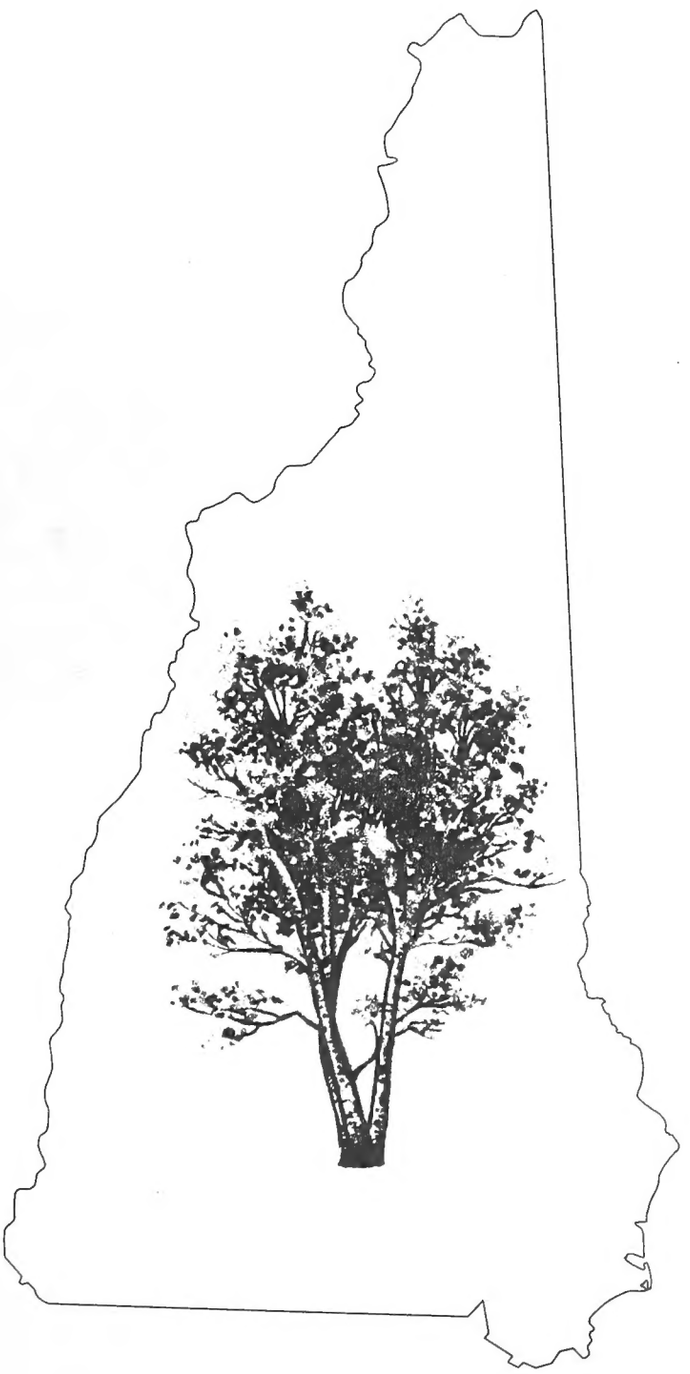
Resource Bulletin NE-146

Forest Statistics for New Hampshire: 1983 and 1997

Thomas Frieswyk
Richard Widmann



Abstract

A statistical report on the fifth forest inventory of New Hampshire conducted in 1996-98 by the Forest Inventory and Analysis Unit of the Northeastern Research Station. Statistics for forest area, numbers of trees, tree biomass, timber volume, growth, and change are displayed at the state and, where appropriate, the county level. The current inventory indicates that there are approximately 9.0 billion cubic feet of growing-stock volume on 4.5 million acres of timberland in New Hampshire.

Foreword

The fifth inventory of New Hampshire was directed by John R. Peters, Project Leader of the Forest Inventory and Analysis Unit. David J. Alerich supervised the data collection phase of the inventory. He was assisted by Robert E. Ilgenfritz, Richard A. McCullough, and Lucretia B. Stewart, and Kathryn M. Tillman at unit headquarters in Radnor, PA; and by Edward A. Doane, Brian M. LaPoint, Jason W. Morrison, and Scott H. Tepke, who coordinated the activities of the following members of the data-collection field staff in New Hampshire:

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Carol Alerich and Tom Frieswyk applied FINSYS (Forest Inventory SYStem), a generalized data processing system, ORACLE SQLPlus, and SAS to process and analyze the information provided by the field crews, and produced summary tables of estimates and errors for the state and counties. Doug Griffith, Richard Goren and Michael Kazimer assisted in data entry and data management.

JB Cullen and Worthen Muzzey, along with other members of the New Hampshire Division of Forests and Lands, collected and compiled data on public ownership and assisted in reviewing this document for accuracy. Steve Mongan of LandVest Inc. also assisted in reviewing this document.

Vickie M. Sharon was responsible for administrative and secretarial services.

The Forest Inventory and Analysis Unit thanks the landowners of New Hampshire and the New Hampshire Division of Forests and Lands for their cooperation and assistance during this inventory.

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Contents

Highlights

Forest-Land Area

Forests cover 4.8 million acres or 84.0 percent of New Hampshire. This is a decrease of 134,500 acres since the previous forest inventory in 1983. Timberland area decreased by 290,700 acres and other forest land increased by 156,200 acres. Timberland area represents 93 percent of total forest-land area.

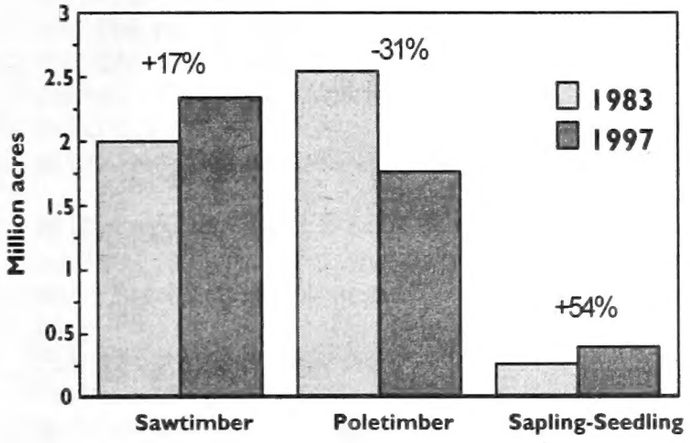
(Thousands of acres at each inventory)

	1948	1960	1973	1983	1997
Timberland	4,682.2	4,907.4	4,692.0	4,799.3	4,508.6
Other forest land	165.6	111.9	293.1	159.0	315.2
Total forest land	4,847.8	5,019.3	4,985.1	4,958.3	4,823.8
Percent forested	83.9%	87.0%	86.2%	86.4%	84.0%
Estimated total land area*	5,775.4	5,769.0	5,781.1	5,740.4	5,740.4

* Estimates of the total land area have changed because of new measurement techniques and refinements in the classification of small bodies of water and streams.

Sawtimber-size stands increased by 17 percent and now account for 52 percent of the timberland. Poletimber-size stands declined by 31 percent and now represent 39 percent of timberland. The area in sapling/seedling stands accounts for 9 percent of the timberland. Area in these conditions increased by 54 percent since the previous inventory.

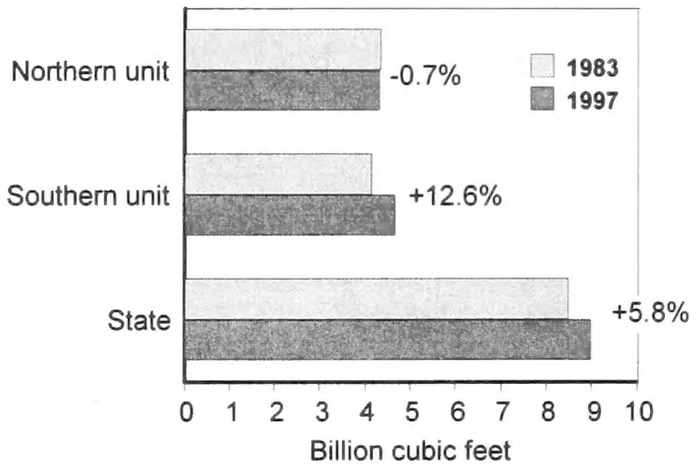
Area of timberland by stand-size class



Volume

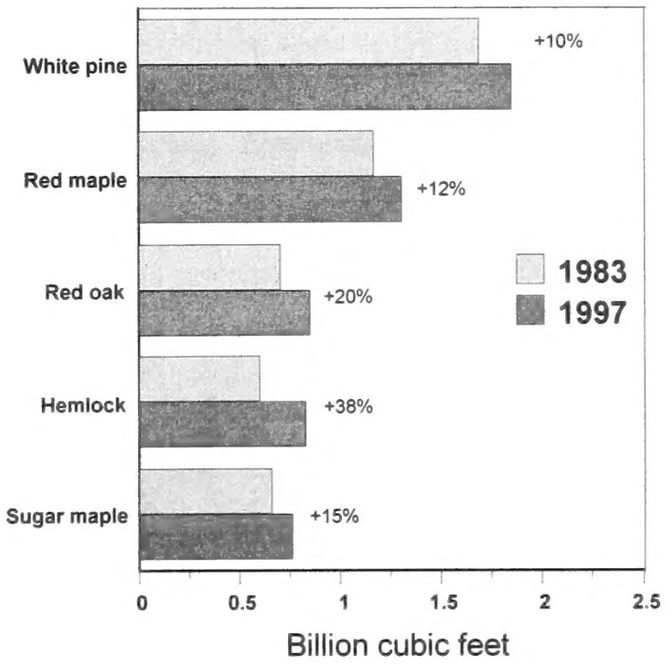
The total volume of all live trees more than 5-inches in diameter increased by 2.1 percent. Growing-stock volume increased by 5.8 percent, decreasing by 0.7 percent in the Northern Unit and increasing by 12.6 percent in the Southern Unit. The portion of volume suitable for sawlogs increased by 18.8 percent.

Growing-stock volume



White pine continued to have the greatest volume. Growing-stock volume of white pine, red maple, and red oak increased by 10.0, 11.9, and 20.2 percent, respectively. Hemlock had the largest volume increase-- 230.3 million cubic feet or 38.2. percent. The volume of spruce and balsam fir decreased by 18.2 and 20.4. percent, respectively.

Change in growing-stock volume, top five species

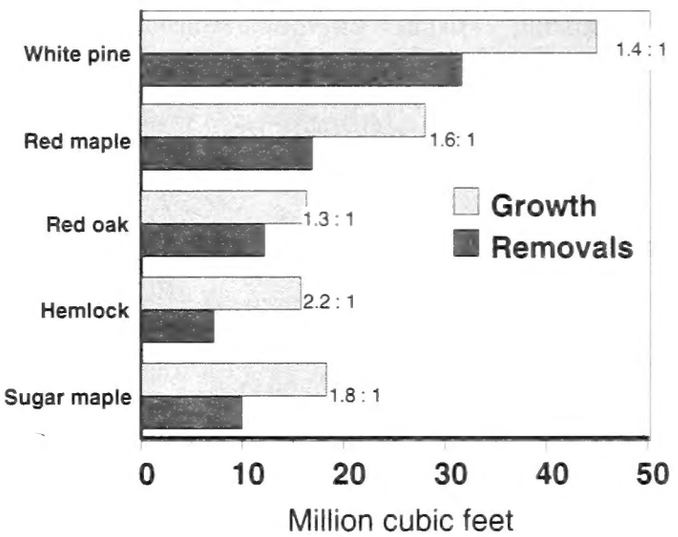


Growth and Removals

On an annual basis, net growth of growing stock on New Hampshire's timberland has averaged 169.1 million cubic feet of wood and the average annual harvest plus other removals has been 133.6 million cubic feet. The ratio of net growth to removals has averaged about 1.3 : 1 over the past inventory period.

On an annual basis, mortality has averaged 50.1 million cubic feet (0.6 percent) of the current inventory.

Average annual net growth and removals of growing-stock, top five species



Introduction

Under the authority of the McSweeney-McNary Forest Research Act of 1928 and subsequent acts, including the Renewable Resources Planning Act of 1974 and the Renewable Resources Research Act of 1978, the USDA Forest Service conducts periodic inventories of all states to provide up-to-date information on the forest resources of the Nation. The initial inventory of New Hampshire's forest resources was conducted in 1948. Succeeding inventories were carried out in 1960, 1973, and 1983. This report presents forest-resource data from the fifth inventory, which was conducted in 1996-97. This inventory was a cooperative effort of the Northeastern Research Station, the New Hampshire Division of Forests and Lands, and the landowners of New Hampshire.

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

The sampling procedure used during the current inventory included the use of aerial photography, the remeasurement of a sample of ground plots established in earlier inventories, and the establishment of new ground plots. For New Hampshire, this procedure required the photointerpretation and classification of 21,306 new photo points and 764 previously sampled ground plot locations into land-use and cubic-foot volume classes. Then, 764 ground plots from the previous inventory were remeasured and 166 new ground plots were established. Of the total 930 plots, 652 were forested at plot center. The data collected were summarized using the FINSYS computer system developed at the Northeastern Research Station.

In January of 1998, a series of ice storms in northern New England and New York damaged an estimated 900,000 acres in New Hampshire. Nine counties were declared disaster areas and FIA was asked to reinventory the area that was most severely impacted. During the spring and summer of 1998, 78 plots were selected and remeasured within the damage footprint identified by the State of New Hampshire. The entire inventory was reprocessed incorporating the updated data from the damage footprint. As part of the agreement with the State of New Hampshire only one set of inventory data will be available and that data will contain the ice damage update.

The resurvey of New Hampshire's forest resources involved several associated studies and considerable analysis. Reports on the state's private forest-land owners and its primary forest-products industry also will be available, and a report analyzing New Hampshire's forest resource in greater detail is being prepared.

The forest area, numbers of trees, biomass, timber volume, growth, and change statistics in this report summarize the information collected (see **Index to Tables** in this report). Other information or additional summaries may be developed. For information about these, contact the **Forest Inventory and Analysis Unit, USDA Forest Service, 11 Campus Boulevard, Suite 200, Newtown Square, PA 19073 (Telephone: 610-557-4075; Fax: 610-557-4200).**

Reliability of the Estimate

The data in this report are based on a carefully designed sample of forest conditions throughout New Hampshire. 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. Accuracy refers to the success of estimating the true value; precision refers to the clustering of sample values about their own averages or to the variation among repeated samples. We are interested primarily in the accuracy of the inventory but in most cases we can only measure its precision.

Although accuracy cannot be measured exactly, it can be checked. Preliminary tables are sent to other agencies and to outside experts familiar with the forest conditions in the New Hampshire. If questions arise, the data are reviewed and reanalyzed to resolve differences. Great care is taken to minimize sources of procedural error through 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 reasonable measure of the inventory's adequacy. The precision of each estimate is

described by its sampling error. Sampling errors are given with several tables in this report. The others are available upon request.

Here is an example of how the sampling error is used to indicate reliability. The estimate of timberland for New Hampshire is 4,509,000 acres. The associated sampling error is 1.1 percent, or 49,599 acres. This means that if there are no errors in the procedure, we are 68 percent confident that the true number of acres is between 4,459,401 and 4,558,599 acres, or 4,509,000 $\pm$ 49,599 (one standard deviation). Similarly, we are 95 percent confident that the true number of acres is within $\pm$ 99,198 acres (two standard deviations). County estimates are less precise. In New Hampshire, for example, while the sampling error for timberland at the state level is 1.1 percent, the sampling error for Rockingham County is 6.1 percent. In general, as the size of the sample decreases the sampling error, expressed as a percentage of the estimate, increases. A high amount of variance within a county increases the sampling error.

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

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

where:

n = total number of sample plots of a population
$P_{ij} = A_{ij} / A$
A_{ij} = cell estimate
A = total land area of a population
ij = row(i) and column(j)

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

Comparison Between Inventories

To evaluate the condition of the forest resource, it is useful to compare the current estimates with those from the previous inventory. However, as a result of ongoing efforts to improve the efficiency of the inventory, we have made several changes in procedures and definitions since 1983. Because these changes make inappropriate the direct comparison of sorne of the current estimates with those published by Frieswyk and Malley (1985), readers should use caution when comparing the data in this report with those in the 1983 report. In this report, several tables containing 1983 data are provided to allow comparisons. The changes in methods and definitions follow.

To improve data consistency at the national level, a standard plot design is being used by all Forest Inventory projects in the country. The new plot design, a cluster of four 24-foot-radius subplots covering a 1/6-acre area, was established at all selected plot locations, both new and previously measured. Field crews recorded different conditions on the plots if certain attributes (land use, forest type, stand origin, stand size, tree density, and/or owner) differed from those at plot center. They "mapped" these conditions by recording information that described the boundaries of the conditions. This mapping procedure is designed to reduce bias in the estimates. In previous inventories, a ground plot was established wholly within the land class (forest or nonforest) that the plot was chosen to represent. The condition (e.g. privately-owned northern-hardwoods sawtimber timberland) that was found at plot center was used to classify the entire plot.

On all selected remeasured plot locations, a subsample of the trees that were recorded in the past were reconciled, and growth and removals estimates were calculated using these data. Condition mapping was ignored for calculations of estimates of change because this procedure was not used at the previous occasion.

Forest Inventory uses Bureau of Census estimates of total land area in a state or county as the basis for estimating land area by various classes. For the 1983 report, 1980 Bureau of Census data were used; in 1997, 1990 data were available. Between 1980 and 1990, the Bureau of Census changed its estimating

procedures. It now can identify as inland water streams more than 200 feet wide and bodies of water 4.5 acres and larger in area. Previously, the minimum width was 660 feet for streams and the minimum area was 40 acres for bodies of water. This procedure results in a reduction in total land area. For comparison of land area between inventories, 1983 estimates of land area by class were recalculated using 1990 land-area values from the Bureau of Census.

Stocking is a quantitative expression of live tree stand density that may be expressed in absolute terms, such as basal area per acre, volume per acre, or number of trees per acre; or in relative terms, such as a percent of a previously defined standard[1]. For the 1983 inventory statistics, the stocking value of a tree was calculated using the basal area of the tree as a percent of 75 square feet per acre, which is the basal area standard for full use of the site[2]. Basal area stocking may well describe current timber volume, but it is inadequate to describe stand composition in a multi-resource inventory in that it neither adequately measures present site utilization nor describes small-diameter stands. For the statistics in this publication, stocking is calculated using relative density, which represents site occupancy based on normal yield tables. Basal area is diameter-dependent only; whereas relative density reflects species composition, stage of development and the social position of the trees present. A relative measure of stand density is a useful tool for interpreting findings of extensive inventories, such as those performed by Forest Inventory and Analysis, where a wide variety of stands are sampled. A procedure using relative density to calculate stocking was developed and accepted as a standard to be used by all FIA projects in the country.

Stand size is a classification (sawtimber, poletimber, seedling and sapling, or nonstocked) of forest land based on the size of the trees that dominate an area, and forest type is a classification of forest land based on the species found in the area. Stand size and forest type are both calculated based on stocking of all live trees, and therefore are affected by the change in the procedure to calculate stocking. To allow comparisons, this report includes several 1983 area tables showing estimates of area of timberland by stand-size class and forest type and forest-type group that are calculated based on relative density. There are also tables that show estimates of timberland area by forest type and stand size for both 1983 and 1997, where stocking is based on the basal area of all live trees.

Forest type is a classification of forest land based on species that form a plurality of live-tree stocking. Prior to 1995, basal area was used to determine plurality of live-tree stocking. Currently, forest type classification is based on stocking values calculated using relative density. There have been refinements with respect to how several species (e.g.red maple and beech) are allocated to local types since the previous inventory and a programming error that affected the white pine type was corrected.

Eighty-two percent of the plots that were visited during the 1983 inventory were remeasured in 1996-98. The estimates of average annual net growth and change are derived from this set of data. These estimates afford an opportunity to look at change in overall volume from occasion to occasion and from plot to plot. The estimates showing 1983 information are from the plots that were selected at that occasion to produce an estimate of the current area and volume.

[1] Arner, Stanford L. et al. 2000. **National Algorithms for Determining Stocking Class, Stand Size Class, and Forest Type for Forest Inventory and Analysis Plots**. Unpublished document on file at Northeastern Research Station Forest Inventory and Analysis, 11 Campus Boulevard, Suite 200, Newtown Square, PA 19073.

[2] Author unknown. 1967. **Forest Survey Handbook.** Unpublished document on file at Northeastern Research Station Forest Inventory and Analysis, 11 Campus Boulevard, Suite 200, Newtown Square, PA 19073.

These data have been used in current procedures to recalculate estimates of area and volume at the 1983 occasion so that comparisons can be made. Although the data set from which estimates of growth and change are derived contains a portion of the plots from which the 1983 recalculated estimates were calculated, they are different data sets designed to produce different types of estimates. Inconsistencies in trends may result when the annual change tables are compared with the total change between the 1983 and 1997 tables. Sampling errors have been included to indicate the precision of the data.

In addition to the traditional data gathered to estimate forest area and tree volumes, information was collected to describe forest wildlife habitat and forest-tree biomass.

Definitions of Terms

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

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

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

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

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

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

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

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

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

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

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

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

Cull tree. A rough tree or a rotten tree.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Gross growth. The sum of accretion and ingrowth.

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

Growing-stock volume. Net volume, in cubic feet, of growing-stock trees 5.0 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.

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

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

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

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

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

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.

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 surveys to produce average annual ingrowth). Also, the estimated net volume of growing-stock trees 5.0 inches d.b.h. and larger that are growing on land that was reclassified from noncommercial forest land or nonforest land to timberland.

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

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

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

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

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

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

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

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 surveys to produce average annual mortality) .

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

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

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

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

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

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

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

Nonforest land. Land that has never supported forests, or land formerly forested but now in nonforest use such as cropland, pasture, residential areas, marshes, swamps, highways, industrial or commercial sites, or noncensus water.

Nonsalvable dead tree. A dead tree with most or all of its bark missing that is at least 5.0 inches d.b.h. and is at least 4.5 feet tall.

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

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

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

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

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

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

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

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

Pastured timberland. Land that is partially developed, maintained, or managed for pasture and grazing, but which continues to meet the definition of timberland.

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

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

Preferred tree. A high-quality tree, from a lumber viewpoint, that would be favored in cultural operations. General characteristics include grade 1 butt log (if sawtimber size), good form, good vigor, and freedom from serious damage.

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

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

Removals. The net growing-stock volume harvested or killed in logging, cultural operations (such as timber stand improvement) or land clearing, and the net growing-stock volume neither harvested nor killed but growing on land that was

reclassified from timberland to noncommercial forest land or nonforest land during the period between surveys. This volume is divided by the number of growing seasons to produce average annual removals.

Reserved productive forest land. Forest land sufficiently productive to qualify as timberland but withdrawn from timber utilization through statute or administrative designation; land exclusively used for Christmas tree production.

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

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

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

Salvable dead tree. A tree at least 5.0 inches d.b.h. that has died recently and still has intact bark; may be standing, fallen, windthrown, knocked down, or broken off.

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

Sapling. All live trees 1.0 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 minimum full stocking with live trees with half or more of such stocking in saplings or seedlings or both.

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

Sawlog portion. That part of the bole of a sawtimber tree between the stump and the sawlog top.

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 minimum 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 tree. A live tree 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.

SE. See Sampling error.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Tree class. A classification of the quality or condition of trees for sawlog production. Tree class for sawtimber trees is based on their current condition. Tree class for poletimber trees is a prospective determination–a forecast of their potential quality when they reach sawtimber size (11.0 inches d.b.h. for hardwoods, 9.0 inches d.b.h. for softwoods).

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

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

Unproductive forest land. See Other forest land.

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

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

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

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

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Tree Species of New Hampshire (as encountered on field plots)

Scientific Name ***	Common Name(s)	Occurrence**
	Softwoods	
Abies balsamea (L.) Mill.	balsam fir	vc
Juniperus virginiana L.	eastern redcedar	vr
Larix laricina (Du Roi) K. Koch	tamarack (native)	r
Picea glauca (Moench) Voss	white spruce	r
Picea mariana (Mill.) B.S.P.	black spruce	r
Picea rubens Sarg.	red spruce	vc
Pinus resinosa Ait.	red pine	r
Pinus rigida Mill.	pitch pine	r
Pinus strobus L.	eastern white pine	vc
Thuja occidentalis L.	northern white-cedar	r
Tsuga canadensis (L.) Carr.	eastern hemlock	vc
	Hardwoods	
Acer negundo L. *	boxelder	vr
Acer pensylvanicum L. *	striped maple	r
Acer rubrum L.	red maple	vc
Acer saccharinum L.	silver maple	r
Acer saccharum Marsh.	sugar maple	vc
Acer spicatum Lam. *	mountain maple	vr
Ailanthus altissima (Mill.) Swingle *	ailanthus	vr
Amelanchier sp. Medic. *	serviceberry	vr
Betula alleghaniensis Britton	yellow birch	vc
Betula lenta L.	sweet birch	c
Betula papyrifera Marsh.	paper birch	vc
Betula populifolia Marsh. *	gray birch	r
Carya sp. Nutt.	hickory	r
Carya cordiformis (Wangenh.) K. Koch	bitternut hickory	vr
Carya glabra (Mill.) Sweet	pignut hickory	vr
Carya laciniosa (Michx. f.) Loud.	shellbark hickory	vr
Carya ovata (Mill.) K. Koch	shagbark hickory	r
Fagus grandifolia Ehrh.	American beech	vc
Fraxinus americana L.	white ash	c
Fraxinus nigra Marsh.	black ash	r
Fraxinus pennsylvanica Marsh.	green ash	r
Juglans cinerea L.	butternut	vr
Malus sp. Mill. *	apple	r
Nyssa sylvatica Marsh.	blackgum	vr
Ostrya virginiana (Mill.) K. Koch *	eastern hophornbeam	r
Populus balsamifera L.	balsam poplar	r
Populus grandidentata Michx.	bigtooth aspen	c
Populus tremuloides Michx.	quaking aspen	c

Tree Species of New Hampshire (continued)

Scientific Name ***	Common Name(s)	Occurrence**
Prunus sp. L. *	cherry, plum	vr
Prunus pensylvanica L. f. *	pin cherry	r
Prunus serotina Ehrh.	black cherry	c
Prunus virginiana L. *	chokecherry	vr
Quercus alba L.	white oak	c
Quercus bicolor Willd.	swamp white oak	vr
Quercus coccinea Muenchh.	scarlet oak	r
Quercus prinus L.	chestnut oak	vr
Quercus rubra L.	northern red oak	vc
Quercus stellata Wangenh.	post oak	vr
Quercus velutina Lam.	black oak	c
Robinia pseudoacacia L.	black locust	vr
Salix sp. L. *	willow	vr
Sorbus americana Marsh. *	American mountain-ash	r
Tilia sp. L.	basswood	vr
Tilia americana L.	American basswood	r
Ulmus americana L.	American elm	r
Ulmus rubra Muhl.	slippery elm	vr

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

** Occurrence is based on the proportion of the species among all live trees 5.0 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.

Species Groups of New Hampshire

Species Group	Scientific name	Common name
Balsam fir	*Abies balsamea*	balsam fir
Tamarack	*Larix laricina*	tamarack (native)
White spruce	*Picea glauca*	white spruce
Black spruce	*Picea mariana*	black spruce
Red spruce	*Picea rubens*	red spruce
Red pine	*Pinus resinosa*	red pine
White pine	*Pinus strobus*	eastern white pine
Northern white-cedar	*Thuja occidentalis*	northern white-cedar
Hemlock	*Tsuga canadensis*	eastern hemlock
Other softwoods	*Juniperus virginiana* *Picea abies* *Pinus rigida*	eastern redcedar Norway spruce pitch pine
Sugar maple	*Acer saccharum*	sugar maple
Red maple	*Acer rubrum* *Acer saccharinum*	red maple silver maple
Yellow birch	*Betula alleghaniensis*	yellow birch
Paper birch	*Betula papyrifera*	paper birch
Beech	*Fagus grandifolia*	American beech
White ash	*Fraxinus americana*	white ash
Black ash	*Fraxinus nigra*	black ash
Aspen	*Populus balsamifera* *Populus grandidentata* *Populus heterophylla* *Populus tremuloides*	balsam poplar bigtooth aspen swamp cottonwood quaking aspen
White oaks	*Quercus alba* *Quercus bicolor* *Quercus prinus* *Quercus stellata*	white oak swamp white oak chestnut oak post oak

Species Groups of New Hampshire (continued)

Species Group	Scientific name	Common name
Red oaks	*Quercus coccinea*	scarlet oak
	Quercus ellipsoidalis	northern pin oak
	Quercus phellos	willow oak
	Quercus rubra	northern red oak
	Quercus velutina	black oak
Basswood	*Tilia americana*	American basswood
Elm	*Ulmus americana*	American elm
	Ulmus rubra	slippery elm
Other hardwoods	*Acer sp.*	maple
	Acer pensylvanicum	striped maple
	Acer negundo	boxelder
	Acer spicatum	mountain maple
	Ailanthus altissima	ailanthus
	Amelanchier sp.	serviceberry
	Betula sp.	birch
	Betula lenta	sweet birch
	Betula populifolia	gray birch
	Carpinus caroliniana	American hornbeam
	Carya sp.	hickory
	Carya cordiformis	bitternut hickory
	Carya glabra	pignut hickory
	Carya laciniosa	shellbark hickory
	Carya ovata	shagbark hickory
	Castanea dentata	American chestnut
	Cornus florida	flowering dogwood
	Crataegus sp.	hawthorn
	Fraxinus pennsylvanica	green ash
	Juglans cinerea	butternut
	Malus sp.	apple
	Morus rubra	red mulberry
	Nyssa sylvatica	blackgum
	Ostrya virginiana	eastern hophornbeam
	Prunus sp.	cherry, plum
	Prunus pensylvanica	pin cherry
	Prunus serotina	black cherry
	Prunus virginiana	chokecherry
	Quercus ilicifolia	bear oak, scrub oak
	Robinia pseudoacacia	black locust
	Salix sp.	willow
	Salix nigra	black willow
	Sassafras albidum	sassafras
	Sorbus americana	American mountain-ash
	Tilia sp.	basswood
		unknown or not listed tree

Tree-Grade Classification

HARDWOOD TREE GRADES

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

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

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

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

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

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

Tree-Grade Classification (continued)

TIE AND TIMBER GRADE

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

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

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

Tree-Grade Classification (continued)

EASTERN WHITE PINE TREE GRADE SPECIFICATIONS

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

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

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

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

[1] Trees under 16 inches DBH require four full length good faces.

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

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

Tree-Grade Classification (continued)

SOUTHERN PINE TREE GRADES

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

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

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

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

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

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

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

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

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

SPRUCE, FIR, CEDAR, TAMARACK, AND HEMLOCK LOGS

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

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

TREE GRADE 5 (ALL SPECIES)

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

Field Plot Data Quality Standards

A quality assurance (QA) program is performed to ensure that a final product will meet the desired level of accuracy and precision. Quality control (QC) procedures are specific actions within the quality assurance program that are designed to maintain data quality within an acceptable range. There are three basic aspects of any QA program: error prevention, assessment and appraisal, and correction. Error prevention is achieved by developing standardized methods, establishing measurement quality objectives and data quality standards, and applying calibration techniques and training. Assessment and appraisal is accomplished by performing audits, debriefings and field personnel feedback, data validation and verification, and a remeasurement program for QC data collection. The purpose of correction, the last aspect of the quality assurance program, is to use all of the information from the prevention and assessment and appraisal components to make improvements, where needed, in the measurement system.

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

After the initial training period, periodic inspections are made of every crew's fieldwork by field supervisors. The number of errors detected will partially determine frequency of inspections. All instances of error are analyzed and discussed with the crew concerned. Supervisors monitor progress and goals, and minimum acceptable performance levels are adjusted as conditions warrant. In addition, a percentage of all plots are subjected to a second measurement as part of the quality control program.

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

Quality Control Program

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

Sample Size

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

Data Collection

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

Compilation

* Trees from both data sets (Crew 1 and 2) are extracted from forested subplots.
* Trees are matched between sets based on the following criteria:
  1) Tree numbers for all remeasure trees.
  2) Distance, azimuth, and species for all new or ingrowth trees.

Comparison

* Tolerance limits from state field instructions are used to compare the tree data between Crew 1 and Crew 2.
* Four tree data item classes are grouped prior to applying tolerance.
  1) Six condition classes are reduced to three: live, dead,

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

Results

* Percentage of data within tolerance limits, and
* Number of times data exceeded tolerance limits.
* Values are either within tolerance (1x) or exceed tolerance (2x, 3x, or 4x).

