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Forest Statistics for Connecticut: 1985 and 1998

Carol L. Alerich

Abstract

A statistical report on the fourth forest inventory of Connecticut conducted in 1997-98 by the Forest Inventory and Analysis Unit of the Northeastern Research Station. Statistics for forest area, numbers of trees, wildlife habitat, tree biomass, timber volume, growth, and change are displayed at the state and, where appropriate, the county level. The current inventory indicates that there are approximately 3.2 billion cubic feet of growing-stock volume on 1.7 million acres of timberland in Connecticut.

Acknowledgment

The Forest Inventory and Analysis Unit thanks the landowners of Connecticut and the Connecticut State Department of Environmental Protection for their cooperation and assistance during this inventory.

Manuscript received for publication 4 May 2000

Foreword

The fourth inventory of Connecticut 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 Edward A. Doane, Robert E. Ilgenfritz, Brian M. LaPoint, Richard A. McCullough, Jason W. Morrison, Lucretia B. Stewart, and Kathryn M. Tillman. The members of the data-collection field staff in Connecticut were:

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

Mr. Donald H. Smith, Jr. and other members of the Connecticut State Department of Environmental Protection; Dr. Jeffrey S. Ward of the Connecticut Agricultural Experiment Station; and Dr. Alan A. Lucier of the National Council of the Paper Industry for Air and Stream Improvement, Inc (NCASI) assisted in reviewing this document for accuracy.

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Forest Statistics for Connecticut: 1985 and 1998

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Highlights

Forest-Land Area

The 1.9 million acres of forest land in Connecticut cover 60 percent of the state's total land area (3.1 million acres). Timberland, the largest component of forest land, totals 1.7 million acres and makes up 91 percent of the forest land, and 55 percent of the total land area. There has been no change in total forest land since 1985, but timberland is down 5 percent since 1985 when it was estimated at 1.8 million acres, or 96 percent of the forest land, and 58 percent of the total area.

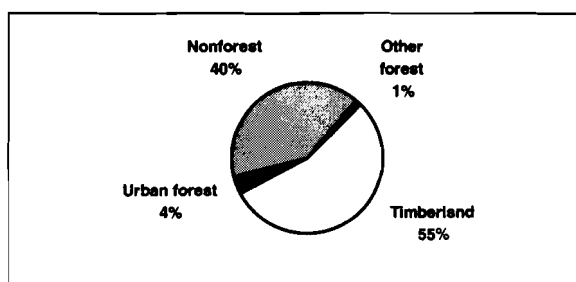


Figure 1. Area by land class, Connecticut, 1998 (Source: Table 1).

An increase in the urbanization in the Northeast is reflected in the increase in urban forest land in Connecticut since 1985. Area in this land class increased from 1.4 percent to 3.8 percent of the total land area.

Forest land class	1985	1998	Percent change
Timberland	1,785	1,696	-5
Urban	44	117	165
Other forest	21	46	114
Total forest land	1,850	1,859	.5

Figure 2. Area (in thousand acres) of components of forest land and percent change, Connecticut, 1985 and 1998 (Source: Table 1).

Timberland

When forest type is classified using relative stand density to calculate stocking (a new nationally developed standard procedure for all FIA projects—see **Comparison Between Inventories** section), the oak/hickory type group is the most common in Connecticut. This type group makes up 51 percent (0.9 million acres) of the timberland area. Northern hardwood forests cover 29 percent (0.5 million acres); elm/ash/red maple, 9 percent (0.2 million acres); and

white/red pine, 7 percent (0.1 million acres). Other type groups combined contribute less than 0.1 million acres.

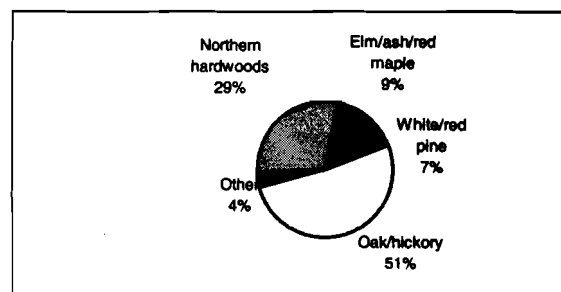


Figure 3. Timberland by forest-type group (based on relative density), Connecticut, 1998 (Source: Table 4).

When forest type is determined using basal area to calculate stocking (the procedure used in 1985), the major forest type groups are similarly represented. The oak/hickory type group makes up 54 percent (0.9 million acres) of the timberland area. Northern hardwood forests cover 26 percent (0.4 million acres); elm/ash/red maple, 9 percent (0.2 million acres); and white/red pine forests cover 8 percent (0.1 million acres). Other type groups contribute less than 0.1 million acres.

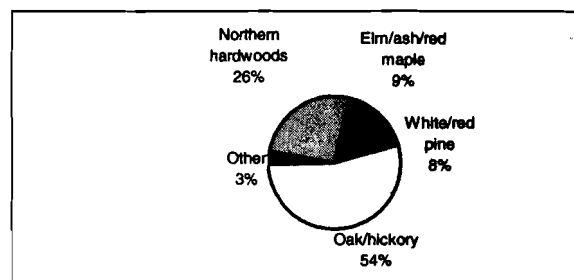


Figure 4. Timberland by forest-type group (based on basal area), Connecticut, 1998 (Source: Table 6).

When stand size is classified using relative density as a factor, sawtimber stands (those in which the stocking of live sawtimber trees makes up the majority) are found on 68 percent of the timberland, or 1.2 million acres. Poletimber stands cover 25 percent (0.4 million acres), sapling and seedling stands account for 6 percent (0.1 million acres), and nonstocked stands cover less than 1 percent of the timberland area. In 1985, sawtimber stands predominated, covering 0.9 million acres (52 percent), while poletimber stands accounted for 0.6 million acres (36 percent). Sapling and seedling stands accounted for 0.2 million acres, or 11 percent. Poletimber stands showed a 36-

percent drop while sawtimber stands increased by 24 percent.

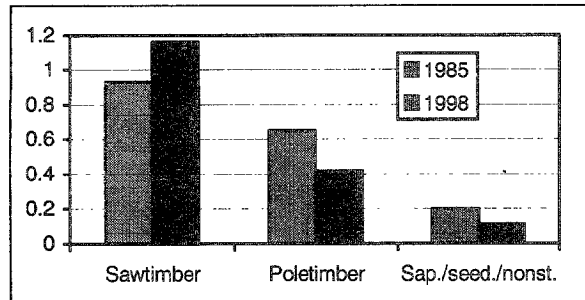


Figure 5. Area of timberland (in million acres) by stand-size class (based on relative density), Connecticut, 1985 and 1998 (Source: Tables 3 and 4).

When stand size is determined using basal area as a factor, sawtimber stands are found on 70 percent of the timberland, or 1.2 million acres. Poletimber stands cover 24 percent (0.4 million acres), sapling and seedling stands, 5 percent (0.1 million acres), and nonstocked stands, less than 1 percent. In 1985, sawtimber stands covered 1.1 million acres (62 percent); poletimber stands covered 0.5 million acres (27 percent); and sapling and seedling stands accounted for 0.2 million acres, or 10 percent. Poletimber stands showed a 15-percent drop while sawtimber stands increased by 8 percent.

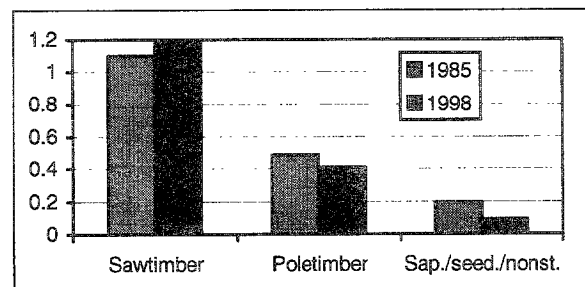


Figure 6. Area of timberland (in million acres) by stand-size class (based on basal area), Connecticut, 1985 and 1998 (Source: Tables 5 and 6).

Numbers of Trees

There are 820 million live trees 1.0 inch or larger in diameter at breast height (d.b.h.) on Connecticut's timberland, or 483 trees per acre. Of these, 273 million (161 trees per acre) are at least 5.0 inches in d.b.h. Red maple is the most common tree species in Connecticut, accounting for 27 percent of all saplings and 26 percent of the live trees 5.0 inches and larger in d.b.h. Sweet birch is the second most common tree species, with 11 percent of the saplings and 9

percent of the live trees at least 5.0 inches in diameter. Eastern hemlock rounds out the top three overall, with 6 percent of the saplings and 8 percent of the live trees 5.0 inches and larger in d.b.h.

Growing-stock trees make up 90 percent of live trees 5.0 inches and larger in d.b.h. Red maple is the most common of the trees in this category with 26 percent of the growing-stock trees. Northern red oak makes up 11 percent of the total. Sweet birch is third, with 10 percent of all growing-stock trees.

There has been a negligible change in the total number of growing-stock trees since 1985. However, since the timberland acreage is down, the number of growing-stock trees per acre is up, from 135 to 144 trees per acre.

In growing-stock trees 5.0 to 10.9 inches in d.b.h., there has been a decrease of 6 percent versus an increase of 20 percent in numbers of trees that are 11.0 inches and larger in diameter.

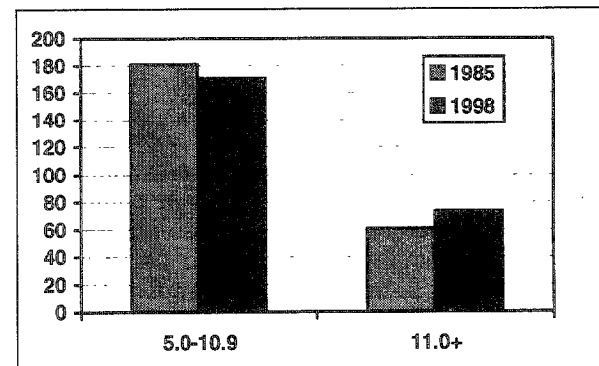


Figure 7. Number of growing-stock trees (in million trees) on timberland by diameter group, Connecticut, 1985 and 1998 (Source: Tables 22 and 23).

Growing-Stock Volume

The volume of growing-stock trees in Connecticut is 3.2 billion cubic feet, or 1,875 cubic feet per acre. This is a 14-percent increase since 1985 when the volume totaled 2.8 billion feet, or 1,570 cubic feet per acre. Red maple is the leading species in growing-stock volume, with 692 million cubic feet, or 22 percent of the total. Northern red oak growing-stock trees contribute 16 percent of the total volume, or 509 million cubic feet. Other red oaks rank third with 11 percent of the total (350

million cubic feet). There has been no change in the ranking of the top three species since 1985.

