester	1.4	1.7	37.4	5.2	10.4	1.2	75.2	3.9
Somerset	.0	7.5	22.6	.0	29.7	6.1	43.7	.0
Wicomico	.2	8.2	37.9	12.4	17.5	.2	23.5	2.8
Worcester	.0	12.0	82.1	26.5	36.0	7.3	56.5	2.9
Lower Eastern Shore Unit	1.6	29.4	180.0	44.1	93.6	14.7	198.8	9.6
Allegany	28.8	2.5	.0	3.4	6.8	22.9	90.9	136.0
Garrett	51.0	17.8	.0	22.7	4.7	106.5	161.4	298.2
Western Unit	79.7	20.3	.0	26.1	11.4	129.4	252.3	434.3
State total	358.9	520.5	762.2	2,318.4	301.6	411.4	1,197.8	980.9

[a]International 1/4-inch rule.

Table 113.Continued

(In millions of board feet)[a]

County	Species					All species
	Other white oaks	Other red oaks	Black locust	Other hardwoods	Total hardwoods	
Baltimore	57.9	121.4	.0	7.7	689.8	767.1
Carroll	55.1	189.5	.0	43.5	511.7	554.9
Frederick	149.4	37.9	10.7	49.0	670.2	683.1
Washington	116.4	47.6	6.8	21.5	460.7	484.8
Anne Arundel/Howard	24.8	126.5	8.0	79.1	824.7	896.4
Caroline/Talbot	.0	136.1	.7	6.7	583.9	780.9
Cecil/Harford	58.9	90.7	17.2	9.4	900.0	955.1
Kent/Queen Annes	.0	39.8	5.4	14.4	617.5	729.4
Montgomery/Prince Georges	17.4	156.7	.4	28.5	945.9	1,044.7
Central Unit	479.9	946.3	49.2	259.8	6,204.4	6,896.5
Calvert	16.2	54.7	.0	30.3	510.7	562.7
Charles	.7	162.4	2.7	28.9	877.3	1,060.7
St. Marys	16.2	108.9	3.1	13.5	622.0	871.0
Southern Unit	33.1	325.9	5.8	72.7	2,010.0	2,494.4
Dorchester	.0	85.8	.0	.1	254.6	525.0
Somerset	.0	39.7	.0	.0	210.6	402.1
Wicomico	.0	25.5	.0	2.8	205.5	411.3
Worcester	.0	41.6	.0	9.3	451.6	692.8
Lower Eastern Shore Unit	.0	192.6	.0	12.2	1,122.3	2,031.3
Allegany	65.9	92.5	11.3	46.6	581.8	635.7
Garrett	116.3	82.6	26.0	56.5	1,162.0	1,276.9
Western Unit	182.2	175.1	37.3	103.1	1,743.7	1,912.6
State total	695.2	1,640.0	92.3	447.8	11,080.4	13,334.8

[a]International 1/4-inch rule.

Table 114.--Average annual net growth of growing-stock and sawtimber volume on timberland by geographic unit and species group, Maryland, 1976-86

Geographic unit	Growing Stock (In thousands of cubic feet)			Sawtimber (In thousands of board feet)[a]		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Central	4,063	75,355	79,418	26,384	252,399	278,783
Southern	8,130	27,300	35,430	27,315	99,622	126,937
Lower Eastern Shore	5,741	16,502	22,243	16,710	47,162	63,872
Western	5,574	26,044	31,618	11,825	83,781	95,606
All classes	23,508	145,201	168,709	82,234	482,964	565,198

[a] International 1/4-inch rule

Table 115.--Average annual removals of growing-stock and sawtimber volume on timberland by geographic unit and species group, Maryland, 1976-86

Geographic unit	Growing Stock (In thousands of cubic feet)			Sawtimber (In thousands of board feet)[a]		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Central	-2,260	-48,613	-50,873	-5,919	-204,859	-210,778
Southern	-3,551	-5,160	-8,711	-4,117	-14,581	-18,698
Lower Eastern Shore	-12,460	-17,411	-29,871	-43,959	-46,067	-89,925
Western	-3,527	-6,649	-10,176	-2,784	-16,175	-18,959
All classes	-21,798	-77,833	-99,631	-56,679	-281,681	-338,360

[a] International 1/4-inch rule

Frieswyk, Thomas S.; DiGiovanni, Dawn M. 1988. **Forest statistics for Maryland--1976 and 1986.** Resour. Bull. NE-107. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 157 p.

A statistical report on the fourth forest survey of Maryland (1986). Findings are displayed in 115 tables containing estimates of forest area, numbers of trees, timber volume, tree biomass, and timber products output. Data are presented at three levels: state, geographic unit, and county.

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Keywords: Forest survey, inventory, area, volume, biomass.

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