New Hampshire QA Tree Data Results from 123 Subplots

		Percentage of data within tolerance				Number of times data exceeded tolerance				
Tree data item		@1x	@2x	@3x	@4x	@1x	@2x	@3x	@4x	Records
Species	-- No tolerance	97%				55				1,599
Trees (missed)	-- No tolerance	99%				(23)				1,599
Horizontal distance	-- .2 feet (+ or -)	72%	89%	94%		454	175	90		1,599
Azimuth	-- 2 degrees (+ or -)	73%	91%	95%		430	146	73		1,599
Tree history	-- No tolerance	96%				25				698
Diameter	-- .1 inch (+ or -)	91%	94%	96%		112	71	51		1,268
Ecotype	-- No tolerance	97%				32				1,180
Condition	-- No tolerance**	97%				40				1,249
Tree grade	-- No tolerance**	80%				65				318
Saw length	-- 4 feet (+ or -)	47%	68%	82%	92%	168	103	56	27	318
Bole length	-- 4 feet (+ or -)	51%	75%	90%	96%	486	250	104	36	996
Total length	-- 10 feet (+ or -)	77%	96%	98%		245	47	17		1,084
Board foot cull	-- 10% (+ or -)	75%	87%	92%	93%	81	41	27	21	318
Board foot soundness	-- 1 class (+ or -)	85%	89%	90%	92%	47	35	32	27	318
Cubic foot cull	-- 10% (+ or -)	78%	93%	97%	98%	221	72	33	18	996
Cubic foot soundness	-- 1 class (+ or -)	85%	87%	89%	92%	153	130	107	83	996
Crown ratio	-- 1 class (+ or -)	83%	95%			169	52			996
Crown class	-- No tolerance	69%				313				996
General damage	-- Variable tolerance	96%				40				996
Special damage	-- Variable tolerance	86%				288				1,992
Tree class	-- No tolerance**	91%				118				1,249
Merchantability class	-- No tolerance**	89%				126				1,148

Metric Equivalents

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

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

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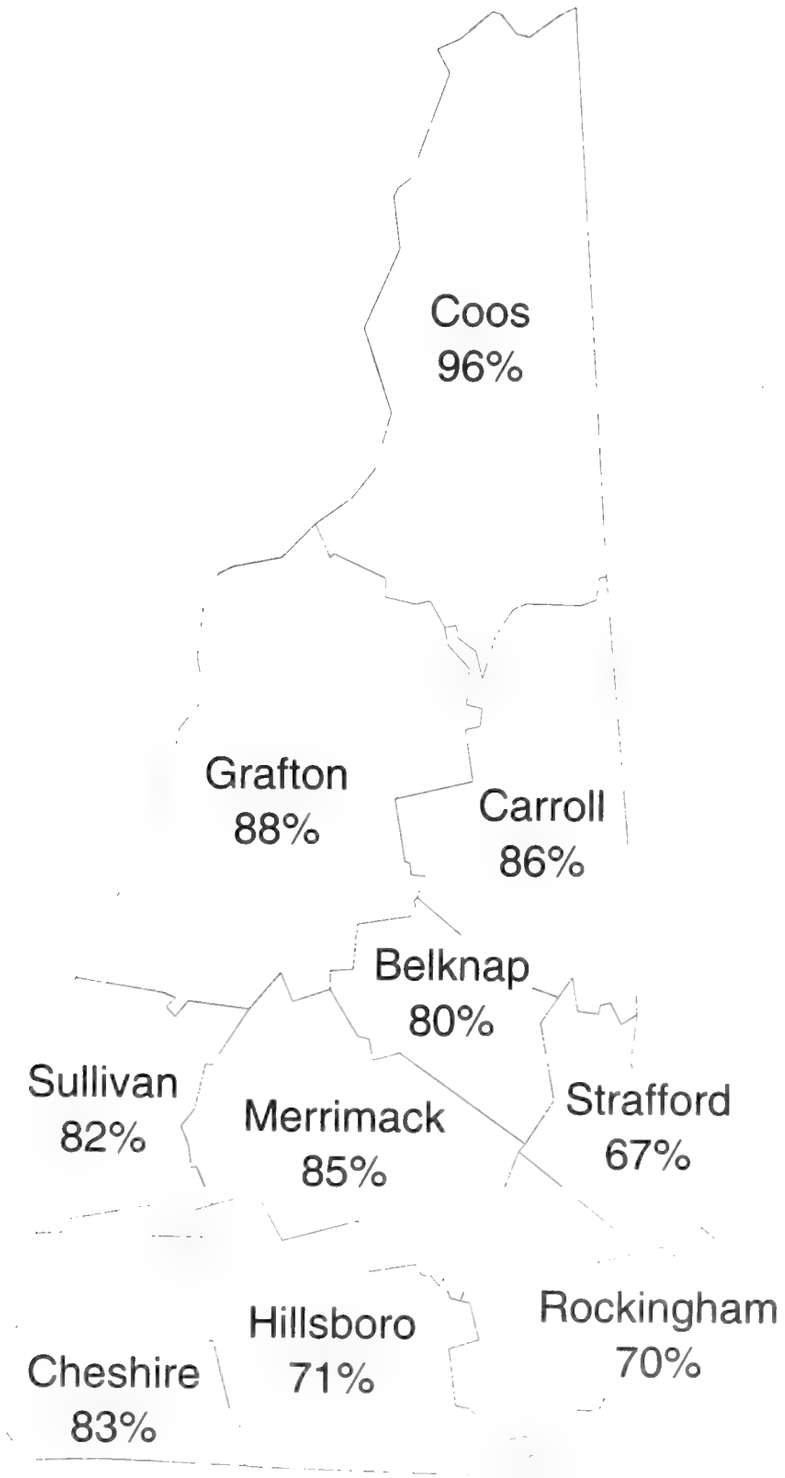
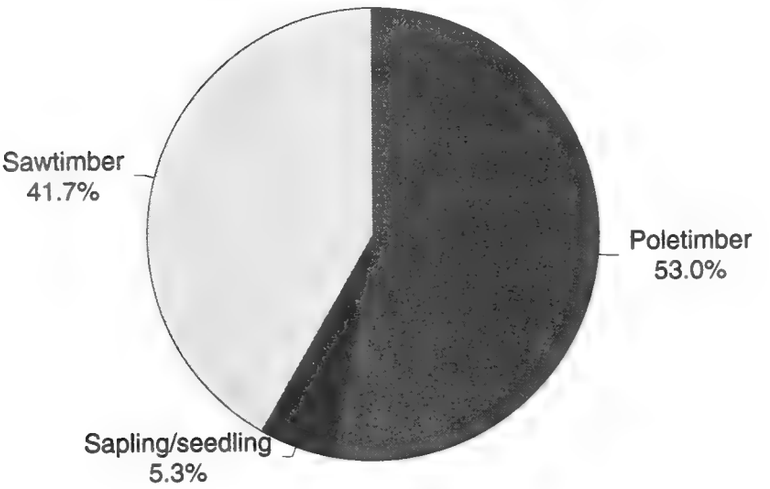
STATE TABLES

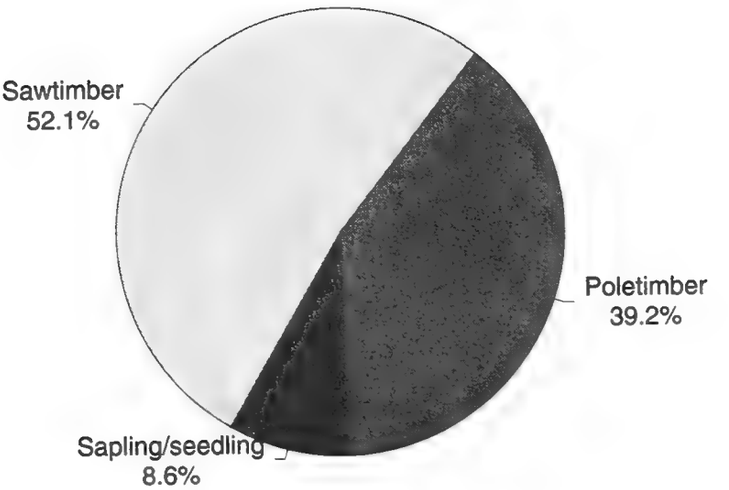


Percentage of land in forest by county, 1997
(State average = 84 percent)

Timberland area by stand-size class
New Hampshire, 1983 and 1997



1983



1997

Table 1.--Land area by land class, New Hampshire, 1983 and 1997[a]

(In thousands of acres)[b]

Land class	Area			
	1983	Percent	1997	Percent
Timberland	4,799.3	84	4,508.6	79
Noncommercial forest land:				
Reserved productive	102.5	2	148.6	3
Urban forest land	0.0	<1	50.1	1
Other forest land[c]	56.5	1	108.1	2
Reserved other forest land	0.0	<1	8.3	<1
Total noncommercial ...	159.0	3	315.2	5
Total forest land	4,958.3	86	4,823.8	84
Nonforest land:				
Cropland	145.4	2	138.8	2
Pasture	80.8	1	52.5	1
Other	555.9	10	725.3	13
Total nonforest land	782.1	14	916.6	16
Total land area[d]	5,740.4	100	5,740.4	100

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

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

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

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

Table 2.--Area of timberland by forest type, forest-type group, and stand-size class, New Hampshire, 1983

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	24.1	.0	.0	.0	24.1	58.4
White pine	343.0	84.4	7.3	.0	434.7	12.1
White pine/hemlock	90.6	38.0	.0	.0	128.6	24.0
Hemlock	97.9	34.7	.0	.0	132.6	23.0
White/red pine group	555.6	157.1	7.3	.0	720.0	9.0
Balsam fir	39.3	148.5	27.1	.0	214.9	20.1
Red spruce	.0	88.4	9.7	.0	98.1	30.4
Red spruce/balsam fir	27.2	105.5	9.7	.0	142.3	24.9
White spruce	.0	20.1	.0	.0	20.1	69.9
Tamarack	.0	10.0	.0	.0	10.0	100.0
Spruce/fir group	66.5	372.5	46.4	.0	485.3	12.3
Pitch pine	9.4	9.4	.0	.0	18.7	68.5
Loblolly/shortleaf group	9.4	9.4	.0	.0	18.7	68.5
Wh. pine/no.red oak/wh. ash	93.8	76.2	.0	.0	170.0	20.9
Other oak/pine	.0	7.3	.0	.0	7.3	100.0
Oak/pine group	93.8	83.5	.0	.0	177.3	20.3
Post, black, or bear oak	7.3	14.5	.0	.0	21.8	57.7
Chestnut oak	.0	7.1	.0	.0	7.1	100.0
White oak/red oak/hickory	21.6	42.8	.0	.0	64.4	32.7
Northern red oak	48.4	114.1	8.4	.0	170.9	21.8
Scarlet oak	.0	7.1	.0	.0	7.1	100.0
Red maple/central hardwood	.0	7.3	17.1	.0	24.5	58.4
Mixed central hardwoods	96.4	160.3	6.9	.0	263.6	16.4
Oak/hickory group	173.7	353.3	32.4	.0	559.3	10.9
Black ash/Amer. elm/red maple	.0	20.8	8.5	.0	29.3	50.5
Red maple(lowland)	.0	14.2	2.9	.0	17.1	61.1
Red maple(upland)	.0	14.3	10.0	.0	24.3	58.5
Elm/ash/red maple group	.0	49.3	21.5	.0	70.7	32.6
Sugar maple/beech/yellow birch	753.8	490.1	35.0	.0	1,278.8	6.9
Black Cherry	.0	10.0	16.6	.0	26.6	58.4
Red maple/northern hardwoods	141.7	502.8	5.3	.0	649.7	10.5
Pin cherry/reverting field	.0	10.0	25.3	.0	35.3	45.9
Mixed northern hardwoods	107.7	178.8	16.2	.0	302.7	15.6
Northern hardwoods group	1,003.2	1,191.7	98.4	.0	2,293.2	4.3
Aspen	38.5	127.4	14.5	.0	180.3	21.6
Paper birch	52.8	201.4	10.7	.0	264.9	18.0
Gray birch	7.3	.0	21.9	.0	29.3	50.0
Aspen/birch group	98.6	328.8	47.1	.0	474.6	12.8
All forest types	2,000.7	2,545.5	253.0	.0	4,799.3	.8
SE	4.8	3.9	16.8	.0	.8	

Table 3.--Area of timberland by forest type, forest-type group, and stand-size class, New Hampshire, 1997

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	1.8	4.9	.0	.0	6.7	77.9
White pine	322.4	49.0	8.7	5.0	385.1	10.9
White pine/hemlock	154.8	36.3	.0	.0	191.1	16.4
Hemlock	121.6	45.6	.0	.0	167.2	17.5
White/red pine group	600.6	135.8	8.7	5.0	750.1	7.2
Balsam fir	31.6	127.6	43.0	.0	202.2	16.9
Red spruce	20.5	34.0	10.2	.0	64.8	28.8
Red spruce/balsam fir	35.3	86.0	6.3	3.9	131.5	20.6
White spruce	11.6	.0	.0	.0	11.6	69.0
Spruce/fir group	99.0	247.6	59.5	3.9	410.1	11.1
Pitch pine	10.4	5.2	.0	.0	15.5	56.0
Loblolly/shortleaf group	10.4	5.2	.0	.0	15.5	56.0
Wh. pine/no.red oak/wh. ash	157.0	44.7	1.4	.0	203.1	15.8
Other oak/pine	2.1	.0	.0	.0	2.1	100.0
Oak/pine group	159.1	44.7	1.4	.0	205.2	15.7
Post, black, or bear oak	4.9	.0	5.2	.0	10.1	70.7
White oak/red oak/hickory	57.2	18.3	.0	.0	75.5	27.4
White oak	.0	4.4	.0	.0	4.4	100.0
Northern red oak	106.8	71.7	.0	.0	178.5	17.3
Red maple/central hardwood	12.2	11.3	.0	.0	23.5	48.3
Mixed central hardwoods	137.4	150.7	17.1	.0	305.2	13.1
Oak/hickory group	318.5	256.4	22.2	.0	597.1	8.8
Black ash/Amer. elm/red maple	11.4	1.9	6.4	.0	19.7	53.2
Red maple(lowland)	17.5	18.5	.0	.0	36.0	39.3
Red maple(upland)	7.5	7.6	.0	.0	15.0	54.0
Willow	.0	.0	1.6	.0	1.6	100.0
Elm/ash/red maple group	36.4	27.9	8.0	.0	72.3	26.9
Sugar maple/beech/yellow birch	696.0	481.4	73.2	.0	1,250.6	5.6
Black Cherry	7.4	1.8	19.0	.0	28.3	40.2
Red maple/northern hardwoods	216.0	309.8	48.6	.0	574.3	9.2
Pin cherry/reverting field	.0	4.5	17.4	.0	22.0	44.5
Mixed northern hardwoods	131.1	144.0	50.6	.0	325.7	12.6
Northern hardwoods group	1,050.4	941.6	208.8	.0	2,200.9	3.7
Aspen	30.2	46.0	34.4	.0	110.5	21.9
Paper birch	41.4	59.3	34.7	.0	135.4	21.1
Gray birch	.0	.0	11.5	.0	11.5	63.7
Aspen/birch group	71.6	105.3	80.5	.0	257.4	14.5
All forest types	2,346.0	1,764.5	389.1	8.9	4,508.6	1.1
SE	3.6	4.6	10.9	71.3	1.1	

Table 4.--Area of timberland by forest-type group and ownership class, New Hampshire, 1997

(In thousands of acres)

Forest-type group	Ownership class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
White/red pine	19.4	55.0	6.9	668.8	750.1	7.2
Spruce/fir	102.0	19.3	115.7	173.1	410.1	11.1
Loblolly/shortleaf	.0	5.2	.0	10.4	15.5	56.0
Oak/pine	.0	17.6	.0	187.6	205.2	15.7
Oak/hickory	21.9	59.4	.0	515.9	597.1	8.8
Elm/ash/red maple	.0	17.2	.0	55.1	72.3	26.9
Northern hardwoods	329.8	156.9	307.2	1,407.0	2,200.9	3.7
Aspen/birch	52.6	30.2	28.0	146.6	257.4	14.5
Total, all groups	525.6	360.9	457.7	3,164.4	4,508.6	1.1
SE	6.3	12.1	8.2	2.0	1.1	

Table 5. Area of timberland by stand-size class and ownership class, New Hampshire, 1997

(In thousands of acres)

Stand-size class	Ownership class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
Sawtimber	275.5	191.9	171.7	1,706.9	2,346.0	3.6
Poletimber	199.6	157.4	211.3	1,196.2	1,764.5	4.6
Sapling and seedling	50.5	11.6	69.7	257.4	389.1	10.9
Nonstocked	.0	.0	5.0	3.9	8.9	71.3
Total, all classes	525.6	360.9	457.7	3,164.4	4,508.6	1.1
SE	6.3	12.1	8.2	2.0	1.1	

Table 6.--Area of timberland by forest-type group and all-live stand-volume class, New Hampshire, 1997

(In thousands of acres)

Forest-type group	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
White/red pine	14.4	15.2	69.3	118.2	126.0	407.0	750.1	7.2
Spruce/fir	66.6	48.3	17.6	107.4	53.6	116.5	410.1	11.1
Loblolly/shortleaf	.0	.0	5.2	.0	5.2	5.2	15.5	56.0
Oak/pine	8.4	1.7	18.1	23.5	44.0	109.5	205.2	15.7
Oak/hickory	18.7	50.4	65.0	153.0	147.1	163.0	597.1	8.8
Elm/ash/red maple	9.9	23.4	24.1	6.0	6.2	2.9	72.3	26.9
Northern hardwoods	191.8	230.2	318.5	359.0	511.2	590.1	2,200.9	3.7
Aspen/birch	77.1	20.3	27.9	50.1	35.2	46.8	257.4	14.5
Total, all groups	386.8	389.5	545.5	817.1	928.6	1,441.0	4,508.6	1.1
SE	10.9	11.2	9.6	7.8	7.2	5.3	1.1	

Table 7.--Area of timberland by forest-type group and cubic-foot stand-volume class, New Hampshire, 1997

(In thousands of acres)

Forest-type group	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
White/red pine	14.4	37.2	89.9	103.8	121.8	383.1	750.1	7.2
Spruce/fir	66.6	48.3	52.2	88.9	54.4	99.5	410.1	11.1
Loblolly/shortleaf	.0	.0	5.2	.0	5.2	5.2	15.5	56.0
Oak/pine	8.4	3.4	21.0	18.9	44.0	109.5	205.2	15.7
Oak/hickory	18.7	50.4	77.4	148.3	143.5	158.9	597.1	8.8
Elm/ash/red maple	14.5	18.8	25.4	10.8	.0	2.9	72.3	26.9
Northern hardwoods	205.5	258.2	356.5	401.1	455.3	524.3	2,200.9	3.7
Aspen/birch	77.1	20.3	44.8	33.2	42.3	39.7	257.4	14.5
Total, all groups	405.2	436.6	672.4	805.0	866.5	1,323.0	4,508.6	1.1
SE	10.5	10.4	8.7	7.8	7.6	5.6	1.1	

Table 8.--Area of timberland by forest-type group and board-foot stand-volume class, New Hampshire, 1997

(In thousands of acres)

Forest-type group	Stand-volume class (board feet per acre)						All classes	SE
	0-1999	2000-3999	4000-5999	6000-7999	8000-9999	10000+		
White/red pine	51.9	119.5	139.1	100.8	72.1	266.7	750.1	7.2
Spruce/fir	150.7	90.9	100.4	44.9	12.0	11.1	410.1	11.1
Loblolly/shortleaf	5.2	.0	5.2	.0	.0	5.2	15.5	56.0
Oak/pine	22.4	12.6	31.8	17.8	29.0	91.5	205.2	15.7
Oak/hickory	116.5	150.2	159.9	77.2	50.4	43.1	597.1	8.8
Elm/ash/red maple	40.8	24.1	6.2	1.3	.0	.0	72.3	26.9
Northern hardwoods	620.8	538.4	468.1	263.8	129.3	180.5	2,200.9	3.7
Aspen/birch	132.0	60.2	22.9	13.8	16.2	12.3	257.4	14.5
Total, all groups	1,140.2	995.9	933.6	519.6	309.0	610.4	4,508.6	1.1
SE	5.9	6.9	7.2	10.0	13.7	8.8	1.1	

Table 9.--Area of timberland by forest-type group and basal-area class, New Hampshire, 1997

(In thousands of acres)

Forest-type group	Basal area class (square feet per acre)							All classes	SE
	0-49	50-99	100-149	150-199	200-249	250-299	300+		
White/red pine	12.1	107.0	283.7	250.7	80.1	11.6	4.8	750.1	7.2
Spruce/fir	59.2	54.8	171.6	63.7	60.7	.0	.0	410.1	11.1
Loblolly/shortleaf	.0	5.2	5.2	5.2	.0	.0	.0	15.5	56.0
Oak/pine	6.9	25.8	69.8	76.1	14.2	12.4	.0	205.2	15.7
Oak/hickory	21.0	143.8	348.5	68.1	9.0	.0	6.7	597.1	8.8
Elm/ash/red maple	9.9	52.1	.0	10.4	.0	.0	.0	72.3	26.9
Northern hardwoods	244.7	577.8	969.6	376.0	30.8	.0	1.8	2,200.9	3.7
Aspen/birch	53.1	77.6	49.0	65.6	12.2	.0	.0	257.4	14.5
Total, all groups	406.9	1,044.1	1,897.5	915.8	207.0	24.0	13.3	4,508.6	1.1
SE	10.5	6.6	4.2	7.2	16.4	44.8	63.0	1.1	

Table 10.--Area of timberland by forest-type group and stocking class of all live trees, New Hampshire, 1983

(In thousands of acres)

Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	.0	48.1	219.8	408.7	43.4	720.0	9.0
Spruce/fir	.0	39.5	158.1	258.1	29.7	485.3	12.3
Loblolly/shortleaf	.0	.0	.0	18.7	.0	18.7	68.5
Oak/pine	.0	14.4	53.3	102.6	7.1	177.3	20.3
Oak/hickory	.0	7.5	128.4	386.6	36.9	559.3	10.9
Elm/ash/red maple	.0	30.9	15.5	14.3	10.0	70.7	32.6
Northern hardwoods	.0	93.5	513.9	1,403.0	282.8	2,293.2	4.3
Aspen/birch	.0	21.9	76.3	312.3	64.1	474.6	12.8
Total, all groups	.0	255.9	1,165.2	2,904.1	474.1	4,799.3	.8
SE	.0	16.7	7.4	3.4	12.7	.8	

Table 11.--Area of timberland by forest-type group and stocking class of all live trees, New Hampshire, 1997

(In thousands of acres)

Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	5.0	7.5	148.1	451.9	137.5	750.1	7.2
Spruce/fir	3.9	39.2	72.8	236.0	58.1	410.1	11.1
Loblolly/shortleaf	.0	.0	5.2	5.2	5.2	15.5	56.0
Oak/pine	.0	2.2	46.5	134.9	21.6	205.2	15.7
Oak/hickory	.0	15.5	113.0	409.6	59.0	597.1	8.8
Elm/ash/red maple	.0	13.1	34.4	20.4	4.5	72.3	26.9
Northern hardwoods	.0	55.6	445.1	1,373.0	327.2	2,200.9	3.7
Aspen/birch	.0	4.5	69.6	132.1	51.2	257.4	14.5
Total, all groups	8.9	137.7	934.5	2,763.1	664.3	4,508.6	1.1
SE	71.3	20.0	6.9	3.0	8.9	1.1	

Table 12.--Area of timberland by forest-type group and stocking class of growing-stock trees, New Hampshire, 1983

(In thousands of acres)

Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	.0	122.6	275.3	314.3	7.8	720.0	9.0
Spruce/fir	8.5	152.3	188.2	136.3	.0	485.3	12.3
Loblolly/shortleaf	.0	.0	18.7	.0	.0	18.7	68.5
Oak/pine	.0	31.6	95.1	50.6	.0	177.3	20.3
Oak/hickory	10.0	41.7	260.7	238.6	8.4	559.3	10.9
Elm/ash/red maple	2.9	50.5	.0	7.3	10.0	70.7	32.6
Northern hardwoods	22.0	375.9	761.5	1,099.2	34.6	2,293.2	4.3
Aspen/birch	14.9	63.3	191.9	187.3	17.2	474.6	12.8
Total, all groups	58.3	837.8	1,791.5	2,033.7	77.9	4,799.3	.8
SE	37.0	8.8	5.5	4.8	33.5	.8	

Table 13.--Area of timberland by forest-type group and stocking class of growing-stock trees, New Hampshire, 1997

(In thousands of acres)

Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	5.0	68.0	284.2	330.8	62.1	750.1	7.2
Spruce/fir	22.4	113.3	157.3	113.6	3.5	410.1	11.1
Loblolly/shortleaf	.0	.0	5.2	10.4	.0	15.5	56.0
Oak/pine	.0	2.2	96.2	97.9	8.8	205.2	15.7
Oak/hickory	10.6	62.6	183.8	319.1	21.1	597.1	8.8
Elm/ash/red maple	.0	29.8	36.2	4.7	1.6	72.3	26.9
Northern hardwoods	42.9	338.4	771.5	976.0	72.1	2,200.9	3.7
Aspen/birch	4.6	76.6	78.4	91.7	6.1	257.4	14.5
Total, all groups	85.5	690.8	1,612.8	1,944.3	175.3	4,508.6	1.1
SE	25.0	8.2	4.9	4.3	17.2	1.1	

Timberland area by forest-type group and percent change, New Hampshire, 1983-97

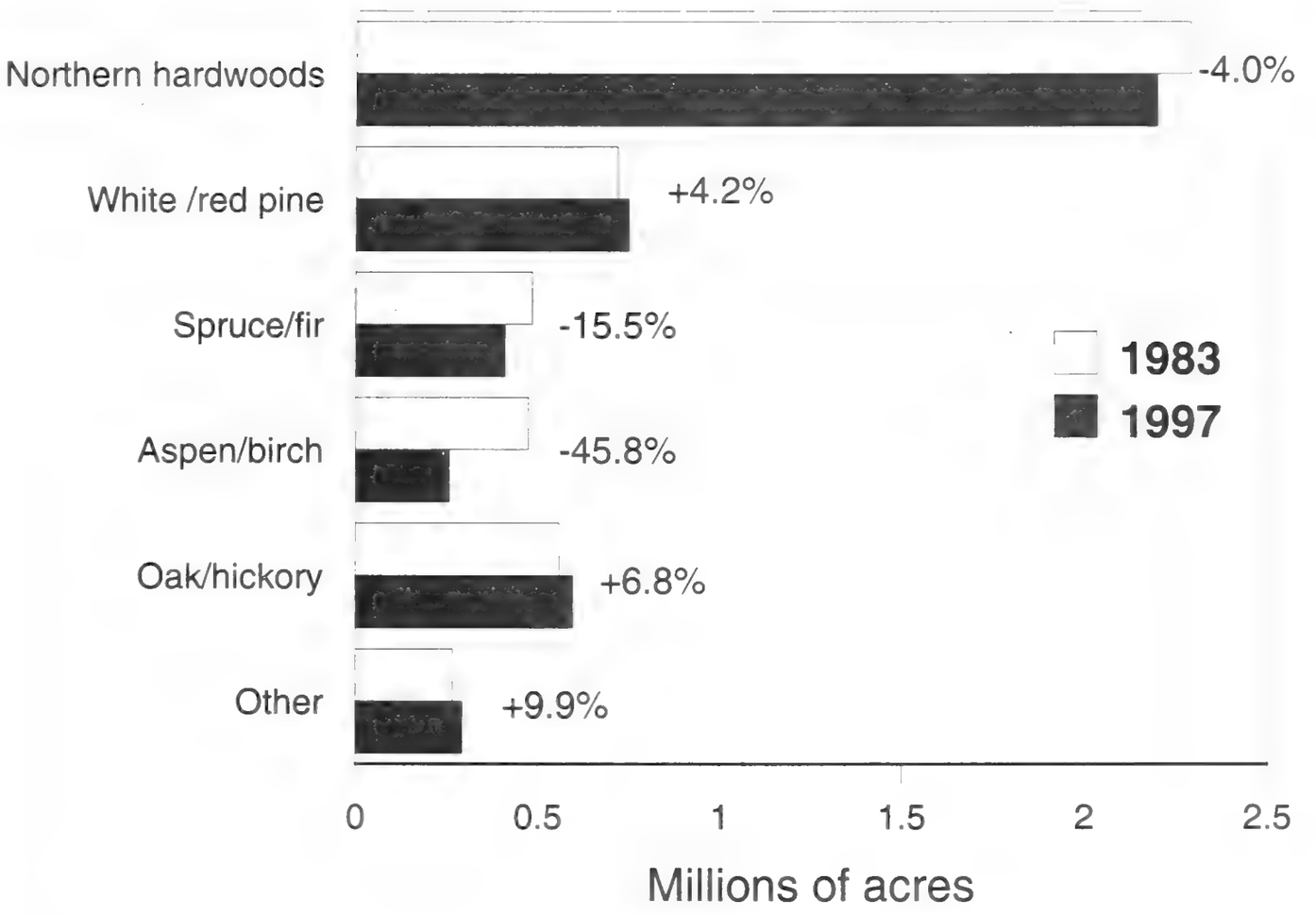


Table 14.--Number of trees (5.0+ inches d.b.h.) on timberland by species and tree class, New Hampshire, 1997

(In thousands of trees)

Species group	Tree class								All classes	SE
	Preferred	Acceptable	All growing stock	Rough cull	Rotten cull	All live	Salvable dead	Nonsalvable dead		
Balsam fir	2,902	75,855	78,756	408	301	79,466	4,404	18,635	102,505	9.0
Tamarack	0	1,049	1,049	69	0	1,118	0	162	1,279	39.1
White spruce	48	2,694	2,743	108	36	2,886	145	36	3,068	38.2
Black spruce	0	38	38	0	0	38	0	0	38	100.0
Red spruce	2,008	52,447	54,455	426	303	55,184	2,396	5,975	63,555	8.7
Red pine	0	3,273	3,273	39	0	3,312	43	180	3,535	33.3
White pine	1,684	99,880	101,564	4,363	390	106,318	2,412	13,688	122,418	5.7
Northern white-cedar	37	1,637	1,674	108	73	1,855	183	299	2,337	57.9
Hemlock	636	79,868	80,505	5,741	790	87,035	1,568	3,233	91,836	6.9
Other softwoods	0	3,480	3,480	61	0	3,542	37	162	3,741	64.0
Total softwoods	7,315	320,221	327,536	11,324	1,894	340,753	11,189	42,370	394,312	3.8
Sugar maple	942	61,813	62,756	2,724	1,405	66,885	509	3,235	70,629	7.5
Red maple	255	156,664	156,919	8,045	3,634	168,598	2,274	9,443	180,315	3.7
Yellow birch	289	45,544	45,833	3,453	1,538	50,823	856	6,631	58,310	6.1
Paper birch	737	62,554	63,291	2,250	1,290	66,831	2,910	7,890	77,631	6.3
Beech	40	45,123	45,163	2,485	2,797	50,444	374	2,564	53,382	7.2
White ash	510	21,129	21,638	393	391	22,422	1,038	1,230	24,690	8.1
Black ash	0	1,058	1,058	0	37	1,095	74	78	1,247	39.0
Aspen	331	21,054	21,385	210	235	21,830	1,095	3,722	26,647	11.1
White oaks	0	7,308	7,308	403	108	7,818	629	592	9,039	12.8
Red oaks	2,279	61,391	63,670	882	497	65,048	1,242	2,391	68,682	6.3
Basswood	0	1,625	1,625	146	60	1,831	36	113	1,979	21.8
Elm	0	1,293	1,293	77	0	1,370	109	752	2,232	22.5
Other commercial hardwoods	119	22,383	22,502	1,315	336	24,153	600	2,598	27,352	7.8
Noncommercial hardwoods	0	0	0	14,242	1,020	15,263	1,169	4,116	20,548	10.0
Total hardwoods	5,502	508,938	514,440	36,625	13,347	564,412	12,916	45,355	622,683	2.2
Total, all species	12,817	829,159	841,976	47,948	15,241	905,165	24,105	87,724	1,016,995	2.0
SE	14.7	2.0	2.0	4.8	7.1	2.0	6.0	4.3	2.0	

Table 15.--Number of standing dead trees (5.0+ inches d.b.h.) on timberland by species, condition class, and diameter class, New Hampshire, 1997

(In thousands of trees)

Species group	Intact top				Broken top					
	5.0-10.9	11.0-14.9	15+	Total	5.0-10.9	11.0-14.9	15+	Total	Total all trees	SE
Balsam fir	2,622	109	74	2,805	17,932	1,387	136	19,455	22,260	11.5
Tamarack	0	0	0	0	95	36	30	162	162	64.3
White spruce	36	0	0	36	109	36	0	145	181	59.4
Red spruce	1,944	109	76	2,129	5,104	721	157	5,982	8,111	11.6
Red pine	80	0	0	80	143	0	0	143	223	70.6
White pine	5,767	271	38	6,075	8,032	1,016	689	9,737	15,812	8.6
Northern white-cedar	115	0	0	115	330	36	0	366	481	71.2
Hemlock	761	185	0	947	2,885	556	258	3,699	4,646	14.4
Other softwoods	100	0	0	100	100	0	0	100	200	45.8
Total softwoods	11,425	675	187	12,288	34,732	3,787	1,271	39,790	52,078	6.7
Sugar maple	614	115	149	879	2,017	488	303	2,808	3,687	13.8
Red maple	1,731	76	58	1,864	8,515	976	292	9,783	11,647	7.5
Yellow birch	709	85	73	868	4,198	1,297	1,054	6,550	7,417	9.6
Paper birch	1,824	54	38	1,916	7,937	702	169	8,809	10,725	10.7
Beech	254	57	0	311	1,668	603	355	2,627	2,938	17.3
White ash	313	77	77	467	1,554	75	33	1,662	2,128	15.5
Black ash	37	0	0	37	83	0	0	83	121	57.8
Aspen	821	75	0	895	3,479	328	0	3,807	4,702	15.4
White oaks	291	0	0	291	790	100	39	930	1,221	21.2
Red oaks	882	178	29	1,089	1,985	286	104	2,374	3,463	16.4
Basswood	37	0	0	37	111	0	0	111	148	61.2
Elm	113	37	0	150	543	138	31	711	861	29.5
Other commercial hardwoods	516	114	33	663	2,233	149	76	2,459	3,122	16.3
Noncommercial hardwoods	1,512	0	0	1,512	3,634	37	0	3,672	5,184	13.1
Total hardwoods	9,655	867	458	10,981	38,749	5,181	2,456	46,386	57,367	4.1
Total, all species	21,081	1,542	646	23,269	73,481	8,969	3,727	86,176	109,445	4.0
SE	6.0	16.4	24.9	5.8	4.7	7.7	10.2	4.4	4.0	

Table 16.--Number of seedlings, saplings, and shrubs on timberland by species and stand-size class, New Hampshire, 1997

(In thousands of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Balsam fir	1,214,155	1,980,983	382,195	0	3,577,333	10.8
Common juniper	14,960	32,685	23,524	0	71,169	32.3
Eastern redcedar	398	1,655	0	0	2,053	82.9
Tamarack	0	4,597	2,053	0	6,650	72.5
Spruce species	348,535	565,140	98,472	0	1,012,147	12.9
Red pine	415	409	0	0	824	70.7
Pitch pine	4,332	2,745	0	0	7,077	62.8
Eastern white pine	617,273	290,933	44,536	0	952,743	12.9
Canada yew	5,409	29,359	1,599	0	36,367	59.4
Northern white-cedar	3,988	0	0	0	3,988	80.7
Eastern hemlock	489,340	207,573	59,799	0	756,711	12.0
Maple species	1,682	0	0	0	1,682	100.0
Boxelder	0	1,408	0	0	1,408	100.0
Striped maple	1,240,870	791,268	204,641	0	2,236,779	9.8
Red maple	1,371,581	964,227	529,280	0	2,865,088	7.8
Silver maple	1,227	489	3,254	0	4,970	70.7
Sugar maple	1,337,703	855,225	485,975	0	2,678,903	14.8
Mountain maple	444,976	458,754	67,603	0	971,333	13.0
Alder species	262,844	334,042	278,456	0	875,342	22.8
Serviceberry	57,144	63,451	6,713	0	127,307	26.3
Bog rosemary	16,827	0	0	0	16,827	100.0
Chokeberry species	4,676	0	0	0	4,676	69.6
Azalea species	0	102,620	0	0	102,620	98.4
Barberry	21,536	42,732	34,638	0	98,905	39.3
Yellow birch	705,814	491,467	247,535	0	1,444,816	11.2
Sweet birch	69,579	67,218	14,662	0	151,459	17.8
Paper birch	350,085	250,842	368,023	0	968,951	13.1
Gray birch	36,731	154,551	91,108	0	282,389	20.4
American hornbeam	27,018	4,243	0	0	31,261	47.6
Hickory species	3,311	1,617	0	0	4,928	74.8
Bitternut hickory	2,189	0	0	0	2,189	100.0
Pignut hickory	2,313	3,551	0	0	5,865	59.8
Shagbark hickory	13,947	2,820	1,617	0	18,384	43.2
American chestnut	40,656	16,331	0	0	56,987	36.7
Sweetfern	56,553	4,597	14,309	0	75,460	65.7
Flowering dogwood	4,146	1,412	0	0	5,558	78.8
Alternate-leaved dogwood	32,263	4,059	6,586	0	42,907	55.0
Silky dogwood	3,091	12,076	6,621	0	21,789	51.8
Round-leaved dogwood	12,344	0	21,780	0	34,124	67.4
Panicled dogwood	2,823	1,315	1,621	0	5,760	61.0
Red-osier dogwood	165,998	35,274	226,781	0	428,053	48.2
Hawthorn species	23,217	37,404	1,402	0	62,023	37.4
American hazelnut	187,890	46,814	0	0	234,704	24.9
Beaked hazelnut	207,418	46,786	48,561	0	302,765	29.3
Leatherwood	137,029	111,350	0	0	248,378	63.6
American beech	1,138,368	556,352	213,508	0	1,908,228	7.9
White ash	361,101	249,926	107,652	0	718,679	10.4
Black ash	2,506	8,717	0	0	11,222	43.3
Green ash	21,682	11,065	0	0	32,747	52.8
Huckleberry	0	3,378	45,828	0	49,206	93.4
Witch-hazel	321,132	237,670	24,090	0	582,892	16.1
Large-leaved holly	15,848	0	0	0	15,848	90.1
Winterberry holly	79,006	246,251	3,389	0	328,646	37.8
Butternut	430	0	0	0	430	100.0
Sheep laurel	252,391	209,690	74,334	0	536,415	38.0
Mountain laurel	188,190	117,162	6,319	0	311,671	34.7
Labrador tea	0	24,519	12,175	0	36,694	68.6
Common spicebush	9,589	72,575	0	0	82,165	79.9
Bush honeysuckle	77,953	184,188	46,784	0	308,925	35.2
Apple species	9,038	1,884	33,251	0	44,172	55.5
Mountain holly	89,380	106,477	99,217	0	295,073	31.7

Table 16.--continued

(In thousands of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Eastern hophornbeam	31,942	47,126	8,789	0	87,857	21.7
Balsam poplar	0	5,488	4,680	0	10,169	48.6
Bigtooth aspen	17,311	6,681	12,093	0	36,085	35.8
Swamp cottonwood	0	2,591	0	0	2,591	100.0
Quaking aspen	88,734	122,468	155,884	0	367,085	21.2
Cherry species	0	1,344	0	0	1,344	100.0
Pin cherry	45,066	151,705	319,471	0	516,242	36.8
Black cherry	409,409	285,687	144,834	0	839,930	11.2
Chokecherry	102,215	60,603	109,127	0	271,945	29.7
White oak	104,613	61,480	13,712	0	179,805	20.4
Swamp white oak	0	4,192	0	0	4,192	100.0
Northern pin oak	5,568	0	0	0	5,568	100.0
Scrub, bear oak	62,895	27,997	103,233	0	194,125	59.6
Willow oak	1,514	0	0	0	1,514	100.0
Chestnut oak	1,593	5,740	398	0	7,731	61.2
Northern red oak	458,225	282,436	54,126	0	794,787	10.2
Black oak	43,284	14,790	7,996	0	66,070	37.8
Buckthorn species	32,564	17,625	1,400	0	51,590	39.4
Rhododendron species	0	0	91,317	0	91,317	100.0
Smooth sumac	1,454	0	0	0	1,454	100.0
Staghorn sumac	0	7,647	21,785	0	29,432	51.3
Poison sumac	0	1,563	0	0	1,563	100.0
Currant species	23,004	25,201	0	0	48,204	38.4
Black locust	0	1,382	0	0	1,382	100.0
Rose species	6,543	21,823	0	0	28,366	80.3
Rubus species	1,668,729	1,886,043	4,058,063	0	7,612,835	12.1
Willow species	2,752	33,003	11,111	0	46,866	48.0
Black willow	0	0	1,511	0	1,511	100.0
American elderberry	2,999	2,783	7,898	0	13,680	51.7
Red-berried alder	13,542	11,374	20,668	0	45,585	32.9
Sassafras	1,655	0	0	0	1,655	100.0
American mountain ash	32,257	119,928	9,828	0	162,012	35.0
Spirea species	476,761	304,073	410,585	6,795	1,198,214	19.4
Sweetleaf	2,613	2,613	0	0	5,227	68.6
Basswood species	0	0	47,371	0	47,371	100.0
American basswood	38,001	5,201	2,805	0	46,007	39.4
American elm	31,789	15,551	10,502	0	57,842	29.6
Blueberry	1,055,859	853,615	339,044	0	2,248,518	13.4
Viburnum species	77,486	32,323	32,969	0	142,778	35.6
Maple-leaved viburnum	248,086	89,589	8,413	0	346,089	22.8
Hobblebush viburnum	1,175,977	712,166	121,528	0	2,009,671	13.1
Wild raisin	135,483	45,482	79,835	0	260,801	23.1
Arrowwood	118,850	51,194	17,835	0	187,879	51.8
Nannyberry	1,382	22,981	14,442	0	38,805	68.3
Blackhaw	6,469	0	0	0	6,469	100.0
Highbush cranberry	4,535	0	42,651	0	47,185	90.9
Unknown deciduous shrub	80,369	201,042	61,023	0	342,434	29.3
Unknown evergreen shrub	9,496	0	19,983	0	29,479	57.6
Unknown tree	11,214	0	9,692	0	20,906	58.2
All species	18,743,146	15,598,408	10,316,498	6,795	44,664,847	3.7
SE	6.2	6.7	13.6	100.0	3.7	

Table 17.--Number of live trees (1.0+ inches d.b.h.) on timberland by species and diameter class, New Hampshire, 1997

(In thousands of trees)