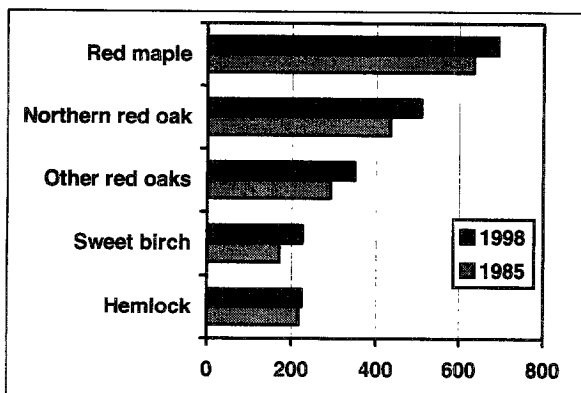


Figure 8. Net volume of growing-stock trees (in million cubic feet) on timberland, top five species, Connecticut, 1985 and 1998 (Source: Tables 33 and 34).

Sawtimber Volume

With an average of 5,406 board feet per acre, there are 9.2 billion board feet of sawtimber volume in Connecticut. In 1985, the volume was 7.6 billion board feet, or 4,276 board feet per acre; sawtimber volume has increased by 20 percent since the last inventory. The top three species for sawtimber volume are the same as for growing-stock volume, but are ranked differently. Northern red oak is the top species with 1.8 billion board feet, or 19 percent of the total. Red maple has 18 percent (1.7 billion board feet) of the total sawtimber volume. Rounding out the top three sawtimber volume species are other red oaks with 12 percent.

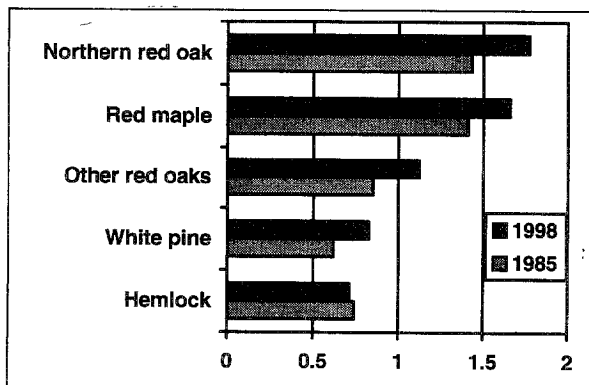


Figure 9. Net volume of sawtimber trees (in billion board feet) on timberland, top five species, Connecticut, 1985 and 1998 (Source: Tables 36 and 37).

Growth and Removals

Since the last inventory, the average annual net growth of growing stock on timberland is 55.7 million cubic feet, or 33 cubic feet per acre per year. This represents 1.8 percent of the current inventory. Average annual removals of growing stock total 25.5 million cubic feet, or 15 cubic feet per acre per year. Net change is positive over the period since the last inventory, with an average annual net change of 30.1 million cubic feet.

Over all species, the growth to removals ratio is 2.2. However, rates of growth to removals of growing-stock volume vary with tree species. Red maple is growing 2.1 times faster than it is being removed, either by harvest or by land-use change, while other red oaks, the species with the highest amount of total growing-stock removals, has a growth to removals ratio of 1.3.

Average annual net growth of sawtimber on timberland is 215.0 million board feet, or 127 board feet per acre per year. The rate of growth to removals of sawtimber volume is 2.5. Annual removals are 87.6 million board feet per year, or 52 board feet per acre annually. Removals combined with growth yielded a positive annual change in board-foot volume of 127.4 million board feet.

For all major species there was a positive change in board-foot volume, with red maple showing the largest annual increase at 24.0 million board feet and a growth-to-removals ratio of 2.6. Northern red oak had an annual increase of 22.5 million board feet, a growth-to-removals ratio of 2.2. Other red oaks, despite a growth-to-removals ratio of 1.4, showed an annual increase of 8.3 million board feet.

Species	Growing stock	Species	Saw-timber
Red maple	2.1	N. red oak	2.2
N. red oak	2.2	Red maple	2.6
Other red	1.3	Other red	1.4
Sweet birch	5.1	White pine	3.5
Hemlock	12.6	Hemlock	13.9

Figure 10. Growth-to-removals ratios of growing-stock and sawtimber volume on timberland, top five species, Connecticut, 1984-1997 (Source: Tables 40 and 41).

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 Connecticut's forest resources was conducted in 1952, the second was completed in 1972, and the third was carried out in 1984. This report presents forest-resource data from the fourth inventory, which was conducted in 1997-98. This inventory was a cooperative effort of the Northeastern Research Station, the Connecticut Department of Environmental Protection, and the landowners of Connecticut.

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 Connecticut, this procedure required the photointerpretation and classification of 11,092 new photo points and 465 previously sampled ground plot locations into land-use and cubic-foot volume classes. Then, 401 ground plots from the previous inventory were remeasured and 50 new ground plots were established. Of the total 451 plots, 268 were forested at plot center. The data collected were summarized using the FINSYS computer system developed at the Northeastern Research Station.

The forest area, numbers of trees, wildlife habitat, biomass, timber volume, growth, and change statistics in this report summarize the information collected by the field crews. Other information or additional summaries may be developed. For information, contact the Forest Inventory and Analysis Unit, USDA Forest Service, 11 Campus Boulevard, Suite 200, Newtown Square, PA 19073 (Telephone: 610-557-4075; Fax: 610-557-4200; Web site: www.fs.fed.us/ne/fia).

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

Reliability of the Estimates

The data in this report were based on a carefully designed sample of forest conditions throughout Connecticut. 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. Statistically, 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 Connecticut. 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 Connecticut is 1,696,100 acres. The associated sampling error is 2.2 percent, or 37,300 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 1,658,800 and 1,733,400 acres, or $1,696,100 \pm 37,300$ (one standard deviation). Similarly, we are 95 percent confident that the true number of acres is within $\pm 74,600$ acres (two standard deviations). County estimates are less precise. In Connecticut, for example, while the sampling error for timberland at the state level is 2.2 percent, the sampling error for Hartford County is 7.1 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 1985. Because these changes make inappropriate the direct comparison of some of the current estimates with those published by Dickson and McAfee (1988), users should use caution when comparing the data in this report with those in the 1985 report. In this report, several tables containing 1985 data are provided to allow comparisons. The changes in methods and definitions follow.

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 1985 report (1988), 1980 Bureau of Census data were used; in 1998, 1990 data were available. Between 1980 and 1990, the Bureau of Census changed its estimating procedures: it now can identify as inland water streams that are more than 200 feet wide and bodies of water 4.5 acres and larger in area. Previously, the minimum width for streams was 660 feet and the minimum area for bodies of water was 40 acres. This procedure results in a reduction in total land area. For comparison of land area between inventories, 1985 estimates of land area by class were recalculated using 1990 total land-area values from the Bureau of Census.

Stocking is a quantitative expression of live-tree stand density that can be expressed in absolute terms, such as basal area per acre, volume per acre, or number of trees per acre; or in relative terms, such as a percentage of a previously defined standard.¹ For the 1985 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

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

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

Basal-area stocking may well describe current timber volume, but it is inadequate to describe stand composition in a multiresource 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 FIA, in which 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 (sapling/seedling, poletimber, sawtimber, or nonstocked) of forest land based on the size of the trees that dominate an area, and forest type is a classification of forest land based on the species found in the area. Both stand size and forest type are calculated based on stocking of all live trees, and, therefore, are affected by the change in the procedure to calculate stocking. To allow comparisons, this report includes several 1985 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 also are tables that show estimates of timberland area by forest type and stand size for both 1985 and 1998, where stocking is based on the basal area of all live trees.

Eighty-six percent of the plots that were visited during the 1985 inventory, either as remeasurement or as new plots, were remeasured in 1997-98. 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 with the same sample of plots. The estimates showing 1985 information are from the plots that were selected at that occasion to produce an estimate of the current area and volume. These data have been used in current procedures to recalculate estimates of area and volume at the 1985

occasion so that comparisons can be made with the current information. Although the data set from which estimates of growth and change are derived contains a portion of the plots from which the 1985 recalculated estimates were calculated, they are different data sets designed to produce different types of estimates. Inconsistencies in trends for certain species may result when the annual change tables are compared with the total change between the 1985 and 1998 tables.

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 points 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 than 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 since this procedure was not used at the previous occasion.

Definitions of Terms

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

Accretion. The estimated net growth on growing-stock trees that were measured during the previous inventory (divided by the number of

growing seasons between surveys to produce average annual accretion). It does not include the growth on trees that were cut during the period, nor those trees that died.

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

Azimuth. The horizontal direction as sighted from subplot center to the center of the base of the tree. Recorded to the nearest degree on all trees 1.0+ inches d.b.h.

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

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

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

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

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

Bog/Marsh/Swamp. Land that has less than 10.0 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

Cull tree. A rough tree or a rotten tree.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

Horizontal distance. The measure of length on a horizontal plane from subplot center to the center of the base of the tree. Recorded to the nearest .1 foot on all trees 1.0+ inches d.b.h.

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

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

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

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

Ingrowth. The estimated net volume of growing-stock trees that became 5.0 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).

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

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

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

Mortality. The estimated net volume of growing-stock trees at the previous inventory that died from natural causes before the current inventory (divided by the number of growing seasons between surveys to produce average annual mortality).

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

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

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

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

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

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

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

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

Nonforest land. Land that has never supported forests, or land formerly forested but now in nonforest use such as cropland, pasture, idle farmland, other farmland, single- and multi-family

housing, bogs/marshes/swamps, rights-of-way, industrial or commercial sites, or noncensus water.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Salvable dead tree. A tree at least 5.0 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 error and are

calculated as the square root of the variance, divided by the estimate, and multiplied by 100. Indicated in statistical tables as "SE".

Sapling. All live trees 1.0 through 4.9 inches d.b.h.

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

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

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

Sawlog top. The point on the bole of a sawtimber tree above which a sawlog cannot be produced. The minimum sawlog top is 7.0 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 at least 10 percent stocked with live trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of sawtimber is at least equal to that of poletimber.

Sawtimber tree. A live tree of commercial species at least 9.0 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 salvageable dead).

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

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

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

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

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

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

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

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

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

Stocking. The degree of occupancy of land by trees relative to the growth potential utilized by a site. It is expressed as a percent of the "normal" value presented in yield tables and stocking guides. 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, salvageable 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.