Species group	Diameter class (inches at breast height)							
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9
Balsam fir	342,165	100,259	46,393	20,334	7,959	3,571	810	278
Tamarack	1,039	0	372	317	284	108	0	36
White spruce	1,803	2,062	716	761	636	376	133	98
Black spruce	0	0	38	0	0	0	0	0
Red spruce	109,821	30,517	22,482	15,854	8,147	5,219	2,211	767
Red pine	415	409	1,016	563	726	356	524	69
White pine	89,818	34,154	26,504	21,359	15,780	13,118	10,734	7,147
Northern white-cedar	895	0	577	505	473	186	0	39
Hemlock	111,848	50,572	29,139	20,803	14,397	9,802	5,965	3,426
Other softwoods	1,241	2,743	1,566	844	376	255	159	247
Total softwoods	659,045	220,717	128,804	81,339	48,780	32,991	20,536	12,107
Sugar maple	128,537	37,841	21,124	15,446	13,590	7,799	3,871	2,052
Red maple	272,669	121,805	67,641	47,466	27,444	13,181	6,820	2,694
Yellow birch	127,468	40,214	17,624	12,329	7,986	5,547	3,119	1,999
Paper birch	79,396	24,738	24,616	19,503	12,407	6,581	2,626	786
Beech	184,530	40,240	19,569	11,348	8,074	5,070	2,741	2,038
White ash	30,540	15,475	7,894	5,103	3,510	2,739	1,815	578
Black ash	1,455	1,997	324	499	272	0	0	0
Aspen	49,004	8,727	5,832	6,179	4,472	2,466	1,867	659
White oaks	4,623	2,489	2,705	1,861	1,224	947	576	139
Red oaks	56,863	23,702	14,427	15,336	12,604	9,823	6,559	2,458
Basswood	2,781	0	708	460	174	263	132	0
Elm	6,158	2,831	618	371	225	39	76	40
Other commercial hardwoods	63,208	17,431	9,965	7,090	3,643	1,712	1,177	349
Noncommercial hardwoods	250,541	41,201	10,996	3,140	869	174	83	0
Total hardwoods	1,257,774	378,693	204,045	146,131	96,495	56,343	31,462	13,792
Total, all species	1,916,819	599,409	332,848	227,470	145,275	89,334	51,997	25,899
SE	4.0	4.0	2.8	2.5	2.5	3.0	3.5	4.6

Table 17.--continued

(In thousands of trees)

Species group	Diameter class (inches at breast height)					All classes	SE
	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	Total 5.0+		
Balsam fir	121	0	0	0	79,466	521,890	10.2
Tamarack	0	0	0	0	1,118	2,157	52.4
White spruce	36	60	72	0	2,886	6,751	36.4
Black spruce	0	0	0	0	38	38	100.0
Red spruce	373	129	0	0	55,184	195,522	9.6
Red pine	0	0	57	0	3,312	4,136	31.9
White pine	3,538	3,006	4,183	949	106,318	230,290	6.8
Northern white-cedar	75	0	0	0	1,855	2,750	74.2
Hemlock	1,708	1,071	692	33	87,035	249,455	8.0
Other softwoods	31	31	31	0	3,542	7,525	63.1
Total softwoods	5,881	4,297	5,036	982	340,753	1,220,515	5.4
Sugar maple	1,022	671	1,056	253	66,885	233,262	9.3
Red maple	1,789	685	804	72	168,598	563,072	4.7
Yellow birch	806	688	664	62	50,823	218,506	9.3
Paper birch	287	24	0	0	66,831	170,965	9.8
Beech	721	387	464	33	50,444	275,215	7.7
White ash	265	255	165	97	22,422	68,437	10.2
Black ash	0	0	0	0	1,095	4,548	55.7
Aspen	142	139	74	0	21,830	79,561	18.9
White oaks	218	70	38	40	7,818	14,930	16.2
Red oaks	1,925	845	914	156	65,048	145,614	7.9
Basswood	93	0	0	0	1,831	4,612	36.2
Elm	0	0	0	0	1,370	10,360	28.2
Other commercial hardwoods	147	70	0	0	24,153	104,792	10.4
Noncommercial hardwoods	0	0	0	0	15,263	307,005	8.6
Total hardwoods	7,416	3,836	4,179	714	564,412	2,200,879	3.0
Total, all species	13,297	8,133	9,215	1,697	905,165	3,421,395	2.7
SE	6.1	8.0	7.7	16.7	2.0	2.7	

Table 18.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, New Hampshire, 1983

(In thousands of trees)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	54,581	25,617	11,502	4,237	917	184	25	0	0	0	97,064	10.0
Tamarack	1,245	399	368	70	35	32	29	0	0	0	2,177	48.0
White spruce	2,130	1,258	462	589	138	0	0	0	0	0	4,578	40.1
Black spruce	773	377	32	29	24	0	0	0	0	0	1,236	61.3
Red spruce	37,399	20,334	11,331	4,526	1,835	738	320	214	57	0	76,755	10.7
Red pine	137	114	468	687	337	241	157	75	0	0	2,216	34.0
White pine	29,035	24,545	18,296	14,237	9,077	5,959	3,665	1,815	2,433	191	109,253	7.5
Northern white-cedar	657	436	306	123	71	32	0	0	22	0	1,647	59.1
Hemlock	23,299	15,621	9,195	6,801	4,039	1,923	1,054	469	405	0	62,806	8.8
Other softwoods	2,827	1,034	423	278	276	80	78	45	21	0	5,062	62.2
Total softwoods	152,084	89,735	52,383	31,577	16,749	9,190	5,328	2,618	2,939	191	362,794	4.9
Sugar maple	18,319	16,056	10,356	5,210	2,935	1,596	827	562	636	62	56,557	10.0
Red maple	63,474	41,977	23,467	9,816	4,243	1,792	889	305	308	15	146,286	5.4
Yellow birch	15,453	10,515	6,449	4,325	2,981	1,383	765	350	447	46	42,715	9.2
Paper birch	33,542	22,565	13,505	5,326	1,743	612	203	102	57	0	77,654	8.5
Beech	13,284	8,476	5,893	3,547	2,565	1,309	682	161	132	13	36,062	10.9
White ash	8,642	5,634	2,902	1,851	1,421	545	275	0	150	19	21,439	12.9
Black ash	1,549	537	464	152	76	0	0	0	0	0	2,778	32.6
Aspen	11,420	9,617	5,738	2,648	1,122	473	142	38	0	0	31,198	13.6
White oaks	3,049	2,875	1,344	1,045	368	267	83	18	12	30	9,092	16.8
Red oaks	19,479	19,724	11,603	7,704	3,950	2,054	1,223	303	475	0	66,517	8.2
Basswood	568	715	315	165	37	23	50	0	0	14	1,888	31.3
Elm	556	192	304	181	103	43	40	0	12	0	1,433	25.0
Other hardwoods	11,355	6,630	3,695	1,408	457	255	80	26	20	0	23,926	9.2
Total hardwoods	200,692	145,513	86,037	43,378	22,000	10,352	5,260	1,865	2,250	199	517,547	2.7
Total, all species	352,776	235,247	138,420	74,955	38,750	19,542	10,587	4,483	5,189	391	880,341	2.1
SE	3.4	2.8	2.8	3.1	3.8	4.9	6.2	8.3	8.1	20.0	2.1	

Table 19.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, New Hampshire, 1997

(In thousands of trees)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	46,148	20,295	7,681	3,423	810	278	121	0	0	0	78,756	9.8
Tamarack	372	284	248	108	0	36	0	0	0	0	1,049	41.5
White spruce	716	761	564	340	133	98	0	60	72	0	2,743	36.7
Black spruce	38	0	0	0	0	0	0	0	0	0	38	100.0
Red spruce	22,375	15,733	7,798	5,149	2,131	767	373	129	0	0	54,455	9.0
Red pine	1,016	563	686	356	524	69	0	0	57	0	3,273	34.3
White pine	25,921	20,780	14,502	12,174	10,630	6,882	3,354	2,806	3,873	643	101,564	5.9
Northern white-cedar	469	505	437	149	0	39	75	0	0	0	1,674	67.7
Hemlock	28,193	20,074	11,965	8,740	5,464	2,876	1,557	949	655	33	80,505	7.2
Other softwoods	1,566	844	343	255	159	218	31	31	31	0	3,480	67.0
Total softwoods	126,813	79,839	44,226	30,695	19,850	11,263	5,510	3,976	4,688	676	327,536	4.0
Sugar maple	20,077	14,640	13,228	7,036	3,262	1,957	832	630	912	180	62,756	7.8
Red maple	63,879	45,272	26,715	10,578	5,866	2,189	1,373	506	541	0	156,919	3.7
Yellow birch	16,329	11,828	7,576	4,445	2,310	1,598	692	544	486	24	45,833	6.5
Paper birch	23,637	18,744	12,061	5,812	2,249	709	79	0	0	0	63,291	6.5
Beech	18,038	10,601	7,434	4,186	2,105	1,743	592	221	243	0	45,163	7.4
White ash	7,691	4,940	3,483	2,591	1,704	512	265	223	132	97	21,638	8.4
Black ash	324	499	235	0	0	0	0	0	0	0	1,058	41.4
Aspen	5,721	6,027	4,408	2,466	1,867	566	142	115	74	0	21,385	11.3
White oaks	2,581	1,726	1,186	805	538	107	218	70	38	40	7,308	13.3
Red oaks	14,150	15,080	12,493	9,644	6,324	2,420	1,854	813	775	116	63,670	6.3
Basswood	593	460	174	173	132	0	93	0	0	0	1,625	22.7
Elm	541	371	225	39	76	40	0	0	0	0	1,293	26.7
Other hardwoods	9,549	6,686	3,457	1,422	1,032	201	117	37	0	0	22,502	8.3
Total hardwoods	183,108	136,875	92,676	49,198	27,464	12,041	6,259	3,159	3,201	458	514,440	2.3
Total, all species	309,921	216,714	136,903	79,893	47,314	23,304	11,769	7,135	7,888	1,134	841,976	2.0
SE	2.9	2.5	2.6	3.1	3.6	4.8	6.4	8.5	8.3	19.3	2.0	

Table 20.--Net volume of all trees on timberland by species and tree class, New Hampshire, 1997

(In millions of cubic feet)

Species group	Tree class						All classes	SE
	Preferred	Acceptable	Preferred/ acceptable	Rough cull	Rotten cull	All cull		
Balsam fir	39.2	443.0	482.2	2.5	1.2	3.7	485.9	9.4
Tamarack	.0	8.2	8.2	.5	.0	.5	8.7	41.4
White spruce	2.1	31.6	33.8	.9	.5	1.4	35.1	44.0
Black spruce	.0	.1	.1	.0	.0	.0	.1	100.0
Red spruce	40.8	459.8	500.5	4.6	1.4	6.0	506.5	9.6
Red pine	.0	44.2	44.2	.3	.0	.3	44.5	33.7
White pine	66.1	1,784.2	1,850.3	82.7	7.0	89.7	1,939.9	5.8
Northern white-cedar	.7	12.6	13.3	.3	.3	.7	14.0	58.3
Hemlock	26.0	806.4	832.4	60.4	5.4	65.8	898.2	8.0
Other softwoods	.0	33.8	33.8	.8	.0	.8	34.6	50.0
Total softwoods	174.9	3,623.9	3,798.8	153.0	15.8	168.8	3,967.7	3.8
Sugar maple	23.6	739.3	762.9	29.4	15.2	44.7	807.6	8.9
Red maple	3.5	1,303.7	1,307.2	84.3	21.1	105.4	1,412.6	4.4
Yellow birch	7.0	458.6	465.5	36.9	13.5	50.4	515.9	7.2
Paper birch	17.4	500.1	517.5	14.3	6.1	20.4	537.9	6.5
Beech	1.1	465.4	466.5	24.6	23.2	47.8	514.3	8.6
White ash	24.3	252.2	276.5	3.7	3.1	6.8	283.3	12.9
Black ash	.0	6.1	6.1	.0	.2	.2	6.4	43.1
Aspen	7.3	246.9	254.1	.6	2.6	3.2	257.3	12.1
White oaks	.0	75.3	75.3	3.1	.7	3.8	79.1	15.6
Red oaks	71.4	782.4	853.8	11.0	8.8	19.8	873.6	6.6
Basswood	.0	19.3	19.3	.5	.7	1.2	20.5	32.2
Elm	.0	9.2	9.2	.1	.0	.1	9.4	36.9
Other commercial hardwoods	2.7	184.5	187.2	11.4	2.0	13.5	200.7	10.4
Noncommercial hardwoods	.0	.0	.0	45.5	.9	46.4	46.4	11.2
Total hardwoods	158.2	5,043.1	5,201.2	265.4	98.3	363.7	5,564.9	2.8
Total, all species	333.1	8,667.0	9,000.0	418.5	114.0	532.5	9,532.5	2.1
SE	12.3	2.2	2.2	6.3	10.4	5.5	2.1	

Volume of all live trees on timberland, for selected species and percent change, New Hampshire, 1983 and 1997

(Volume increased by 2.1 percent for all species)

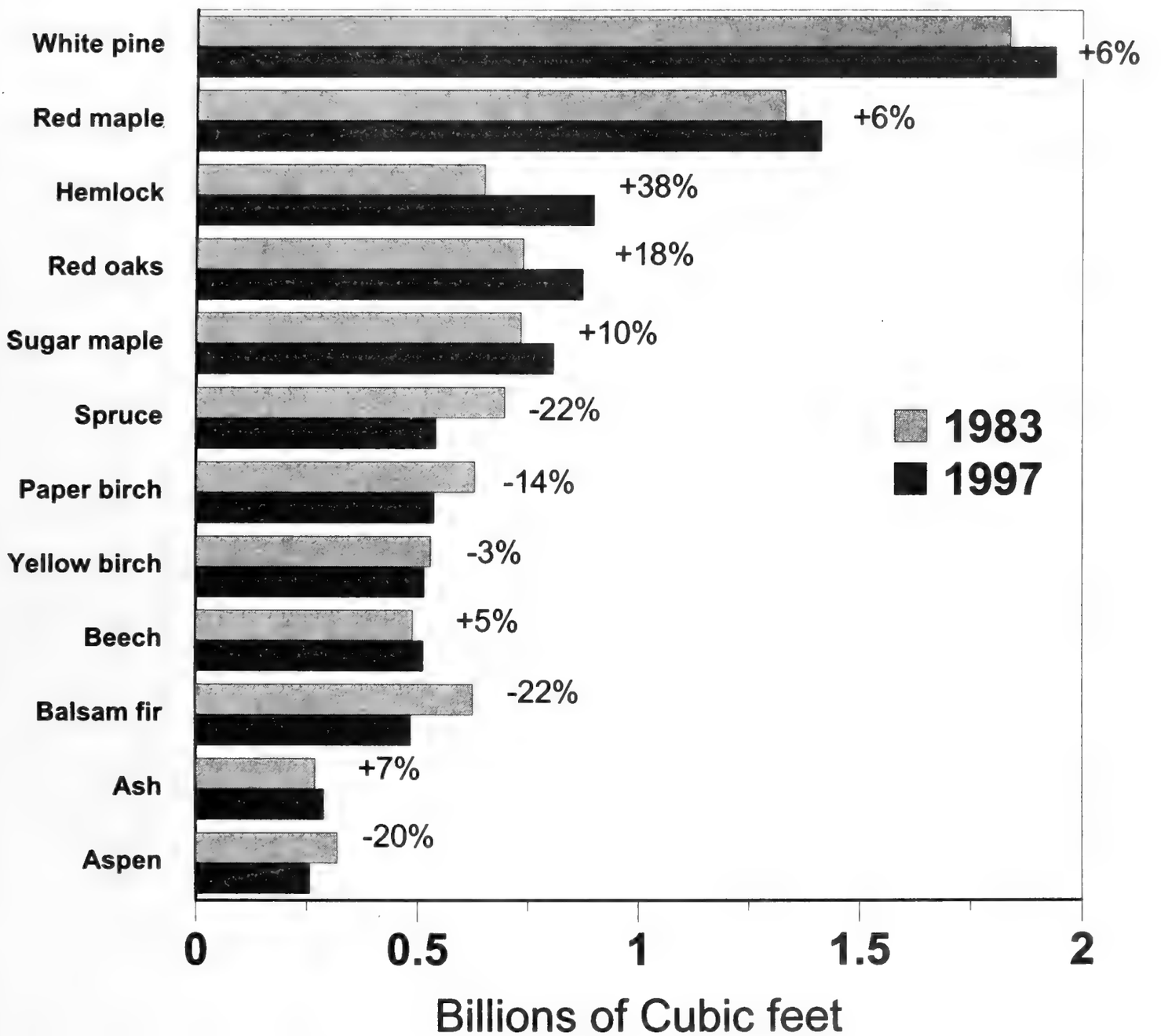


Table 21.--Net volume of all live trees on timberland by species and diameter class, New Hampshire, 1983

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	178.1	190.4	141.7	82.7	26.0	6.4	.9	.0	.0	.0	626.3	9.5
Tamarack	3.9	2.8	4.1	1.3	.8	1.0	2.0	.0	.0	.0	15.9	35.2
White spruce	8.8	11.2	6.8	12.8	6.5	.0	2.0	2.2	.7	.0	51.2	47.8
Black spruce	2.9	3.0	.4	.5	.8	.0	.0	.0	.0	.0	7.6	66.8
Red spruce	141.2	152.6	140.5	89.2	52.0	29.4	17.7	11.5	4.8	.0	638.8	9.5
Red pine	.9	.9	5.4	12.9	9.5	8.5	7.9	4.6	.0	.0	50.4	37.6
White pine	122.3	194.2	231.1	275.7	252.8	221.7	177.2	108.5	210.1	44.1	1,837.8	6.6
Northern white-cedar	1.5	2.6	2.5	1.9	2.0	.8	.0	.0	1.2	.0	12.5	48.0
Hemlock	72.7	98.6	102.1	119.2	97.7	62.6	45.6	23.9	28.4	.0	650.9	8.6
Other softwoods	8.5	6.8	5.4	4.6	6.6	2.6	3.3	2.2	1.5	.0	41.6	45.4
Total softwoods	540.8	663.2	640.1	600.9	454.7	333.0	256.5	152.9	246.8	44.1	3,932.9	4.1
Sugar maple	62.1	125.2	137.4	106.0	80.5	59.8	50.4	35.7	61.0	16.0	734.1	9.4
Red maple	222.6	320.8	300.1	199.0	117.5	69.8	44.7	22.5	31.5	2.9	1,331.5	5.2
Yellow birch	54.1	81.9	82.7	82.2	75.6	51.8	34.5	25.2	33.9	9.1	531.0	8.5
Paper birch	110.5	166.2	171.7	97.0	44.5	22.3	8.2	5.5	4.4	.0	630.2	8.1
Beech	44.5	71.1	91.0	78.2	77.4	57.4	38.7	10.5	19.3	2.0	490.2	10.4
White ash	31.8	46.9	40.7	39.1	41.2	20.5	14.0	.0	8.8	5.4	248.4	14.9
Black ash	6.4	3.5	6.2	2.9	2.0	.0	.0	.0	.0	.0	21.1	43.6
Aspen	47.3	80.3	82.4	52.2	30.8	16.6	8.3	2.5	.0	.0	320.2	13.2
White oaks	10.4	15.5	13.5	15.4	9.5	6.0	3.9	.7	2.0	3.0	79.8	16.8
Red oaks	65.7	139.3	137.8	131.2	94.9	68.3	50.5	16.1	32.7	2.4	738.9	7.3
Basswood	2.5	5.4	3.9	3.0	1.2	1.3	2.7	.0	.0	1.4	21.4	28.2
Elm	2.4	1.5	3.5	2.6	2.5	2.1	1.5	.7	1.1	.0	17.8	22.7
Other commercial hardwoods	29.7	46.6	40.8	27.9	14.3	10.6	3.0	1.1	1.3	.0	175.5	10.2
Noncommercial hardwoods	35.1	17.7	5.5	1.8	1.2	.4	.0	.0	.5	.0	62.2	11.9
Total hardwoods	725.0	1,121.8	1,117.2	838.5	593.0	387.0	260.3	120.5	196.5	42.3	5,402.3	2.7
Total, all species	1,265.8	1,785.1	1,757.3	1,439.3	1,047.7	720.0	516.9	273.4	443.3	86.4	9,335.2	1.7
SE	3.1	2.7	2.7	3.0	3.7	4.7	5.8	7.7	7.7	15.1	1.7	

Table 22.--Net volume of live trees on timberland by species and diameter class, New Hampshire, 1997

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	145.5	141.7	96.1	66.1	22.1	9.4	5.0	.0	.0	.0	485.9	9.4
Tamarack	1.2	1.6	2.9	1.8	.0	1.2	.0	.0	.0	.0	8.7	41.4
White spruce	1.9	4.8	7.5	6.4	3.8	3.7	.5	2.3	4.2	.0	35.1	44.0
Black spruce	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	100.0
Red spruce	76.7	114.9	101.9	101.1	59.1	28.6	17.3	6.9	.0	.0	506.5	9.6
Red pine	2.9	3.8	8.4	6.3	15.8	2.7	.0	.0	4.5	.0	44.5	33.7
White pine	80.5	141.3	183.8	233.8	275.8	245.5	157.8	163.8	326.5	131.2	1,939.9	5.8
Northern white-cedar	1.5	3.1	4.3	2.4	.0	.8	1.9	.0	.0	.0	14.0	58.3
Hemlock	73.4	116.5	144.0	155.9	133.5	102.3	70.1	51.4	46.8	4.2	898.2	8.0
Other softwoods	5.1	5.3	3.5	4.0	3.4	8.0	1.6	1.6	2.2	.0	34.6	50.0
Total softwoods	388.7	533.1	552.3	577.8	513.5	402.2	254.3	226.0	384.2	135.4	3,967.7	3.8
Sugar maple	59.0	102.1	162.2	139.2	95.1	66.3	44.8	37.9	75.2	25.9	807.6	8.9
Red maple	184.9	306.8	312.4	219.1	155.1	82.4	66.9	32.3	50.0	2.8	1,412.6	4.4
Yellow birch	47.1	74.1	84.4	86.7	67.9	54.8	29.0	32.0	35.5	4.4	515.9	7.2
Paper birch	76.6	125.5	141.5	109.3	56.6	23.0	4.3	1.0	.0	.0	537.9	6.5
Beech	51.2	75.2	93.6	93.6	64.9	67.1	29.6	16.7	22.2	.1	514.3	8.6
White ash	26.2	36.7	44.5	54.6	48.2	20.4	13.5	14.0	9.4	15.7	283.3	12.9
Black ash	.9	2.7	2.8	.0	.0	.0	.0	.0	.0	.0	6.4	43.1
Aspen	21.9	47.7	57.0	48.6	48.5	18.3	4.3	7.6	3.4	.0	257.3	12.1
White oaks	7.5	10.2	12.3	14.0	12.7	3.7	7.6	3.2	2.9	4.9	79.1	15.6
Red oaks	44.1	100.1	142.3	168.2	149.7	80.7	74.6	41.6	50.8	21.4	873.6	6.6
Basswood	2.0	3.4	1.8	3.8	4.1	.0	5.4	.0	.0	.0	20.5	32.2
Elm	1.4	1.9	2.3	.8	1.6	1.3	.0	.0	.0	.0	9.4	36.9
Other commercial hardwoods	29.8	48.4	42.0	30.9	29.4	10.3	6.8	3.1	.0	.0	200.7	10.4
Noncommercial hardwoods	23.1	13.7	6.4	1.9	1.3	.0	.0	.0	.0	.0	46.4	11.2
Total hardwoods	576.0	948.4	1,105.4	970.8	734.9	428.4	286.7	189.6	249.5	75.1	5,564.9	2.8
Total, all species	964.8	1,481.5	1,657.7	1,548.6	1,248.5	830.7	541.0	415.5	633.7	210.5	9,532.5	2.1
SE	3.1	2.6	2.7	3.2	3.7	4.7	6.5	8.4	8.4	17.9	2.1	

Table 23.--Net volume of growing-stock trees on timberland by species and diameter class, New Hampshire, 1983

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	170.5	182.3	139.1	81.3	25.5	6.4	.9	.0	.0	.0	606.1	9.5
Tamarack	3.5	2.6	4.1	1.3	.8	1.0	1.1	.0	.0	.0	14.4	37.1
White spruce	7.6	9.5	5.8	11.5	3.4	.0	.0	.0	.0	.0	37.7	42.4
Black spruce	2.5	2.6	.4	.5	.8	.0	.0	.0	.0	.0	6.8	69.6
Red spruce	128.8	148.1	138.3	86.1	49.8	27.6	14.7	11.5	4.1	.0	608.9	9.6
Red pine	.5	.9	5.4	12.9	8.9	8.5	7.9	4.6	.0	.0	49.4	38.3
White pine	93.0	167.3	219.5	263.0	241.8	208.7	168.9	101.2	196.0	27.6	1,687.1	6.8
Northern white-cedar	1.2	2.5	2.5	1.9	1.5	.8	.0	.0	1.2	.0	11.6	49.7
Hemlock	61.5	90.0	93.0	112.2	93.4	58.8	43.3	23.0	26.8	.0	602.1	8.7
Other softwoods	7.9	6.2	4.6	4.6	6.0	2.6	3.3	2.2	1.2	.0	38.7	47.8
Total softwoods	476.9	611.9	612.8	575.5	431.9	314.4	240.2	142.5	229.3	27.6	3,662.9	4.2
Sugar maple	56.7	118.3	132.1	97.4	73.3	54.7	39.9	32.4	50.4	7.5	662.6	9.8
Red maple	191.7	289.5	278.7	173.1	103.1	58.0	37.0	15.6	20.1	1.2	1,167.9	5.5
Yellow birch	47.2	72.8	77.6	74.7	67.9	41.9	28.1	18.9	24.6	7.6	461.4	9.1
Paper birch	104.6	159.9	167.4	93.1	39.9	18.7	7.2	5.5	2.9	.0	599.2	8.3
Beech	37.0	61.4	74.1	68.8	69.2	47.8	30.1	8.1	8.9	1.6	406.9	10.9
White ash	31.2	44.5	39.5	37.8	39.0	19.6	13.5	.0	8.4	5.4	238.9	15.1
Black ash	5.4	3.5	6.0	2.9	2.0	.0	.0	.0	.0	.0	19.9	45.8
Aspen	42.0	75.6	75.8	51.0	29.4	16.6	6.5	2.5	.0	.0	299.4	13.7
White oaks	7.9	14.6	13.5	14.8	8.1	6.0	2.8	.7	1.3	3.0	72.7	17.2
Red oaks	60.4	131.7	135.4	128.9	91.8	67.4	48.7	15.4	30.4	.0	710.1	7.4
Basswood	1.8	5.1	3.1	3.0	1.2	.7	2.7	.0	.0	1.4	19.0	30.1
Elm	1.3	1.1	3.0	2.6	2.2	1.2	1.5	.0	1.1	.0	14.1	25.1
Other hardwoods	34.0	47.2	41.7	24.7	11.0	8.5	3.0	1.1	1.3	.0	172.5	9.9
Total hardwoods	621.1	1,025.4	1,047.9	772.9	538.0	340.9	221.1	100.2	149.3	27.7	4,844.6	2.9
Total, all species	1,098.0	1,637.2	1,660.7	1,348.4	970.0	655.3	461.2	242.7	378.6	55.4	8,507.5	1.9
SE	3.5	2.9	2.8	3.1	3.9	5.0	6.3	8.4	8.6	20.2	1.9	

Table 24.--Net volume of growing-stock trees on timberland by species and diameter class, New Hampshire, 1997

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	145.1	141.7	94.5	64.3	22.1	9.4	5.0	.0	.0	.0	482.2	9.4
Tamarack	1.2	1.5	2.4	1.8	.0	1.2	.0	.0	.0	.0	8.2	43.5
White spruce	1.9	4.8	6.9	6.1	3.8	3.7	.0	2.3	4.2	.0	33.8	43.6
Black spruce	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	100.0
Red spruce	76.5	114.5	99.4	100.4	56.9	28.6	17.3	6.9	.0	.0	500.5	9.5
Red pine	2.9	3.8	8.1	6.3	15.8	2.7	.0	.0	4.5	.0	44.2	33.7
White pine	79.2	138.7	174.7	223.5	274.4	239.5	151.9	156.1	318.6	93.8	1,850.3	5.9
Northern white-cedar	1.3	3.1	4.1	2.1	.0	.8	1.9	.0	.0	.0	13.3	59.6
Hemlock	72.4	114.7	126.6	144.1	125.2	88.3	64.6	46.9	45.4	4.2	832.4	8.3
Other softwoods	5.1	5.3	3.2	4.0	3.4	7.4	1.6	1.6	2.2	.0	33.8	51.1
Total softwoods	385.6	528.3	520.0	552.8	501.5	381.6	242.4	213.7	374.9	98.0	3,798.8	3.9
Sugar maple	58.1	99.2	159.8	129.7	83.3	64.4	39.5	36.6	70.1	22.2	762.9	8.9
Red maple	180.3	299.4	309.9	186.8	139.7	71.1	56.8	26.1	37.2	.0	1,307.2	4.4
Yellow birch	46.0	72.6	82.6	74.6	55.2	46.9	25.9	27.7	32.1	2.1	465.5	7.5
Paper birch	75.1	123.5	139.4	102.8	52.1	22.6	1.9	.0	.0	.0	517.5	6.6
Beech	49.9	73.1	90.0	84.1	56.6	60.7	26.7	11.7	13.7	.0	466.5	8.9
White ash	26.0	36.0	44.2	53.4	46.7	19.1	13.5	13.4	8.6	15.7	276.5	13.1
Black ash	.9	2.7	2.5	.0	.0	.0	.0	.0	.0	.0	6.1	43.9
Aspen	21.7	47.3	56.6	48.6	48.5	16.9	4.3	6.9	3.4	.0	254.1	12.2
White oaks	7.4	10.0	12.1	12.0	12.1	3.1	7.6	3.2	2.9	4.9	75.3	15.9
Red oaks	43.7	98.9	141.9	166.2	147.0	79.9	72.8	40.8	45.3	17.4	853.8	6.6
Basswood	1.8	3.4	1.8	2.8	4.1	.0	5.4	.0	.0	.0	19.3	31.2
Elm	1.3	1.9	2.3	.8	1.6	1.3	.0	.0	.0	.0	9.2	37.2
Other hardwoods	29.3	47.3	40.9	27.9	27.0	7.0	5.5	2.3	.0	.0	187.2	10.5
Total hardwoods	541.5	915.2	1,084.0	889.6	673.9	392.8	259.9	168.6	213.4	62.3	5,201.2	2.9
Total, all species	927.1	1,443.5	1,604.0	1,442.4	1,175.5	774.4	502.3	382.4	588.3	160.2	9,000.0	2.2
SE	3.2	2.7	2.7	3.3	3.8	4.9	6.8	8.9	8.8	20.3	2.2	

Table 25.--Net volume of growing-stock trees on timberland by species and stand-size class, New Hampshire, 1983

(In millions of cubic feet)

Species group	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Balsam fir	142.6	458.2	5.3	.0	606.1	9.5
Tamarack	3.2	8.4	2.8	.0	14.4	37.1
White spruce	2.6	35.1	.0	.0	37.7	42.4
Black spruce	4.6	1.3	1.0	.0	6.8	69.6
Red spruce	201.9	400.9	6.1	.0	608.9	9.6
Red pine	46.1	2.5	.8	.0	49.4	38.3
White pine	1,187.3	476.9	22.9	.0	1,687.1	6.8
Northern white-cedar	6.7	4.9	.0	.0	11.6	49.7
Hemlock	430.2	171.7	.2	.0	602.1	8.7
Other softwoods	20.4	17.1	1.2	.0	38.7	47.8
Total softwoods	2,045.6	1,577.0	40.2	.0	3,662.9	4.2
Sugar maple	382.6	276.0	4.0	.0	662.6	9.8
Red maple	468.7	694.3	4.9	.0	1,167.9	5.5
Yellow birch	274.5	184.7	2.2	.0	461.4	9.1
Paper birch	174.4	424.4	.4	.0	599.2	8.3
Beech	307.9	98.2	.8	.0	406.9	10.9
White ash	111.3	125.5	2.2	.0	238.9	15.1
Black ash	4.5	15.4	.0	.0	19.9	45.8
Aspen	84.2	214.2	1.0	.0	299.4	13.7
White oaks	33.9	38.2	.6	.0	72.7	17.2
Red oaks	320.8	385.6	3.8	.0	710.1	7.4
Basswood	9.5	9.5	.0	.0	19.0	30.1
Elm	10.1	3.9	.0	.0	14.1	25.1
Other hardwoods	74.3	91.2	7.0	.0	172.5	9.9
Total hardwoods	2,256.7	2,561.2	26.7	.0	4,844.6	2.9
Total, all species	4,302.3	4,138.2	66.9	.0	8,507.5	1.9
SE	5.1	4.6	22.2	.0	1.9	

Table 26.--Net volume of growing-stock trees on timberland by species and stand-size class, New Hampshire, 1997

(In millions of cubic feet)

Species group	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Balsam fir	151.6	310.6	20.0	.0	482.2	9.4
Tamarack	5.3	2.7	.1	.0	8.2	43.5
White spruce	25.2	8.1	.5	.0	33.8	43.6
Black spruce	.0	.0	.1	.0	.1	100.0
Red spruce	251.1	236.7	12.7	.0	500.5	9.5
Red pine	31.2	12.5	.5	.0	44.2	33.7
White pine	1,557.6	277.7	15.0	.0	1,850.3	5.9
Northern white-cedar	10.8	.1	2.4	.0	13.3	59.6
Hemlock	634.2	194.8	3.4	.0	832.4	8.3
Other softwoods	20.4	12.8	.6	.0	33.8	51.1
Total softwoods	2,687.4	1,056.1	55.3	.0	3,798.8	3.9
Sugar maple	499.6	251.3	12.0	.0	762.9	8.9
Red maple	761.5	524.7	21.0	.0	1,307.2	4.4
Yellow birch	303.8	155.0	6.8	.0	465.5	7.5
Paper birch	255.0	249.2	13.4	.0	517.5	6.6
Beech	327.3	132.0	7.2	.0	466.5	8.9
White ash	170.1	99.5	6.8	.0	276.5	13.1
Black ash	1.5	4.6	.0	.0	6.1	43.9
Aspen	92.2	151.7	10.3	.0	254.1	12.2
White oaks	51.0	24.3	.0	.0	75.3	15.9
Red oaks	546.8	298.8	8.2	.0	853.8	6.6
Basswood	12.3	7.0	.0	.0	19.3	31.2
Elm	7.1	1.8	.4	.0	9.2	37.2
Other hardwoods	126.7	55.1	5.3	.0	187.2	10.5
Total hardwoods	3,155.0	1,955.0	91.3	.0	5,201.2	2.9
Total, all species	5,842.4	3,011.0	146.6	.0	9,000.0	2.2
SE	4.1	5.5	17.5	.0	2.2	

Table 27.--Net volume of growing-stock trees on timberland by forest type and stand-size class, New Hampshire, 1997

(In millions of cubic feet)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	11.3	4.8	.0	.0	16.1	76.3
White pine	925.6	76.9	6.2	.0	1,008.8	11.7
White pine/hemlock	473.2	73.6	.0	.0	546.7	17.7
Hemlock	354.7	75.3	.0	.0	430.0	20.7
White/red pine group	1,764.8	230.6	6.2	.0	2,001.5	8.0
Balsam fir	48.9	229.7	24.1	.0	302.7	20.1
Red spruce	50.0	73.9	4.6	.0	128.5	32.6
Red spruce/balsam fir	73.2	184.4	.1	.0	257.7	24.4
White spruce	30.5	.0	.0	.0	30.5	76.4
Spruce/fir group	202.7	488.0	28.8	.0	719.4	13.2
Pitch pine	22.9	11.8	.0	.0	34.7	57.9
Loblolly/shortleaf group	22.9	11.8	.0	.0	34.7	57.9
Wh. pine/no.red oak/wh. ash	503.1	65.8	.0	.0	568.8	17.8
Other oak/pine	7.6	.0	.0	.0	7.6	100.0
Oak/pine group	510.6	65.8	.0	.0	576.4	17.6
Post, black, or bear oak	9.9	.0	.9	.0	10.9	92.0
White oak/red oak/hickory	140.4	26.8	.0	.0	167.2	29.8
White oak	.0	2.5	.0	.0	2.5	100.0
Northern red oak	260.1	135.0	.0	.0	395.1	18.9
Red maple/central hardwood	30.8	21.9	.0	.0	52.6	49.2
Mixed central hardwoods	292.6	254.2	7.5	.0	554.4	14.2
Oak/hickory group	733.8	440.4	8.5	.0	1,182.7	9.8
Black ash/Amer. elm/red maple	14.2	.7	2.2	.0	17.1	60.4
Red maple(lowland)	15.5	16.5	.0	.0	31.9	43.6
Red maple(upland)	15.6	12.9	.0	.0	28.4	50.6
Elm/ash/red maple group	45.2	30.0	2.2	.0	77.4	29.1
Sugar maple/beech/yellow birch	1,550.3	769.7	26.9	.0	2,346.9	6.9
Black Cherry	14.8	2.3	2.3	.0	19.4	72.7
Red maple/northern hardwoods	502.2	548.7	28.9	.0	1,079.8	10.5
Mixed northern hardwoods	337.2	238.0	28.2	.0	603.3	15.0
Northern hardwoods group	2,404.4	1,558.7	86.3	.0	4,049.4	4.7
Aspen	57.4	81.9	6.2	.0	145.5	29.9
Paper birch	100.5	104.0	7.1	.0	211.5	24.5
Gray birch	.0	.0	1.4	.0	1.4	72.2
Aspen/birch group	157.9	185.9	14.7	.0	358.4	18.5
All forest types	5,842.4	3,011.0	146.6	.0	9,000.0	2.2
SE	4.1	5.5	17.5	.0	2.2	

Percent of growing-stock volume by forest-type group
New Hampshire, 1997

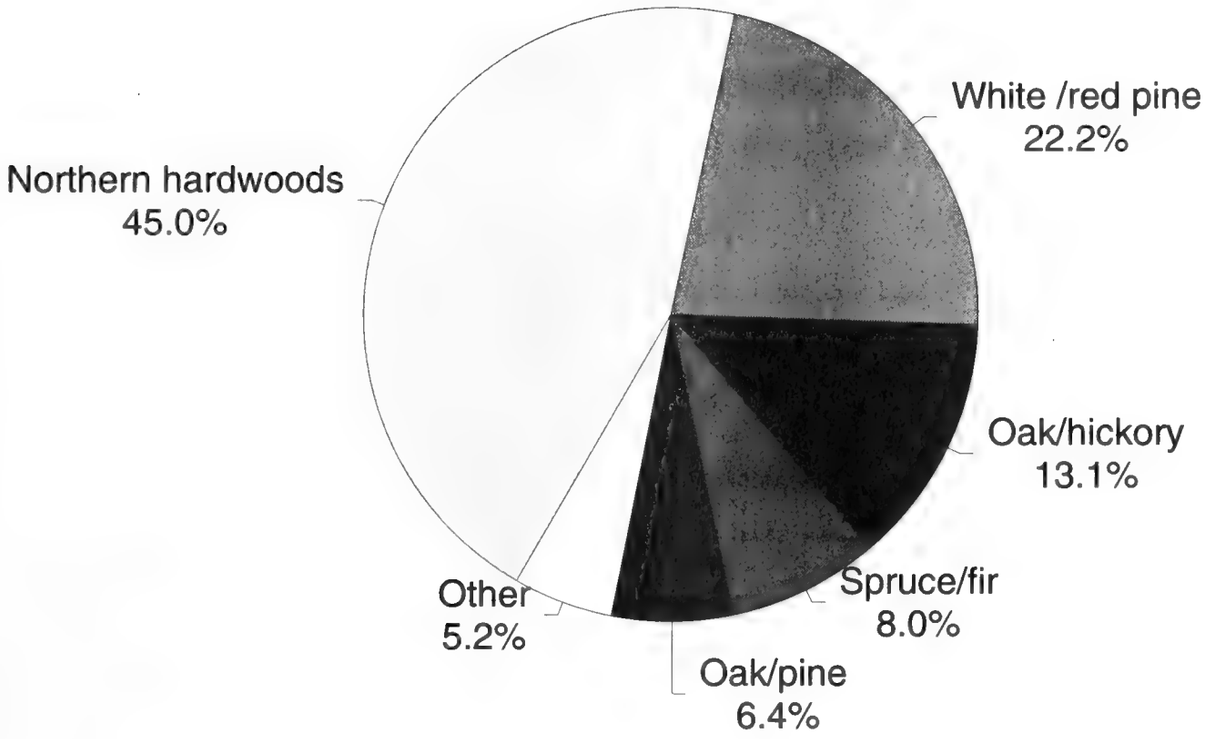


Table 28.--Net volume of growing-stock trees on timberland by species and forest-type group, New Hampshire, 1983

(In millions of cubic feet)

Species group	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Balsam fir	7.2	338.6	.0	.5	2.6	.0	1.5	155.8	99.8	606.1	9.5
Tamarack	.0	12.1	.0	.0	1.3	.0	.0	.6	.5	14.4	37.1
White spruce	.0	29.5	.0	.9	.0	.0	.0	2.4	5.0	37.7	42.4
Black spruce	4.6	1.8	.0	.0	.0	.0	.0	.5	.0	6.8	69.6
Red spruce	41.0	264.9	.0	3.6	5.3	.0	.0	221.4	72.7	608.9	9.6
Red pine	41.0	.0	.0	4.5	1.3	.0	.0	2.6	.0	49.4	38.3
White pine	953.7	30.8	1.9	175.1	138.4	.0	3.7	332.1	51.4	1,687.1	6.8
Northern white-cedar	.0	6.0	.0	.0	.0	.0	.0	1.2	4.4	11.6	49.7
Hemlock	246.9	9.8	.0	24.6	49.6	.0	.3	256.8	14.1	602.1	8.7
Other softwoods	7.7	.0	25.7	2.7	2.6	.0	.0	.0	.0	38.7	47.8
Total softwoods	1,302.0	693.4	27.6	212.0	201.1	.0	5.5	973.4	247.9	3,662.9	4.2
Sugar maple	10.9	3.9	.0	2.2	8.8	.0	.0	622.3	14.6	662.6	9.8
Red maple	119.6	24.7	1.5	42.0	96.0	.0	29.2	786.5	68.4	1,167.9	5.5
Yellow birch	4.9	17.4	.0	.3	4.3	.0	.4	402.8	31.3	461.4	9.1
Paper birch	36.7	49.3	.0	12.8	24.1	.0	.0	244.7	231.6	599.2	8.3
Beech	5.2	.0	.0	2.0	13.1	.0	.0	384.6	2.1	406.9	10.9
White ash	17.9	1.1	.0	9.7	8.2	.0	.0	195.5	6.6	238.9	15.1
Black ash	.6	5.9	.0	.0	.6	.0	.0	12.2	.6	19.9	45.8
Aspen	29.2	15.4	.0	5.5	18.3	.0	.0	79.2	151.8	299.4	13.7
White oaks	12.3	.0	.0	6.1	45.3	.0	.0	8.6	.4	72.7	17.2
Red oaks	67.6	1.6	.0	46.6	397.6	.0	.0	180.9	15.9	710.1	7.4
Basswood	1.9	.0	.0	.0	.5	.0	.0	16.6	.0	19.0	30.1
Elm	5.1	.0	.0	.4	3.1	.0	.0	5.2	.2	14.1	25.1
Other hardwoods	24.0	2.6	.0	1.6	34.5	.0	7.0	94.3	8.4	172.5	9.9
Total hardwoods	335.7	121.9	1.5	129.3	654.4	.0	36.7	3,033.2	532.0	4,844.6	2.9
Total, all species	1,637.7	815.3	29.1	341.2	855.5	.0	42.1	4,006.6	779.9	8,507.5	1.9
SE	9.8	14.0	70.5	22.0	11.6	.0	42.5	5.0	14.6	1.9	

Table 29.--Net volume of growing-stock trees on timberland by species and forest-type group, New Hampshire, 1997

(In millions of cubic feet)

Species group	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Balsam fir	16.3	287.7	.0	4.6	2.6	.0	.6	132.4	38.1	482.2	9.4
Tamarack	4.0	2.7	.0	.8	.0	.0	.0	.8	.0	8.2	43.5
White spruce	.4	22.6	.0	.0	.2	.0	.0	2.2	8.4	33.8	43.6
Black spruce	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	100.0
Red spruce	44.5	221.4	.0	.8	11.6	.0	.0	191.9	30.3	500.5	9.5
Red pine	27.0	.0	.0	.5	7.9	.0	.0	8.3	.5	44.2	33.7
White pine	982.1	36.6	2.1	314.5	174.2	.0	9.5	301.4	30.0	1,850.3	5.9
Northern white-cedar	.6	9.9	.0	.0	.0	.0	.0	2.5	.4	13.3	59.6
Hemlock	433.8	11.7	.0	49.2	55.6	.0	2.9	264.6	14.7	832.4	8.3
Other softwoods	1.4	.0	30.1	.5	1.2	.0	.0	.6	.0	33.8	51.1
Total softwoods	1,510.1	592.6	32.1	370.8	253.2	.0	12.9	904.6	122.5	3,798.8	3.9
Sugar maple	11.3	1.1	.0	1.5	13.8	.0	1.0	730.4	3.9	762.9	8.9
Red maple	177.5	38.3	2.4	69.4	184.2	.0	57.3	750.4	27.8	1,307.2	4.4
Yellow birch	18.1	15.0	.0	2.6	8.4	.0	.1	397.3	24.0	465.5	7.5
Paper birch	49.5	48.6	.0	14.1	42.1	.0	.1	266.7	96.4	517.5	6.6
Beech	28.5	.0	.0	2.5	50.6	.0	.0	383.8	1.0	466.5	8.9
White ash	23.2	.0	.0	16.8	21.2	.0	.0	213.9	1.4	276.5	13.1
Black ash	.2	3.8	.0	.0	.0	.0	.0	1.5	.7	6.1	43.9
Aspen	41.3	17.6	.0	9.0	11.4	.0	.4	107.9	66.6	254.1	12.2
White oaks	12.9	.0	.0	3.7	54.8	.0	.0	2.8	1.1	75.3	15.9
Red oaks	97.3	1.3	.2	77.8	503.6	.0	.5	166.7	6.3	853.8	6.6
Basswood	1.2	.0	.0	.0	1.5	.0	.0	15.7	.9	19.3	31.2
Elm	6.4	.1	.0	.5	.2	.0	.7	1.2	.1	9.2	37.2
Other hardwoods	24.0	1.0	.0	7.7	37.8	.0	4.5	106.4	5.9	187.2	10.5
Total hardwoods	491.5	126.8	2.5	205.6	929.5	.0	64.6	3,144.8	235.9	5,201.2	2.9
Total, all species	2,001.5	719.4	34.7	576.4	1,182.7	.0	77.4	4,049.4	358.4	9,000.0	2.2
SE	8.0	13.2	57.9	17.6	9.8	.0	29.1	4.7	18.5	2.2	

Table 30.--Net volume of growing-stock in the sawlog portion of sawtimber trees on timberland by species and diameter class, New Hampshire, 1997

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	79.5	56.0	19.7	8.5	4.6	.0	.0	.0	168.4	10.6
Tamarack	2.1	1.6	.0	1.1	.0	.0	.0	.0	4.7	50.5
White spruce	5.8	5.3	3.4	3.4	.0	2.2	3.9	.0	24.0	47.1
Red spruce	83.6	87.3	50.9	26.0	16.0	6.4	.0	.0	270.2	10.9
Red pine	6.8	5.5	14.2	2.5	.0	.0	4.2	.0	33.2	37.0
White pine	146.9	194.4	245.3	217.9	140.1	145.2	297.9	87.7	1,475.5	6.2
Northern white-cedar	3.4	1.8	.0	.8	1.7	.0	.0	.0	7.7	54.8
Hemlock	106.5	125.4	111.9	80.3	59.6	43.6	42.4	3.9	573.7	9.3
Other softwoods	2.7	3.5	3.0	6.7	1.5	1.5	2.1	.0	21.0	57.4
Total softwoods	437.4	481.0	448.4	347.2	223.6	198.8	350.6	91.6	2,578.5	4.4
Sugar maple	.0	95.4	67.5	54.1	33.5	31.1	59.6	18.9	360.2	10.9
Red maple	.0	137.4	113.2	59.7	48.3	22.2	31.7	.0	412.4	7.4
Yellow birch	.0	54.9	44.7	39.4	22.0	23.5	27.2	1.8	213.5	9.9
Paper birch	.0	75.7	42.2	19.0	1.6	.0	.0	.0	138.5	11.3
Beech	.0	61.9	45.9	51.0	22.7	10.0	11.7	.0	203.0	11.6
White ash	.0	39.3	37.8	16.0	11.4	11.4	7.3	13.3	136.6	19.4
Aspen	.0	35.7	39.2	14.2	3.7	5.8	2.9	.0	101.6	18.1
White oaks	.0	8.9	9.8	2.6	6.5	2.7	2.5	4.1	37.0	22.0
Red oaks	.0	122.3	119.1	67.1	61.9	34.7	38.5	14.8	458.3	7.9
Basswood	.0	2.0	3.4	.0	4.6	.0	.0	.0	10.0	44.5
Elm	.0	.6	1.3	1.1	.0	.0	.0	.0	3.0	62.2
Other hardwoods	.0	20.5	21.9	5.9	4.7	2.0	.0	.0	55.0	19.3
Total hardwoods	.0	654.7	545.9	330.0	220.9	143.3	181.4	52.9	2,129.1	4.3
Total, all species	437.4	1,135.7	994.3	677.2	444.5	342.1	531.9	144.5	4,707.6	3.0
SE	5.1	3.3	3.8	4.9	6.8	8.9	8.9	20.1	3.0	

Sawtimber volume on timberland, for selected species and percent change, New hampshire, 1983 and 1997

(Volume increased by 18.8 percent for all species)

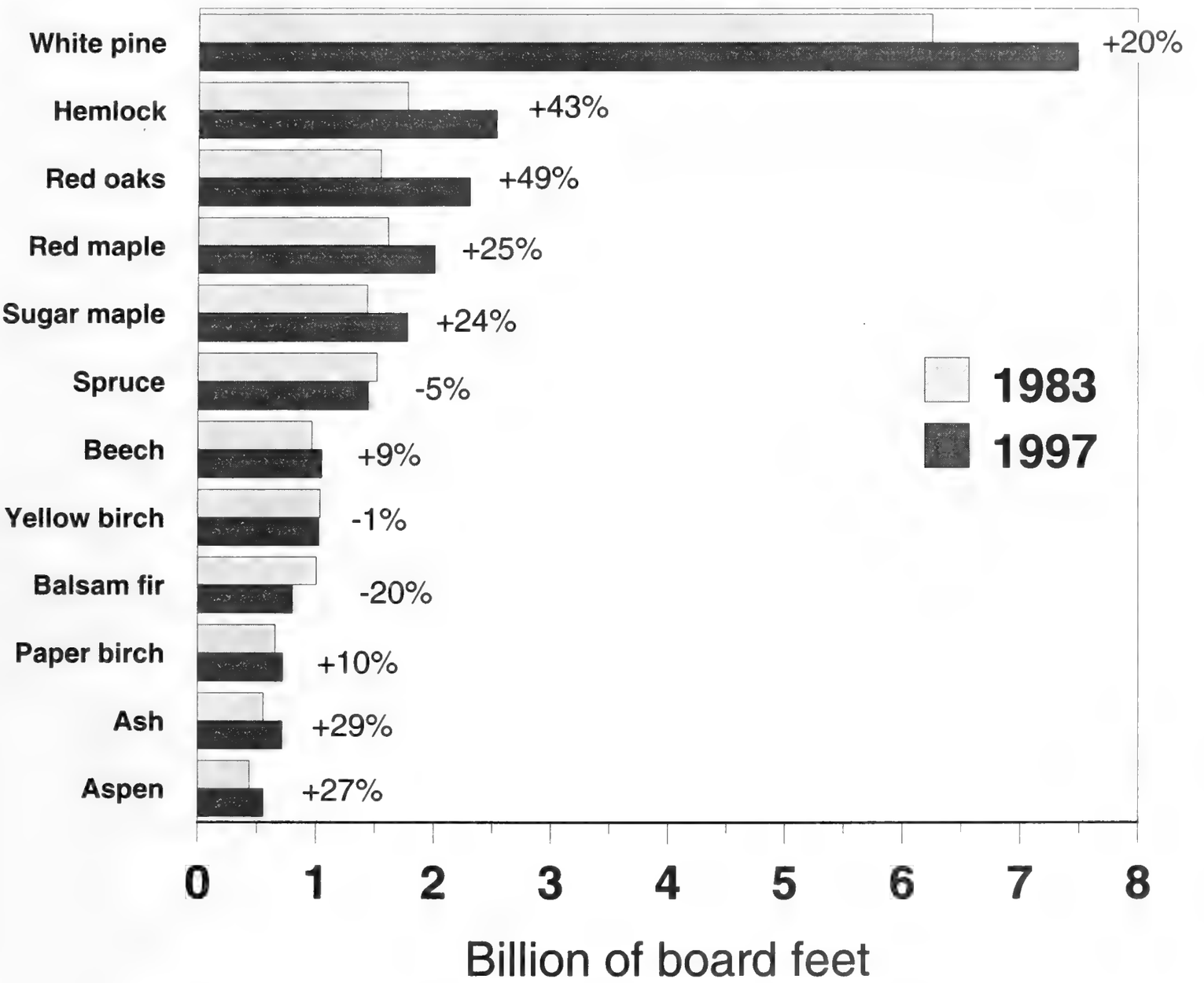


Table 31.--Net volume of sawtimber trees on timberland by species and diameter class, New Hampshire, 1983

(In millions of board feet)

Species group	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	518.6	336.0	114.9	31.0	4.8	.0	.0	.0	1,005.3	11.8
Tamarack	14.1	4.9	3.5	4.2	5.1	.0	.0	.0	31.7	35.2
White spruce	21.8	50.0	15.5	.0	.0	.0	.0	.0	87.3	44.8
Black spruce	1.5	2.3	3.9	.0	.0	.0	.0	.0	7.7	100.0
Red spruce	516.0	373.0	232.0	142.6	78.8	59.0	21.5	.0	1,422.9	11.6
Red pine	17.6	51.3	38.8	40.2	38.9	23.2	.0	.0	210.0	40.2
White pine	722.6	1,042.5	1,058.8	977.6	807.6	497.3	1,007.9	142.8	6,257.1	7.2
Northern white-cedar	5.2	5.7	5.5	2.5	.0	.0	5.2	.0	24.0	61.7
Hemlock	300.2	420.6	371.8	254.2	193.6	106.6	128.3	.0	1,775.2	9.5
Other softwoods	15.8	17.0	23.7	11.3	15.2	10.1	5.8	.0	99.0	64.3
Total softwoods	2,133.2	2,303.2	1,868.4	1,463.5	1,144.0	696.2	1,168.8	142.8	10,920.0	4.8
Sugar maple	.0	357.2	292.0	224.4	163.8	139.6	223.7	33.5	1,434.3	12.1
Red maple	.0	644.4	405.8	239.7	158.3	68.8	85.9	9.1	1,612.0	8.2
Yellow birch	.0	288.2	258.2	172.5	107.5	74.7	104.0	31.9	1,037.1	10.5
Paper birch	.0	364.3	152.8	77.8	28.2	21.8	12.0	.0	657.0	12.6
Beech	.0	259.8	291.3	193.0	139.9	40.2	35.4	7.6	967.2	12.5
White ash	.0	150.0	165.7	86.9	64.3	.0	35.9	33.1	535.9	20.3
Black ash	.0	11.7	9.0	.0	.0	.0	.0	.0	20.6	76.4
Aspen	.0	198.8	123.6	72.6	31.2	12.0	.0	.0	438.3	19.5
White oaks	.0	56.6	31.9	30.5	11.8	3.3	7.2	15.6	156.9	21.2
Red oaks	.0	479.2	367.0	271.8	211.5	70.4	147.2	.0	547.2	8.2
Basswood	.0	9.4	5.8	2.9	12.4	.0	.0	6.4	36.9	44.7
Elm	.0	10.3	8.7	6.6	6.0	.0	5.5	.0	37.2	30.8
Other hardwoods	.0	92.7	41.6	36.2	12.4	5.0	6.9	.0	194.9	17.0
Total hardwoods	.0	2,922.6	2,153.5	1,415.1	947.4	435.9	663.8	137.3	8,675.6	4.5
Total, all species	2,133.2	5,225.8	4,021.9	2,878.5	2,091.4	1,132.1	1,832.6	280.1	19,595.7	2.9
SE	5.6	3.2	3.9	5.1	6.4	8.4	8.9	20.5	2.9	

Table 32.--Net volume of sawtimber trees on timberland by species and diameter class, New Hampshire, 1997

(In millions of board feet)

Species group	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	358.1	276.2	97.9	46.3	24.4	.0	.0	.0	802.9	10.8
Tamarack	8.4	6.4	.0	5.0	.0	.0	.0	.0	19.8	51.6
White spruce	21.2	24.5	16.8	18.7	.0	11.9	17.6	.0	110.7	44.5
Red spruce	373.6	439.4	264.3	139.8	82.1	34.5	.0	.0	1,333.6	11.3
Red pine	27.2	26.0	77.0	13.8	.0	.0	24.9	.0	168.9	39.2
White pine	595.1	906.3	1,218.9	1,135.1	730.9	778.1	1,648.5	481.4	7,494.3	6.4
Northern white-cedar	10.2	7.7	.0	2.8	5.3	.0	.0	.0	26.0	54.1
Hemlock	399.0	528.0	492.1	372.4	287.0	216.6	218.4	20.3	2,534.0	9.7
Other softwoods	10.6	15.5	14.0	32.4	7.9	7.5	10.7	.0	98.6	60.1
Total softwoods	1,803.4	2,230.2	2,181.0	1,766.3	1,137.7	1,048.6	1,920.1	501.7	12,589.0	4.6
Sugar maple	.0	468.8	326.9	259.4	158.6	152.4	311.5	99.1	1,776.7	11.1
Red maple	.0	684.5	543.6	285.9	229.8	111.9	152.1	.0	2,007.7	7.6
Yellow birch	.0	281.7	201.8	178.0	106.8	113.5	135.8	8.3	1,025.8	10.1
Paper birch	.0	406.1	213.1	94.0	7.2	.0	.0	.0	720.4	11.2
Beech	.0	324.3	227.8	255.4	125.2	57.8	59.3	.0	1,049.8	12.0
White ash	.0	204.6	195.3	75.3	61.5	60.6	38.2	80.4	716.0	20.3
Aspen	.0	197.9	210.4	76.5	22.3	33.4	15.7	.0	556.4	19.3
White oaks	.0	45.2	46.1	12.9	28.1	16.4	15.6	30.3	194.7	24.7
Red oaks	.0	614.9	587.9	331.3	305.5	185.9	206.6	74.1	2,306.3	7.9
Basswood	.0	8.1	17.5	.0	26.4	.0	.0	.0	52.0	47.7
Elm	.0	4.0	6.1	6.5	.0	.0	.0	.0	16.6	63.5
Other hardwoods	.0	102.5	102.2	29.8	19.6	9.7	.0	.0	263.8	19.2
Total hardwoods	.0	3,342.6	2,678.8	1,605.1	1,091.1	741.6	934.8	292.3	10,686.2	4.3
Total, all species	1,803.4	5,572.8	4,859.8	3,371.4	2,228.8	1,790.2	2,855.0	793.9	23,275.1	3.1
SE	5.3	3.3	3.8	5.0	7.0	9.1	9.1	20.5	3.1	

Table 33.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, New Hampshire, 1997

(In millions of board feet)

Species group	>15" Diameter at breast height						All size classes						
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	SE
Balsam fir	34.6	.0	.0	.0	36.0	70.7	718.8	.0	.0	.0	84.0	802.9	10.8
Tamarack	5.0	.0	.0	.0	.0	5.0	17.3	.0	.0	.0	2.5	19.8	51.6
White spruce	25.4	.0	.0	.0	22.9	48.3	75.2	.0	.0	.0	35.5	110.7	44.5
Red spruce	217.8	.0	.0	.0	38.6	256.4	1,223.7	.0	.0	.0	109.9	1,333.6	11.3
Red pine	30.7	.0	7.9	.0	.0	38.7	54.7	2.4	105.7	.0	6.2	168.9	39.2
White pine	231.1	1,441.8	1,592.2	497.9	1,011.1	4,774.1	294.2	2,190.9	3,042.9	799.0	1,167.3	7,494.3	6.4
Northern white-cedar	3.6	.0	.0	.0	4.5	8.1	20.0	.0	.0	.0	6.0	26.0	54.1
Hemlock	754.3	.0	.0	.0	360.5	1,114.8	1,881.1	.0	.0	.0	652.8	2,534.0	9.7
Other softwoods	14.0	9.9	23.9	.0	10.7	58.5	18.4	15.0	54.5	.0	10.7	98.6	60.1
Total softwoods	1,316.6	1,451.7	1,624.0	497.9	1,484.3	6,374.4	4,303.6	2,208.3	3,203.1	799.0	2,075.0	12,589.0	4.6
Sugar maple	240.6	327.7	237.7	63.8	111.2	981.0	240.6	443.0	847.6	97.4	148.1	1,776.7	11.1
Red maple	57.9	155.1	293.3	63.5	209.9	779.7	57.9	306.8	1,191.8	140.6	310.6	2,007.7	7.6
Yellow birch	118.6	147.0	168.4	18.7	89.7	542.3	118.6	231.1	531.7	28.7	115.8	1,025.8	10.1
Paper birch	35.6	44.6	10.2	.0	10.9	101.2	35.6	167.2	459.3	13.3	45.2	720.4	11.2
Beech	20.6	83.4	226.0	60.1	107.5	497.7	20.6	134.6	599.0	151.6	143.9	1,049.8	12.0
White ash	122.9	91.5	48.8	.0	52.8	316.1	122.9	219.3	302.9	1.6	69.3	716.0	20.3
Aspen	26.8	46.8	36.9	9.3	28.2	148.0	26.8	137.5	307.9	54.1	30.1	556.4	19.3
White oaks	12.0	8.9	44.3	4.2	34.0	103.3	12.0	28.4	111.6	8.8	34.0	194.7	24.7
Red oaks	427.5	399.2	137.5	48.4	90.8	1,103.5	427.5	749.0	942.2	73.9	113.6	2,306.3	7.9
Basswood	19.2	7.2	.0	.0	.0	26.4	19.2	16.1	13.9	.9	1.9	52.0	47.7
Elm	.0	.0	6.5	.0	.0	6.5	.0	.0	12.5	.0	4.1	16.6	63.5
Other hardwoods	.0	25.5	27.6	.0	5.9	59.1	.0	64.5	163.5	15.9	19.9	263.8	19.2
Total hardwoods	1,081.6	1,337.0	1,237.2	268.0	741.0	4,664.8	1,081.6	2,497.5	5,483.8	586.8	1,036.4	10,686.2	4.3
Total, all species	2,398.2	2,788.7	2,861.2	765.8	2,225.3	11,039.2	5,385.2	4,705.8	8,686.9	1,385.8	3,111.4	23,275.1	3.1
SE	9.0	8.4	7.3	13.2	9.6	4.8	5.9	6.0	3.8	9.4	7.6	3.1	

Table 34.--Average annual net change of growing-stock volume on timberland by species and component of change, New Hampshire, 1997

(In thousands of cubic feet)

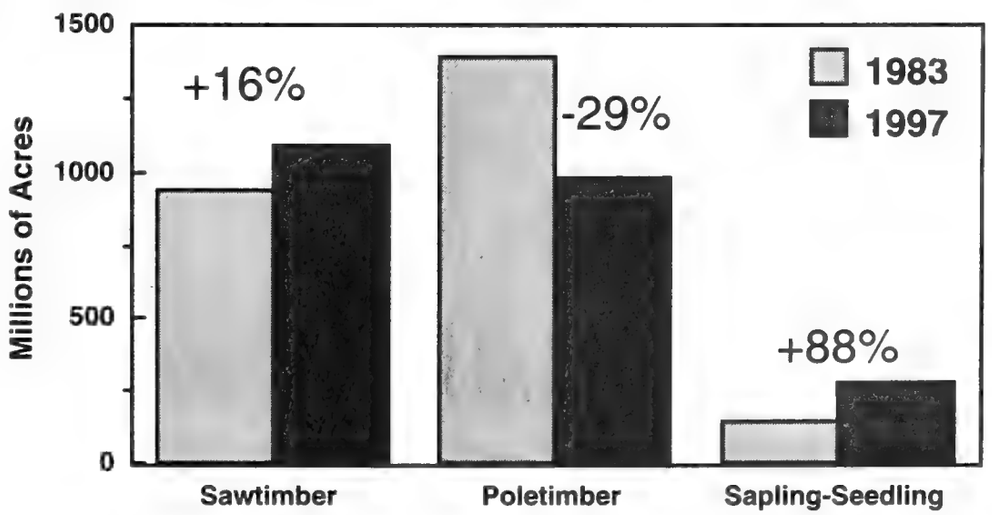
Species group	Component of change								Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull decrement	Cull increment	Net growth	Removals	
Balsam fir	10,203	7,746	17,949	-11,818	543	-330	6,344	-11,667	-5,323
Tamarack	119	201	320	-130	207	-77	321	-308	13
White spruce	373	498	872	-88	666	0	1,450	-564	886
Black spruce	0	31	31	-155	0	0	-124	-268	-392
Red spruce	4,183	7,172	11,355	-4,087	929	-473	7,724	-7,598	126
Red pine	527	250	777	-215	35	-72	525	-1,979	-1,454
White pine	12,738	31,842	44,580	-3,896	6,908	-2,492	45,101	-31,791	13,310
Northern white-cedar	109	268	377	-200	0	0	176	-17	159
Hemlock	8,389	11,194	19,583	-2,008	1,801	-3,273	16,103	-7,367	8,736
Other softwoods	177	278	455	-62	46	0	439	-77	362
Total softwoods	36,820	59,481	96,301	-22,659	11,135	-6,717	78,059	-61,636	16,423
Sugar maple	7,301	10,742	18,043	-1,189	3,638	-1,936	18,555	-10,075	8,480
Red maple	10,943	17,099	28,043	-4,342	8,334	-3,913	28,121	-17,206	10,916
Yellow birch	4,569	4,453	9,021	-3,789	2,520	-2,157	5,595	-5,573	22
Paper birch	3,852	4,191	8,044	-6,025	855	-2,161	713	-9,192	-8,478
Beech	3,685	5,109	8,794	-3,084	3,972	-3,083	6,599	-7,987	-1,388
White ash	3,649	3,416	7,065	-1,553	154	-87	5,578	-2,458	3,119
Black ash	0	16	16	-160	0	0	-144	-70	-214
Aspen	3,093	3,418	6,511	-3,531	886	-171	3,695	-3,868	-173
White oaks	551	826	1,377	-158	365	-123	1,461	-1,497	-36
Red oaks	7,940	8,656	16,596	-1,914	1,971	-212	16,441	-12,298	4,143
Basswood	196	427	623	0	69	-32	660	-65	595
Elm	48	0	48	-577	53	0	-475	-244	-719
Other hardwoods	2,224	2,480	4,704	-1,168	1,000	-340	4,195	-1,400	2,795
Total hardwoods	48,052	60,834	108,886	-27,491	23,817	-14,216	90,996	-71,934	19,062
Total, all species	84,871	120,315	205,187	-50,150	34,951	-20,933	169,055	-133,570	35,485

Table 35.--Average annual net change of sawtimber volume on timberland by species and component of change, New Hampshire, 1997

(In thousands of board feet)

Species group	Component of change								Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull decrement	Cull increment	Net growth	Removals	
Balsam fir	23,644	13,091	36,735	-23,248	136	-166	13,458	-23,020	-9,562
Tamarack	511	507	1,017	-317	635	0	1,337	-1,127	210
White spruce	1,767	2,082	3,849	-220	2,804	0	6,433	-1,873	4,560
Black spruce	101	0	101	0	0	0	101	-690	-589
Red spruce	16,152	22,185	38,338	-11,403	2,067	-1,582	27,420	-19,677	7,743
Red pine	109	1,284	1,393	-965	0	-309	119	-9,023	-8,904
White pine	64,539	155,065	219,605	-10,984	22,836	-9,701	221,757	-127,147	94,610
Northern white-cedar	335	1,887	2,222	-383	0	0	1,838	-34	1,804
Hemlock	25,939	37,826	63,765	-5,221	3,764	-11,305	51,003	-25,258	25,745
Other softwoods	489	1,302	1,791	-127	71	0	1,736	-145	1,591
Total softwoods	133,586	235,231	368,817	-52,867	32,314	-23,063	325,201	-207,994	117,207
Sugar maple	32,029	15,980	48,009	-740	9,549	-6,172	50,645	-23,967	26,678
Red maple	42,951	20,586	63,537	-4,861	10,965	-9,837	59,804	-29,222	30,582
Yellow birch	17,382	8,079	25,461	-6,979	6,109	-5,182	19,408	-17,781	1,627
Paper birch	16,231	3,006	19,237	-3,001	699	-4,003	12,933	-18,173	-5,240
Beech	18,617	10,124	28,741	-9,674	2,608	-6,742	14,932	-18,020	-3,087
White ash	15,590	9,180	24,769	-2,317	238	0	22,690	-6,415	16,275
Black ash	0	0	0	0	0	0	0	-269	-269
Aspen	17,841	6,981	24,822	-4,232	836	-491	20,935	-5,990	14,945
White oaks	2,210	1,399	3,609	0	488	-580	3,517	-2,795	722
Red oaks	45,023	25,363	70,386	-3,044	2,605	-533	69,413	-31,513	37,899
Basswood	917	1,281	2,199	0	0	0	2,199	0	2,199
Elm	0	0	0	-1,699	0	0	-1,699	-1,209	-2,907
Other hardwoods	7,075	2,121	9,195	-2,135	2,528	-898	8,691	-2,151	6,540
Total hardwoods	215,866	104,099	319,965	-38,682	36,625	-34,439	283,469	-157,505	125,963
Total, all species	349,453	339,330	688,783	-91,549	68,939	-57,503	608,670	-365,500	243,171

NORTHERN UNIT TABLES



Northern Unit, area of timberland by stand-size class, 1983 and 1997

Table 36.--Area of timberland by forest type, forest-type group, and stand-size class, Northern Unit, New Hampshire, 1983

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	9.7	.0	.0	.0	9.7	100.0
White pine	30.2	20.5	.0	.0	50.7	44.2
White pine/hemlock	20.4	9.7	.0	.0	30.1	57.1
Hemlock	19.0	9.7	.0	.0	28.7	57.7
White/red pine group	79.3	39.9	.0	.0	119.2	27.5
Balsam fir	39.3	148.5	27.1	.0	214.9	20.1
Red spruce	.0	69.8	9.7	.0	79.4	35.0
Red spruce/balsam fir	19.8	105.5	9.7	.0	134.9	25.7
White spruce	.0	20.1	.0	.0	20.1	69.9
Tamarack	.0	10.0	.0	.0	10.0	100.0
Spruce/fir group	59.2	353.8	46.4	.0	459.3	12.7
Pitch pine	9.4	9.4	.0	.0	18.7	68.5
Loblolly/shortleaf group	9.4	9.4	.0	.0	18.7	68.5
Wh. pine/no.red oak/wh. ash	28.6	18.7	.0	.0	47.3	43.8
Oak/pine group	28.6	18.7	.0	.0	47.3	43.8
Northern red oak	19.4	49.8	8.4	.0	77.6	34.6
Red maple/central hardwood	.0	.0	10.0	.0	10.0	100.0
Mixed central hardwoods	9.7	38.2	.0	.0	47.9	44.8
Oak/hickory group	29.1	88.0	18.3	.0	135.5	25.7
Black ash/Amer. elm/red maple	.0	8.2	8.5	.0	16.7	70.7
Red maple(upland)	.0	.0	10.0	.0	10.0	100.0
Elm/ash/red maple group	.0	8.2	18.6	.0	26.7	58.0
Sugar maple/beech/yellow birch	559.6	332.2	28.0	.0	919.8	8.1
Black Cherry	.0	10.0	9.7	.0	19.7	70.7
Red maple/northern hardwoods	68.7	245.9	.0	.0	314.6	16.0
Pin cherry/reverting field	.0	10.0	.0	.0	10.0	100.0
Mixed northern hardwoods	28.5	48.0	8.9	.0	85.4	32.4
Northern hardwoods group	656.7	646.1	46.6	.0	1,349.4	5.7
Aspen	38.5	76.3	7.0	.0	121.7	27.2
Paper birch	38.7	158.0	10.7	.0	207.5	20.9
Aspen/birch group	77.2	234.3	17.7	.0	329.2	15.8
All forest types	939.5	1,398.4	147.5	.0	2,485.4	1.0
SE	7.5	5.4	23.4	.0	1.0	

Table 37.--Area of timberland by forest type, forest-type group, and stand-size class, Northern Unit, New Hampshire, 1997

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	.0	4.9	.0	.0	4.9	100.0
White pine	55.8	16.0	.0	.0	71.8	24.4
White pine/hemlock	42.4	7.1	.0	.0	49.5	33.1
Hemlock	57.6	4.9	.0	.0	62.5	27.8
White/red pine group	155.8	32.9	.0	.0	188.7	15.0
Balsam fir	31.6	127.6	43.0	.0	202.2	16.9
Red spruce	12.3	10.6	10.2	.0	33.1	38.4
Red spruce/balsam fir	28.5	86.0	6.3	3.9	124.7	21.1
White spruce	11.6	.0	.0	.0	11.6	69.0
Spruce/fir group	84.0	224.2	59.5	3.9	371.6	11.5
Pitch pine	10.4	5.2	.0	.0	15.5	56.0
Loblolly/shortleaf group	10.4	5.2	.0	.0	15.5	56.0
Wh. pine/no.red oak/wh. ash	18.1	15.8	1.4	.0	35.3	34.0
Oak/pine group	18.1	15.8	1.4	.0	35.3	34.0
Post, black, or bear oak	.0	.0	5.2	.0	5.2	100.0
White oak/red oak/hickory	5.5	5.4	.0	.0	10.9	70.7
Northern red oak	29.1	23.5	.0	.0	52.5	32.6
Red maple/central hardwood	1.4	.0	.0	.0	1.4	100.0
Mixed central hardwoods	29.1	52.6	.0	.0	81.8	25.6
Oak/hickory group	65.0	81.6	5.2	.0	151.8	18.3
Black ash/Amer. elm/red maple	11.4	1.9	.0	.0	13.3	62.4
Red maple(lowland)	6.7	.0	.0	.0	6.7	100.0
Willow	.0	.0	1.6	.0	1.6	100.0
Elm/ash/red maple group	18.1	1.9	1.6	.0	21.5	50.0
Sugar maple/beech/yellow birch	539.2	378.7	66.7	.0	984.5	6.0
Black Cherry	7.4	.0	19.0	.0	26.4	42.5
Red maple/northern hardwoods	104.1	117.1	34.0	.0	255.2	14.6
Pin cherry/reverting field	.0	4.5	11.0	.0	15.5	59.5
Mixed northern hardwoods	38.2	52.0	23.6	.0	113.9	21.8
Northern hardwoods group	688.9	552.3	154.4	.0	1,395.6	4.4
Aspen	19.5	19.9	28.0	.0	67.4	28.2
Paper birch	32.4	53.6	19.9	.0	105.9	24.4
Gray birch	.0	.0	6.9	.0	6.9	82.6
Aspen/birch group	51.9	73.4	54.9	.0	180.2	17.6
All forest types	1,092.2	987.2	276.8	3.9	2,360.2	1.7
SE	5.7	6.1	12.9	100.0	1.7	

Table 38.--Number of live trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Northern Unit, New Hampshire, 1997

(In thousands of trees)