Total length. The length of a tree stem from a 1 foot stump to the apical meristem. Recorded to the nearest whole foot on all live and dead poletimber and sawtimber trees.

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

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

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

Tree condition. A classification for all live and dead trees 5.0+ inches d.b.h. that indicates the status of the top of the tree, whether broken or intact.

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

Tree history. A classification for all trees 5.0+ inches d.b.h., either currently or previously, that indicates the status of the tree (accretion, ingrowth, mortality, removals).

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

Unproductive forest land. See Other forest land.

Upper-stem portion. That part of the main stem or fork of a sawtimber tree above the sawlog top to a diameter of 4.0 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.

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Species Groups of Connecticut (as encountered on field plots)

Species Group	Scientific Name	Common Name
Spruce/fir	<i>Picea abies</i> <i>Picea pungens</i> <i>Picea rubens</i>	Norway spruce blue spruce red spruce
Red pine	<i>Pinus resinosa</i>	red pine
Pitch pine	<i>Pinus rigida</i>	pitch pine
White pine	<i>Pinus strobus</i>	eastern white pine
Hemlock	<i>Tsuga canadensis</i>	eastern hemlock
Other softwoods	<i>Chamaecyparis thyoides</i> <i>Juniperus virginiana</i> <i>Larix laricina</i> <i>Pinus sylvestris</i> <i>Thuja occidentalis</i>	Atlantic white-cedar eastern redcedar tamarack (native) Scotch pine northern white-cedar
Red maple	<i>Acer rubrum</i>	red maple
Sugar maple	<i>Acer saccharum</i>	sugar maple
Yellow birch	<i>Betula alleghaniensis</i>	yellow birch
Sweet birch	<i>Betula lenta</i>	sweet birch
Paper birch	<i>Betula papyrifera</i>	paper birch
Hickory	<i>Carya sp.</i> <i>Carya cordiformis</i> <i>Carya glabra</i> <i>Carya laciniata</i> <i>Carya ovata</i> <i>Carya tomentosa</i>	hickory bitternut hickory pignut hickory shellbark hickory shagbark hickory mockernut hickory
Beech	<i>Fagus grandifolia</i>	American beech
White ash	<i>Fraxinus americana</i>	white ash
Aspen	<i>Populus deltoides</i> <i>Populus grandidentata</i> <i>Populus tremuloides</i>	eastern cottonwood bigtooth aspen quaking aspen
Black cherry	<i>Prunus serotina</i>	black cherry
White oak	<i>Quercus alba</i>	white oak
Northern red oak	<i>Quercus rubra</i>	northern red oak
Other red oaks	<i>Quercus coccinea</i> <i>Quercus palustris</i> <i>Quercus velutina</i>	scarlet oak pin oak black oak

Species Groups of Connecticut (continued)

Species Group	Scientific Name	Common Name
Elm	<i>Ulmus sp.</i>	elm
	<i>Ulmus alata</i>	winged elm
	<i>Ulmus americana</i>	American elm
	<i>Ulmus rubra</i>	slippery elm
Other hardwoods	<i>Acer sp.</i>	maple
	<i>Acer negundo</i>	boxelder
	<i>Acer pensylvanicum</i>	striped maple
	<i>Acer saccharinum</i>	silver maple
	<i>Acer spicatum</i>	mountain maple
	<i>Acer platanoides</i>	Norway maple
	<i>Amelanchier sp.</i>	serviceberry
	<i>Betula populifolia</i>	gray birch
	<i>Carpinus caroliniana</i>	American hornbeam
	<i>Castanea dentata</i>	American chestnut
	<i>Cornus florida</i>	flowering dogwood
	<i>Crataegus sp.</i>	hawthorn
	<i>Fraxinus sp.</i>	ash
	<i>Fraxinus nigra</i>	black ash
	<i>Fraxinus pennsylvanica</i>	green ash
	<i>Juglans cinerea</i>	butternut
	<i>Liriodendron tulipifera</i>	yellow-poplar
	<i>Malus sp.</i>	apple
	<i>Morus sp.</i>	mulberry
	<i>Nyssa sylvatica</i>	blackgum
	<i>Ostrya virginiana</i>	eastern hophornbeam
	<i>Paulownia tomentosa</i>	Paulownia
	<i>Platanus occidentalis</i>	sycamore
	<i>Prunus pennsylvanica</i>	pin cherry
	<i>Prunus virginiana</i>	chokecherry
	<i>Quercus sp.</i>	oak
	<i>Quercus bicolor</i>	swamp white oak
	<i>Quercus prinus</i>	chestnut oak
	<i>Robinia pseudoacacia</i>	black locust
	<i>Salix sp.</i>	willow
	<i>Sassafras albidum</i>	sassafras
	<i>Sorbus americana</i>	American mountain-ash
	<i>Tilia americana</i>	American basswood
		unknown or not listed tree

Tree Species of Connecticut (as encountered on field plots)

Scientific Name ***	Common Name(s)	Occurrence**	SE
Softwoods			
<i>Juniperus virginiana</i> L.	eastern redcedar	c	25
<i>Larix laricina</i> (Du Roi) K. Koch	tamarack (native)		100
<i>Picea abies</i> (L.) Karst.	Norway spruce		74
<i>Picea pungens</i> Engelm.	blue spruce		100
<i>Picea rubens</i> Sarg.	red spruce		98
<i>Pinus resinosa</i> Ait.	red pine		93
<i>Pinus rigida</i> Mill.	pitch pine		53
<i>Pinus strobus</i> L.	eastern white pine	vc	16
<i>Pinus sylvestris</i> L.	Scotch pine		100
<i>Tsuga canadensis</i> (L.) Carr.	eastern hemlock	vc	15
Hardwoods			
<i>Acer negundo</i> L. *	boxelder		100
<i>Acer pensylvanicum</i> L. *	striped maple		100
<i>Acer platanoides</i> L.	Norway maple		100
<i>Acer rubrum</i> L.	red maple	vc	7
<i>Acer saccharinum</i> L.	silver maple		83
<i>Acer saccharum</i> Marsh.	sugar maple	c	12
<i>Acer spicatum</i> Lam. *	mountain maple		100
<i>Amelanchier</i> sp. Medic. *	serviceberry		71
<i>Betula alleghaniensis</i> Britton	yellow birch	c	17
<i>Betula lenta</i> L.	sweet birch	vc	8
<i>Betula papyrifera</i> Marsh.	paper birch	c	30
<i>Betula populifolia</i> Marsh. *	gray birch	r	34
<i>Carpinus caroliniana</i> Walt. *	American hornbeam	r	50
<i>Carya</i> sp. Nutt.	hickory		71
<i>Carya cordiformis</i> (Wangenh.) K. Koch	bitternut hickory	r	46
<i>Carya glabra</i> (Mill.) Sweet	pignut hickory	c	12
<i>Carya laciniosa</i> (Michx. f.) Loud.	shellbark hickory		100
<i>Carya ovata</i> (Mill.) K. Koch	shagbark hickory	c	23
<i>Carya tomentosa</i> (Poir.) Nutt.	mockernut hickory		55
<i>Cornus florida</i> L. *	flowering dogwood	r	36
<i>Fagus grandifolia</i> Ehrh.	American beech	c	16
<i>Fraxinus</i> sp. L.	ash		71
<i>Fraxinus americana</i> L.	white ash	c	13
<i>Fraxinus nigra</i> Marsh.	black ash		100
<i>Fraxinus pennsylvanica</i> Marsh.	green ash		85
<i>Juglans cinerea</i> L.	butternut		100
<i>Liriodendron tulipifera</i> L.	yellow-poplar	r	27
<i>Malus</i> sp. Mill. *	apple	r	40
<i>Morus</i> sp. L. *	mulberry		100
<i>Nyssa sylvatica</i> Marsh.	blackgum	r	29
<i>Ostrya virginiana</i> (Mill.) K. Koch *	eastern hophornbeam	r	39

Tree Species of Connecticut (continued)

Scientific Name ***	Common Name(s)	Occurrence**	SE
<i>Paulownia tomentosa</i> (Thunb.) Sieb. & Zucc. ex Steud.	Paulownia		100
<i>Platanus occidentalis</i> L.	sycamore		71
<i>Populus deltoides</i> Bartr. ex Marsh.	eastern cottonwood	r	49
<i>Populus grandidentata</i> Michx.	bigtooth aspen	r	34
<i>Populus tremuloides</i> Michx.	quaking aspen	r	35
<i>Prunus pensylvanica</i> L. f. *	pin cherry		75
<i>Prunus serotina</i> Ehrh.	black cherry	c	16
<i>Quercus alba</i> L.	white oak	vc	9
<i>Quercus bicolor</i> Willd.	swamp white oak	r	50
<i>Quercus coccinea</i> Muenchh.	scarlet oak	c	22
<i>Quercus palustris</i> Muenchh.	pin oak		100
<i>Quercus prinus</i> L.	chestnut oak	c	26
<i>Quercus rubra</i> L.	northern red oak	vc	9
<i>Quercus velutina</i> Lam.	black oak	vc	11
<i>Robinia pseudoacacia</i> L.	black locust		54
<i>Salix</i> sp. L. *	willow		72
<i>Sassafras albidum</i> (Nutt.) Nees *	sassafras	c	25
<i>Sorbus americana</i> Marsh. *	American mountain-ash		100
<i>Tilia americana</i> L.	American basswood	r	46
<i>Ulmus</i> sp. L.	elm		100
<i>Ulmus alata</i> Michx.	winged elm		100
<i>Ulmus americana</i> L.	American elm	c	24
<i>Ulmus rubra</i> Muhl.	slippery elm		58
*	unknown or not listed tree		100

*** 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%). Occurrence estimates for species that have more than 50% error are not reported.

* Noncommercial species.

Tree-Grade Classification

HARDWOOD TREE GRADES

GRADING FACTOR	TREE GRADE 1	TREE GRADE 2	TREE GRADE 3
Length of grading zone (feet)	Butt 16	Butt 16	Butt 16
Length of grading section ^a (feet)	Best 12	Best 12	Best 12
Minimum 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 SECTION³
 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 grade³. 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 Remeasurement Program

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

Sample Size

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

Data Collection

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

Compilation

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

Comparison

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

- 1) Six condition classes are reduced to three: live, dead, or snag.
- 2) Six tree grades are reduced to four: merchantable, tie & timber, cull, and dead.
- 3) Six tree classes are reduced to five: preferred and acceptable, rough, rotten, dead, and snag.