Species group	Diameter class (inches at breast height)							
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9
Balsam fir	306,495	90,472	42,735	19,490	7,690	3,303	693	278
Tamarack	1,039	0	338	243	250	108	0	36
White spruce	1,803	2,062	716	761	636	376	133	98
Red spruce	88,117	24,206	16,739	11,575	6,248	3,596	1,601	492
Red pine	415	409	847	496	281	149	142	31
White pine	26,618	5,832	6,749	4,585	3,065	2,103	2,358	1,506
Northern white-cedar	895	0	577	505	473	186	0	39
Hemlock	28,610	13,738	7,454	5,615	5,173	3,319	2,123	1,275
Other softwoods	389	2,743	1,344	844	376	157	93	218
Total softwoods	454,381	139,461	77,499	44,113	24,192	13,298	7,143	3,973
Sugar maple	93,604	26,528	15,289	11,953	10,822	6,576	3,082	1,593
Red maple	104,434	39,276	25,824	18,029	9,506	5,046	3,198	1,206
Yellow birch	98,067	30,033	12,145	9,592	6,160	4,105	2,609	1,641
Paper birch	55,813	20,979	18,847	13,837	7,382	4,350	1,863	572
Beech	117,965	26,815	12,474	7,168	5,691	3,478	1,789	1,360
White ash	9,635	7,079	3,349	2,125	1,555	1,499	691	263
Black ash	1,455	1,513	324	499	235	0	0	0
Aspen	29,440	4,017	3,349	3,547	2,452	1,567	1,315	588
White oaks	500	909	162	162	33	139	33	0
Red oaks	15,435	6,208	4,282	4,097	3,037	1,794	1,661	611
Basswood	408	0	241	202	0	93	33	0
Elm	1,872	0	236	31	36	0	0	0
Other commercial hardwoods	16,731	4,959	1,767	1,002	322	318	370	173
Noncommercial hardwoods	169,248	25,873	6,308	2,251	473	75	57	0
Total hardwoods	714,611	194,190	104,598	74,495	47,704	29,041	16,702	8,007
Total, all species	1,168,992	333,652	182,097	118,608	71,896	42,339	23,845	11,981
SE	5.8	5.8	4.4	3.8	3.9	4.7	5.6	7.2

Table 38.--continued

(In thousands of trees)

Species group	Diameter class (inches at breast height)					All classes	SE
	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	Total 5.0+		
Balsam fir	121	0	0	0	74,309	471,276	10.9
Tamarack	0	0	0	0	975	2,013	55.9
White spruce	36	60	72	0	2,886	6,751	36.4
Red spruce	263	93	0	0	40,607	152,930	11.0
Red pine	0	0	57	0	2,004	2,828	43.3
White pine	849	368	1,140	291	23,015	55,465	13.7
Northern white-cedar	75	0	0	0	1,855	2,750	74.2
Hemlock	652	603	305	33	26,551	68,899	15.1
Other softwoods	31	31	31	0	3,127	6,259	75.2
Total softwoods	2,026	1,156	1,605	323	175,329	769,172	7.9
Sugar maple	875	555	757	64	51,567	171,700	9.9
Red maple	619	211	239	33	63,912	207,622	8.6
Yellow birch	670	571	586	24	38,103	166,204	11.3
Paper birch	92	24	0	0	46,967	123,759	12.5
Beech	538	280	322	33	33,134	177,915	10.2
White ash	153	64	125	60	9,884	26,599	14.0
Black ash	0	0	0	0	1,057	4,026	61.8
Aspen	142	100	74	0	13,133	46,590	23.5
White oaks	0	33	0	40	603	2,013	47.4
Red oaks	688	66	168	80	16,484	38,128	16.0
Basswood	93	0	0	0	662	1,070	44.6
Elm	0	0	0	0	303	2,176	43.2
Other commercial hardwoods	41	70	0	0	4,064	25,754	23.4
Noncommercial hardwoods	0	0	0	0	9,164	204,285	11.1
Total hardwoods	3,911	1,974	2,272	335	289,040	1,197,841	4.6
Total, all species	5,937	3,130	3,878	658	464,370	1,967,013	4.1
SE	9.1	12.4	12.0	27.9	3.2	4.1	

Table 39.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Northern Unit, New Hampshire, 1983

(In thousands of trees)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	53,287	24,987	11,214	4,123	868	184	25	0	0	0	94,688	10.2
Tamarack	1,038	399	368	70	35	32	29	0	0	0	1,970	51.9
White spruce	2,130	1,258	462	589	138	0	0	0	0	0	4,578	40.1
Black spruce	440	77	0	0	0	0	0	0	0	0	517	70.8
Red spruce	31,568	16,694	9,907	3,728	1,556	657	301	143	41	0	64,594	12.0
Red pine	0	0	86	153	35	62	138	75	0	0	548	52.1
White pine	6,783	5,828	3,357	2,927	1,265	1,197	706	314	671	28	23,076	19.7
Northern white-cedar	657	436	306	123	71	32	0	0	22	0	1,647	59.1
Hemlock	6,907	4,293	2,488	1,898	1,662	707	373	145	263	0	18,737	16.1
Other softwoods	2,622	678	81	107	199	56	78	45	21	0	3,887	79.8
Total softwoods	105,430	54,651	28,269	13,718	5,829	2,928	1,650	721	1,019	28	214,244	7.3
Sugar maple	11,707	10,865	7,265	3,618	2,032	1,299	670	458	548	37	38,498	12.8
Red maple	27,388	18,589	10,160	4,373	2,047	1,043	455	126	171	15	64,366	9.0
Yellow birch	10,257	8,298	5,259	3,595	2,722	995	667	313	415	41	32,561	11.2
Paper birch	22,726	15,244	7,858	3,836	1,125	518	138	48	42	0	51,535	11.7
Beech	8,349	5,077	4,247	2,404	1,749	895	538	161	86	13	23,520	14.6
White ash	3,316	2,305	1,215	851	827	340	160	0	84	19	9,118	19.8
Black ash	1,138	418	225	39	0	0	0	0	0	0	1,821	36.1
Aspen	6,967	5,672	4,005	1,982	898	428	84	21	0	0	20,058	16.5
White oaks	89	0	0	0	39	0	0	0	0	0	127	76.0
Red oaks	5,465	5,220	2,582	1,237	689	575	302	71	55	0	16,195	23.3
Basswood	86	0	0	0	37	0	31	0	0	14	168	65.7
Elm	280	80	0	77	0	0	0	0	0	0	437	46.5
Other hardwoods	2,995	1,223	645	305	105	31	0	26	20	0	5,350	20.5
Total hardwoods	100,763	72,991	43,462	22,319	12,269	6,124	3,044	1,223	1,421	139	263,756	4.2
Total, all species	206,194	127,643	71,732	36,037	18,097	9,052	4,694	1,944	2,440	167	478,000	3.2
SE	5.2	4.3	4.1	4.9	5.9	7.8	9.5	13.7	12.8	29.7	3.2	

Table 40.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Northern Unit, New Hampshire, 1997

(In thousands of trees)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	42,603	19,452	7,412	3,193	693	278	121	0	0	0	73,751	10.3
Tamarack	338	210	214	108	0	36	0	0	0	0	906	47.1
White spruce	716	761	564	340	133	98	0	60	72	0	2,743	36.7
Red spruce	16,670	11,532	5,975	3,565	1,601	492	263	93	0	0	40,191	10.2
Red pine	847	496	241	149	142	31	0	0	57	0	1,964	51.2
White pine	6,749	4,585	2,728	2,007	2,331	1,466	809	325	1,056	248	22,305	12.2
Northern white-cedar	469	505	437	149	0	39	75	0	0	0	1,674	67.7
Hemlock	7,197	5,389	4,794	3,225	2,090	1,209	652	603	305	33	25,496	13.0
Other softwoods	1,344	844	343	157	93	218	31	31	31	0	3,094	75.3
Total softwoods	76,932	43,774	22,710	12,894	7,082	3,867	1,950	1,113	1,521	281	172,124	6.4
Sugar maple	14,474	11,367	10,460	5,969	2,513	1,499	685	514	720	64	48,265	9.2
Red maple	24,231	17,047	9,252	3,791	2,709	964	491	171	130	0	58,788	6.6
Yellow birch	11,161	9,127	5,884	3,234	1,868	1,308	556	427	448	24	34,038	7.7
Paper birch	17,943	13,237	7,105	3,775	1,522	495	0	0	0	0	44,078	8.7
Beech	11,707	6,866	5,356	2,787	1,268	1,065	409	183	169	0	29,809	9.4
White ash	3,250	2,055	1,555	1,392	658	229	153	31	93	60	9,475	12.5
Black ash	324	499	197	0	0	0	0	0	0	0	1,020	42.8
Aspen	3,311	3,507	2,389	1,567	1,315	495	142	76	74	0	12,875	14.6
White oaks	162	162	33	139	33	0	0	33	0	40	603	43.0
Red oaks	4,184	4,054	3,004	1,794	1,535	611	655	33	135	40	16,045	13.3
Basswood	241	202	0	33	33	0	93	0	0	0	602	36.0
Elm	236	31	36	0	0	0	0	0	0	0	303	41.9
Other hardwoods	1,528	932	253	291	300	65	41	37	0	0	3,446	17.6
Total hardwoods	92,752	69,087	45,523	24,771	13,754	6,732	3,226	1,506	1,768	228	259,349	3.6
Total, all species	169,685	112,861	68,234	37,664	20,837	10,598	5,176	2,619	3,289	510	431,473	3.3
SE	4.5	3.8	4.0	4.9	5.8	7.2	9.8	13.4	13.1	29.1	3.3	

Table 41.--Net volume of all trees on timberland by species and tree class, Northern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Tree class						All classes	SE
	Preferred	Acceptable	Preferred/ acceptable	Rough cull	Rotten cull	All cull		
Balsam fir	39.2	416.5	455.7	1.9	1.2	3.1	458.9	9.8
Tamarack	.0	7.5	7.5	.5	.0	.5	8.0	44.6
White spruce	2.1	31.6	33.8	.9	.5	1.4	35.1	44.0
Red spruce	34.3	335.0	369.3	1.2	1.2	2.4	371.7	10.6
Red pine	.0	21.2	21.2	.3	.0	.3	21.4	42.3
White pine	21.4	393.3	414.7	6.5	4.9	11.4	426.1	12.0
Northern white-cedar	.7	12.6	13.3	.3	.3	.7	14.0	58.3
Hemlock	22.1	303.8	325.9	5.4	.6	6.1	331.9	14.3
Other softwoods	.0	30.6	30.6	.2	.0	.2	30.8	55.8
Total softwoods	119.8	1,552.1	1,671.9	17.3	8.8	26.1	1,698.0	6.1
Sugar maple	22.7	578.3	600.9	23.1	11.1	34.2	635.1	10.2
Red maple	2.0	484.8	486.8	40.8	7.7	48.5	535.3	7.4
Yellow birch	7.0	355.8	362.7	32.1	9.3	41.4	404.1	8.5
Paper birch	14.7	318.8	333.5	9.3	4.9	14.2	347.7	8.9
Beech	.0	311.4	311.4	16.0	19.0	35.0	346.5	10.8
White ash	19.7	110.8	130.5	2.0	2.3	4.2	134.8	22.7
Black ash	.0	5.6	5.6	.0	.2	.2	5.9	46.0
Aspen	7.3	153.5	160.8	.4	2.3	2.7	163.5	16.2
White oaks	.0	10.3	10.3	.0	.0	.0	10.3	57.9
Red oaks	15.3	187.9	203.1	2.7	6.7	9.4	212.5	15.0
Basswood	.0	9.5	9.5	.0	.7	.7	10.2	57.0
Elm	.0	1.2	1.2	.0	.0	.0	1.2	46.2
Other commercial hardwoods	.0	33.1	33.1	3.8	1.1	4.9	37.9	30.9
Noncommercial hardwoods	.0	.0	.0	25.5	.9	26.4	26.4	14.3
Total hardwoods	88.5	2,560.9	2,649.5	155.6	66.3	221.9	2,871.4	4.3
Total, all species	208.3	4,113.1	4,321.4	172.9	75.1	248.0	4,569.4	3.4
SE	17.4	3.4	3.5	7.9	13.2	7.0	3.4	

Volume of all live trees on timberland, for selected species and percent change, Northern Unit of New Hampshire, 1983 and 1997

(Volume decreased by 3.6 percent for all species)

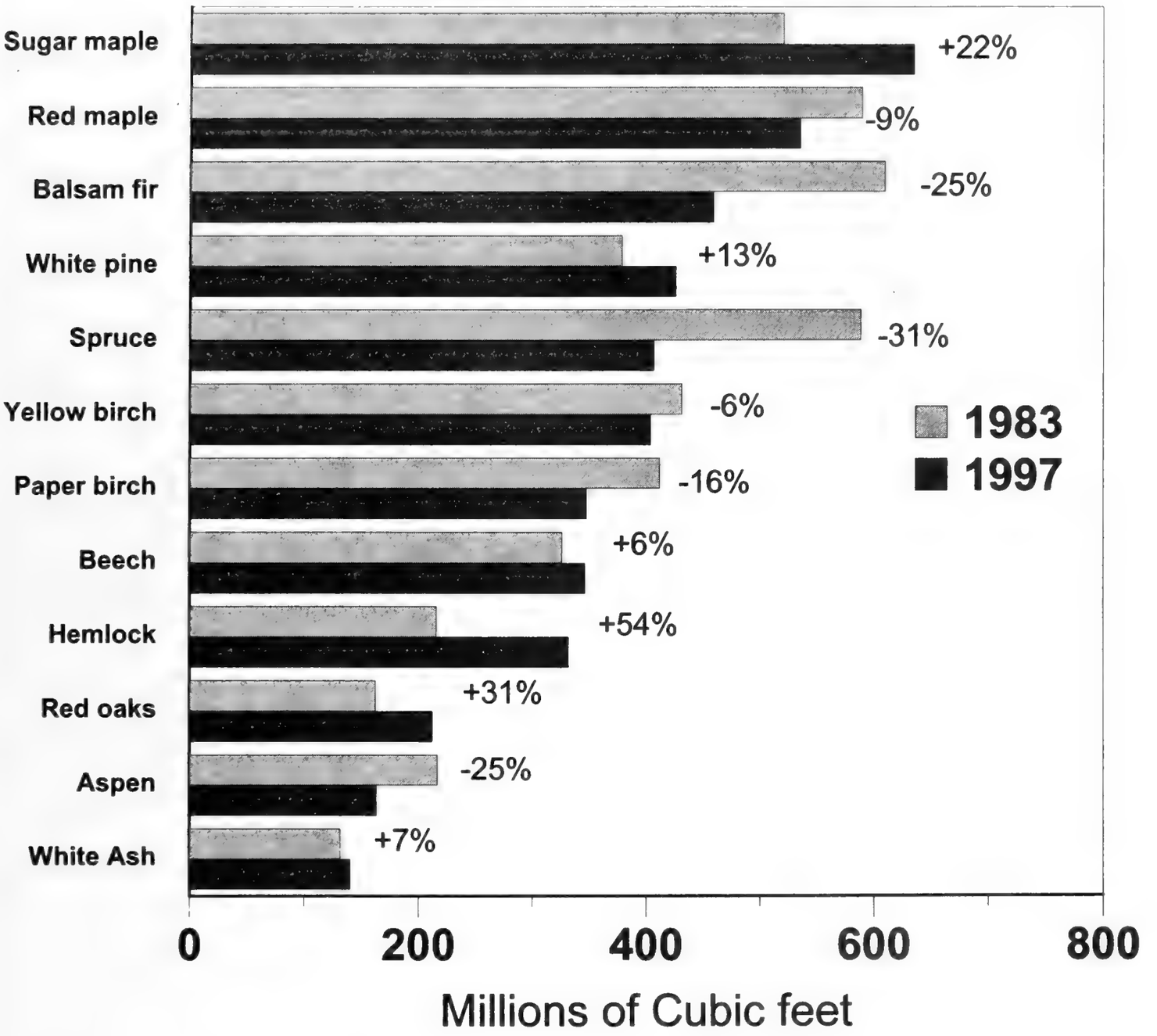


Table 42.--Net volume of all live trees on timberland by species and diameter class, Northern Unit, New Hampshire, 1983

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	173.2	186.3	138.0	80.3	24.7	6.4	.9	.0	.0	.0	609.7	9.7
Tamarack	2.9	2.8	4.1	1.3	.8	1.0	2.0	.0	.0	.0	14.9	37.2
White spruce	8.8	11.2	6.8	12.8	6.5	.0	2.0	2.2	.7	.0	51.2	47.8
Black spruce	1.5	.9	.0	.0	.0	.0	.0	.0	.0	.0	2.4	73.9
Red spruce	118.3	124.1	122.8	72.3	43.9	25.5	16.7	7.6	3.7	.0	534.9	10.6
Red pine	.0	.0	1.0	2.8	.9	2.3	6.9	4.6	.0	.0	18.3	58.7
White pine	24.8	43.2	45.2	57.8	35.5	47.1	34.2	20.2	57.4	13.4	378.6	15.8
Northern white-cedar	1.5	2.6	2.5	1.9	2.0	.8	.0	.0	1.2	.0	12.5	48.0
Hemlock	20.9	27.0	28.7	35.8	41.2	23.1	15.3	6.9	17.3	.0	216.2	13.8
Other softwoods	7.5	4.1	1.5	2.0	4.4	1.9	3.3	2.2	1.2	.0	28.2	64.0
Total softwoods	359.3	402.3	350.5	267.0	159.9	108.0	81.4	43.7	81.5	13.4	1,867.0	6.1
Sugar maple	38.7	86.1	95.2	73.9	54.6	48.6	38.7	27.6	50.4	7.0	520.7	12.1
Red maple	92.4	136.2	129.0	89.9	56.0	37.8	23.1	8.4	14.7	2.1	589.7	8.8
Yellow birch	36.6	63.1	65.9	67.8	68.6	38.1	29.7	22.5	31.5	7.7	431.6	10.0
Paper birch	73.4	111.6	101.2	69.3	27.3	17.9	5.3	2.7	3.4	.0	412.1	11.2
Beech	26.2	41.5	68.0	52.1	51.6	37.1	27.4	9.3	11.7	1.6	326.4	14.0
White ash	12.1	18.9	17.7	17.9	24.0	13.0	7.9	.0	3.8	5.4	120.8	25.7
Black ash	5.0	2.7	2.7	.8	.0	.0	.0	.0	.0	.0	11.2	36.5
Aspen	27.1	48.0	58.2	38.5	24.5	15.0	4.6	1.4	.0	.0	217.2	16.8
White oaks	.2	.0	.0	.0	1.2	.0	.0	.0	.7	.0	2.1	74.8
Red oaks	16.7	37.1	30.3	20.7	16.4	19.2	12.8	3.9	4.5	1.1	162.8	20.4
Basswood	.4	.0	.0	.0	1.2	.6	1.6	.0	.0	1.4	5.3	61.6
Elm	1.2	.5	.2	1.1	.0	.0	.0	.0	.0	.0	3.0	40.6
Other commercial hardwoods	6.0	8.6	5.7	6.0	3.3	1.4	.0	1.1	1.3	.0	33.4	24.8
Noncommercial hardwoods	19.2	10.2	3.5	.9	1.2	.0	.0	.0	.5	.0	35.4	17.6
Total hardwoods	355.3	564.5	577.4	438.8	329.8	228.6	151.2	76.9	122.7	26.4	2,871.6	4.1
Total, all species	714.6	966.8	927.9	705.8	489.7	336.6	232.6	120.6	204.2	39.8	4,738.7	2.5
SE	4.9	4.1	4.0	4.8	5.7	7.3	8.9	12.4	11.9	21.1	2.5	

Table 43.--Net volume of live trees on timberland by species and diameter class, Northern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	135.6	136.7	92.4	61.2	18.6	9.4	5.0	.0	.0	.0	458.9	9.8
Tamarack	1.1	1.3	2.6	1.8	.0	1.2	.0	.0	.0	.0	8.0	44.6
White spruce	1.9	4.8	7.5	6.4	3.8	3.7	.5	2.3	4.2	.0	35.1	44.0
Red spruce	58.7	86.1	79.1	69.7	42.6	18.8	12.1	4.7	.0	.0	371.7	10.6
Red pine	2.4	3.2	3.1	2.8	4.2	1.2	.0	.0	4.5	.0	21.4	42.3
White pine	20.9	30.9	36.5	38.0	58.4	48.4	39.5	18.7	95.1	39.9	426.1	12.0
Northern white-cedar	1.5	3.1	4.3	2.4	.0	.8	1.9	.0	.0	.0	14.0	58.3
Hemlock	19.5	33.2	53.6	54.4	48.2	38.8	28.0	30.2	21.9	4.2	331.9	14.3
Other softwoods	4.6	5.3	3.5	2.6	2.1	7.4	1.6	1.6	2.2	.0	30.8	55.8
Total softwoods	246.2	304.5	282.4	239.2	178.0	129.6	88.6	57.5	128.0	44.1	1,698.0	6.1
Sugar maple	43.0	79.8	130.2	116.3	75.0	52.1	38.5	32.3	61.3	6.7	635.1	10.2
Red maple	72.3	117.7	106.6	82.4	71.2	36.3	24.1	10.4	12.2	2.1	535.3	7.4
Yellow birch	33.1	57.1	65.8	63.5	56.3	43.8	23.5	26.3	32.6	2.1	404.1	8.5
Paper birch	57.5	86.4	80.6	68.3	37.5	16.0	.4	1.0	.0	.0	347.7	8.9
Beech	34.0	49.3	67.2	62.0	42.4	44.4	22.3	11.6	13.1	.1	346.5	10.8
White ash	11.4	15.2	20.1	29.7	19.4	10.1	8.7	2.5	6.8	10.9	134.8	22.7
Black ash	.9	2.7	2.3	.0	.0	.0	.0	.0	.0	.0	5.9	46.0
Aspen	12.5	26.8	32.2	30.7	33.0	15.5	4.3	5.0	3.4	.0	163.5	16.2
White oaks	.5	.9	.3	1.6	.7	.0	.0	1.5	.0	4.9	10.3	57.9
Red oaks	13.8	26.7	34.7	29.8	37.8	19.9	25.1	2.6	9.3	12.7	212.5	15.0
Basswood	.8	1.4	.0	1.3	1.3	.0	5.4	.0	.0	.0	10.2	57.0
Elm	.6	.2	.5	.0	.0	.0	.0	.0	.0	.0	1.2	46.2
Other commercial hardwoods	4.8	6.0	3.0	6.2	8.8	4.2	1.7	3.1	.0	.0	37.9	30.9
Noncommercial hardwoods	12.8	9.4	2.7	.5	.9	.0	.0	.0	.0	.0	26.4	14.3
Total hardwoods	298.2	479.5	546.2	492.4	384.4	242.2	154.0	96.3	138.8	39.4	2,871.4	4.3
Total, all species	544.4	784.0	828.6	731.6	562.3	371.8	242.6	153.8	266.7	83.5	4,569.4	3.4
SE	4.8	4.0	4.3	5.0	5.8	7.2	10.0	12.7	13.1	31.1	3.4	

Table 44.--Net volume of growing-stock trees on timberland by species and diameter class, Northern Unit, New Hampshire, 1983

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	166.6	178.2	135.7	79.2	24.2	6.4	.9	.0	.0	.0	591.1	9.7
Tamarack	2.9	2.6	4.1	1.3	.8	1.0	1.1	.0	.0	.0	13.8	38.5
White spruce	7.6	9.5	5.8	11.5	3.4	.0	.0	.0	.0	.0	37.7	42.4
Black spruce	1.3	.5	.0	.0	.0	.0	.0	.0	.0	.0	1.8	70.9
Red spruce	108.4	121.1	121.0	70.9	42.2	24.5	13.8	7.6	2.9	.0	512.5	10.6
Red pine	.0	.0	1.0	2.8	.9	2.3	6.9	4.6	.0	.0	18.3	58.7
White pine	21.8	39.0	39.9	54.9	33.1	42.2	33.0	18.3	55.6	3.5	341.3	16.4
Northern white-cedar	1.2	2.5	2.5	1.9	1.5	.8	.0	.0	1.2	.0	11.6	49.7
Hemlock	18.1	24.8	25.5	31.4	38.5	21.0	15.3	6.9	16.4	.0	197.9	14.4
Other softwoods	7.4	4.0	.9	2.0	4.4	1.9	3.3	2.2	1.2	.0	27.4	65.0
Total softwoods	335.4	382.1	336.3	255.9	149.1	100.1	74.3	39.6	77.3	3.5	1,753.6	6.3
Sugar maple	35.6	80.7	92.6	67.8	51.3	45.0	32.3	26.2	44.0	4.3	479.8	12.5
Red maple	84.1	127.9	121.3	78.0	49.7	33.6	19.2	6.6	10.3	1.2	532.1	9.3
Yellow birch	31.9	57.2	62.4	62.3	62.6	30.2	24.3	16.7	23.0	6.2	376.7	10.6
Paper birch	70.6	108.8	98.6	67.0	25.4	16.0	4.8	2.7	2.3	.0	396.2	11.4
Beech	23.4	37.0	53.9	47.1	47.4	32.8	23.9	8.1	5.7	1.6	280.9	14.3
White ash	11.9	18.3	16.9	16.9	22.4	13.0	7.9	.0	3.8	5.4	116.5	25.7
Black ash	4.0	2.7	2.5	.8	.0	.0	.0	.0	.0	.0	10.0	38.6
Aspen	25.3	44.7	53.7	38.1	23.7	15.0	3.6	1.4	.0	.0	205.3	17.0
White oaks	.2	.0	.0	.0	.8	.0	.0	.0	.0	.0	1.1	80.6
Red oaks	16.5	35.2	30.3	20.7	15.8	18.6	12.0	3.9	4.5	.0	157.6	20.8
Basswood	.4	.0	.0	.0	1.2	.0	1.6	.0	.0	1.4	4.6	68.7
Elm	.6	.4	.0	1.1	.0	.0	.0	.0	.0	.0	2.1	53.8
Other hardwoods	9.4	9.6	6.3	5.4	2.4	.8	.0	1.1	1.3	.0	36.4	22.7
Total hardwoods	314.0	522.4	538.4	405.3	302.7	204.9	129.6	66.8	95.0	20.2	2,599.3	4.4
Total, all species	649.4	904.6	874.7	661.1	451.8	305.0	203.9	106.4	172.3	23.7	4,352.9	2.7
SE	5.2	4.4	4.2	5.0	6.0	7.9	9.6	13.8	13.5	30.6	2.7	

Table 45.--Net volume of growing-stock trees on timberland by species and diameter class, Northern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	135.4	136.7	90.8	59.9	18.6	9.4	5.0	.0	.0	.0	455.7	9.8
Tamarack	1.1	1.2	2.2	1.8	.0	1.2	.0	.0	.0	.0	7.5	47.0
White spruce	1.9	4.8	6.9	6.1	3.8	3.7	.0	2.3	4.2	.0	33.8	43.6
Red spruce	58.6	85.8	77.2	69.4	42.6	18.8	12.1	4.7	.0	.0	369.3	10.7
Red pine	2.4	3.2	2.8	2.8	4.2	1.2	.0	.0	4.5	.0	21.2	42.3
White pine	20.9	30.9	33.9	37.0	57.9	47.4	37.9	17.7	93.5	37.7	414.7	12.0
Northern white-cedar	1.3	3.1	4.1	2.1	.0	.8	1.9	.0	.0	.0	13.3	59.6
Hemlock	19.2	32.7	50.9	53.4	47.8	37.6	28.0	30.2	21.9	4.2	325.9	14.5
Other softwoods	4.6	5.3	3.2	2.6	2.1	7.4	1.6	1.6	2.2	.0	30.6	56.2
Total softwoods	245.4	303.7	271.9	235.1	177.0	127.4	86.6	56.4	126.3	41.8	1,671.9	6.1
Sugar maple	42.5	77.6	127.8	109.2	63.7	50.2	33.2	31.0	59.1	6.7	600.9	10.3
Red maple	70.5	114.6	105.5	65.6	63.2	30.7	19.9	8.8	7.9	.0	486.8	7.6
Yellow birch	32.3	55.7	64.4	54.1	44.9	37.0	20.3	22.0	30.0	2.1	362.7	8.8
Paper birch	56.2	84.9	79.2	63.7	33.9	15.6	.0	.0	.0	.0	333.5	9.0
Beech	33.4	48.2	65.0	54.6	35.7	37.9	19.4	8.7	8.5	.0	311.4	11.1
White ash	11.2	15.0	20.1	29.1	18.9	8.9	8.7	1.8	6.0	10.9	130.5	23.1
Black ash	.9	2.7	2.0	.0	.0	.0	.0	.0	.0	.0	5.6	47.0
Aspen	12.4	26.7	31.8	30.7	33.0	14.1	4.3	4.3	3.4	.0	160.8	16.3
White oaks	.5	.9	.3	1.6	.7	.0	.0	1.5	.0	4.9	10.3	57.9
Red oaks	13.7	26.4	34.5	29.8	36.0	19.9	24.6	1.8	7.7	8.7	203.1	14.8
Basswood	.8	1.4	.0	.6	1.3	.0	5.4	.0	.0	.0	9.5	54.9
Elm	.6	.2	.5	.0	.0	.0	.0	.0	.0	.0	1.2	46.2
Other hardwoods	4.6	6.0	2.7	6.0	7.9	1.8	1.7	2.3	.0	.0	33.1	31.2
Total hardwoods	279.7	460.1	533.9	445.1	338.9	216.1	137.6	82.2	122.6	33.2	2,649.5	4.4
Total, all species	525.1	763.9	805.8	680.2	516.0	343.6	224.2	138.6	248.9	75.1	4,321.4	3.5
SE	5.0	4.0	4.3	5.1	5.9	7.4	10.6	13.6	13.8	31.0	3.5	

Table 46.--Net volume of growing-stock trees on timberland by species and stand-size class, Northern Unit, New Hampshire, 1983

(In millions of cubic feet)

Species group	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Balsam fir	137.1	449.8	4.3	.0	591.1	9.7
Tamarack	3.2	8.4	2.2	.0	13.8	38.5
White spruce	2.6	35.1	.0	.0	37.7	42.4
Black spruce	.0	.8	1.0	.0	1.8	70.9
Red spruce	158.8	349.1	4.6	.0	512.5	10.6
Red pine	17.7	.7	.0	.0	18.3	58.7
White pine	204.8	132.6	3.9	.0	341.3	16.4
Northern white-cedar	6.7	4.9	.0	.0	11.6	49.7
Hemlock	143.3	54.7	.0	.0	197.9	14.4
Other softwoods	15.0	11.2	1.2	.0	27.4	65.0
Total softwoods	689.2	1,047.3	17.2	.0	1,753.6	6.3
Sugar maple	288.7	187.7	3.4	.0	479.8	12.5
Red maple	222.0	309.0	1.1	.0	532.1	9.3
Yellow birch	231.5	143.0	2.2	.0	376.7	10.6
Paper birch	117.8	278.0	.4	.0	396.2	11.4
Beech	227.2	52.9	.8	.0	280.9	14.3
White ash	67.9	46.5	2.2	.0	116.5	25.7
Black ash	3.7	6.3	.0	.0	10.0	38.6
Aspen	57.2	147.3	.7	.0	205.3	17.0
White oaks	.2	.8	.0	.0	1.1	80.6
Red oaks	62.5	95.0	.0	.0	157.6	20.8
Basswood	4.6	.0	.0	.0	4.6	68.7
Elm	.2	1.9	.0	.0	2.1	53.8
Other hardwoods	6.7	23.2	6.5	.0	36.4	22.7
Total hardwoods	1,290.3	1,291.7	17.2	.0	2,599.3	4.4
Total, all species	1,979.5	2,339.0	34.4	.0	4,352.9	2.7
SE	8.0	6.4	32.8	.0	2.7	

Table 47.--Net volume of growing-stock trees on timberland by species and stand-size class, Northern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Balsam fir	138.7	297.3	19.7	.0	455.7	9.8
Tamarack	4.8	2.5	.1	.0	7.5	47.0
White spruce	25.2	8.1	.5	.0	33.8	43.6
Red spruce	191.7	167.4	10.2	.0	369.3	10.7
Red pine	14.9	6.2	.0	.0	21.2	42.3
White pine	313.9	93.0	7.8	.0	414.7	12.0
Northern white-cedar	10.8	.1	2.4	.0	13.3	59.6
Hemlock	269.7	55.8	.3	.0	325.9	14.5
Other softwoods	18.3	12.4	.0	.0	30.6	56.2
Total softwoods	988.1	642.9	40.9	.0	1,671.9	6.1
Sugar maple	385.7	203.9	11.4	.0	600.9	10.3
Red maple	260.2	219.2	7.3	.0	486.8	7.6
Yellow birch	246.8	111.9	4.0	.0	362.7	8.8
Paper birch	156.2	164.2	13.1	.0	333.5	9.0
Beech	221.7	83.5	6.2	.0	311.4	11.1
White ash	86.8	38.9	4.8	.0	130.5	23.1
Black ash	1.5	4.1	.0	.0	5.6	47.0
Aspen	61.2	90.6	8.9	.0	160.8	16.3
White oaks	7.3	2.9	.0	.0	10.3	57.9
Red oaks	128.3	72.5	2.3	.0	203.1	14.8
Basswood	8.0	1.4	.0	.0	9.5	54.9
Elm	.5	.8	.0	.0	1.2	46.2
Other hardwoods	26.9	4.9	1.3	.0	33.1	31.2
Total hardwoods	1,591.1	999.0	59.4	.0	2,649.5	4.4
Total, all species	2,579.2	1,641.8	100.3	.0	4,321.4	3.5
SE	6.4	7.4	22.0	.0	3.5	

Table 48.--Net volume of growing-stock trees on timberland by forest type and stand-size class, Northern Unit, New Hampshire, 1997

(In millions of cubic feet)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	.0	4.8	.0	.0	4.8	100.0
White pine	180.0	20.4	.0	.0	200.4	26.5
White pine/hemlock	149.4	9.7	.0	.0	159.1	36.8
Hemlock	179.1	10.3	.0	.0	189.4	32.6
White/red pine group	508.6	45.2	.0	.0	553.7	17.6
Balsam fir	48.9	229.7	24.1	.0	302.7	20.1
Red spruce	32.6	20.2	4.6	.0	57.4	47.4
Red spruce/balsam fir	63.4	184.4	.1	.0	247.9	25.1
White spruce	30.5	.0	.0	.0	30.5	76.4
Spruce/fir group	175.5	434.3	28.8	.0	638.5	13.9
Pitch pine	22.9	11.8	.0	.0	34.7	57.9
Loblolly/shortleaf group	22.9	11.8	.0	.0	34.7	57.9
Wh. pine/no.red oak/wh. ash	61.7	26.9	.0	.0	88.6	43.7
Oak/pine group	61.7	26.9	.0	.0	88.6	43.7
Post, black, or bear oak	.0	.0	.9	.0	.9	100.0
White oak/red oak/hickory	6.0	9.4	.0	.0	15.4	72.4
Northern red oak	86.3	37.1	.0	.0	123.4	37.2
Red maple/central hardwood	4.2	.0	.0	.0	4.2	100.0
Mixed central hardwoods	61.9	81.6	.0	.0	143.5	28.3
Oak/hickory group	158.4	128.1	.9	.0	287.4	21.4
Black ash/Amer. elm/red maple	14.2	.7	.0	.0	14.9	67.7
Red maple(lowland)	5.3	.0	.0	.0	5.3	100.0
Elm/ash/red maple group	19.5	.7	.0	.0	20.2	56.4
Sugar maple/beech/yellow birch	1,170.9	574.0	25.2	.0	1,770.1	7.7
Black Cherry	14.8	.0	2.3	.0	17.1	81.3
Red maple/northern hardwoods	232.4	197.8	21.8	.0	452.1	16.6
Mixed northern hardwoods	92.8	76.1	12.3	.0	181.2	27.2
Northern hardwoods group	1,510.9	848.0	61.6	.0	2,420.5	6.0
Aspen	43.7	50.2	5.6	.0	99.5	39.6
Paper birch	78.1	96.8	2.5	.0	177.4	27.2
Gray birch	.0	.0	.9	.0	.9	98.2
Aspen/birch group	121.8	147.0	9.0	.0	277.8	21.9
All forest types	2,579.2	1,641.8	100.3	.0	4,321.4	3.5
SE	6.4	7.4	22.0	.0	3.5	

Percent of growing-stock volume by forest-type group
Northern Unit, New Hampshire, 1997

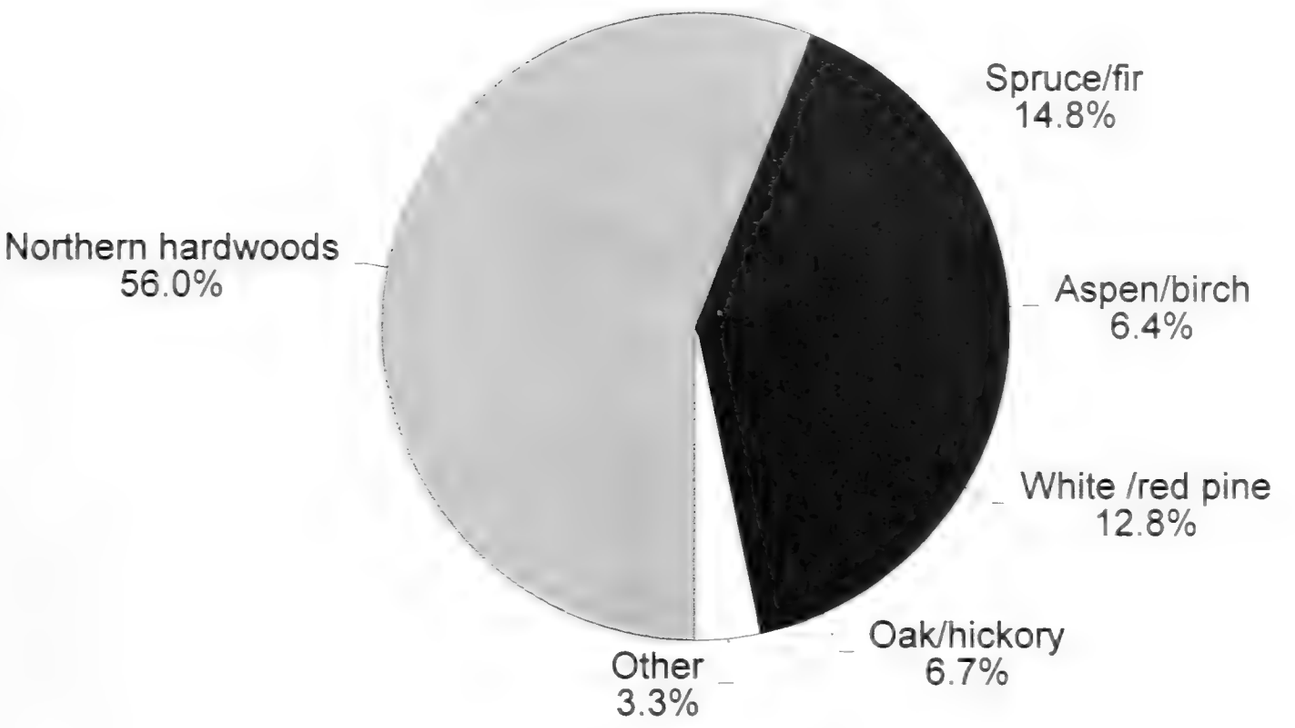


Table 49.--Net volume of growing-stock trees on timberland by species and forest-type group, Northern Unit, New Hampshire, 1983

(In millions of cubic feet)

Species group	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Balsam fir	5.1	334.7	.0	.5	2.1	.0	1.5	148.8	98.3	591.1	9.7
Tamarack	.0	12.1	.0	.0	1.3	.0	.0	.0	.5	13.8	38.5
White spruce	.0	29.5	.0	.9	.0	.0	.0	2.4	5.0	37.7	42.4
Black spruce	.0	1.8	.0	.0	.0	.0	.0	.0	.0	1.8	70.9
Red spruce	20.9	236.4	.0	3.6	1.1	.0	.0	184.5	66.0	512.5	10.6
Red pine	12.7	.0	.0	2.7	.7	.0	.0	2.2	.0	18.3	58.7
White pine	127.1	30.8	1.9	45.5	22.1	.0	1.4	89.6	22.9	341.3	16.4
Northern white-cedar	.0	6.0	.0	.0	.0	.0	.0	1.2	4.4	11.6	49.7
Hemlock	46.9	9.2	.0	.7	6.8	.0	.0	129.1	5.2	197.9	14.4
Other softwoods	.5	.0	25.7	.0	1.2	.0	.0	.0	.0	27.4	65.0
Total softwoods	213.2	660.3	27.6	54.0	35.3	.0	3.0	558.0	202.3	1,753.6	6.3
Sugar maple	1.4	2.8	.0	.5	2.0	.0	.0	464.4	8.6	479.8	12.5
Red maple	28.3	22.4	1.5	15.6	16.1	.0	5.6	396.2	46.3	532.1	9.3
Yellow birch	2.3	16.9	.0	.0	.7	.0	.0	326.7	30.2	376.7	10.6
Paper birch	12.9	48.6	.0	1.9	5.1	.0	.0	135.4	192.2	396.2	11.4
Beech	.0	.0	.0	.9	3.7	.0	.0	275.3	1.0	280.9	14.3
White ash	.7	.4	.0	6.9	.7	.0	.0	102.2	5.6	116.5	25.7
Black ash	.6	5.9	.0	.0	.0	.0	.0	2.8	.6	10.0	38.6
Aspen	6.6	15.4	.0	3.6	9.9	.0	.0	62.9	106.9	205.3	17.0
White oaks	.0	.0	.0	.0	.8	.0	.0	.2	.0	1.1	80.6
Red oaks	9.4	.2	.0	8.0	93.6	.0	.0	45.8	.6	157.6	20.8
Basswood	.0	.0	.0	.0	.0	.0	.0	4.6	.0	4.6	68.7
Elm	.0	.0	.0	.0	.2	.0	.0	1.7	.2	2.1	53.8
Other hardwoods	1.0	2.6	.0	.6	2.6	.0	5.8	18.8	5.0	36.4	22.7
Total hardwoods	63.1	115.2	1.5	38.0	135.6	.0	11.4	1,837.2	397.3	2,599.3	4.4
Total, all species	276.3	775.5	29.1	92.0	170.8	.0	14.3	2,395.1	599.6	4,352.9	2.7
SE	28.7	14.4	70.5	46.4	29.6	.0	71.5	6.6	17.3	2.7	

Table 50.--Net volume of growing-stock trees on timberland by species and forest-type group, Northern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Balsam fir	11.7	284.1	.0	4.5	.5	.0	.4	116.5	38.1	455.7	9.8
Tamarack	3.4	2.7	.0	.8	.0	.0	.0	.6	.0	7.5	47.0
White spruce	.4	22.6	.0	.0	.2	.0	.0	2.2	8.4	33.8	43.6
Red spruce	25.3	165.0	.0	.0	2.9	.0	.0	150.7	25.4	369.3	10.7
Red pine	8.9	.0	.0	.0	6.0	.0	.0	6.1	.0	21.2	42.3
White pine	209.2	35.4	2.1	45.8	39.8	.0	.4	75.0	7.0	414.7	12.0
Northern white-cedar	.6	9.9	.0	.0	.0	.0	.0	2.5	.4	13.3	59.6
Hemlock	159.9	8.5	.0	.7	16.5	.0	1.5	125.2	13.6	325.9	14.5
Other softwoods	.0	.0	30.1	.0	.6	.0	.0	.0	.0	30.6	56.2
Total softwoods	419.5	528.2	32.1	51.8	66.4	.0	2.3	478.7	92.9	1,671.9	6.1
Sugar maple	2.1	1.1	.0	.2	6.4	.0	.8	586.5	3.9	600.9	10.3
Red maple	45.4	26.9	2.4	6.4	41.9	.0	16.4	333.1	14.3	486.8	7.6
Yellow birch	9.0	14.6	.0	.0	.4	.0	.0	315.2	23.6	362.7	8.8
Paper birch	16.9	45.4	.0	6.1	13.9	.0	.0	163.1	88.1	333.5	9.0
Beech	15.6	.0	.0	.4	15.3	.0	.0	279.9	.3	311.4	11.1
White ash	7.5	.0	.0	2.4	3.4	.0	.0	116.4	.9	130.5	23.1
Black ash	.2	3.8	.0	.0	.0	.0	.0	1.0	.7	5.6	47.0
Aspen	14.7	17.6	.0	4.1	7.6	.0	.0	68.5	48.3	160.8	16.3
White oaks	.0	.0	.0	.0	10.1	.0	.0	.2	.0	10.3	57.9
Red oaks	15.7	.0	.2	16.1	121.5	.0	.2	48.3	1.1	203.1	14.8
Basswood	.1	.0	.0	.0	.0	.0	.0	9.4	.0	9.5	54.9
Elm	.4	.1	.0	.5	.2	.0	.0	.0	.0	1.2	46.2
Other hardwoods	6.6	.8	.0	.6	.3	.0	.4	20.4	3.9	33.1	31.2
Total hardwoods	134.2	110.3	2.5	36.8	221.0	.0	17.9	1,941.7	184.9	2,649.5	4.4
Total, all species	553.7	638.5	34.7	88.6	287.4	.0	20.2	2,420.5	277.8	4,321.4	3.5
SE	17.6	13.9	57.9	43.7	21.4	.0	56.4	6.0	21.9	3.5	

Table 51.--Net volume of growing-stock in the sawlog portion of sawtimber trees on timberland by species and diameter class, Northern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	76.4	52.1	16.6	8.5	4.6	.0	.0	.0	158.3	11.0
Tamarack	1.8	1.6	.0	1.1	.0	.0	.0	.0	4.5	52.8
White spruce	5.8	5.3	3.4	3.4	.0	2.2	3.9	.0	24.0	47.1
Red spruce	65.0	60.4	38.1	17.1	11.2	4.3	.0	.0	196.0	12.1
Red pine	2.3	2.4	3.8	1.1	.0	.0	4.2	.0	13.9	45.5
White pine	28.5	32.2	51.7	43.2	35.0	16.4	87.4	35.2	329.6	12.8
Northern white-cedar	3.4	1.8	.0	.8	1.7	.0	.0	.0	7.7	54.8
Hemlock	42.8	46.4	42.7	34.2	25.9	28.1	20.5	3.9	244.5	15.3
Other softwoods	2.7	2.2	1.9	6.7	1.5	1.5	2.1	.0	18.6	64.6
Total softwoods	228.7	204.6	158.3	116.0	79.9	52.5	118.1	39.1	997.1	7.1
Sugar maple	.0	80.4	51.6	42.1	28.2	26.3	50.2	5.7	284.6	12.3
Red maple	.0	48.3	51.2	25.8	17.0	7.5	6.7	.0	156.5	11.5
Yellow birch	.0	39.8	36.4	31.1	17.3	18.7	25.5	1.8	170.5	11.5
Paper birch	.0	46.9	27.5	13.1	.0	.0	.0	.0	87.5	15.2
Beech	.0	40.2	28.9	31.8	16.5	7.4	7.2	.0	132.0	14.8
White ash	.0	21.4	15.3	7.5	7.4	1.5	5.1	9.3	67.5	34.8
Aspen	.0	22.6	26.7	11.9	3.7	3.6	2.9	.0	71.4	24.0
White oaks	.0	1.2	.5	.0	.0	1.2	.0	4.1	7.1	68.5
Red oaks	.0	21.9	29.2	16.7	20.9	1.5	6.6	7.4	104.2	18.6
Basswood	.0	.4	1.0	.0	4.6	.0	.0	.0	6.0	67.2
Other hardwoods	.0	4.4	6.4	1.5	1.5	2.0	.0	.0	15.8	48.5
Total hardwoods	.0	327.6	274.5	181.5	117.0	69.8	104.2	28.3	1,103.0	6.6
Total, all species	228.7	532.2	432.8	297.5	196.9	122.3	222.3	67.4	2,100.1	4.7
SE	7.7	5.1	5.9	7.4	10.6	13.7	13.9	30.6	4.7	

Sawtimber volume on timberland, for selected species and percent change, Northern Unit of New Hampshire, 1983 and 1997

(Volume increased by 11.5 percent for all species)

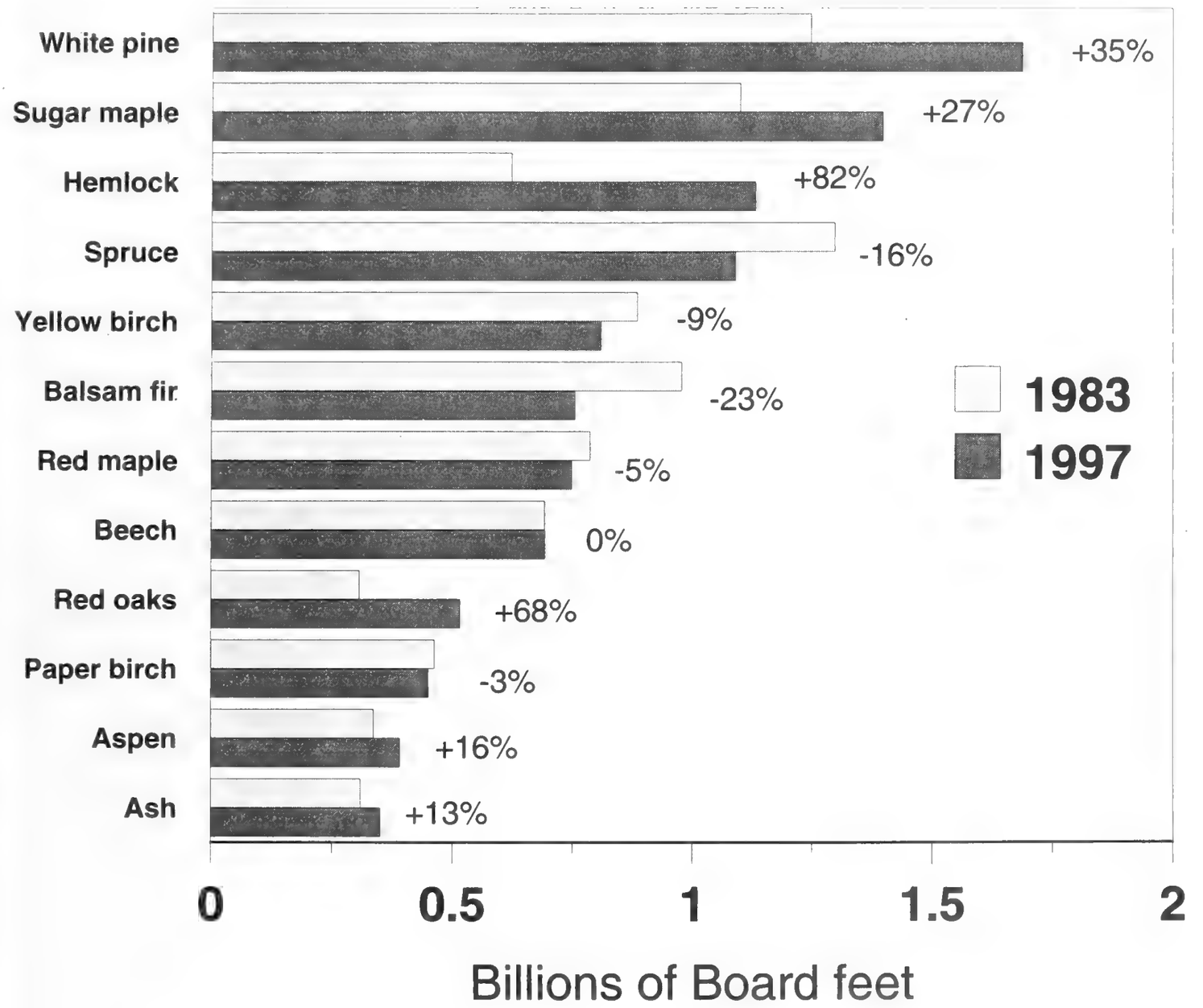


Table 52.--Net volume of sawtimber trees on timberland by species and diameter class, Northern Unit, New Hampshire, 1983

(In millions of board feet)

Species group	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	505.7	326.9	109.3	31.0	4.8	.0	.0	.0	977.8	12.0
Tamarack	14.1	4.9	3.5	4.2	5.1	.0	.0	.0	31.7	35.2
White spruce	21.8	50.0	15.5	.0	.0	.0	.0	.0	87.3	44.8
Red spruce	451.6	307.3	197.4	126.3	74.0	39.0	15.5	.0	1,211.0	12.8
Red pine	3.0	11.0	3.7	10.9	33.9	23.2	.0	.0	85.8	60.2
White pine	130.7	219.0	144.9	197.7	158.6	90.1	288.5	18.5	1,248.0	17.6
Northern white-cedar	5.2	5.7	5.5	2.5	.0	.0	5.2	.0	24.0	61.7
Hemlock	82.5	117.8	153.4	90.5	68.6	32.2	77.6	.0	622.6	14.9
Other softwoods	3.3	7.5	17.3	8.4	15.2	10.1	5.8	.0	67.7	91.8
Total softwoods	1,217.9	1,050.0	650.6	471.5	360.2	194.6	392.6	18.5	4,355.9	7.5
Sugar maple	.0	248.6	205.1	184.9	133.7	113.1	195.1	20.0	1,100.4	15.1
Red maple	.0	290.0	195.1	138.0	81.4	29.6	43.7	9.1	787.0	13.1
Yellow birch	.0	240.7	237.9	124.3	92.5	66.1	97.5	26.3	885.4	12.0
Paper birch	.0	261.1	96.5	66.6	18.6	11.1	9.4	.0	463.3	16.2
Beech	.0	178.2	199.7	132.5	111.4	40.2	22.7	7.6	692.4	16.0
White ash	.0	67.5	94.5	58.1	37.7	.0	16.0	33.1	306.9	31.3
Black ash	.0	2.9	.0	.0	.0	.0	.0	.0	2.9	100.0
Aspen	.0	149.0	99.5	65.9	16.3	6.2	.0	.0	337.0	24.1
White oaks	.0	.0	3.5	.0	.0	.0	.0	.0	3.5	100.0
Red oaks	.0	77.4	63.3	74.5	50.9	18.8	22.3	.0	307.1	19.4
Basswood	.0	.0	5.8	.0	7.5	.0	.0	6.4	19.7	74.9
Elm	.0	4.3	.0	.0	.0	.0	.0	.0	4.3	71.2
Other hardwoods	.0	20.0	8.7	3.1	.0	5.0	6.9	.0	43.7	44.5
Total hardwoods	.0	1,539.8	1,209.6	847.9	550.0	290.2	413.6	102.6	4,953.7	6.8
Total, all species	1,217.9	2,589.8	1,860.2	1,319.4	910.3	484.8	806.2	121.1	9,309.6	4.3
SE	8.2	5.0	6.0	8.0	9.8	13.8	14.0	31.6	4.3	

Table 53.--Net volume of sawtimber trees on timberland by species and diameter class, Northern Unit, New Hampshire, 1997

(In millions of board feet)

Species group	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	343.0	258.0	83.7	46.3	24.4	.0	.0	.0	755.4	11.2
Tamarack	7.8	6.4	.0	5.0	.0	.0	.0	.0	19.2	53.2
White spruce	21.2	24.5	16.8	18.7	.0	11.9	17.6	.0	110.7	44.5
Red spruce	293.6	305.5	200.0	94.2	59.9	26.5	.0	.0	979.6	12.7
Red pine	9.9	11.7	20.2	5.9	.0	.0	24.9	.0	72.5	46.6
White pine	115.5	154.6	253.0	224.2	185.4	87.9	490.6	176.4	1,687.6	13.3
Northern white-cedar	10.2	7.7	.0	2.8	5.3	.0	.0	.0	26.0	54.1
Hemlock	164.6	201.3	196.4	164.2	127.8	144.2	113.9	20.3	1,132.6	15.9
Other softwoods	10.6	10.1	9.0	32.4	7.9	7.5	10.7	.0	88.2	67.0
Total softwoods	976.2	979.9	779.1	593.6	410.8	277.9	657.6	196.7	4,871.7	7.4
Sugar maple	.0	390.9	246.4	199.2	134.1	128.9	267.6	31.1	1,398.2	12.5
Red maple	.0	234.5	248.8	124.5	80.1	32.6	28.0	.0	748.4	11.8
Yellow birch	.0	200.8	163.2	139.4	80.6	92.1	124.9	8.3	809.3	11.7
Paper birch	.0	248.8	137.7	63.9	.0	.0	.0	.0	450.3	14.9
Beech	.0	209.5	144.1	160.5	93.3	45.8	39.8	.0	693.0	15.4
White ash	.0	104.8	77.1	34.5	42.5	9.4	27.7	55.0	350.9	37.2
Aspen	.0	126.0	141.6	64.7	22.3	21.1	15.7	.0	391.5	25.9
White oaks	.0	5.8	2.9	.0	.0	7.5	.0	30.3	46.5	72.7
Red oaks	.0	108.0	143.6	85.0	102.2	8.8	37.8	31.0	516.4	18.6
Basswood	.0	1.9	5.9	.0	26.4	.0	.0	.0	34.2	68.2
Other hardwoods	.0	20.7	26.0	7.8	5.6	9.7	.0	.0	69.6	50.5
Total hardwoods	.0	1,651.6	1,337.2	879.4	587.0	355.8	541.6	155.7	5,508.5	6.7
Total, all species	976.2	2,631.5	2,116.3	1,473.0	997.8	633.7	1,199.3	352.4	10,380.2	4.9
SE	8.2	5.2	6.0	7.5	11.0	13.9	14.2	31.6	4.9	

Table 54.--Average annual net change of growing-stock volume on timberland by species and component of change, Northern Unit, New Hampshire, 1997

(In thousands of cubic feet)

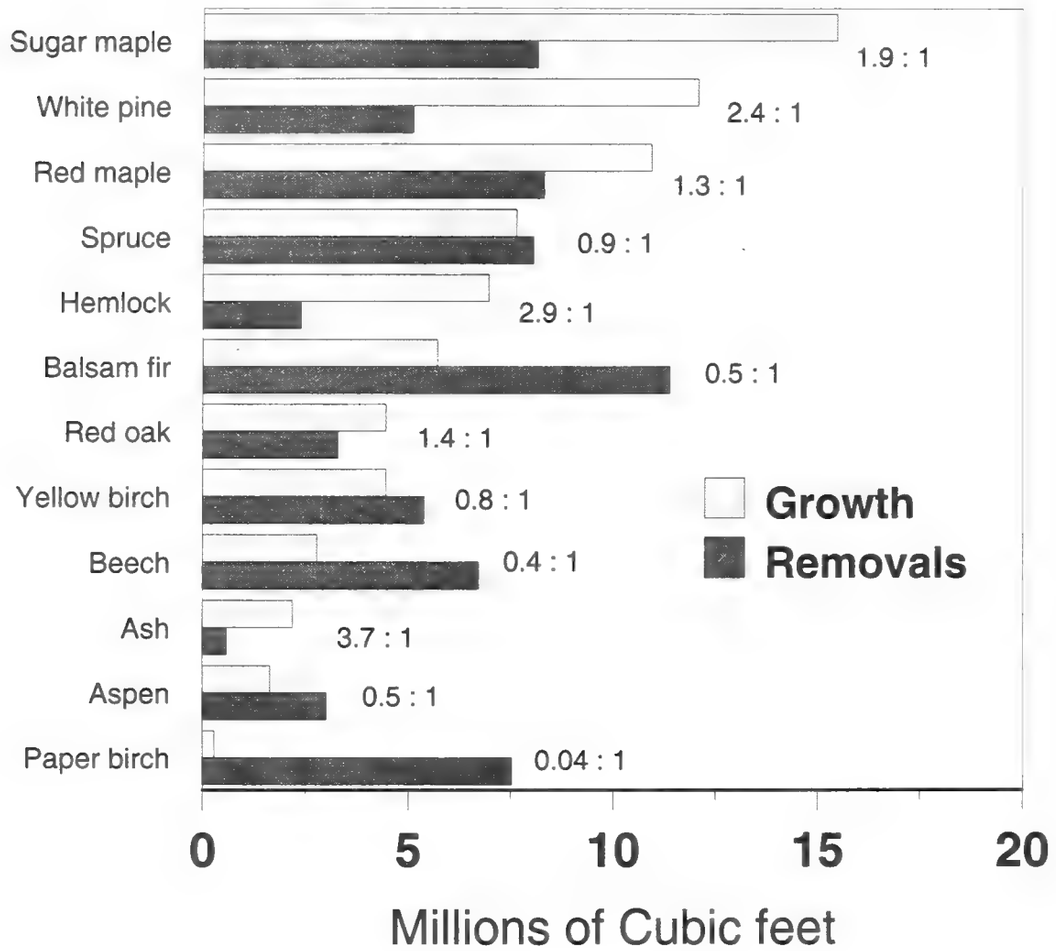
Species group	Component of change								Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull decrement	Cull increment	Net growth	Removals	
Balsam fir	9,521	7,602	17,123	-11,670	492	-228	5,717	-11,393	-5,676
Tamarack	119	201	320	-130	134	-77	247	-308	-60
White spruce	373	498	872	-88	666	0	1,450	-564	886
Black spruce	0	0	0	0	0	0	0	-116	-116
Red spruce	3,391	5,666	9,057	-3,535	878	-208	6,192	-7,379	-1,187
Red pine	495	55	550	-215	0	0	335	-660	-325
White pine	3,275	8,786	12,060	-1,373	1,593	-195	12,085	-5,117	6,968
Northern white-cedar	109	268	377	-200	0	0	176	-17	159
Hemlock	2,361	4,619	6,979	-535	662	-135	6,971	-2,390	4,581
Other softwoods	167	277	444	-26	21	0	439	-37	402
Total softwoods	19,811	27,971	47,782	-17,773	4,446	-843	33,613	-27,981	5,632
Sugar maple	6,017	8,988	15,006	-673	2,453	-1,304	15,482	-8,150	7,332
Red maple	4,296	7,437	11,734	-1,857	2,554	-1,486	10,945	-8,314	2,631
Yellow birch	3,501	3,653	7,154	-2,631	1,775	-1,841	4,457	-5,383	-927
Paper birch	2,583	2,537	5,120	-3,603	373	-1,599	291	-7,529	-7,237
Beech	2,595	2,883	5,478	-2,545	2,215	-2,368	2,779	-6,722	-3,942
White ash	1,433	1,139	2,572	-299	62	0	2,336	-518	1,817
Black ash	0	16	16	-160	0	0	-144	-70	-214
Aspen	1,913	1,229	3,143	-1,863	415	-46	1,648	-3,007	-1,358
White oaks	33	-103	-71	0	0	0	-71	-136	-207
Red oaks	1,932	2,348	4,280	-43	289	-66	4,459	-3,287	1,172
Basswood	109	88	197	0	29	0	225	0	225
Elm	0	0	0	-160	53	0	-107	0	-107
Other hardwoods	201	138	338	-311	219	-216	30	-509	-479
Total hardwoods	24,614	30,354	54,968	-14,147	10,437	-8,927	42,331	-43,626	-1,295
Total, all species	44,424	58,326	102,750	-31,920	14,883	-9,770	75,944	-71,607	4,337

Table 55.--Average annual net change of sawtimber volume on timberland by species and component of change, Northern Unit, New Hampshire, 1997

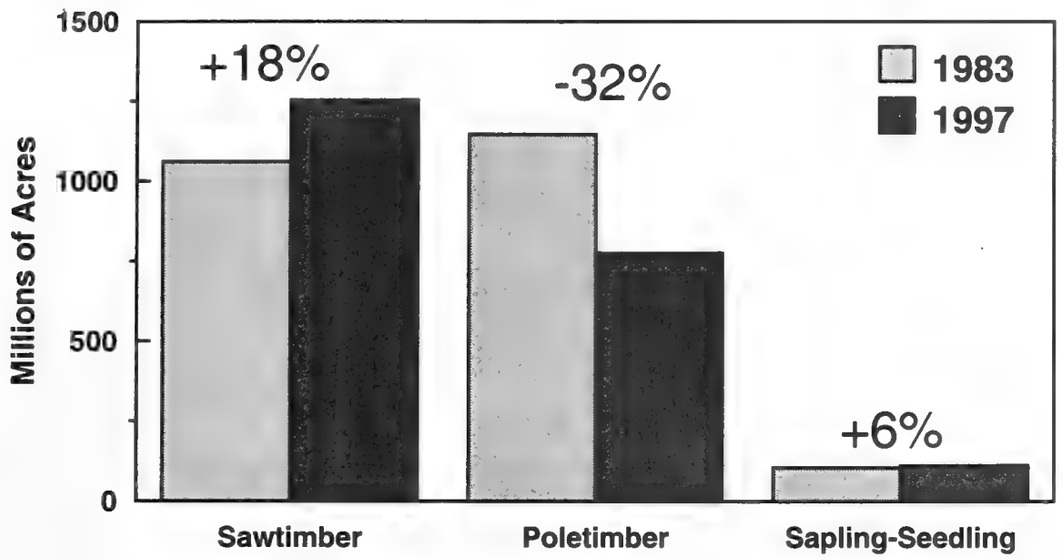
(In thousands of board feet)

Species group	Component of change								Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull decrement	Cull increment	Net growth	Removals	
Balsam fir	22,854	12,874	35,729	-22,845	136	-166	12,855	-22,618	-9,764
Tamarack	511	507	1,017	-317	635	0	1,337	-1,127	210
White spruce	1,767	2,082	3,849	-220	2,804	0	6,433	-1,873	4,560
Red spruce	12,020	17,305	29,325	-10,074	1,945	-342	20,854	-18,882	1,972
Red pine	0	199	199	-965	0	0	-766	-3,095	-3,861
White pine	14,276	39,404	53,680	-5,630	6,415	-519	53,945	-19,226	34,719
Northern white-cedar	335	1,887	2,222	-383	0	0	1,838	-34	1,804
Hemlock	9,243	18,946	28,189	-1,843	1,474	-491	27,329	-8,921	18,408
Other softwoods	489	1,299	1,788	0	71	0	1,859	0	1,859
Total softwoods	61,494	94,502	155,997	-42,277	13,481	-1,517	125,684	-75,777	49,907
Sugar maple	26,823	12,717	39,540	-242	5,488	-4,428	40,359	-20,011	20,348
Red maple	17,083	10,089	27,172	-2,378	4,604	-4,235	25,163	-14,529	10,635
Yellow birch	13,643	6,222	19,866	-5,838	4,838	-4,614	14,252	-17,254	-3,002
Paper birch	9,370	1,290	10,660	-1,408	480	-3,457	6,274	-16,611	-10,336
Beech	12,965	6,327	19,292	-8,815	964	-5,419	6,022	-15,881	-9,859
White ash	9,066	4,518	13,584	-363	238	0	13,459	-1,353	12,106
Black ash	0	0	0	0	0	0	0	-269	-269
Aspen	11,566	4,155	15,722	-2,299	619	0	14,042	-3,732	10,310
White oaks	171	0	171	0	0	0	171	0	171
Red oaks	9,814	4,983	14,797	-169	0	-261	14,366	-7,455	6,911
Basswood	478	-20	457	0	0	0	457	0	457
Elm	0	0	0	-294	0	0	-294	0	-294
Other hardwoods	396	43	440	-1,206	701	-898	-963	-1,098	-2,062
Total hardwoods	111,375	50,325	161,700	-23,013	17,933	-23,312	133,308	-98,193	35,115
Total, all species	172,869	144,828	317,697	-65,290	31,414	-24,829	258,992	-173,970	85,022

Average annual growth and removals of growing-stock volume
and ratio of growth to removals for selected species
on timberland, Northern Unit of New Hampshire, 1983-97
(Ratio of growth/removals for all species is 1.1 : 1)



SOUTHERN UNIT TABLES



Southern Unit, area of timberland by stand-size class, 1983 and 1997

Table 56.--Area of timberland by forest type, forest-type group, and stand-size class, Southern Unit, New Hampshire, 1983

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	14.4	.0	.0	.0	14.4	70.7
White pine	312.8	63.9	7.3	.0	384.0	12.4
White pine/hemlock	70.2	28.3	.0	.0	98.5	26.1
Hemlock	78.9	25.0	.0	.0	103.9	24.7
White/red pine group	476.3	117.2	7.3	.0	600.8	9.3
Red spruce	.0	18.7	.0	.0	18.7	58.7
Red spruce/balsam fir	7.3	.0	.0	.0	7.3	100.0
Spruce/fir group	7.3	18.7	.0	.0	26.0	50.7
Wh. pine/no.red oak/wh. ash	65.2	57.5	.0	.0	122.7	23.6
Other oak/pine	.0	7.3	.0	.0	7.3	100.0
Oak/pine group	65.2	64.8	.0	.0	130.0	22.7
Post, black, or bear oak	7.3	14.5	.0	.0	21.8	57.7
Chestnut oak	.0	7.1	.0	.0	7.1	100.0
White oak/red oak/hickory	21.6	42.8	.0	.0	64.4	32.7
Northern red oak	29.0	64.3	.0	.0	93.3	27.7
Scarlet oak	.0	7.1	.0	.0	7.1	100.0
Red maple/central hardwood	.0	7.3	7.2	.0	14.5	70.7
Mixed central hardwoods	86.7	122.1	6.9	.0	215.7	17.4
Oak/hickory group	144.6	265.3	14.1	.0	423.9	11.7
Black ash/Amer. elm/red maple	.0	12.6	.0	.0	12.6	70.8
Red maple(lowland)	.0	14.2	2.9	.0	17.1	61.1
Red maple(upland)	.0	14.3	.0	.0	14.3	70.7
Elm/ash/red maple group	.0	41.1	2.9	.0	44.0	38.8
Sugar maple/beech/yellow birch	194.2	157.9	7.0	.0	359.0	12.9
Black Cherry	.0	.0	6.9	.0	6.9	100.0
Red maple/northern hardwoods	73.0	256.9	5.3	.0	335.2	13.6
Pin cherry/reverting field	.0	.0	25.3	.0	25.3	50.4
Mixed northern hardwoods	79.2	130.8	7.3	.0	217.4	17.6
Northern hardwoods group	346.4	545.5	51.8	.0	943.8	6.7
Aspen	.0	51.1	7.5	.0	58.6	35.4
Paper birch	14.1	43.4	.0	.0	57.5	34.4
Gray birch	7.3	.0	21.9	.0	29.3	50.0
Aspen/birch group	21.4	94.5	29.4	.0	145.4	21.6
All forest types	1,061.3	1,147.1	105.5	.0	2,313.9	1.2
SE	6.1	5.8	23.4	.0	1.2	

Table 57.--Area of timberland by forest type, forest-type group, and stand-size class, Southern Unit, New Hampshire, 1997

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	1.8	.0	.0	.0	1.8	100.0
White pine	266.6	33.0	8.7	5.0	313.3	12.2
White pine/hemlock	112.4	29.2	.0	.0	141.6	18.9
Hemlock	64.0	40.7	.0	.0	104.7	22.5
White/red pine group	444.8	102.9	8.7	5.0	561.4	8.2
Red spruce	8.2	23.4	.0	.0	31.6	43.2
Red spruce/balsam fir	6.8	.0	.0	.0	6.8	100.0
Spruce/fir group	15.1	23.4	.0	.0	38.5	39.7
Wh. pine/no.red oak/wh. ash	138.9	28.9	.0	.0	167.8	17.8
Other oak/pine	2.1	.0	.0	.0	2.1	100.0
Oak/pine group	141.0	28.9	.0	.0	169.9	17.6
Post, black, or bear oak	4.9	.0	.0	.0	4.9	100.0
White oak/red oak/hickory	51.7	12.9	.0	.0	64.6	29.7
White oak	.0	4.4	.0	.0	4.4	100.0
Northern red oak	77.8	48.2	.0	.0	126.0	20.4
Red maple/central hardwood	10.9	11.3	.0	.0	22.1	50.9
Mixed central hardwoods	108.2	98.1	17.1	.0	223.4	15.2
Oak/hickory group	253.5	174.9	17.1	.0	445.4	10.1
Black ash/Amer. elm/red maple	.0	.0	6.4	.0	6.4	100.0
Red maple(lowland)	10.8	18.5	.0	.0	29.3	42.5
Red maple(upland)	7.5	7.6	.0	.0	15.0	54.0
Elm/ash/red maple group	18.3	26.1	6.4	.0	50.8	31.9
Sugar maple/beech/yellow birch	156.8	102.8	6.5	.0	266.0	13.8
Black Cherry	.0	1.8	.0	.0	1.8	100.0
Red maple/northern hardwoods	111.9	192.7	14.5	.0	319.2	11.8
Pin cherry/reverting field	.0	.0	6.4	.0	6.4	49.3
Mixed northern hardwoods	92.9	92.0	26.9	.0	211.8	15.5
Northern hardwoods group	361.5	389.3	54.4	.0	805.3	6.4
Aspen	10.6	26.1	6.4	.0	43.1	34.7
Paper birch	9.1	5.8	14.7	.0	29.5	40.8
Gray birch	.0	.0	4.6	.0	4.6	100.0
Aspen/birch group	19.7	31.9	25.7	.0	77.2	25.6
All forest types	1,253.8	777.3	112.3	5.0	2,148.5	1.5
SE	4.7	7.0	20.4	100.0	1.5	

Table 58.--Number of live trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Southern Unit, New Hampshire, 1997

(In thousands of trees)

Species group	Diameter class (inches at breast height)							
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9
Balsam fir	35,670	9,788	3,659	844	269	268	117	0
Tamarack	0	0	35	74	35	0	0	0
Black spruce	0	0	38	0	0	0	0	0
Red spruce	21,705	6,311	5,743	4,279	1,899	1,623	610	275
Red pine	0	0	169	67	445	207	382	38
White pine	63,200	28,322	19,755	16,773	12,715	11,014	8,375	5,641
Hemlock	83,238	36,834	21,685	15,188	9,225	6,482	3,842	2,150
Other softwoods	852	0	222	0	0	98	66	29
Total softwoods	204,664	81,255	51,305	37,226	24,588	19,693	13,392	8,133
Sugar maple	34,933	11,313	5,835	3,493	2,768	1,223	789	459
Red maple	168,235	82,528	41,818	29,437	17,938	8,135	3,622	1,488
Yellow birch	29,401	10,181	5,479	2,736	1,826	1,442	510	358
Paper birch	23,583	3,760	5,769	5,667	5,025	2,231	763	214
Beech	66,565	13,425	7,094	4,180	2,383	1,591	951	678
White ash	20,904	8,396	4,544	2,978	1,956	1,240	1,124	315
Black ash	0	483	0	0	38	0	0	0
Aspen	19,564	4,711	2,483	2,632	2,019	899	551	71
White oaks	4,123	1,580	2,542	1,699	1,191	809	543	139
Red oaks	41,428	17,494	10,145	11,239	9,568	8,029	4,897	1,847
Basswood	2,372	0	467	258	174	171	98	0
Elm	4,286	2,831	383	339	189	39	76	40
Other commercial hardwoods	46,476	12,472	8,198	6,088	3,321	1,393	807	176
Noncommercial hardwoods	81,293	15,328	4,688	889	397	99	27	0
Total hardwoods	543,164	184,503	99,446	71,636	48,791	27,302	14,760	5,784
Total, all species	747,828	265,758	150,752	108,861	73,379	46,995	28,152	13,918
SE	4.8	5.4	3.1	3.1	3.1	3.8	4.5	6.0

Table 58.--continued

(In thousands of trees)