- 4) Three merchantability classes are reduced to two: sound and .unsound.

- * Values are either within tolerance (1x) or exceed tolerance (2x, 3x, or 4x).

Results

Tree data items are presented as:

- * Percentage of data within tolerance limits, and
- * Number of times data exceeded tolerance limits.

Southern New England QA Tree Data Results from 124 Subplots*

Tree data item	Tolerance	Percentage of data within tolerance				Number of times data exceeded tolerance				Records
		@1x	@2x	@3x	@4x	@1x	@2x	@3x	@4x	
Species	No tolerance	95%				81				1,566
Trees (missed)	No tolerance	98%				(33)				1,566
Horizontal distance	± .2 feet	77%	90%	94%		360	150	99		1,566
Azimuth	± 2 degrees	73%	91%	96%		425	135	64		1,566
Tree history	No tolerance	93%				48				731
Diameter	± .1 inch	93%	95%	96%		92	60	50		1,268
Ecotype	No tolerance	95%				59				1,108
Condition	No tolerance**	95%				62				1,268
Tree grade	No tolerance**	83%				48				284
Saw length	± 4 feet	46%	68%	85%	93%	152	92	43	19	284
Bole length	± 4 feet	56%	81%	91%	96%	420	181	87	34	962
Total length	± 10 feet	85%	98%	98%		158	23	18		1,063
Board foot cull	± 10%	76%	89%	93%	95%	69	32	19	15	284
Board foot soundness	± 1 class	93%	94%	95%	96%	21	17	14	12	284
Cubic foot cull	± 10%	86%	95%	98%	99%	139	49	19	10	962
Cubic foot soundness	± 1 class	90%	91%	92%	93%	98	83	74	67	962
Crown ratio	± 1 class	87%	97%			124	29			962
Crown class	No tolerance	68%				304				962
General damage	Variable tolerance	96%				36				962
Special damage	Variable tolerance	92%				146				1,924
Tree class	No tolerance**	89%				137				1,268
Merchantability class	No tolerance**	93%				82				1,159

* Because of the small number of samples, Connecticut, Massachusetts, and Rhode Island data cannot be reported individually. 34 plots visited with forest land

** Item codes have been grouped for comparison

Metric Equivalents

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

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

Index to Tables

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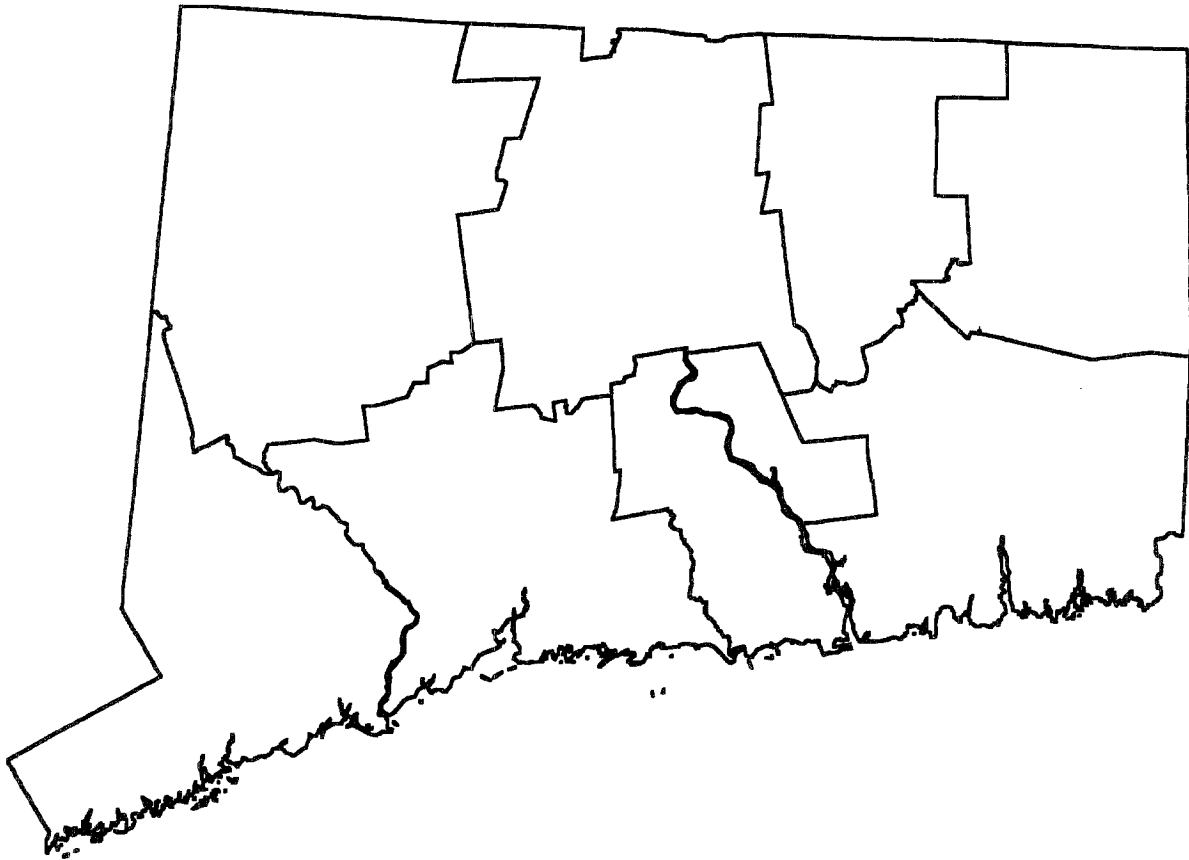
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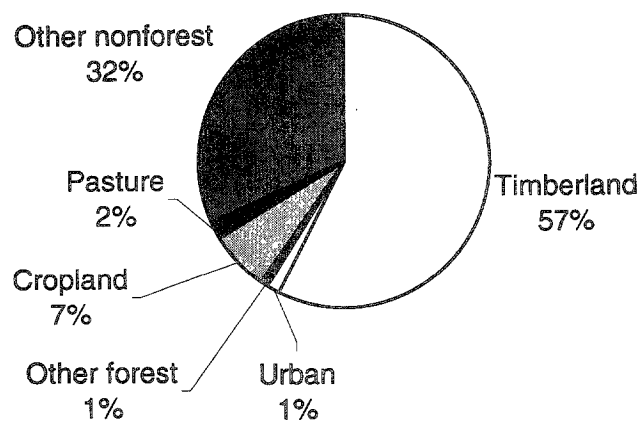
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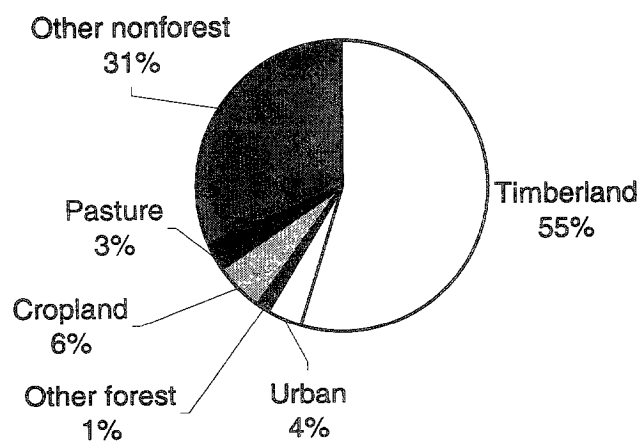
STATE TABLES



Area by land class, Connecticut, 1985 and 1998



1985



1998

Table 1.--Land area by land class, Connecticut, 1985 and 1998^a

(In thousands of acres)^b

Land class	1985	Percent of total	SE	1998	Percent of total	SE
Timberland	1,784.5	57.5	1.9	1,696.1	54.7	2.2
Noncommercial forest land:						
Reserved productive	6.3	.2	100.0	14.3	.5	65.9
Urban forest land	44.4	1.4	41.8	117.5	3.8	19.0
Other forest land ^c	15.1	.5	100.0	31.4	1.0	41.2
Christmas tree plantation	.0	.0	.0	.0	.0	.0
Reserved other forest land	.0	.0	.0	.0	.0	.0
Total noncommercial forest land	65.7	2.1	36.4	163.2	5.3	16.3
Total forest land	1,850.3	59.7	1.7	1,859.3	60.0	1.6
Nonforest land:						
Cropland	204.9	6.6	15.4	177.8	5.7	14.9
Pasture	63.9	2.1	33.6	93.0	3.0	25.0
Other	982.0	31.7	4.7	971.0	31.3	4.0
Total nonforest land	1,250.7	40.3	2.5	1,241.7	40.0	2.4
Total land area ^d	3,101.0	100.0	.0	3,101.0	100.0	.0

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

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

^c "Other forest land" formerly known as unproductive forest land.

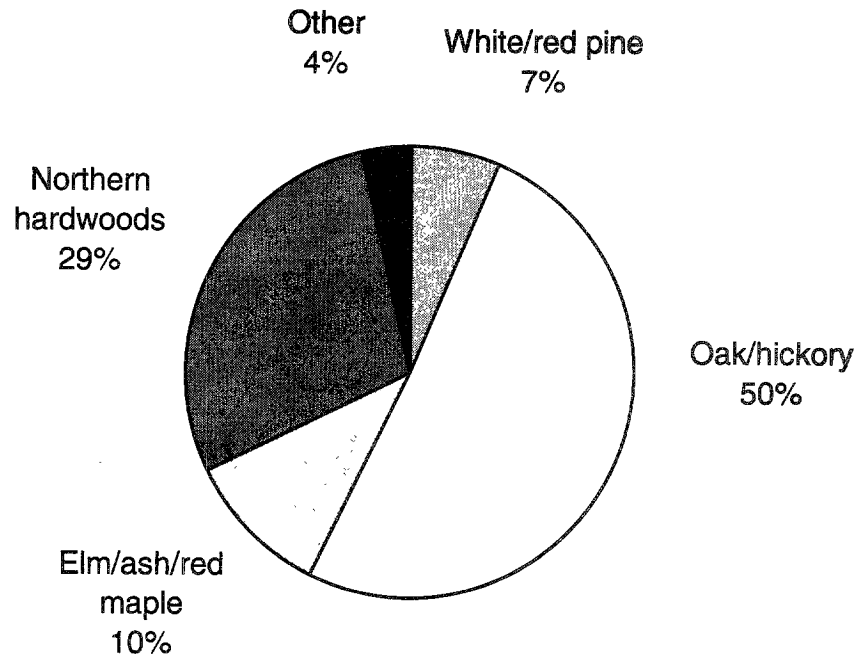
^d Source: 1990 United States Department of Commerce, Bureau of Census.