Species group	Diameter class (inches at breast height)					All classes	SE
	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	Total 5.0+		
Balsam fir	0	0	0	0	5,157	50,614	24.4
Tamarack	0	0	0	0	143	143	60.6
Black spruce	0	0	0	0	38	38	100.0
Red spruce	109	37	0	0	14,577	42,592	19.8
Red pine	0	0	0	0	1,308	1,308	37.9
White pine	2,689	2,637	3,043	659	83,303	174,825	7.8
Hemlock	1,056	467	388	0	60,484	180,556	9.4
Other softwoods	0	0	0	0	415	1,267	48.6
Total softwoods	3,855	3,141	3,431	659	165,424	451,343	5.3
Sugar maple	147	116	299	189	15,317	61,563	21.8
Red maple	1,170	475	565	39	104,686	355,450	5.6
Yellow birch	136	117	78	38	12,720	52,302	14.2
Paper birch	196	0	0	0	19,864	47,206	13.7
Beech	183	107	142	0	17,310	97,300	11.5
White ash	113	192	39	37	12,538	41,838	14.2
Black ash	0	0	0	0	38	521	93.0
Aspen	0	39	0	0	8,696	32,971	31.2
White oaks	218	36	38	0	7,215	12,917	17.2
Red oaks	1,237	780	746	76	48,564	107,486	9.0
Basswood	0	0	0	0	1,169	3,541	45.1
Elm	0	0	0	0	1,067	8,184	33.8
Other commercial hardwoods	106	0	0	0	20,089	79,038	11.5
Noncommercial hardwoods	0	0	0	0	6,099	102,720	13.1
Total hardwoods	3,505	1,862	1,907	379	275,372	1,003,038	3.8
Total, all species	7,360	5,003	5,337	1,038	440,796	1,454,381	3.1
SE	8.2	10.3	10.1	20.7	2.2	3.1	

Table 59.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Southern Unit, New Hampshire, 1983

(In thousands of trees)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	1,295	630	288	114	49	0	0	0	0	0	2,376	25.0
Tamarack	207	0	0	0	0	0	0	0	0	0	207	100.0
Black spruce	333	300	32	29	24	0	0	0	0	0	718	92.4
Red spruce	5,831	3,640	1,423	798	279	82	19	71	16	0	12,161	22.0
Red pine	137	114	382	535	303	179	19	0	0	0	1,668	41.8
White pine	22,253	18,717	14,939	11,309	7,812	4,761	2,959	1,501	1,762	164	86,177	8.0
Hemlock	16,392	11,327	6,707	4,903	2,377	1,216	680	325	141	0	44,069	10.5
Other softwoods	205	357	342	171	76	24	0	0	0	0	1,175	47.3
Total softwoods	46,653	35,083	24,113	17,859	10,921	6,262	3,678	1,897	1,920	164	148,551	5.6
Sugar maple	6,612	5,191	3,091	1,592	903	297	157	104	88	25	18,060	15.4
Red maple	36,086	23,388	13,308	5,443	2,197	749	434	179	137	0	81,920	6.6
Yellow birch	5,196	2,217	1,191	730	259	387	98	37	32	5	10,154	15.3
Paper birch	10,816	7,321	5,646	1,489	617	94	65	54	15	0	26,119	10.1
Beech	4,935	3,399	1,646	1,142	816	414	144	0	46	0	12,542	15.0
White ash	5,327	3,329	1,687	999	594	205	114	0	67	0	12,322	17.1
Black ash	411	119	238	112	76	0	0	0	0	0	957	64.9
Aspen	4,452	3,945	1,733	666	224	44	58	17	0	0	11,141	23.9
White oaks	2,960	2,875	1,344	1,045	329	267	83	18	12	30	8,965	17.0
Red oaks	14,014	14,504	9,021	6,467	3,262	1,480	921	233	421	0	50,321	7.9
Basswood	483	715	315	165	0	23	19	0	0	0	1,720	33.7
Elm	276	112	304	104	103	43	40	0	12	0	995	29.6
Other hardwoods	8,361	5,407	3,050	1,102	352	224	80	0	0	0	18,576	10.3
Total hardwoods	99,929	72,521	42,575	21,059	9,731	4,227	2,216	642	829	61	253,791	3.5
Total, all species	146,582	107,605	66,688	38,918	20,652	10,490	5,893	2,539	2,749	224	402,341	2.4
SE	3.9	3.5	3.7	3.9	5.0	6.3	8.1	10.3	10.3	27.0	2.4	

Table 60.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Southern Unit, New Hampshire, 1997

(In thousands of trees)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	3,545	844	269	230	117	0	0	0	0	0	5,005	26.7
Tamarack	35	74	35	0	0	0	0	0	0	0	143	60.6
Black spruce	38	0	0	0	0	0	0	0	0	0	38	100.0
Red spruce	5,704	4,201	1,823	1,584	529	275	109	37	0	0	14,263	19.0
Red pine	169	67	445	207	382	38	0	0	0	0	1,308	37.9
White pine	19,172	16,195	11,774	10,167	8,299	5,415	2,545	2,481	2,817	394	79,259	6.8
Hemlock	20,996	14,685	7,171	5,514	3,374	1,667	905	346	350	0	55,009	8.6
Other softwoods	222	0	0	98	66	0	0	0	0	0	387	29.8
Total softwoods	49,881	36,065	21,516	17,801	12,768	7,396	3,560	2,863	3,167	394	155,411	4.6
Sugar maple	5,604	3,273	2,768	1,067	749	459	147	116	192	116	14,491	13.5
Red maple	39,647	28,225	17,463	6,787	3,157	1,225	882	335	411	0	98,132	4.4
Yellow birch	5,167	2,701	1,692	1,211	443	290	136	117	39	0	11,795	12.1
Paper birch	5,694	5,506	4,956	2,037	727	214	79	0	0	0	19,213	8.0
Beech	6,331	3,734	2,078	1,400	836	678	183	38	74	0	15,353	12.0
White ash	4,440	2,886	1,929	1,199	1,046	283	113	192	39	37	12,163	11.4
Black ash	0	0	38	0	0	0	0	0	0	0	38	100.0
Aspen	2,409	2,519	2,019	899	551	71	0	39	0	0	8,509	17.9
White oaks	2,418	1,563	1,153	666	505	107	218	36	38	0	6,705	14.0
Red oaks	9,966	11,026	9,489	7,850	4,790	1,810	1,199	780	640	76	47,625	7.1
Basswood	352	258	174	140	98	0	0	0	0	0	1,023	29.2
Elm	305	339	189	39	76	40	0	0	0	0	989	32.4
Other hardwoods	8,021	5,755	3,204	1,131	732	136	76	0	0	0	19,056	9.3
Total hardwoods	90,356	67,787	47,153	24,427	13,709	5,310	3,033	1,653	1,433	230	255,091	2.9
Total, all species	140,237	103,852	68,669	42,228	26,477	12,706	6,593	4,516	4,599	624	410,503	2.3
SE	3.2	3.2	3.2	4.1	4.7	6.4	8.5	10.9	10.8	25.9	2.3	

Table 61.--Net volume of all trees on timberland by species and tree class, Southern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Tree class						All classes	SE
	Preferred	Acceptable	Preferred/ acceptable	Rough cull	Rotten cull	All cull		
Balsam fir	.0	26.5	26.5	.6	.0	.6	27.1	27.1
Tamarack	.0	.7	.7	.0	.0	.0	.7	62.7
Black spruce	.0	.1	.1	.0	.0	.0	.1	100.0
Red spruce	6.5	124.8	131.3	3.4	.2	3.6	134.8	20.7
Red pine	.0	23.1	23.1	.0	.0	.0	23.1	51.7
White pine	44.7	1,390.9	1,435.6	76.2	2.0	78.2	1,513.9	6.6
Hemlock	4.0	502.6	506.5	54.9	4.8	59.7	566.3	9.6
Other softwoods	.0	3.2	3.2	.6	.0	.6	3.8	42.0
Total softwoods	55.2	2,071.8	2,127.0	135.7	7.0	142.7	2,269.6	4.8
Sugar maple	.9	161.1	162.0	6.3	4.2	10.5	172.5	17.2
Red maple	1.5	819.0	820.4	43.5	13.4	56.9	877.3	5.5
Yellow birch	.0	102.8	102.8	4.8	4.2	9.0	111.8	13.0
Paper birch	2.7	181.3	184.0	5.0	1.2	6.2	190.2	8.9
Beech	1.1	154.0	155.0	8.6	4.2	12.8	167.8	14.4
White ash	4.5	141.4	145.9	1.7	.8	2.5	148.5	13.6
Black ash	.0	.5	.5	.0	.0	.0	.5	100.0
Aspen	.0	93.4	93.4	.2	.2	.4	93.8	17.7
White oaks	.0	65.0	65.0	3.1	.7	3.8	68.9	15.8
Red oaks	56.2	594.5	650.7	8.3	2.2	10.4	661.1	7.3
Basswood	.0	9.8	9.8	.5	.0	.5	10.3	30.8
Elm	.0	8.0	8.0	.1	.0	.1	8.1	41.9
Other commercial hardwoods	2.7	151.4	154.1	7.7	1.0	8.6	162.8	10.7
Noncommercial hardwoods	.0	.0	.0	20.0	.0	20.0	20.0	17.8
Total hardwoods	69.6	2,482.1	2,551.7	109.8	32.0	141.8	2,693.5	3.5
Total, all species	124.8	4,553.9	4,678.7	245.5	39.0	284.5	4,963.2	2.6
SE	15.5	2.8	2.7	9.3	16.7	8.4	2.6	

Volume of all live trees on timberland, for selected species and percent change, Southern Unit of New Hampshire, 1983 and 1997

(Volume increased by 8.0 percent for all species)

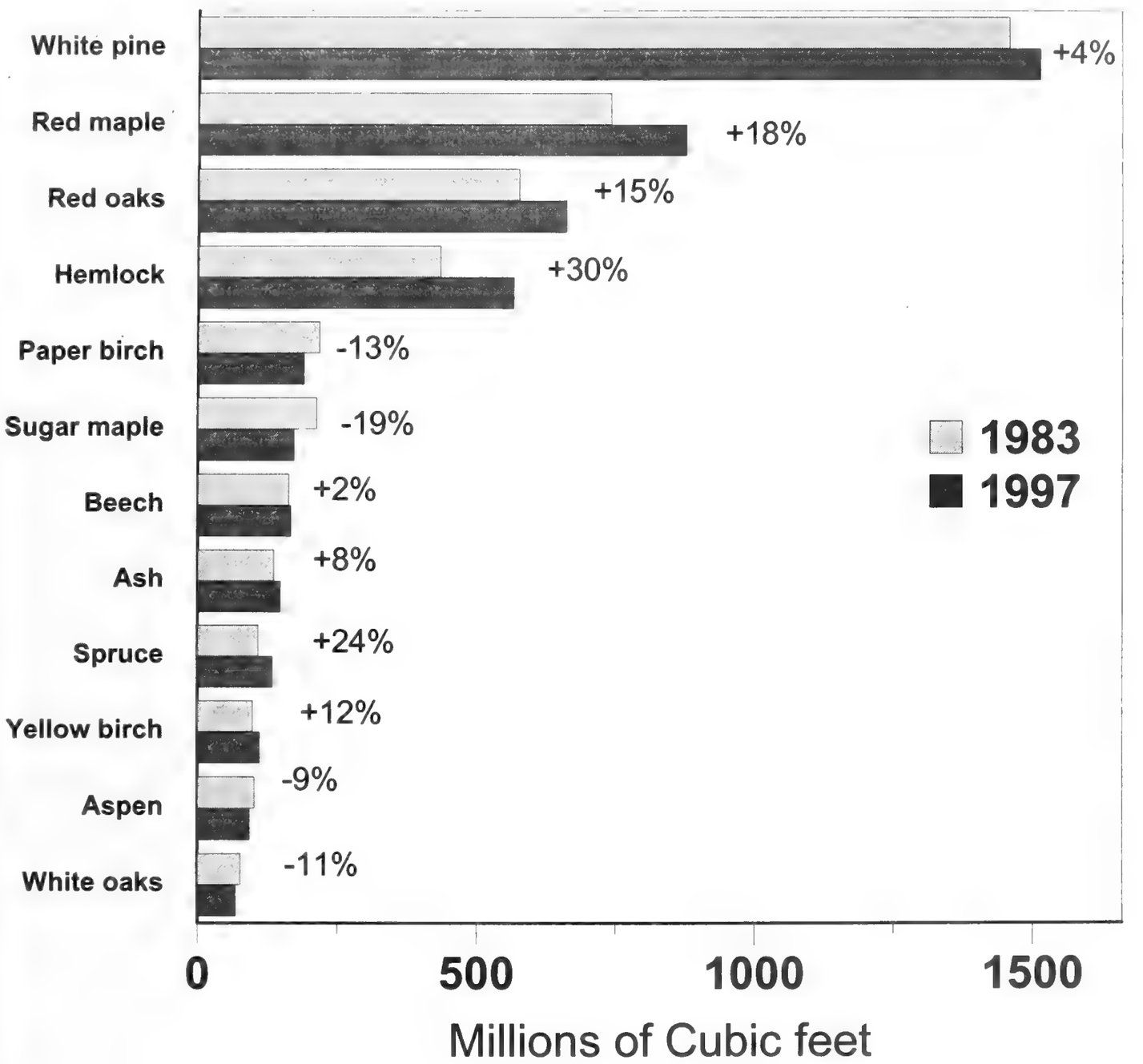


Table 62.--Net volume of all live trees on timberland by species and diameter class, Southern Unit, New Hampshire, 1983

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	4.9	4.1	3.7	2.5	1.3	.0	.0	.0	.0	.0	16.5	29.8
Tamarack	1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0	77.8
Black spruce	1.4	2.1	.4	.5	.8	.0	.0	.0	.0	.0	5.3	91.1
Red spruce	22.9	28.5	17.8	16.8	8.1	3.9	.9	3.9	1.1	.0	103.9	21.8
Red pine	.9	.9	4.4	10.1	8.6	6.2	1.0	.0	.0	.0	32.1	48.7
White pine	97.6	151.1	185.9	217.9	217.3	174.6	143.0	88.3	152.8	30.6	1,459.1	7.2
Hemlock	51.8	71.6	73.4	83.5	56.5	39.5	30.2	17.0	11.1	.0	434.7	10.8
Other softwoods	.9	2.7	4.0	2.6	2.2	.7	.0	.0	.2	.0	13.4	41.2
Total softwoods	181.4	260.9	289.6	333.9	294.8	225.0	175.2	109.2	165.3	30.6	2,065.9	5.4
Sugar maple	23.4	39.1	42.2	32.2	25.9	11.2	11.7	8.1	10.5	9.1	213.4	12.9
Red maple	130.2	184.6	171.1	109.0	61.6	32.1	21.6	14.1	16.8	.8	741.8	6.3
Yellow birch	17.4	18.8	16.8	14.4	6.9	13.7	4.8	2.7	2.4	1.4	99.5	14.3
Paper birch	37.1	54.5	70.6	27.7	17.2	4.4	2.8	2.8	1.0	.0	218.1	9.9
Beech	18.3	29.7	23.0	26.1	25.9	20.3	11.3	1.3	7.6	.4	163.8	13.7
White ash	19.8	28.0	23.0	21.2	17.2	7.5	6.1	.0	5.0	.0	127.6	15.9
Black ash	1.4	.8	3.5	2.2	2.0	.0	.0	.0	.0	.0	9.9	83.3
Aspen	20.2	32.3	24.2	13.7	6.3	1.6	3.6	1.1	.0	.0	103.0	21.1
White oaks	10.1	15.5	13.5	15.4	8.3	6.0	3.9	.7	1.3	3.0	77.6	17.1
Red oaks	49.0	102.2	107.5	110.5	78.5	49.1	37.6	12.2	28.1	1.3	576.1	7.4
Basswood	2.1	5.4	3.9	3.0	.0	.7	1.1	.0	.0	.0	16.2	31.5
Elm	1.1	1.0	3.3	1.5	2.5	2.1	1.5	.7	1.1	.0	14.8	26.1
Other commercial hardwoods	23.7	38.0	35.2	21.9	11.0	9.2	3.0	.0	.0	.0	142.1	11.2
Noncommercial hardwoods	16.0	7.5	2.0	.9	.0	.4	.0	.0	.0	.0	26.8	14.9
Total hardwoods	369.8	557.3	539.8	399.7	263.2	158.4	109.1	43.6	73.8	15.9	2,530.7	3.4
Total, all species	551.2	818.3	829.4	733.5	558.0	383.4	284.3	152.8	239.1	46.6	4,596.5	2.3
SE	3.5	3.3	3.6	3.7	4.8	6.1	7.8	9.6	10.1	21.5	2.3	

Table 63.--Net volume of live trees on timberland by species and diameter class, Southern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	9.9	5.1	3.8	4.9	3.5	.0	.0	.0	.0	.0	27.1	27.1
Tamarack	.1	.3	.3	.0	.0	.0	.0	.0	.0	.0	.7	62.7
Black spruce	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	100.0
Red spruce	17.9	28.9	22.9	31.4	16.5	9.8	5.3	2.2	.0	.0	134.8	20.7
Red pine	.5	.6	5.3	3.6	11.6	1.6	.0	.0	.0	.0	23.1	51.7
White pine	59.6	110.4	147.3	195.8	217.5	197.2	118.4	145.0	231.4	91.3	1,513.9	6.6
Hemlock	54.0	83.3	90.4	101.5	85.3	63.5	42.1	21.3	24.9	.0	566.3	9.6
Other softwoods	.4	.0	.0	1.5	1.3	.6	.0	.0	.0	.0	3.8	42.0
Total softwoods	142.5	228.6	269.9	338.6	335.6	272.7	165.7	168.5	256.2	91.3	2,269.6	4.8
Sugar maple	16.0	22.4	32.0	22.8	20.1	14.3	6.3	5.6	13.9	19.2	172.5	17.2
Red maple	112.6	189.1	205.7	136.7	83.8	46.1	42.8	22.0	37.8	.7	877.3	5.5
Yellow birch	14.0	17.0	18.6	23.3	11.5	11.0	5.5	5.7	2.9	2.3	111.8	13.0
Paper birch	19.1	39.1	60.9	41.0	19.1	7.0	3.9	.0	.0	.0	190.2	8.9
Beech	17.2	25.9	26.4	31.6	22.5	22.8	7.3	5.1	9.2	.0	167.8	14.4
White ash	14.9	21.5	24.4	24.9	28.7	10.4	4.7	11.5	2.6	4.8	148.5	13.6
Black ash	.0	.0	.5	.0	.0	.0	.0	.0	.0	.0	.5	100.0
Aspen	9.4	20.9	24.8	17.9	15.5	2.8	.0	2.6	.0	.0	93.8	17.7
White oaks	7.1	9.3	12.0	12.4	12.0	3.7	7.6	1.8	2.9	.0	68.9	15.8
Red oaks	30.3	73.4	107.6	138.4	111.9	60.8	49.5	39.0	41.5	8.7	661.1	7.3
Basswood	1.2	2.0	1.8	2.5	2.9	.0	.0	.0	.0	.0	10.3	30.8
Elm	.8	1.7	1.8	.8	1.6	1.3	.0	.0	.0	.0	8.1	41.9
Other commercial hardwoods	25.0	42.3	38.9	24.7	20.5	6.1	5.0	.0	.0	.0	162.8	10.7
Noncommercial hardwoods	10.3	4.3	3.7	1.4	.4	.0	.0	.0	.0	.0	20.0	17.8
Total hardwoods	277.9	468.9	559.2	478.4	350.5	186.2	132.7	93.3	110.7	35.7	2,693.5	3.5
Total, all species	420.4	697.5	829.2	817.0	686.1	458.9	298.4	261.8	367.0	127.0	4,963.2	2.6
SE	3.3	3.3	3.3	4.0	4.7	6.2	8.6	11.1	10.9	21.4	2.6	

Table 64.--Net volume of growing-stock trees on timberland by species and diameter class, Southern Unit, New Hampshire, 1983

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	3.9	4.1	3.5	2.2	1.3	.0	.0	.0	.0	.0	15.0	31.5
Tamarack	.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	100.0
Black spruce	1.2	2.1	.4	.5	.8	.0	.0	.0	.0	.0	5.1	90.7
Red spruce	20.3	26.9	17.3	15.2	7.5	3.1	.9	3.9	1.1	.0	96.3	22.4
Red pine	.5	.9	4.4	10.1	8.0	6.2	1.0	.0	.0	.0	31.1	50.0
White pine	71.1	128.3	179.6	208.1	208.7	166.6	135.9	82.9	140.4	24.1	1,345.8	7.5
Hemlock	43.4	65.3	67.6	80.8	54.9	37.7	28.0	16.1	10.4	.0	404.1	10.9
Other softwoods	.5	2.2	3.7	2.6	1.7	.7	.0	.0	.0	.0	11.3	44.3
Total softwoods	141.5	229.7	276.5	319.6	282.8	214.3	165.8	102.8	152.0	24.1	1,909.3	5.6
Sugar maple	21.0	37.6	39.5	29.6	21.9	9.7	7.5	6.2	6.4	3.2	182.8	13.9
Red maple	107.5	161.6	157.4	95.1	53.3	24.4	17.8	8.9	9.7	.0	635.8	6.5
Yellow birch	15.3	15.6	15.1	12.5	5.4	11.7	3.9	2.2	1.6	1.4	84.7	14.6
Paper birch	34.0	51.1	68.7	26.1	14.5	2.7	2.4	2.8	.6	.0	203.0	10.4
Beech	13.6	24.5	20.3	21.6	21.7	14.9	6.1	.0	3.2	.0	126.0	15.2
White ash	19.2	26.3	22.7	20.9	16.6	6.6	5.6	.0	4.6	.0	122.4	16.4
Black ash	1.4	.8	3.5	2.2	2.0	.0	.0	.0	.0	.0	9.9	83.3
Aspen	16.7	30.9	22.1	12.9	5.7	1.6	2.9	1.1	.0	.0	94.0	22.5
White oaks	7.7	14.6	13.5	14.8	7.2	6.0	2.8	.7	1.3	3.0	71.6	17.4
Red oaks	43.9	96.6	105.2	108.2	76.0	48.7	36.7	11.4	25.8	.0	552.5	7.4
Basswood	1.4	5.1	3.1	3.0	.0	.7	1.1	.0	.0	.0	14.4	33.1
Elm	.7	.7	3.0	1.5	2.2	1.2	1.5	.0	1.1	.0	11.9	28.0
Other hardwoods	24.5	37.6	35.4	19.2	8.7	7.7	3.0	.0	.0	.0	136.1	11.0
Total hardwoods	307.1	503.0	509.5	367.6	235.3	136.0	91.5	33.4	54.3	7.6	2,245.3	3.6
Total, all species	448.6	732.7	786.0	687.2	518.2	350.4	257.3	136.2	206.3	31.7	4,154.6	2.5
SE	4.0	3.6	3.8	3.9	5.1	6.4	8.3	10.3	11.1	26.9	2.5	

Table 65.--Net volume of growing-stock trees on timberland by species and diameter class, Southern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	9.8	5.1	3.8	4.4	3.5	.0	.0	.0	.0	.0	26.5	27.4
Tamarack	.1	.3	.3	.0	.0	.0	.0	.0	.0	.0	.7	62.7
Black spruce	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	100.0
Red spruce	17.8	28.7	22.2	31.0	14.3	9.8	5.3	2.2	.0	.0	131.3	20.6
Red pine	.5	.6	5.3	3.6	11.6	1.6	.0	.0	.0	.0	23.1	51.7
White pine	58.3	107.8	140.8	186.5	216.5	192.1	113.9	138.5	225.1	56.1	1,435.6	6.7
Hemlock	53.2	82.0	75.8	90.8	77.4	50.7	36.6	16.7	23.5	.0	506.5	10.0
Other softwoods	.4	.0	.0	1.5	1.3	.0	.0	.0	.0	.0	3.2	40.5
Total softwoods	140.2	224.5	248.1	317.7	324.5	254.1	155.8	157.3	248.6	56.1	2,127.0	5.0
Sugar maple	15.6	21.6	32.0	20.5	19.7	14.3	6.3	5.6	11.0	15.5	162.0	17.8
Red maple	109.8	184.9	204.4	121.1	76.5	40.4	36.8	17.3	29.3	.0	820.4	5.5
Yellow birch	13.7	17.0	18.1	20.5	10.3	9.9	5.5	5.7	2.1	.0	102.8	13.5
Paper birch	18.9	38.7	60.2	39.1	18.2	7.0	1.9	.0	.0	.0	184.0	9.0
Beech	16.5	24.8	24.9	29.5	21.0	22.8	7.3	3.0	5.2	.0	155.0	14.7
White ash	14.8	21.1	24.1	24.3	27.8	10.2	4.7	11.5	2.6	4.8	145.9	13.6
Black ash	.0	.0	.5	.0	.0	.0	.0	.0	.0	.0	.5	100.0
Aspen	9.3	20.6	24.8	17.9	15.5	2.8	.0	2.6	.0	.0	93.4	17.7
White oaks	6.9	9.1	11.8	10.4	11.4	3.1	7.6	1.8	2.9	.0	65.0	16.0
Red oaks	30.0	72.4	107.3	136.3	111.0	60.0	48.3	39.0	37.6	8.7	650.7	7.4
Basswood	1.0	2.0	1.8	2.2	2.9	.0	.0	.0	.0	.0	9.8	31.1
Elm	.7	1.7	1.8	.8	1.6	1.3	.0	.0	.0	.0	8.0	42.4
Other hardwoods	24.7	41.2	38.2	21.9	19.2	5.1	3.8	.0	.0	.0	154.1	10.9
Total hardwoods	261.8	455.1	550.1	444.5	335.0	176.7	122.3	86.5	90.8	29.0	2,551.7	3.6
Total, all species	402.0	679.6	798.2	762.2	659.5	430.8	278.1	243.8	339.4	85.2	4,678.7	2.7
SE	3.4	3.4	3.4	4.2	4.8	6.6	8.9	11.6	11.5	26.7	2.7	

Table 66.--Net volume of growing-stock trees on timberland by species and stand-size class, Southern Unit, New Hampshire, 1983

(In millions of cubic feet)

Species group	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Balsam fir	5.5	8.4	1.1	.0	15.0	31.5
Tamarack	.0	.0	.6	.0	.6	100.0
Black spruce	4.6	.5	.0	.0	5.1	90.7
Red spruce	43.1	51.8	1.4	.0	96.3	22.4
Red pine	28.5	1.8	.8	.0	31.1	50.0
White pine	982.5	344.3	19.0	.0	1,345.8	7.5
Hemlock	286.9	117.0	.2	.0	404.1	10.9
Other softwoods	5.4	5.9	.0	.0	11.3	44.3
Total softwoods	1,356.4	529.8	23.1	.0	1,909.3	5.6
Sugar maple	94.0	88.3	.6	.0	182.8	13.9
Red maple	246.7	385.3	3.8	.0	635.8	6.5
Yellow birch	43.0	41.7	.0	.0	84.7	14.6
Paper birch	56.6	146.4	.0	.0	203.0	10.4
Beech	80.7	45.3	.0	.0	126.0	15.2
White ash	43.4	79.0	.0	.0	122.4	16.4
Black ash	.8	9.1	.0	.0	9.9	83.3
Aspen	26.9	66.9	.2	.0	94.0	22.5
White oaks	33.7	37.4	.6	.0	71.6	17.4
Red oaks	258.3	290.5	3.8	.0	552.5	7.4
Basswood	4.9	9.5	.0	.0	14.4	33.1
Elm	9.9	2.0	.0	.0	11.9	28.0
Other hardwoods	67.5	68.0	.6	.0	136.1	11.0
Total hardwoods	966.4	1,269.4	9.5	.0	2,245.3	3.6
Total, all species	2,322.8	1,799.2	32.6	.0	4,154.6	2.5
SE	6.7	6.6	29.9	.0	2.5	

Table 67.--Net volume of growing-stock trees on timberland by species and stand-size class, Southern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Balsam fir	12.9	13.2	.3	.0	26.5	27.4
Tamarack	.5	.1	.0	.0	.7	62.7
Black spruce	.0	.0	.1	.0	.1	100.0
Red spruce	59.4	69.3	2.5	.0	131.3	20.6
Red pine	16.3	6.3	.5	.0	23.1	51.7
White pine	1,243.7	184.7	7.2	.0	1,435.6	6.7
Hemlock	364.4	139.0	3.1	.0	506.5	10.0
Other softwoods	2.1	.5	.6	.0	3.2	40.5
Total softwoods	1,699.4	413.2	14.4	.0	2,127.0	5.0
Sugar maple	113.9	47.4	.7	.0	162.0	17.8
Red maple	501.3	305.5	13.7	.0	820.4	5.5
Yellow birch	57.0	43.1	2.7	.0	102.8	13.5
Paper birch	98.8	85.0	.2	.0	184.0	9.0
Beech	105.6	48.5	1.0	.0	155.0	14.7
White ash	83.4	60.6	2.0	.0	145.9	13.6
Black ash	.0	.5	.0	.0	.5	100.0
Aspen	31.0	61.1	1.3	.0	93.4	17.7
White oaks	43.7	21.3	.0	.0	65.0	16.0
Red oaks	418.5	226.3	5.9	.0	650.7	7.4
Basswood	4.3	5.5	.0	.0	9.8	31.1
Elm	6.6	1.0	.4	.0	8.0	42.4
Other hardwoods	99.8	50.2	4.1	.0	154.1	10.9
Total hardwoods	1,563.8	956.0	31.9	.0	2,551.7	3.6
Total, all species	3,263.2	1,369.2	46.3	.0	4,678.7	2.7
SE	5.2	8.0	27.9	.0	2.7	

Table 68.--Net volume of growing-stock trees on timberland by forest type and stand-size class, Southern Unit, New Hampshire, 1997

(In millions of cubic feet)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	11.3	.0	.0	.0	11.3	100.0
White pine	745.7	56.5	6.2	.0	808.4	13.1
White pine/hemlock	323.7	63.9	.0	.0	387.6	19.9
Hemlock	175.5	65.0	.0	.0	240.5	26.7
White/red pine group	1,256.2	185.4	6.2	.0	1,447.8	8.8
Red spruce	17.4	53.6	.0	.0	71.1	44.8
Red spruce/balsam fir	9.8	.0	.0	.0	9.8	100.0
Spruce/fir group	27.3	53.6	.0	.0	80.9	41.2
Wh. pine/no.red oak/wh. ash	441.4	38.9	.0	.0	480.3	19.5
Other oak/pine	7.6	.0	.0	.0	7.6	100.0
Oak/pine group	449.0	38.9	.0	.0	487.9	19.3
Post, black, or bear oak	9.9	.0	.0	.0	9.9	100.0
White oak/red oak/hickory	134.4	17.5	.0	.0	151.9	32.0
White oak	.0	2.5	.0	.0	2.5	100.0
Northern red oak	173.8	98.0	.0	.0	271.8	21.7
Red maple/central hardwood	26.5	21.9	.0	.0	48.4	52.8
Mixed central hardwoods	230.7	172.6	7.5	.0	410.8	16.5
Oak/hickory group	575.4	312.4	7.5	.0	895.3	10.9
Black ash/Amer. elm/red maple	.0	.0	2.2	.0	2.2	100.0
Red maple(lowland)	10.2	16.5	.0	.0	26.6	48.3
Red maple(upland)	15.6	12.9	.0	.0	28.4	50.6
Elm/ash/red maple group	25.7	29.3	2.2	.0	57.2	33.9
Sugar maple/beech/yellow birch	379.4	195.7	1.7	.0	576.7	15.2
Black Cherry	.0	2.3	.0	.0	2.3	100.0
Red maple/northern hardwoods	269.8	350.8	7.1	.0	627.7	13.4
Mixed northern hardwoods	244.4	161.9	15.8	.0	422.2	18.0
Northern hardwoods group	893.6	710.7	24.6	.0	1,628.9	7.7
Aspen	13.7	31.7	.6	.0	46.0	39.8
Paper birch	22.3	7.2	4.6	.0	34.1	55.5
Gray birch	.0	.0	.5	.0	.5	100.0
Aspen/birch group	36.0	38.9	5.7	.0	80.6	32.7
All forest types	3,263.2	1,369.2	46.3	.0	4,678.7	2.7
SE	5.2	8.0	27.9	.0	2.7	

Percent of growing-stock volume by forest-type group
Southern Unit, New Hampshire, 1997

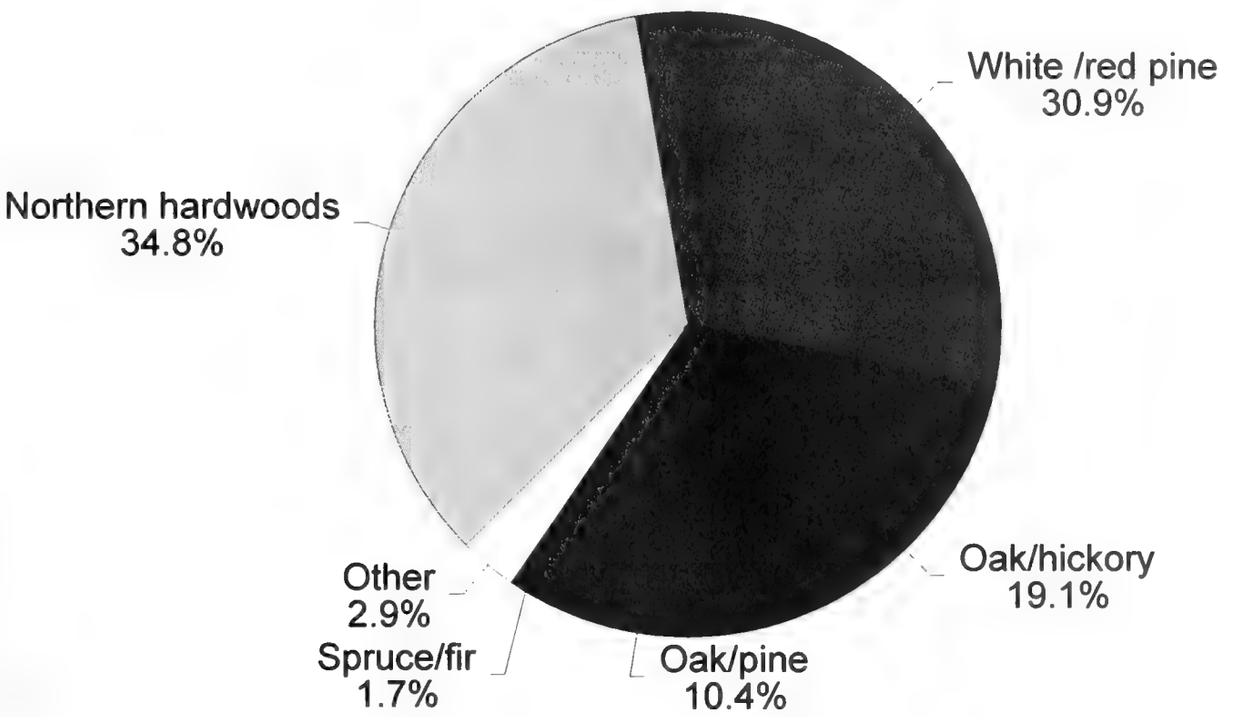


Table 69.--Net volume of growing-stock trees on timberland by species and forest-type group, Southern Unit, New Hampshire, 1983

(In millions of cubic feet)

Species group	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Balsam fir	2.1	4.0	.0	.0	.5	.0	.0	7.0	1.4	15.0	31.5
Tamarack	.0	.0	.0	.0	.0	.0	.0	.6	.0	.6	100.0
Black spruce	4.6	.0	.0	.0	.0	.0	.0	.5	.0	5.1	90.7
Red spruce	20.2	28.6	.0	.0	4.2	.0	.0	36.8	6.6	96.3	22.4
Red pine	28.3	.0	.0	1.8	.6	.0	.0	.3	.0	31.1	50.0
White pine	826.6	.0	.0	129.6	116.3	.0	2.2	242.5	28.6	1,345.8	7.5
Hemlock	200.0	.6	.0	23.8	42.8	.0	.3	127.6	8.9	404.1	10.9
Other softwoods	7.1	.0	.0	2.7	1.5	.0	.0	.0	.0	11.3	44.3
Total softwoods	1,088.8	33.1	.0	158.0	165.8	.0	2.5	415.4	45.5	1,909.3	5.6
Sugar maple	9.5	1.1	.0	1.7	6.8	.0	.0	157.9	6.0	182.8	13.9
Red maple	91.2	2.3	.0	26.4	79.9	.0	23.7	390.3	22.1	635.8	6.5
Yellow birch	2.7	.5	.0	.3	3.6	.0	.4	76.2	1.0	84.7	14.6
Paper birch	23.8	.7	.0	10.9	19.0	.0	.0	109.2	39.4	203.0	10.4
Beech	5.2	.0	.0	1.1	9.4	.0	.0	109.3	1.1	126.0	15.2
White ash	17.2	.7	.0	2.8	7.4	.0	.0	93.3	1.0	122.4	16.4
Black ash	.0	.0	.0	.0	.6	.0	.0	9.3	.0	9.9	83.3
Aspen	22.6	.0	.0	1.9	8.4	.0	.0	16.2	44.9	94.0	22.5
White oaks	12.3	.0	.0	6.1	44.5	.0	.0	8.3	.4	71.6	17.4
Red oaks	58.2	1.4	.0	38.6	304.0	.0	.0	135.1	15.3	552.5	7.4
Basswood	1.9	.0	.0	.0	.5	.0	.0	12.0	.0	14.4	33.1
Elm	5.1	.0	.0	.4	2.9	.0	.0	3.5	.0	11.9	28.0
Other hardwoods	23.0	.0	.0	1.1	31.9	.0	1.2	75.5	3.4	136.1	11.0
Total hardwoods	272.6	6.7	.0	91.3	518.8	.0	25.3	1,196.1	134.7	2,245.3	3.6
Total, all species	1,361.4	39.7	.0	249.3	684.6	.0	27.8	1,611.5	180.3	4,154.6	2.5
SE	10.2	53.6	.0	24.9	12.5	.0	52.8	7.4	26.5	2.5	