Table 2.--Area of all forest land by land class and forest-type group, Connecticut, 1998

(In thousands of acres)

Land class	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Timberland	113.7	7.0	5.9	24.2	875.8	.0	159.6	484.7	25.2	1,696.1	2.2
Noncommercial forest land:											
Reserved productive	1.1	.0	.0	.0	6.5	.0	.0	6.7	.0	14.3	65.9
Urban forest land	6.2	.0	.0	.0	54.4	.0	22.0	31.5	3.5	117.5	19.0
Other forest land	.0	.0	.0	.0	5.7	.0	13.3	12.5	.0	31.4	41.2
Total noncommercial forest	7.2	.0	.0	.0	66.6	.0	35.2	50.7	3.5	163.2	16.3
Total forest land	120.9	7.0	5.9	24.2	942.3	.0	194.8	535.4	28.7	1,859.3	1.6

Area of forest land by forest-type group*, Connecticut, 1998



* stocking based on relative density

Table 3.--**Area of timberland by forest type, forest-type group, and stand-size class, Connecticut, 1985

(In thousands of acres)

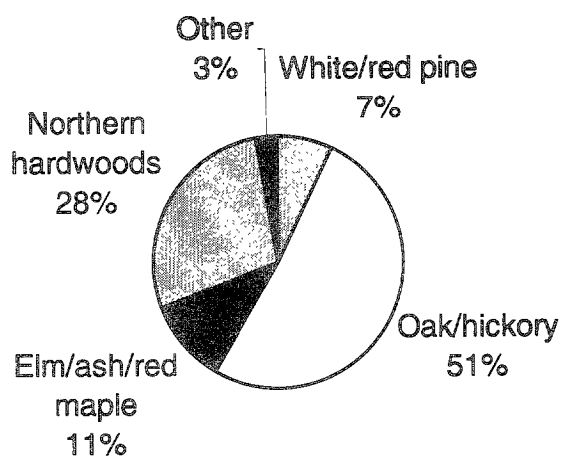
Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	8.9	.0	.0	.0	8.9	100.0
White pine	14.0	.0	.0	.0	14.0	76.5
White pine/hemlock	23.8	6.0	.0	.0	29.7	51.9
Hemlock	67.4	2.5	.0	.0	69.8	28.6
Scotch pine	.0	5.3	.0	.0	5.3	100.0
White/red pine group	114.0	13.7	.0	.0	127.6	20.6
Red spruce	.0	.0	9.9	.0	9.9	100.0
Spruce/fir group	.0	.0	9.9	.0	9.9	100.0
Eastern redcedar	.0	13.7	.0	.0	13.7	70.9
Hard pine group	.0	13.7	.0	.0	13.7	70.9
Wh. pine/no. red oak/wh. ash	6.3	6.4	.0	.0	12.7	70.7
Eastern redcedar/hardwood	.0	5.4	.0	.0	5.4	100.0
Other oak/pine	.0	8.0	.0	.0	8.0	100.0
Oak/pine group	6.3	19.9	.0	.0	26.2	50.5
Post, black, or bear oak	11.4	11.0	7.3	.0	29.7	45.0
Chestnut oak	.0	8.9	.0	.0	8.9	100.0
White oak/red oak/hickory	126.2	77.0	.0	.0	203.2	16.7
White oak	21.9	.0	.0	.0	21.9	50.1
Northern red oak	61.1	40.4	.0	.0	101.5	23.0
Hawthorn/reverting field	.0	.0	8.6	.0	8.6	100.0
Scarlet oak	10.0	19.3	.0	.0	29.3	51.5
Red maple/central hardwoods	33.7	21.2	7.9	.0	62.8	32.5
Mixed central hardwoods	229.6	175.5	42.8	.0	447.9	10.7
Oak/hickory group	493.9	353.3	66.6	.0	913.8	6.0
Black ash/Amer. elm/red maple	11.4	21.9	.0	.0	33.3	45.1
Red maple(lowland)	38.8	49.0	6.3	.0	94.2	25.9
Red maple(upland)	20.2	17.2	15.1	.0	52.5	34.6
Cottonwood	5.6	.0	.0	.0	5.6	100.0
Willow	.0	.0	8.4	.0	8.4	100.0
Elm/ash/red maple group	76.1	88.1	29.8	.0	194.0	17.7
Sugar maple/beech/yellow birch	103.1	34.8	36.7	.0	174.6	19.1
Red maple/northern hardwoods	66.4	66.0	13.0	.0	145.3	20.1
Pin cherry/reverting field	.0	.0	5.6	.0	5.6	100.0
Mixed northern hardwoods	73.9	60.6	39.1	.0	173.7	19.0
Northern hardwoods group	243.4	161.4	94.5	.0	499.3	10.1
All forest types	933.7	650.1	200.7	.0	1,784.5	1.9
SE	5.5	7.9	16.4	.0	1.9	

Table 4.--Area of timberland by forest type, forest-type group, and stand-size class, Connecticut, 1998

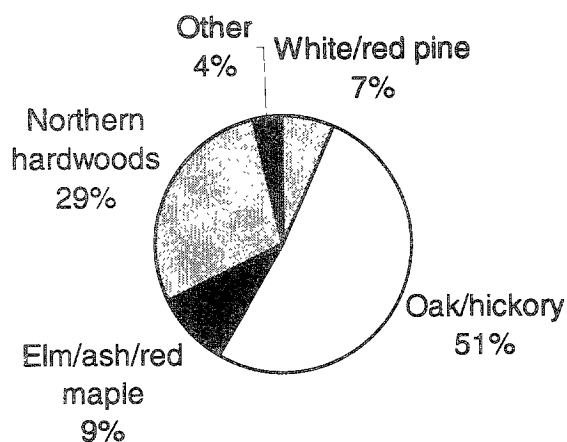
(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	2.0	.0	.0	.0	2.0	100.0
White pine	26.6	12.2	4.9	.0	43.7	32.8
White pine/hemlock	13.7	.0	.0	.0	13.7	70.7
Hemlock	54.3	.0	.0	.0	54.3	32.8
White/red pine group	96.6	12.2	4.9	.0	113.7	20.9
Red spruce	.0	7.0	.0	.0	7.0	100.0
Spruce/fir group	.0	7.0	.0	.0	7.0	100.0
Eastern redcedar	5.9	.0	.0	.0	5.9	71.5
Hard pine group	5.9	.0	.0	.0	5.9	71.5
Wh. pine/no. red oak/wh. ash	15.1	.6	.0	.0	15.7	61.2
Eastern redcedar/hardwood	1.7	5.1	.0	.0	6.8	78.9
Other oak/pine	.0	.0	1.7	.0	1.7	100.0
Oak/pine group	16.8	5.7	1.7	.0	24.2	45.9
Post, black, or bear oak	39.2	6.8	.0	.0	46.0	38.4
Chestnut oak	13.9	5.1	.0	.0	19.0	58.3
White oak/red oak/hickory	148.9	28.2	1.7	.0	178.8	17.0
White oak	8.3	.0	.0	.0	8.3	82.1
Northern red oak	69.2	21.2	5.4	.0	95.8	24.9
Y. poplar/wh. oak/no. red oak	13.3	.0	.0	.0	13.3	70.7
Black walnut	1.7	.0	.0	.0	1.7	100.0
Hawthorn/reverting field	.0	1.8	1.5	.0	3.2	71.0
Scarlet oak	1.7	8.6	.0	.0	10.3	69.6
Sassafras/persimmon	1.7	.0	.0	.0	1.7	100.0
Red maple/central hardwoods	26.0	.0	.0	.0	26.0	47.8
Mixed central hardwoods	327.4	122.3	21.7	.0	471.5	9.9
Oak/hickory group	651.5	194.0	30.3	.0	875.8	5.9
Black ash/Amer. elm/red maple	2.8	21.3	5.3	.0	29.4	40.6
Red maple(lowland)	40.4	46.4	.0	.0	86.8	25.3
Red maple(upland)	21.0	9.3	.0	.0	30.3	43.0
River birch/sycamore	7.0	.0	.0	.0	7.0	100.0
Cottonwood	6.2	.0	.0	.0	6.2	100.0
Elm/ash/red maple group	77.3	77.0	5.3	.0	159.6	18.4
Sugar maple/beech/yellow birch	69.2	25.8	11.7	.0	106.8	23.8
Black cherry	3.1	.0	.0	.0	3.1	71.8
Red maple/northern hardwoods	100.3	44.4	12.7	.0	157.4	19.1
Pin cherry/reverting field	1.8	.0	10.9	6.9	19.6	47.2
Mixed northern hardwoods	139.5	47.8	10.4	.0	197.7	17.1
Northern hardwoods group	313.9	118.1	45.8	6.9	484.7	9.6
Aspen	.0	4.9	5.6	.0	10.6	64.4
Gray birch	.0	.0	14.6	.0	14.6	70.8
Aspen/birch group	.0	4.9	20.2	.0	25.2	49.1
All forest types	1,162.2	418.9	108.2	6.9	1,696.1	2.2
SE	4.5	10.5	22.0	100.0	2.2	

Area of timberland by forest-type group*, Connecticut, 1985 and 1998



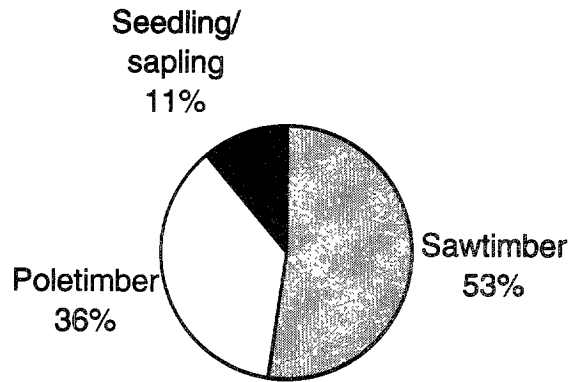
1985



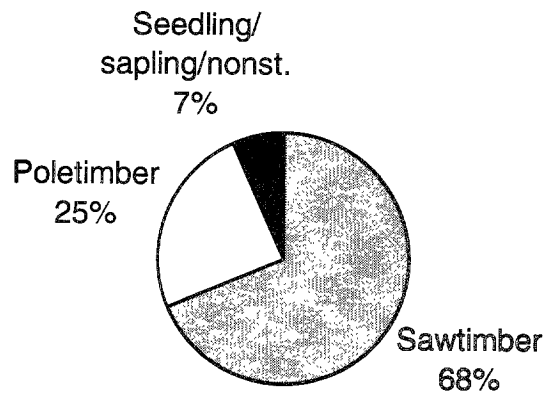
1998

* stocking based on relative density

Area of timberland by stand-size class*, Connecticut, 1985 and 1998



1985



1998

* stocking based on relative density

Table 5.--**Area of timberland by forest type, forest-type group, and stand-size class (stocking based on basal area), Connecticut, 1985

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	8.9	.0	.0	.0	8.9	100.0
White pine	53.8	21.0	.0	.0	74.8	32.5
White pine/hemlock	12.2	.0	.0	.0	12.2	72.1
Hemlock	40.2	14.7	.0	.0	54.9	32.5
Scotch pine	5.3	.0	.0	.0	5.3	100.0
White/red pine group	120.3	35.7	.0	.0	156.0	18.6
Red spruce	.0	.0	9.9	.0	9.9	100.0
Norway spruce	.0	5.4	.0	.0	5.4	100.0
Spruce/fir group	.0	5.4	9.9	.0	15.3	73.6
Eastern redcedar	.0	6.4	.0	.0	6.4	100.0
Hard pine group	.0	6.4	.0	.0	6.4	100.0
Wh. pine/no. red oak/wh. ash	34.2	14.3	.0	.0	48.5	38.5
Eastern redcedar/hardwood	.0	8.0	10.7	.0	18.7	71.4
Oak/pine group	34.2	22.3	10.7	.0	67.3	34.1
Post, black, or bear oak	16.6	11.0	6.3	.0	33.8	40.2
Chestnut oak	.0	8.9	.0	.0	8.9	100.0
White oak/red oak/hickory	122.2	44.5	5.4	.0	172.1	18.0
White oak	21.9	.0	6.4	.0	28.3	44.8
Northern red oak	114.3	30.0	12.3	.0	156.7	18.1
Y. poplar/wh. oak/no. red oak	8.0	.0	.0	.0	8.0	100.0
Yellow-poplar	.0	.0	10.3	.0	10.3	100.0
Hawthorn/reverting field	.0	8.9	20.0	.0	28.9	51.2
Scarlet oak	9.5	11.6	.0	.0	21.1	50.5
Red maple/central hardwoods	48.7	5.0	14.7	.0	68.5	32.4
Mixed central hardwoods	306.7	126.5	5.3	.0	438.5	10.9
Oak/hickory group	647.9	246.4	80.7	.0	975.0	5.7
Black ash/Amer. elm/red maple	12.5	21.4	19.5	.0	53.3	34.8
Red maple(lowland)	44.0	46.4	6.3	.0	96.6	24.3
Red maple(upland)	31.8	10.9	.0	.0	42.6	36.1
Willow	9.9	.0	7.5	.0	17.4	71.4
Elm/ash/red maple group	98.1	78.6	33.3	.0	210.0	16.7
Sugar maple/beech/yellow birch	62.3	22.9	.0	.0	85.1	25.4
Red maple/northern hardwoods	64.3	42.8	.0	.0	107.1	23.6
Pin cherry/reverting field	.0	.0	33.5	10.7	44.2	42.0
Mixed northern hardwoods	71.6	27.5	18.9	.0	118.0	23.3
Northern hardwoods group	198.1	93.2	52.4	10.7	354.5	12.5
All forest types	1,098.6	488.2	187.0	10.7	1,784.5	1.9
SE	4.7	9.8	18.9	100.0	1.9	

Table 6.--Area of timberland by forest type, forest-type group, and stand-size class (stocking based on basal area), Connecticut, 1998

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
White pine	54.7	13.9	6.7	.0	75.3	29.6
Hemlock	61.3	.0	.0	.0	61.3	32.0
White/red pine group	116.0	13.9	6.7	.0	136.6	21.0
Red spruce	.0	7.0	.0	.0	7.0	100.0
Spruce/fir group	.0	7.0	.0	.0	7.0	100.0
Eastern redcedar	6.7	.0	.0	.0	6.7	100.0
Hard pine group	6.7	.0	.0	.0	6.7	100.0
Wh. pine/no. red oak/wh. ash	20.7	6.7	.0	.0	27.4	50.0
Eastern redcedar/hardwood	6.8	.0	.0	.0	6.8	100.0
Oak/pine group	27.5	6.7	.0	.0	34.2	44.7
Post, black, or bear oak	56.7	13.8	6.7	.0	77.3	29.9
Chestnut oak	13.9	6.8	.0	.0	20.7	57.7
White oak/red oak/hickory	158.3	34.4	.0	.0	192.7	16.5
White oak	20.4	8.3	.0	.0	28.7	50.2
Northern red oak	98.1	21.4	.0	.0	119.4	22.1
Y. poplar/wh. oak/no. red oak	6.7	6.7	.0	.0	13.4	70.7
Yellow-poplar	6.7	.0	.0	.0	6.7	100.0
Scarlet oak	6.6	6.9	7.2	.0	20.7	57.8
Red maple/central hardwoods	54.9	6.7	.0	.0	61.6	32.3
Mixed central hardwoods	274.8	96.6	8.3	.0	379.8	12.0
Oak/hickory group	697.1	201.6	22.2	.0	920.9	6.0
Black ash/Amer. elm/red maple	.0	27.2	.0	.0	27.2	50.0
Red maple(lowland)	27.7	27.5	.0	.0	55.2	34.9
Red maple(upland)	26.3	7.6	14.4	.0	48.3	36.3
River birch/sycamore	7.0	.0	.0	.0	7.0	100.0
Cottonwood	6.2	.0	.0	6.9	13.0	70.8
Elm/ash/red maple group	67.1	62.3	14.4	6.9	150.7	20.9
Sugar maple/beech/yellow birch	47.4	19.8	14.2	.0	81.3	28.9
Black cherry	6.9	6.7	.0	.0	13.6	70.7
Red maple/northern hardwoods	110.9	41.5	14.1	.0	166.6	19.7
Pin cherry/reverting field	.0	.0	6.8	.0	6.8	100.0
Mixed northern hardwoods	108.7	55.5	7.2	.0	171.4	19.4
Northern hardwoods group	273.9	123.5	42.3	.0	439.7	11.2
All forest types	1,188.5	414.9	85.7	6.9	1,696.0	2.5
SE	4.7	11.6	28.6	100.0	2.5	

Table 7.--Area of timberland by forest-type group and ownership class, Connecticut, 1998

(In thousands of acres)

Forest-type group	Owner class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
White/red pine	.0	23.8	.0	89.9	113.7	20.9
Spruce/fir	.0	.0	.0	7.0	7.0	100.0
Hard pine	.0	.0	.0	5.9	5.9	71.5
Oak/pine	.0	1.7	.0	22.5	24.2	45.9
Oak/hickory	.0	189.3	.0	686.5	875.8	5.9
Elm/ash/red maple	.0	15.7	.0	143.9	159.6	18.4
Northern hardwoods	.0	49.2	.0	435.5	484.7	9.6
Aspen/birch	.0	.0	.0	25.2	25.2	49.1
All groups	.0	279.7	.0	1,416.4	1,696.1	2.2
SE	.0	13.2	.0	3.4	2.2	

Table 8.--Area of timberland by stand-size class and ownership class, Connecticut, 1998

(In thousands of acres)

Stand-size class	Owner class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
Sawtimber	.0	207.8	.0	954.4	1,162.2	4.5
Poletimber	.0	46.5	.0	372.4	418.9	10.5
Sapling and seedling	.0	25.5	.0	82.6	108.2	22.0
Nonstocked	.0	.0	.0	6.9	6.9	100.0
All classes	.0	279.7	.0	1,416.4	1,696.1	2.2
SE	.0	13.2	.0	3.4	2.2	

Table 9.--Area of timberland by board-foot stand-volume class and ownership class,
Connecticut, 1998

(In thousands of acres)

Stand-volume class	Owner class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
0 - 1,999	.0	46.9	.0	344.4	391.3	10.7
2,000 - 3,999	.0	59.9	.0	329.3	389.3	11.1
4,000 - 5,999	.0	32.9	.0	202.5	235.4	14.9
6,000 - 7,999	.0	60.9	.0	187.7	248.5	14.8
8,000 - 9,999	.0	44.4	.0	164.7	209.1	16.8
10,000+	.0	34.8	.0	187.7	222.6	14.8
All classes	.0	279.7	.0	1,416.4	1,696.1	2.2
SE	.0	13.2	.0	3.4	2.2	

Table 10.--Area of timberland by stocking class of growing-stock trees and
ownership class, Connecticut, 1998

(In thousands of acres)

Stocking class	Owner class				All classes	SE
	National Forest	Other public	Forest industry	Other private		
Nonstocked	.0	5.4	.0	18.7	24.1	49.6
Poorly stocked	.0	37.0	.0	200.1	237.0	14.8
Moderately stocked	.0	83.7	.0	581.0	664.6	7.8
Fully stocked	.0	143.7	.0	591.0	734.6	7.2
Overstocked	.0	10.1	.0	25.7	35.7	40.9
All classes	.0	279.7	.0	1,416.4	1,696.1	2.2
SE	.0	13.2	.0	3.4	2.2	

Table 11.--Area of timberland by forest-type group and cubic-foot stand-volume class of growing-stock trees, Connecticut, 1998

(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	4.9	2.2	3.5	12.6	15.0	75.4	113.7	20.9
Spruce/fir	.0	7.0	.0	.0	.0	.0	7.0	100.0
Hard pine	5.9	.0	.0	.0	.0	.0	5.9	71.5
Oak/pine	1.9	6.8	.0	1.7	.0	13.8	24.2	45.9
Oak/hickory	50.9	70.9	161.7	264.8	166.0	161.5	875.8	5.9
Elm/ash/red maple	13.0	15.8	45.3	36.2	29.7	19.7	159.6	18.4
Northern hardwoods	55.5	70.3	69.8	56.9	81.3	150.9	484.7	9.6
Aspen/birch	13.2	10.6	1.4	.0	.0	.0	25.2	49.1
All groups	145.4	183.7	281.6	372.2	292.0	421.3	1,696.1	2.2
SE	17.9	17.3	13.3	11.4	13.4	9.6	2.2	

Table 12.--Area of timberland by forest-type group and board-foot stand-volume class, Connecticut, 1998

(In thousands of acres)