Table 70.--Net volume of growing-stock trees on timberland by species and forest-type group, Southern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Balsam fir	4.6	3.6	.0	.1	2.1	.0	.2	15.9	.0	26.5	27.4
Tamarack	.5	.0	.0	.0	.0	.0	.0	.1	.0	.7	62.7
Black spruce	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	100.0
Red spruce	19.2	56.5	.0	.8	8.7	.0	.0	41.2	4.9	131.3	20.6
Red pine	18.1	.0	.0	.5	1.8	.0	.0	2.2	.5	23.1	51.7
White pine	772.8	1.2	.0	268.7	134.4	.0	9.1	226.5	23.0	1,435.6	6.7
Hemlock	273.9	3.2	.0	48.5	39.1	.0	1.3	139.4	1.2	506.5	10.0
Other softwoods	1.4	.0	.0	.5	.6	.0	.0	.6	.0	3.2	40.5
Total softwoods	1,090.6	64.4	.0	319.0	186.8	.0	10.6	425.9	29.6	2,127.0	5.0
Sugar maple	9.2	.0	.0	1.3	7.4	.0	.2	144.0	.0	162.0	17.8
Red maple	132.1	11.4	.0	63.0	142.3	.0	40.9	417.3	13.5	820.4	5.5
Yellow birch	9.1	.4	.0	2.6	8.0	.0	.1	82.2	.3	102.8	13.5
Paper birch	32.6	3.2	.0	8.0	28.2	.0	.1	103.6	8.3	184.0	9.0
Beech	12.9	.0	.0	2.2	35.3	.0	.0	103.9	.8	155.0	14.7
White ash	15.7	.0	.0	14.4	17.8	.0	.0	97.5	.5	145.9	13.6
Black ash	.0	.0	.0	.0	.0	.0	.0	.5	.0	.5	100.0
Aspen	26.6	.0	.0	4.9	3.8	.0	.4	39.4	18.3	93.4	17.7
White oaks	12.9	.0	.0	3.7	44.7	.0	.0	2.6	1.1	65.0	16.0
Red oaks	81.6	1.3	.0	61.7	382.1	.0	.3	118.4	5.2	650.7	7.4
Basswood	1.1	.0	.0	.0	1.5	.0	.0	6.3	.9	9.8	31.1
Elm	6.0	.0	.0	.0	.0	.0	.7	1.2	.1	8.0	42.4
Other hardwoods	17.4	.2	.0	7.0	37.4	.0	4.1	86.0	2.0	154.1	10.9
Total hardwoods	357.3	16.5	.0	168.8	708.5	.0	46.7	1,203.0	50.9	2,551.7	3.6
Total, all species	1,447.8	80.9	.0	487.9	895.3	.0	57.2	1,628.9	80.6	4,678.7	2.7
SE	8.8	41.2	.0	19.3	10.9	.0	33.9	7.7	32.7	2.7	

Table 71.--Net volume of growing-stock in the sawlog portion of sawtimber trees on timberland by species and diameter class, Southern Unit, New Hampshire, 1997

(In millions of cubic feet)

Species group	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	3.2	3.8	3.1	.0	.0	.0	.0	.0	10.1	36.9
Tamarack	.2	.0	.0	.0	.0	.0	.0	.0	.2	100.0
Red spruce	18.7	27.0	12.8	8.9	4.9	2.0	.0	.0	74.2	23.2
Red pine	4.5	3.1	10.4	1.4	.0	.0	.0	.0	19.4	54.5
White pine	118.4	162.3	193.5	174.8	105.1	128.8	210.5	52.5	1,145.8	7.1
Hemlock	63.7	79.0	69.2	46.1	33.8	15.5	21.9	.0	329.2	11.5
Other softwoods	.0	1.3	1.1	.0	.0	.0	.0	.0	2.4	46.4
Total softwoods	208.7	276.4	290.1	231.2	143.7	146.3	232.5	52.5	1,581.4	5.6
Sugar maple	.0	15.1	15.9	12.0	5.3	4.8	9.3	13.2	75.6	23.5
Red maple	.0	89.1	62.0	33.9	31.3	14.7	24.9	.0	255.9	9.7
Yellow birch	.0	15.1	8.3	8.4	4.7	4.8	1.8	.0	43.1	18.5
Paper birch	.0	28.8	14.8	5.8	1.6	.0	.0	.0	51.0	16.1
Beech	.0	21.7	17.0	19.1	6.2	2.5	4.5	.0	71.0	18.6
White ash	.0	17.9	22.5	8.6	4.0	9.8	2.2	4.1	69.1	17.6
Aspen	.0	13.1	12.5	2.3	.0	2.2	.0	.0	30.2	21.5
White oaks	.0	7.7	9.2	2.6	6.5	1.5	2.5	.0	29.9	21.9
Red oaks	.0	100.3	89.9	50.4	41.0	33.2	32.0	7.4	354.2	8.6
Basswood	.0	1.6	2.3	.0	.0	.0	.0	.0	4.0	46.1
Elm	.0	.6	1.3	1.1	.0	.0	.0	.0	3.0	62.2
Other hardwoods	.0	16.1	15.5	4.3	3.2	.0	.0	.0	39.2	18.6
Total hardwoods	.0	327.1	271.4	148.4	103.9	73.5	77.2	24.7	1,026.2	5.2
Total, all species	208.7	603.5	561.5	379.7	247.6	219.8	309.6	77.2	2,607.6	3.8
SE	6.4	4.2	4.9	6.5	8.9	11.6	11.6	26.5	3.8	

Sawtimber volume on timberland, for selected species and percent change, Southern Unit of New Hampshire, 1983 and 1997

(Volume increased by 25.4 percent for all species)

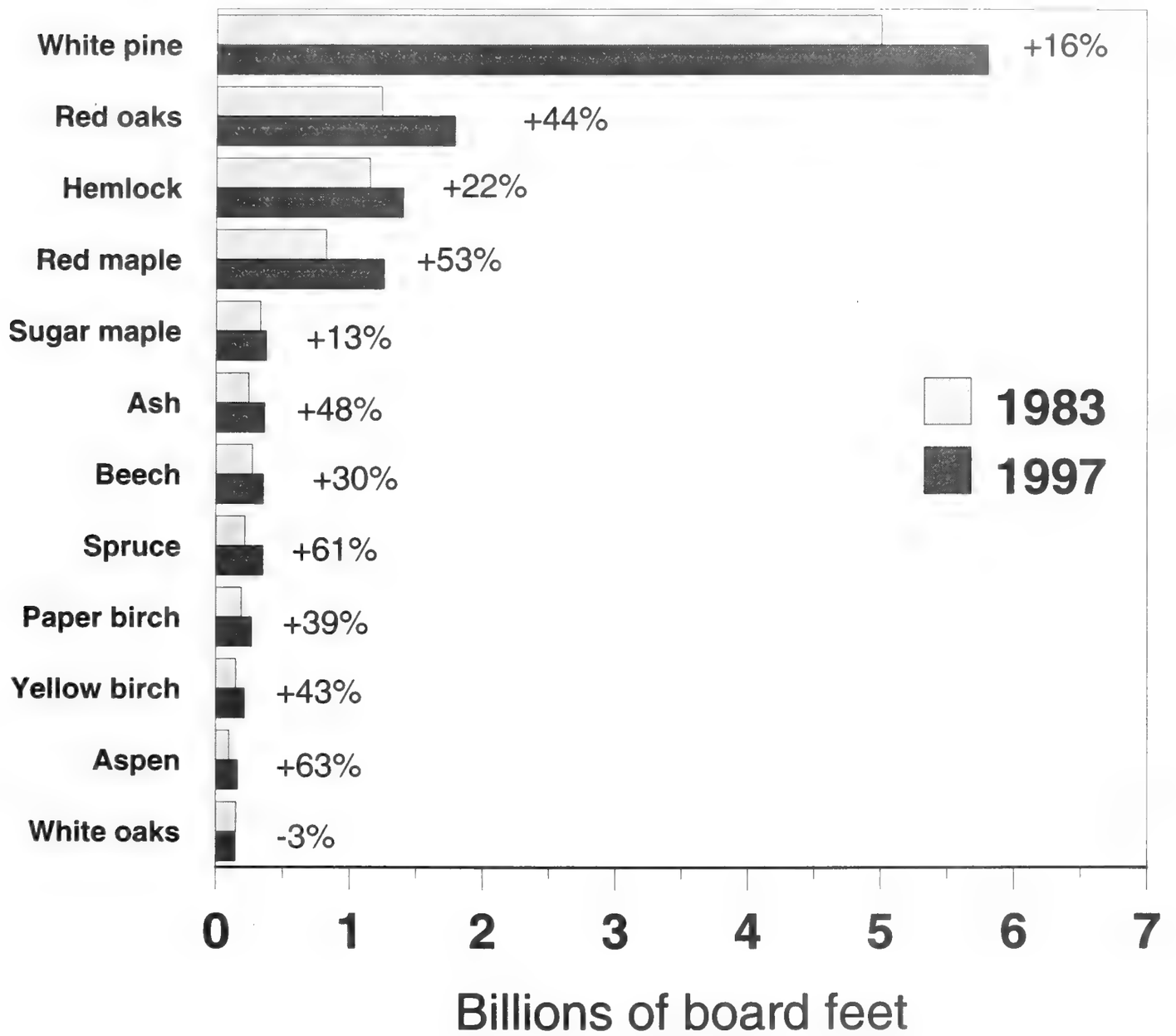


Table 72.--Net volume of sawtimber trees on timberland by species and diameter class, Southern Unit, New Hampshire, 1983

(In millions of board feet)

Species group	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	12.8	9.0	5.6	.0	.0	.0	.0	.0	27.5	53.0
Black spruce	1.5	2.3	3.9	.0	.0	.0	.0	.0	7.7	100.0
Red spruce	64.4	65.7	34.6	16.3	4.9	20.0	6.1	.0	211.9	26.9
Red pine	14.6	40.3	35.1	29.3	5.0	.0	.0	.0	124.2	53.9
White pine	591.9	823.6	913.9	779.9	649.0	407.1	719.5	124.3	5,009.1	7.9
Hemlock	217.7	302.8	218.4	163.6	125.0	74.4	50.7	.0	1,152.6	12.3
Other softwoods	12.5	9.5	6.4	2.9	.0	.0	.0	.0	31.3	44.7
Total softwoods	915.3	1,253.2	1,217.8	992.0	783.8	501.6	776.2	124.3	6,564.1	6.3
Sugar maple	.0	108.7	86.9	39.5	30.1	26.5	28.7	13.5	333.8	15.1
Red maple	.0	354.3	210.8	101.7	76.9	39.2	42.2	.0	825.0	10.0
Yellow birch	.0	47.6	20.2	48.2	15.0	8.6	6.5	5.6	151.8	17.5
Paper birch	.0	103.3	56.3	11.2	9.5	10.7	2.6	.0	193.7	18.2
Beech	.0	81.6	91.6	60.5	28.5	.0	12.7	.0	274.8	18.0
White ash	.0	82.5	71.2	28.8	26.6	.0	20.0	.0	229.0	22.1
Black ash	.0	8.7	9.0	.0	.0	.0	.0	.0	17.7	87.5
Aspen	.0	49.8	24.1	6.7	14.9	5.8	.0	.0	101.3	26.3
White oaks	.0	56.6	28.4	30.5	11.8	3.3	7.2	15.6	153.4	21.6
Red oaks	.0	401.7	303.8	197.4	160.6	51.6	125.0	.0	1,240.1	9.0
Basswood	.0	9.4	.0	2.9	5.0	.0	.0	.0	17.2	43.0
Elm	.0	6.0	8.7	6.6	6.0	.0	5.5	.0	32.9	33.6
Other hardwoods	.0	72.6	33.0	33.1	12.4	.0	.0	.0	151.1	17.8
Total hardwoods	.0	1,382.8	943.9	567.2	397.4	145.7	250.1	34.7	3,722.0	5.3
Total, all species	915.3	2,636.0	2,161.8	1,559.2	1,181.2	647.3	1,026.4	159.0	10,286.1	4.0
SE	7.1	3.9	5.2	6.5	8.4	10.4	11.4	27.0	4.0	

Table 73.--Net volume of sawtimber trees on timberland by species and diameter class, Southern Unit, New Hampshire, 1997

(In millions of board feet)

Species group	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Balsam fir	15.1	18.1	14.2	.0	.0	.0	.0	.0	47.5	38.0
Tamarack	.6	.0	.0	.0	.0	.0	.0	.0	.6	100.0
Red spruce	80.0	134.0	64.3	45.6	22.2	8.0	.0	.0	354.1	23.8
Red pine	17.4	14.3	56.8	7.9	.0	.0	.0	.0	96.5	59.1
White pine	479.6	751.7	965.9	910.9	545.5	690.2	1,157.9	305.0	5,806.8	7.3
Hemlock	234.4	326.7	295.7	208.3	159.2	72.5	104.6	.0	1,401.4	12.0
Other softwoods	.0	5.4	5.0	.0	.0	.0	.0	.0	10.4	46.7
Total softwoods	827.1	1,250.3	1,401.9	1,172.8	727.0	770.7	1,262.5	305.0	7,717.3	5.9
Sugar maple	.0	77.9	80.5	60.2	24.5	23.5	43.9	68.0	378.4	23.7
Red maple	.0	450.0	294.8	161.4	149.7	79.4	124.0	.0	1,259.3	10.0
Yellow birch	.0	80.9	38.6	38.6	26.2	21.3	10.8	.0	216.5	18.9
Paper birch	.0	157.3	75.4	30.1	7.2	.0	.0	.0	270.1	16.3
Beech	.0	114.7	83.7	94.9	31.9	12.0	19.5	.0	356.8	18.7
White ash	.0	99.8	118.2	40.9	19.0	51.3	10.5	25.4	365.1	17.5
Aspen	.0	71.9	68.8	11.9	.0	12.2	.0	.0	164.9	21.2
White oaks	.0	39.5	43.2	12.9	28.1	8.9	15.6	.0	148.1	23.0
Red oaks	.0	506.9	444.3	246.3	203.3	177.1	168.9	43.1	1,789.9	8.7
Basswood	.0	6.2	11.6	.0	.0	.0	.0	.0	17.8	47.8
Elm	.0	4.0	6.1	6.5	.0	.0	.0	.0	16.6	63.5
Other hardwoods	.0	81.8	76.3	22.0	14.0	.0	.0	.0	194.2	18.9
Total hardwoods	.0	1,690.9	1,341.6	725.7	504.0	385.8	393.2	136.5	5,177.7	5.4
Total, all species	827.1	2,941.2	2,743.5	1,898.4	1,231.0	1,156.4	1,655.7	441.5	12,895.0	4.0
SE	6.5	4.3	5.0	6.7	9.1	11.9	11.8	26.9	4.0	

Table 74.--Average annual net change of growing-stock volume on timberland by species and component of change, Southern Unit, New Hampshire, 1997

(In thousands of cubic feet)

Species group	Component of change								Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull decrement	Cull increment	Net growth	Removals	
Balsam fir	682	144	826	-148	51	-102	627	-274	353
Tamarack	0	0	0	0	73	0	73	0	73
Black spruce	0	31	31	-155	0	0	-124	-153	-277
Red spruce	793	1,506	2,299	-551	51	-265	1,532	-219	1,313
Red pine	32	194	227	0	35	-72	190	-1,319	-1,129
White pine	9,464	23,056	32,520	-2,522	5,315	-2,297	33,015	-26,673	6,342
Hemlock	6,028	6,575	12,603	-1,473	1,139	-3,138	9,131	-4,977	4,154
Other softwoods	10	1	11	-36	24	0	0	-39	-40
Total softwoods	17,009	31,509	48,518	-4,886	6,688	-5,874	44,446	-33,655	10,791
Sugar maple	1,283	1,753	3,037	-516	1,185	-632	3,073	-1,925	1,148
Red maple	6,647	9,662	16,309	-2,485	5,780	-2,427	17,177	-8,892	8,285
Yellow birch	1,067	800	1,868	-1,159	745	-315	1,138	-190	949
Paper birch	1,270	1,654	2,924	-2,421	482	-562	422	-1,663	-1,241
Beech	1,090	2,226	3,316	-539	1,757	-715	3,819	-1,265	2,554
White ash	2,216	2,276	4,492	-1,255	92	-87	3,242	-1,940	1,302
Aspen	1,179	2,189	3,368	-1,668	471	-124	2,047	-861	1,186
White oaks	519	929	1,448	-158	365	-123	1,532	-1,361	171
Red oaks	6,008	6,308	12,316	-1,871	1,683	-146	11,982	-9,011	2,971
Basswood	87	339	426	0	40	-32	435	-65	370
Elm	48	0	48	-417	0	0	-368	-244	-613
Other hardwoods	2,023	2,342	4,365	-856	781	-124	4,166	-891	3,275
Total hardwoods	23,438	30,480	53,918	-13,344	13,379	-5,289	48,665	-28,307	20,357
Total, all species	40,447	61,989	102,436	-18,231	20,068	-11,163	93,111	-61,963	31,148

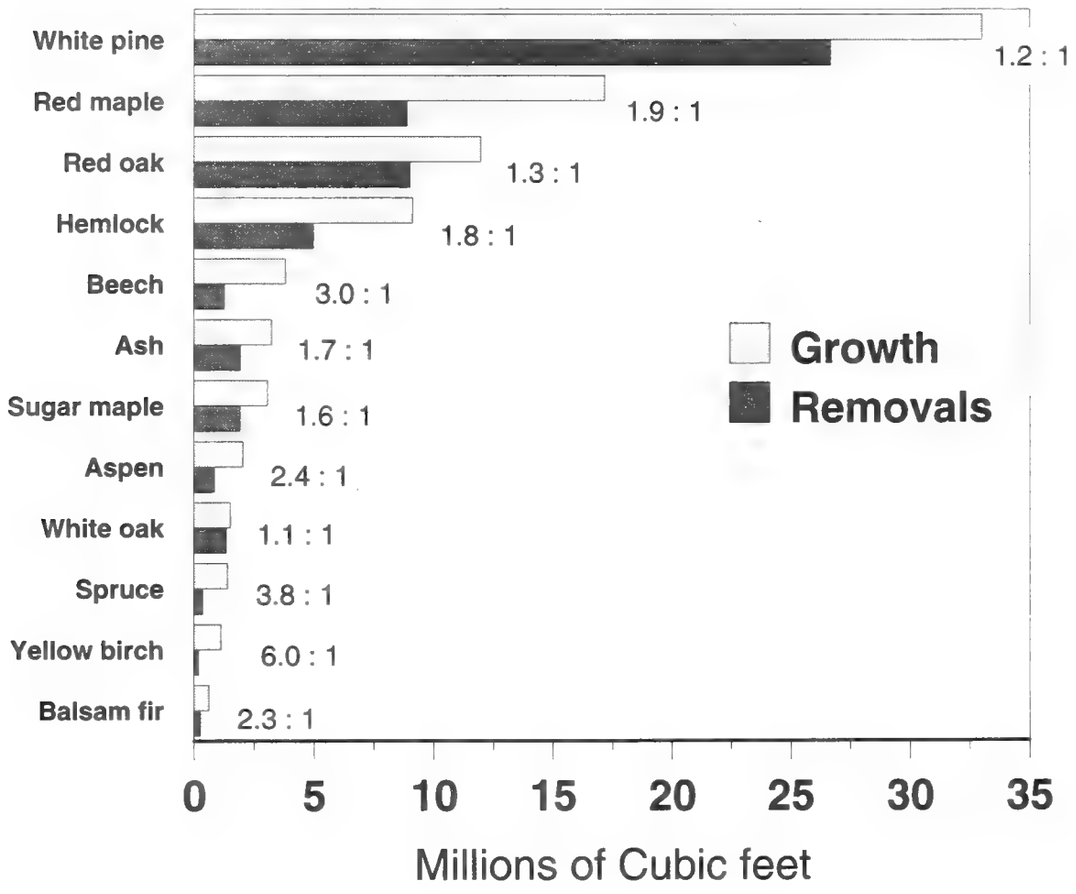
Table 75.--Average annual net change of sawtimber volume on timberland by species and component of change, Southern Unit, New Hampshire, 1997

(In thousands of board feet)

Species group	Component of change								Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull decrement	Cull increment	Net growth	Removals	
Balsam fir	790	217	1,006	-403	0	0	603	-401	202
Black spruce	101	0	101	0	0	0	101	-690	-589
Red spruce	4,133	4,881	9,013	-1,329	122	-1,241	6,566	-795	5,771
Red pine	109	1,085	1,194	0	0	-309	885	-5,928	-5,043
White pine	50,263	115,661	165,925	-5,353	16,421	-9,182	167,811	-107,920	59,891
Hemlock	16,696	18,880	35,577	-3,379	2,290	-10,814	23,674	-16,337	7,336
Other softwoods	0	4	4	-127	0	0	-123	-145	-268
Total softwoods	72,092	140,728	212,821	-10,590	18,833	-21,546	199,518	-132,217	67,301
Sugar maple	5,206	3,263	8,470	-498	4,060	-1,745	10,287	-3,957	6,330
Red maple	25,869	10,496	36,365	-2,483	6,361	-5,602	34,641	-14,693	19,947
Yellow birch	3,738	1,856	5,595	-1,141	1,270	-569	5,156	-527	4,629
Paper birch	6,861	1,716	8,577	-1,593	220	-546	6,658	-1,562	5,097
Beech	5,652	3,797	9,449	-859	1,644	-1,323	8,910	-2,139	6,772
White ash	6,524	4,662	11,186	-1,955	0	0	9,231	-5,063	4,168
Aspen	6,275	2,825	9,100	-1,932	217	-491	6,894	-2,258	4,635
White oaks	2,039	1,399	3,438	0	488	-580	3,346	-2,795	551
Red oaks	35,208	20,381	55,589	-2,875	2,605	-272	55,047	-24,058	30,988
Basswood	440	1,301	1,741	0	0	0	1,741	0	1,741
Elm	0	0	0	-1,404	0	0	-1,404	-1,209	-2,613
Other hardwoods	6,678	2,077	8,755	-928	1,827	0	9,654	-1,053	8,601
Total hardwoods	104,491	53,774	158,265	-15,669	18,692	-11,127	150,161	-59,313	90,848
Total, all species	176,583	194,502	371,086	-26,260	37,525	-32,673	349,679	-191,530	158,149

Average annual growth and removals of growing-stock volume and ratio of growth to removals for selected species on timberland, Southern Unit of New Hampshire, 1983-97

(Ratio of growth/removals for all species is 1.5 : 1)



COUNTY TABLES

Table 76.--Net land area by county, and land class, New Hampshire, 1997

(In thousands of acres)

County	Land class						All classes
	Timberland	Other-urban forest	Reserved forest	Other res forest	Total forest land	Nonforest land	
Carroll	502.0	14.3	.0	.0	516.2	81.5	597.7
Coos	1,037.1	15.3	49.6	6.3	1,108.4	44.0	1,152.4
Grafton	821.1	39.4	99.0	2.0	961.5	135.2	1,096.6
Northern Unit	2,360.2	69.0	148.6	8.3	2,586.1	260.7	2,846.8
Belknap	200.9	4.5	.0	.0	205.4	51.4	256.8
Cheshire	366.2	8.7	.0	.0	375.0	77.8	452.8
Hillsborough	383.0	15.7	.0	.0	398.6	162.3	560.9
Merrimack	474.1	31.6	.0	.0	505.7	92.4	598.1
Rockingham	284.2	28.8	.0	.0	313.0	132.0	444.9
Strafford	158.9	.0	.0	.0	158.9	77.1	236.1
Sullivan	281.1	.0	.0	.0	281.1	62.8	344.0
Southern Unit	2,148.5	89.2	.0	.0	2,237.7	655.9	2,893.6
Total	4,508.6	158.2	148.6	8.3	4,823.8	916.6	5,740.4

Table 77.--Area of timberland by county and ownership class, New Hampshire, 1997

(In thousands of acres)

County	Ownership class								All ownerships	SE
	National Forest	Misc. federal	State	County and municipal	Forest industry	Farmer	Corporate	Individual		
Carroll	153.2	.0	10.4	.0	5.5	.0	105.1	227.8	502.0	3.1
Coos	154.7	.0	66.1	6.1	434.6	13.9	135.1	226.6	1,037.1	2.2
Grafton	217.7	.0	10.9	10.9	12.6	.0	124.2	444.7	821.1	3.6
Northern Unit	525.6	.0	87.4	17.0	452.7	13.9	364.5	899.1	2,360.2	1.7
Belknap	.0	.0	22.4	.0	.0	.0	6.7	171.8	200.9	3.5
Cheshire	.0	6.7	6.2	39.3	.0	.0	90.8	223.2	366.2	2.9
Hillsborough	.0	5.0	.0	16.5	.0	2.1	82.6	276.8	383.0	4.0
Merrimack	.0	10.7	26.3	22.9	5.0	4.8	81.3	323.1	474.1	2.3
Rockingham	.0	.0	24.1	27.5	.0	.0	38.7	193.9	284.2	6.1
Strafford	.0	.0	6.3	.0	.0	.0	19.5	133.1	158.9	5.7
Sullivan	.0	.0	42.7	.0	.0	5.6	43.3	189.6	281.1	3.2
Southern Unit	.0	22.3	128.0	106.2	5.0	12.5	362.9	1,511.5	2,148.5	1.5
Total	525.6	22.3	215.4	123.2	457.7	26.4	727.4	2,410.7	4,508.6	1.1
SE	6.3	50.7	15.9	21.2	8.2	46.2	8.1	3.1	1.1	

Table 78.--Area of timberland by county and forest-type group, New Hampshire, 1997

(In thousands of acres)

County	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Carroll	88.8	5.3	15.5	22.5	101.5	.0	14.0	241.2	13.0	502.0	3.1
Coos	9.4	252.7	.0	.0	6.5	.0	7.5	653.3	107.8	1,037.1	2.2
Grafton	90.5	113.5	.0	12.7	43.8	.0	.0	501.1	59.4	821.1	3.6
Northern Unit	188.7	371.6	15.5	35.3	151.8	.0	21.5	1,395.6	180.2	2,360.2	1.7
Belknap	70.1	6.7	.0	13.5	44.9	.0	.0	61.2	4.6	200.9	3.5
Cheshire	66.3	6.1	.0	17.9	84.8	.0	12.6	167.3	11.3	366.2	2.9
Hillsborough	124.5	1.5	.0	32.9	88.8	.0	17.5	114.4	3.3	383.0	4.0
Merrimack	133.1	4.4	.0	48.3	82.2	.0	6.2	173.6	26.3	474.1	2.3
Rockingham	86.8	.0	.0	20.3	83.0	.0	13.2	63.0	17.8	284.2	6.1
Strafford	19.5	6.8	.0	30.6	29.3	.0	1.3	67.8	3.7	158.9	5.7
Sullivan	61.1	12.9	.0	6.4	32.4	.0	.0	158.0	10.3	281.1	3.2
Southern Unit	561.4	38.5	.0	169.9	445.4	.0	50.8	805.3	77.2	2,148.5	1.5
Total	750.1	410.1	15.5	205.2	597.1	.0	72.3	2,200.9	257.4	4,508.6	1.1
SE	7.2	11.1	56.0	15.7	8.8	.0	26.9	3.7	14.5	1.1	

Table 79.--Area of timberland by county and stand-size class, New Hampshire, 1997

(In thousands of acres)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Carroll	319.0	147.7	35.3	.0	502.0	3.1
Coos	383.6	476.8	172.8	3.9	1,037.1	2.2
Grafton	389.5	362.8	68.8	.0	821.1	3.6
Northern Unit	1,092.2	987.2	276.8	3.9	2,360.2	1.7
Belknap	126.2	65.9	8.8	.0	200.9	3.5
Cheshire	238.2	117.4	10.6	.0	366.2	2.9
Hillsborough	259.1	110.6	13.2	.0	383.0	4.0
Merrimack	236.1	213.7	19.3	5.0	474.1	2.3
Rockingham	164.4	92.4	27.3	.0	284.2	6.1
Strafford	103.5	40.9	14.5	.0	158.9	5.7
Sullivan	126.3	136.4	18.5	.0	281.1	3.2
Southern Unit	1,253.8	777.3	112.3	5.0	2,148.5	1.5
Total	2,346.0	1,764.5	389.1	8.9	4,508.6	1.1
SE	3.6	4.6	10.9	71.3	1.1	

Table 80.--Area of timberland by county and stocking class of growing-stock trees, New Hampshire, 1997

(In thousands of acres)

County	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
Carroll	5.2	74.5	124.7	266.7	30.8	502.0	3.1
Coos	56.9	272.2	349.5	338.9	19.7	1,037.1	2.2
Grafton	5.4	97.6	284.1	382.5	51.4	821.1	3.6
Northern Unit	67.5	444.3	758.3	988.1	102.0	2,360.2	1.7
Belknap	.0	31.1	91.3	78.6	.0	200.9	3.5
Cheshire	.0	37.8	115.9	193.7	18.8	366.2	2.9
Hillsborough	.0	34.1	151.6	186.5	10.7	383.0	4.0
Merrimack	5.0	55.5	199.1	204.1	10.3	474.1	2.3
Rockingham	9.9	23.8	123.9	109.7	16.9	284.2	6.1
Strafford	1.6	38.6	61.6	53.5	3.6	158.9	5.7
Sullivan	1.5	25.8	110.9	130.0	12.9	281.1	3.2
Southern Unit	18.0	246.6	854.4	956.1	73.3	2,148.5	1.5
Total	85.5	690.8	1,612.8	1,944.3	175.3	4,508.6	1.1
SE	25.0	8.2	4.9	4.3	17.2	1.1	

Table 81.--Net volume of growing-stock trees on timberland by county and forest-type group, New Hampshire, 1997

(In millions of cubic feet)

County	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Carroll	266.4	21.5	34.7	62.9	188.0	.0	13.5	517.2	2.2	1,106.3	7.1
Coos	31.4	420.7	.0	.0	8.0	.0	6.7	920.2	169.1	1,556.1	5.4
Grafton	255.9	196.3	.0	25.7	91.4	.0	.0	983.1	106.5	1,659.0	5.7
Northern Unit	553.7	638.5	34.7	88.6	287.4	.0	20.2	2,420.5	277.8	4,321.4	3.5
Belknap	165.1	14.5	.0	44.4	78.9	.0	.0	93.1	6.9	402.9	9.8
Cheshire	176.0	12.4	.0	71.9	198.7	.0	12.8	360.0	14.4	846.3	5.8
Hillsborough	337.3	2.9	.0	101.4	192.8	.0	20.9	265.8	.0	921.1	6.4
Merrimack	335.2	7.2	.0	124.4	148.3	.0	8.4	345.1	38.4	1,007.0	5.8
Rockingham	238.2	.0	.0	38.2	170.9	.0	10.2	135.6	8.5	601.6	8.8
Strafford	45.4	9.8	.0	94.0	43.3	.0	5.0	128.5	6.7	332.7	9.4
Sullivan	150.5	34.1	.0	13.6	62.4	.0	.0	300.7	5.7	567.1	7.3
Southern Unit	1,447.8	80.9	.0	487.9	895.3	.0	57.2	1,628.9	80.6	4,678.7	2.7
Total	2,001.5	719.4	34.7	576.4	1,182.7	.0	77.4	4,049.4	358.4	9,000.0	2.2
SE	8.0	13.2	57.9	17.6	9.8	.0	29.1	4.7	18.5	2.2	

Table 82.--Net volume of growing-stock trees on timberland by county and stand-size class, New Hampshire, 1997

(In millions of cubic feet)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Carroll	876.6	220.4	9.3	.0	1,106.3	7.1
Coos	734.0	772.4	49.8	.0	1,556.1	5.4
Grafton	968.6	649.1	41.2	.0	1,659.0	5.7
Northern Unit	2,579.2	1,641.8	100.3	.0	4,321.4	3.5
Belknap	299.8	96.9	6.3	.0	402.9	9.8
Cheshire	614.7	229.0	2.6	.0	846.3	5.8
Hillsborough	705.2	206.7	9.2	.0	921.1	6.4
Merrimack	639.7	359.3	8.0	.0	1,007.0	5.8
Rockingham	421.3	175.4	5.0	.0	601.6	8.8
Strafford	270.6	56.8	5.3	.0	332.7	9.4
Sullivan	311.9	245.2	10.0	.0	567.1	7.3
Southern Unit	3,263.2	1,369.2	46.3	.0	4,678.7	2.7
Total	5,842.4	3,011.0	146.6	.0	9,000.0	2.2
SE	4.1	5.5	17.5	.0	2.2	

Table 83.--Net volume of sawtimber trees on timberland by county and forest-type group, New Hampshire, 1997

(In millions of board feet)

County	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Carroll	915.8	57.9	91.6	197.2	488.6	.0	26.1	1,498.6	.0	3,275.8	9.5
Coos	113.9	852.7	.0	.0	7.9	.0	18.1	1,887.0	328.8	3,208.5	8.0
Grafton	753.4	329.8	.0	67.8	196.0	.0	.0	2,339.1	209.7	3,895.9	7.8
Northern Unit	1,783.2	1,240.4	91.6	265.0	692.5	.0	44.2	5,724.7	538.5	10,380.2	4.9
Belknap	430.3	27.1	.0	159.2	196.1	.0	.0	214.0	7.8	1,034.5	16.4
Cheshire	489.8	8.3	.0	294.7	538.1	.0	34.9	886.9	32.8	2,285.5	9.1
Hillsborough	1,131.3	7.6	.0	350.6	427.8	.0	38.5	699.6	.0	2,655.4	8.6
Merrimack	1,072.1	9.3	.0	381.5	364.8	.0	17.4	803.9	94.2	2,743.2	8.5
Rockingham	800.4	.0	.0	113.3	416.2	.0	5.9	373.6	15.5	1,724.8	10.9
Strafford	157.0	33.5	.0	342.2	97.3	.0	9.5	342.4	23.2	1,005.2	14.0
Sullivan	439.2	107.1	.0	52.0	122.4	.0	.0	718.8	7.0	1,446.4	11.2
Southern Unit	4,520.1	192.8	.0	1,693.5	2,162.7	.0	106.2	4,039.1	180.5	12,895.0	4.0
Total	6,303.3	1,433.2	91.6	1,958.5	2,855.1	.0	150.3	9,763.9	719.1	23,275.1	3.1
SE	8.7	15.0	69.3	19.1	11.1	.0	34.0	5.8	22.5	3.1	

Table 84.--Net volume of sawtimber trees on timberland by county and stand-size class, New Hampshire, 1997

(In millions of board feet)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Carroll	2,932.6	326.0	17.2	.0	3,275.8	9.5
Coos	2,000.1	1,114.4	93.9	.0	3,208.5	8.0
Grafton	2,821.3	980.5	94.0	.0	3,895.9	7.8
Northern Unit	7,754.1	2,420.9	205.2	.0	10,380.2	4.9
Belknap	892.6	132.1	9.8	.0	1,034.5	16.4
Cheshire	1,870.0	408.8	6.7	.0	2,285.5	9.1
Hillsborough	2,320.4	319.9	15.1	.0	2,655.4	8.6
Merrimack	2,103.5	619.8	19.9	.0	2,743.2	8.5
Rockingham	1,374.5	339.1	11.2	.0	1,724.8	10.9
Strafford	887.1	114.1	4.0	.0	1,005.2	14.0
Sullivan	954.3	468.2	23.9	.0	1,446.4	11.2
Southern Unit	10,402.3	2,402.0	90.6	.0	12,895.0	4.0
Total	18,156.4	4,822.9	295.8	.0	23,275.1	3.1
SE	4.4	6.2	24.9	.0	3.1	

Table 85.--Biomass of all trees and shrubs on timberland, by county and class of material, New Hampshire, 1997

(In thousands of dry tons)

County	Timber	Non-timber				Total trees and shrubs	SE
		Salvable dead trees	Saplings	Seedlings	Shrubs		
Carroll	41,276	411	3,456	681	115	45,939	8.2
Coos	59,730	1,137	8,045	1,704	660	71,275	4.4
Grafton	59,982	675	6,610	1,310	230	68,807	5.1
Belknap	15,174	79	1,670	213	49	17,185	6.7
Cheshire	32,038	276	2,200	266	97	34,879	5.4
Hillsborough	30,401	256	2,353	259	187	33,456	5.9
Merrimack	35,940	573	2,658	365	161	39,697	4.3
Rockingham	21,153	380	1,582	178	139	23,433	8.1
Strafford	11,764	60	1,177	154	54	13,209	7.4
Sullivan	21,669	216	2,094	245	42	24,267	6.1
Total	329,127	4,063	31,847	5,374	1,736	372,147	2.0
SE	2.2	8.2	3.5	4.0	8.3	2.0	

Table 86.--Biomass of all timber on timberland, by county, class of timber, and component, New Hampshire, 1997

(In thousands of dry tons)

County	Growing stock trees					Total timber	SE
	Growing stock	Branches	Foliage	Stump and roots	Cull trees		
Carroll	25,840	3,488	1,416	7,930	2,601	41,276	9.1
Coos	35,263	4,927	2,136	11,165	6,239	59,730	5.0
Grafton	35,921	5,032	2,170	11,354	5,505	59,982	5.4
Belknap	8,529	1,246	573	2,712	2,113	15,174	7.9
Cheshire	19,847	2,731	1,147	6,152	2,160	32,038	5.7
Hillsborough	19,030	2,736	1,233	5,984	1,418	30,401	6.2
Merrimack	21,426	3,046	1,358	6,691	3,419	35,940	4.6
Rockingham	12,934	1,842	836	4,025	1,516	21,153	8.7
Strafford	7,213	1,009	430	2,246	867	11,764	8.4
Sullivan	12,486	1,768	783	3,930	2,703	21,669	6.6
Total	198,489	27,825	12,082	62,189	28,542	329,127	2.2
SE	2.2	2.1	2.3	2.2	5.9	2.2	

*U.S. GPO:-2000-550-321/20004

Frieswyk, Thomas S.; Widmann Richard H. 2000. **Forest statistics for New Hampshire: 1983 and 1997.** Resour. Bull. NE-146. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 130 p.

A statistical report on the fifth forest inventory of New Hampshire (1996-1998). Findings are displayed in 86 tables containing estimates of forest area, numbers of trees, timber volume, growth, change, and biomass. Data are presented at three levels: state, county, and region.

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

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