Forest-type group	Stand-volume class (board feet per acre)						All classes	SE
	0-1,999	2,000-3,999	4,000-5,999	6,000-7,999	8,000-9,999	10,000+		
White/red pine	7.2	10.6	5.5	35.8	12.3	42.3	113.7	20.9
Spruce/fir	7.0	.0	.0	.0	.0	.0	7.0	100.0
Hard pine	5.9	.0	.0	.0	.0	.0	5.9	71.5
Oak/pine	7.0	1.7	1.7	.0	.0	13.8	24.2	45.9
Oak/hickory	145.9	252.9	156.7	120.6	116.5	83.2	875.8	5.9
Elm/ash/red maple	68.0	47.2	4.5	21.9	6.3	11.7	159.6	18.4
Northern hardwoods	125.1	76.9	67.0	70.2	74.0	71.5	484.7	9.6
Aspen/birch	25.2	.0	.0	.0	.0	.0	25.2	49.1
All groups	391.3	389.3	235.4	248.5	209.1	222.6	1,696.1	2.2
SE	10.7	11.1	14.9	14.8	16.8	14.8	2.2	

Table 13.--**Area of timberland by forest-type group and stocking class of all live trees, Connecticut, 1985

(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	.0	9.9	63.2	54.5	127.6	20.6
Spruce/fir	.0	.0	9.9	.0	.0	9.9	100.0
Hard pine	.0	6.4	7.3	.0	.0	13.7	70.9
Oak/pine	.0	5.4	14.4	6.3	.0	26.2	50.5
Oak/hickory	.0	41.5	331.9	523.9	16.5	913.8	6.0
Elm/ash/red maple	.0	17.3	87.7	83.8	5.3	194.0	17.7
Northern hardwoods	.0	35.4	203.2	227.8	32.9	499.3	10.1
All groups	.0	106.0	664.2	905.0	109.3	1,784.5	1.9
SE	.0	25.5	7.8	6.0	22.9	1.9	

Table 14.--Area of timberland by forest-type group and stocking class of all live trees, Connecticut, 1998

(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	3.5	7.3	80.5	22.4	113.7	20.9
Spruce/fir	.0	.0	7.0	.0	.0	7.0	100.0
Hard pine	.0	.0	5.9	.0	.0	5.9	71.5
Oak/pine	.0	.0	.0	20.8	3.4	24.2	45.9
Oak/hickory	.0	17.1	254.6	581.7	22.4	875.8	5.9
Elm/ash/red maple	.0	9.5	71.3	70.3	8.4	159.6	18.4
Northern hardwoods	6.9	45.0	141.8	263.3	27.6	484.7	9.6
Aspen/birch	.0	7.6	.0	17.6	.0	25.2	49.1
All groups	6.9	82.7	488.0	1,034.2	84.2	1,696.1	2.2
SE	100.0	25.9	9.6	5.3	26.9	2.2	

Table 15.--**Area of timberland by forest-type group and stocking class of growing-stock trees, Connecticut, 1985

(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	.0	18.8	59.2	49.7	127.6	20.6
Spruce/fir	.0	.0	9.9	.0	.0	9.9	100.0
Loblolly/shortleaf	.0	6.4	7.3	.0	.0	13.7	70.9
Oak/pine	.0	5.4	14.4	6.3	.0	26.2	50.5
Oak/hickory	8.6	48.1	382.1	463.6	11.3	913.8	6.0
Elm/ash/red maple	.0	45.4	106.1	42.5	.0	194.0	17.7
Northern hardwoods	16.4	37.1	254.4	178.7	12.7	499.3	10.1
All groups	25.0	142.5	793.0	750.3	73.7	1,784.5	1.9
SE	59.5	21.2	7.0	7.3	29.1	1.9	

Table 16.--Area of timberland by forest-type group and stocking class of growing-stock trees, Connecticut, 1998

(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	3.5	19.9	73.4	16.9	113.7	20.9
Spruce/fir	.0	.0	7.0	.0	.0	7.0	100.0
Loblolly/shortleaf	.0	5.9	.0	.0	.0	5.9	71.5
Oak/pine	.0	.0	5.1	15.7	3.4	24.2	45.9
Oak/hickory	.0	37.3	315.0	501.7	21.8	875.8	5.9
Elm/ash/red maple	.0	24.5	64.5	68.9	1.7	159.6	18.4
Northern hardwoods	8.6	64.8	150.9	253.4	7.0	484.7	9.6
Aspen/birch	7.6	.0	10.6	7.0	.0	25.2	49.1
All groups	16.2	135.9	573.0	920.1	50.8	1,696.1	2.2
SE	64.2	18.9	8.5	5.8	34.4	2.2	

Table 17.--Area of timberland by stand-size class, forest-type group, and basal-area class (all live trees), Connecticut, 1998

(In thousands of acres)

Forest-type group	Basal area class (square feet per acre)						All classes	SE	
	0- 49	50- 99	100- 149	150- 199	200- 249	250- 299			300+
Sawtimber:									
White/red pine	.0	.0	28.1	57.6	8.8	2.0	.0	96.6	23.0
Hard pine	3.4	2.5	.0	.0	.0	.0	.0	5.9	71.5
Oak/pine	.0	.0	.0	16.8	.0	.0	.0	16.8	58.1
Oak/hickory	6.2	228.5	365.9	49.2	1.7	.0	.0	651.5	8.0
Elm/ash/red maple	.0	41.4	16.2	15.8	4.0	.0	.0	77.3	26.6
Northern hardwoods	.0	77.7	149.7	73.1	6.3	7.2	.0	313.9	12.5
All type groups	9.6	350.2	559.9	212.5	20.8	9.2	.0	1,162.2	4.5
Poletimber:									
White/red pine	.0	3.5	7.1	.0	1.6	.0	.0	12.2	66.2
Spruce/fir	.0	7.0	.0	.0	.0	.0	.0	7.0	100.0
Oak/pine	.2	.0	5.1	.0	.0	.0	.5	5.7	89.2
Oak/hickory	17.3	108.7	66.9	1.2	.0	.0	.0	194.0	16.8
Elm/ash/red maple	4.3	37.9	26.4	8.4	.0	.0	.0	77.0	27.3
Northern hardwoods	19.8	68.8	29.5	.0	.0	.0	.0	118.1	20.5
Aspen/birch	.0	3.6	1.4	.0	.0	.0	.0	4.9	77.6
All type groups	41.5	229.5	136.3	9.6	1.6	.0	.5	418.9	10.5
Seedling/sapling:									
White/red pine	4.9	.0	.0	.0	.0	.0	.0	4.9	100.0
Oak/pine	1.7	.0	.0	.0	.0	.0	.0	1.7	100.0
Oak/hickory	21.9	8.3	.0	.0	.0	.0	.0	30.3	42.4
Elm/ash/red maple	5.3	.0	.0	.0	.0	.0	.0	5.3	100.0
Northern hardwoods	21.9	23.9	.0	.0	.0	.0	.0	45.8	33.7
Aspen/birch	7.6	12.7	.0	.0	.0	.0	.0	20.2	58.1
All type groups	63.3	44.9	.0	.0	.0	.0	.0	108.2	22.0
Nonstocked:									
Northern hardwoods	6.9	.0	.0	.0	.0	.0	.0	6.9	100.0
All type groups	6.9	.0	.0	.0	.0	.0	.0	6.9	100.0
All classes	121.3	624.6	696.1	222.1	22.4	9.2	.5	1,696.1	2.2
SE	20.3	7.9	7.6	15.1	40.1	80.9	100.0	2.2	

Table 18.--Number of live trees (1.0+ inches d.b.h.) on all forest land by species and diameter group, Connecticut, 1998

(In thousands of trees)

Species	Diameter class (inches at breast height)					All classes	SE
	1.0-4.9	5.0-8.9	9.0-14.9	15.0-20.9	21.0+		
Eastern redcedar	9,828	3,995	734	40	0	14,598	27.8
Tamarack (native)	0	81	41	0	0	122	100.0
Norway spruce	0	83	122	81	0	287	73.9
Blue spruce	0	41	0	0	0	41	100.0
Red spruce	1,580	2,070	0	0	0	3,651	98.9
Red pine	0	286	244	0	0	530	92.5
Pitch pine	0	170	40	0	0	210	53.5
White pine	22,787	7,372	5,265	1,945	673	38,043	18.0
Scotch pine	0	84	126	0	0	210	100.0
Eastern hemlock	30,639	11,918	7,677	1,729	498	52,462	18.8
All softwoods	64,835	26,101	14,249	3,796	1,172	110,153	12.3
Boxelder	517	43	0	0	0	560	92.6
Striped maple	2,558	118	0	0	0	2,677	41.0
Red maple	160,431	44,835	27,334	5,459	1,045	239,104	6.9
Silver maple	0	0	164	41	0	205	83.1
Sugar maple	38,657	6,712	3,598	731	299	49,997	15.9
Mountain maple	0	41	0	0	0	41	100.0
Norway maple	0	80	0	0	0	80	100.0
Serviceberry	7,340	245	0	0	0	7,585	33.6
Yellow birch	18,533	4,759	2,230	292	0	25,813	17.7
Sweet birch	64,208	17,201	8,975	1,229	0	91,614	12.0
Paper birch	4,687	1,003	720	0	0	6,411	36.4
Gray birch	11,327	542	40	0	0	11,910	44.0
American hornbeam	19,837	167	0	0	0	20,004	25.8
Hickory species	519	0	83	0	0	603	86.2
Bitternut hickory	3,617	665	123	50	0	4,455	38.1
Pignut hickory	16,783	4,024	3,792	540	0	25,140	15.1
Shellbark hickory	0	42	0	0	0	42	100.0
Shagbark hickory	3,554	2,295	1,462	204	0	7,516	35.1
Mockernut hickory	0	299	0	0	0	299	54.8
American chestnut	1,503	0	0	0	0	1,503	74.6
Flowering dogwood	4,525	365	0	0	0	4,890	42.4
Hawthorn species	946	0	0	0	0	946	100.0
Beech	40,793	3,885	2,339	452	91	47,561	18.2
Ash species	501	123	41	0	0	665	77.3
White ash	11,886	6,087	3,724	901	321	22,919	15.2
Black ash	1,249	43	0	0	0	1,292	96.7
Green ash	0	209	42	0	0	251	85.4
Butternut	0	0	0	43	0	43	100.0
Tulip-poplar	503	408	366	447	161	1,885	43.2
Apple species	1,584	331	40	0	43	1,999	59.2

Table 18.-continued

(In thousands of trees)							
Species	Diameter class (inches at breast height)					All classes	SE
	1.0-	5.0-	9.0-	15.0-			
	4.9	8.9	14.9	20.9	21.0+		
Mulberry species	0	41	0	0	0	41	100.0
Blackgum	6,603	895	537	0	0	8,035	43.4
Eastern hophornbeam	21,632	514	42	0	0	22,188	22.6
Paulownia	499	40	0	0	0	539	100.0
American sycamore	0	40	0	0	42	82	70.7
Eastern cottonwood	0	247	42	0	114	403	49.2
Bigtooth aspen	516	589	502	0	0	1,608	41.6
Quaking aspen	526	1,234	168	0	0	1,928	37.1
Pin cherry	1,540	244	0	0	0	1,784	50.9
Black cherry	24,466	3,308	1,929	510	86	30,299	19.0
White oak	6,796	5,733	6,721	1,939	372	21,561	14.1
Swamp white oak	0	0	124	40	0	164	50.0
Scarlet oak	2,753	2,284	3,780	289	40	9,146	24.1
Pin oak	0	0	40	0	0	40	100.0
Chestnut oak	5,560	2,115	2,542	216	81	10,514	28.0
Northern red oak	19,875	8,292	14,173	5,227	1,207	48,775	10.4
Black oak	6,729	4,312	8,373	2,752	671	22,837	14.7
Black locust	516	250	164	81	0	1,012	57.5
Willow species	0	41	81	0	80	203	72.0
Sassafras	8,803	983	446	81	0	10,312	36.9
American mountain-ash	0	41	0	0	0	41	100.0
American basswood	0	247	164	0	0	411	46.4
Elm species	517	41	0	0	0	558	93.0
Winged elm	0	0	41	0	0	41	100.0
American elm	3,590	1,149	414	164	0	5,318	34.3
Slippery elm	0	90	40	0	0	131	58.1
Unknown	0	0	42	0	0	42	100.0
All hardwoods	526,984	127,254	95,444	21,689	4,655	776,026	3.8
All species	591,819	153,355	109,693	25,485	5,827	886,179	3.5
SE	4.8	3.9	3.3	5.3	9.7	3.5	

Table 19.--Number of live trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Connecticut, 1998

(In thousands of trees)

Species	Diameter class (inches at breast height)							
	1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9
Spruce/fir	0	1,580	1,816	378	41	81	0	81
Red pine	0	0	41	244	122	122	0	0
Pitch pine	0	0	127	42	40	0	0	0
White pine	14,438	8,350	4,179	2,987	2,345	1,437	1,143	739
Eastern hemlock	19,776	10,359	6,445	5,067	3,501	2,143	1,871	1,119
Other softwoods	8,264	1,563	2,783	1,338	493	247	161	40
Total softwoods	42,479	21,852	15,393	10,057	6,542	4,030	3,175	1,980
Red maple	109,283	36,164	24,372	16,689	13,355	6,919	4,789	2,894
Sugar maple	24,988	6,675	3,525	2,113	1,421	1,157	723	409
Yellow birch	12,341	4,680	2,634	1,960	1,072	790	368	250
Sweet birch	48,768	13,372	10,534	5,945	4,626	2,420	1,239	857
Paper birch	3,126	1,562	434	569	509	212	0	0
Hickory	14,561	9,913	4,189	3,017	2,429	1,953	958	504
Beech	29,458	5,826	2,553	887	1,269	462	285	207
White ash	7,227	3,666	2,781	2,621	1,679	876	778	261
Aspen	516	526	768	1,013	207	254	124	0
Black cherry	18,797	4,659	1,524	1,249	653	746	326	209
White oak	5,783	524	2,449	3,006	2,958	2,002	1,363	832
Northern red oak	14,649	3,655	2,906	4,612	5,470	4,182	3,439	2,621
Other red oaks	7,419	2,062	2,700	3,737	5,167	3,712	2,673	1,362
Elm	1,566	2,044	542	574	328	126	41	124
Other commercial hardwoods	10,000	3,796	1,987	1,739	1,591	1,467	546	249
Noncommercial hardwoods	64,484	10,499	2,467	658	366	159	126	81
Total hardwoods	372,968	109,624	66,367	50,390	43,103	27,437	17,780	10,859
All species	415,447	131,476	81,760	60,447	49,645	31,467	20,955	12,838
SE	5.9	8.1	4.9	4.8	4.4	4.7	5.4	6.9

Table 19.-continued

(In thousands of trees)							
Species	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+		
Spruce/fir	0	0	0	0	2,398	3,979	90.9
Red pine	0	0	0	0	530	530	92.5
Pitch pine	0	0	0	0	210	210	53.5
White pine	631	284	468	123	14,338	37,126	18.4
Eastern hemlock	492	118	331	42	21,129	51,265	19.2
Other softwoods	0	0	0	0	5,062	14,890	27.3
Total softwoods	1,124	403	799	165	43,668	107,999	12.5
Red maple	1,285	957	677	207	72,143	217,591	7.4
Sugar maple	79	203	164	81	9,877	41,540	16.5
Yellow birch	0	42	0	0	7,116	24,137	17.7
Sweet birch	125	125	0	0	25,873	88,013	12.4
Paper birch	0	0	0	0	1,724	6,411	36.4
Hickory	127	123	0	0	13,300	37,774	14.1
Beech	124	40	91	0	5,919	41,203	19.1
White ash	327	205	242	79	9,850	20,744	16.3
Aspen	0	0	37	37	2,440	3,483	29.2
Black cherry	165	81	86	0	5,040	28,496	19.9
White oak	696	126	332	0	13,764	20,071	14.7
Northern red oak	1,437	872	1,003	43	26,585	44,889	11.0
Other red oaks	947	490	539	132	21,461	30,943	13.0
Elm	0	40	0	0	1,776	5,385	34.7
Other commercial hardwoods	290	162	243	42	8,316	22,112	19.7
Noncommercial hardwoods	0	0	43	0	3,899	78,883	12.8
Total hardwoods	5,601	3,468	3,457	621	229,084	711,675	4.2
All species	6,725	3,871	4,256	787	272,751	819,674	3.9
SE	8.6	10.7	11.5	25.0	3.1	3.9	

Table 20.--Number of all live trees on timberland by diameter class, tree class,
and species group, Connecticut, 1998

(In thousands of trees)

Diameter class	Growing stock		Cull		All classes	SE
	Soft- woods	Hard- woods	Soft- woods	Hard- woods		
Seedlings	238,881	2,747,468	-	1,036,317	4,022,666	7.7
1.0 - 2.9	42,479	308,483	-	64,484	415,447	5.9
3.0 - 4.9	21,852	99,125	-	10,499	131,476	8.1
Total saplings	64,331	407,609	-	74,983	546,923	5.2
5.0 - 6.9	12,891	57,321	2,502	9,046	81,760	4.9
7.0 - 8.9	9,359	45,107	698	5,283	60,447	4.8
9.0 - 10.9	-	40,858	-	2,245	43,103	4.6
Total pole/timber	22,250	143,286	3,200	16,574	185,309	3.9
9.0 - 10.9	5,303	-	1,239	-	6,542	14.1
11.0 - 12.9	3,412	24,998	617	2,439	31,467	4.7
13.0 - 14.9	3,053	16,053	122	1,727	20,955	5.4
Total small sawtimber	11,769	41,051	1,979	4,166	58,965	4.4
15.0 - 16.9	1,857	10,174	123	684	12,838	6.9
17.0 - 18.9	958	5,183	165	417	6,725	8.6
19.0 - 20.9	403	3,055	0	413	3,871	10.7
21.0 - 28.9	592	3,026	207	430	4,256	11.5
29.0 and larger	165	505	0	116	787	25.0
Total large sawtimber	3,976	21,944	495	2,062	28,477	5.3
All classes	341,207	3,361,358	5,673	1,134,102	4,842,340	6.6
SE	22.6	6.8	19.5	13.3	6.6	

Table 21.--Number of trees (5.0+ inches d.b.h.) on timberland by species and tree class, Connecticut, 1998

(In thousands of trees)

Species	Tree class								All classes	SE
	Preferred	Acceptable	All growing stock	Rough cull	Rotten cull	All live	Salvable dead	Nonsalvable dead		
Spruce/fir	0	1,596	1,596	802	0	2,398	0	42	2,441	85.4
Red pine	0	530	530	0	0	530	42	124	696	78.4
Pitch pine	0	167	167	42	0	210	80	42	332	49.4
White pine	163	12,638	12,801	1,412	125	14,338	205	1,512	16,055	16.5
Eastern hemlock	314	18,666	18,981	1,984	165	21,129	1,012	1,407	23,549	15.8
Other softwoods	0	3,919	3,919	1,142	0	5,062	420	286	5,768	23.3
Total softwoods	478	37,517	37,995	5,383	289	43,668	1,759	3,414	48,841	10.5
Red maple	125	62,650	62,775	6,804	2,565	72,143	369	3,381	75,894	7.1
Sugar maple	83	8,935	9,018	653	206	9,877	42	294	10,213	13.0
Yellow birch	43	6,096	6,139	727	250	7,116	201	248	7,565	16.8
Sweet birch	125	24,036	24,161	1,169	542	25,873	260	771	26,903	8.5
Paper birch	0	1,724	1,724	0	0	1,724	42	333	2,098	29.5
Hickory	416	12,399	12,815	485	0	13,300	262	177	13,739	11.8
Beech	0	5,472	5,472	247	200	5,919	100	204	6,223	17.4
White ash	248	9,030	9,278	368	204	9,850	512	561	10,924	13.6
Aspen	0	2,360	2,360	37	43	2,440	41	248	2,730	25.3
Black cherry	86	3,849	3,935	1,022	82	5,040	162	622	5,823	16.6
White oak	163	12,725	12,888	836	41	13,764	127	1,991	15,883	10.1
Northern red oak	1,656	24,158	25,814	380	391	26,585	208	1,453	28,247	9.4
Other red oaks	985	19,399	20,385	747	329	21,461	123	1,042	22,626	11.5
Elm	0	1,614	1,614	162	0	1,776	43	535	2,354	23.1
Other commercial hardwoods	329	7,575	7,904	369	43	8,316	41	848	9,205	16.0
Noncommercial hardwoods	-	-	-	3,570	329	3,899	0	539	4,439	14.8
Total hardwoods	4,259	202,023	206,282	17,576	5,225	229,084	2,534	13,248	244,866	3.1
All species	4,737	239,540	244,277	22,960	5,515	272,751	4,293	16,662	293,707	3.2
SE	11.9	3.3	3.3	8.2	10.6	3.1	14.3	7.3	3.2	

Table 22.--**Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Connecticut, 1985

(In thousands of trees)

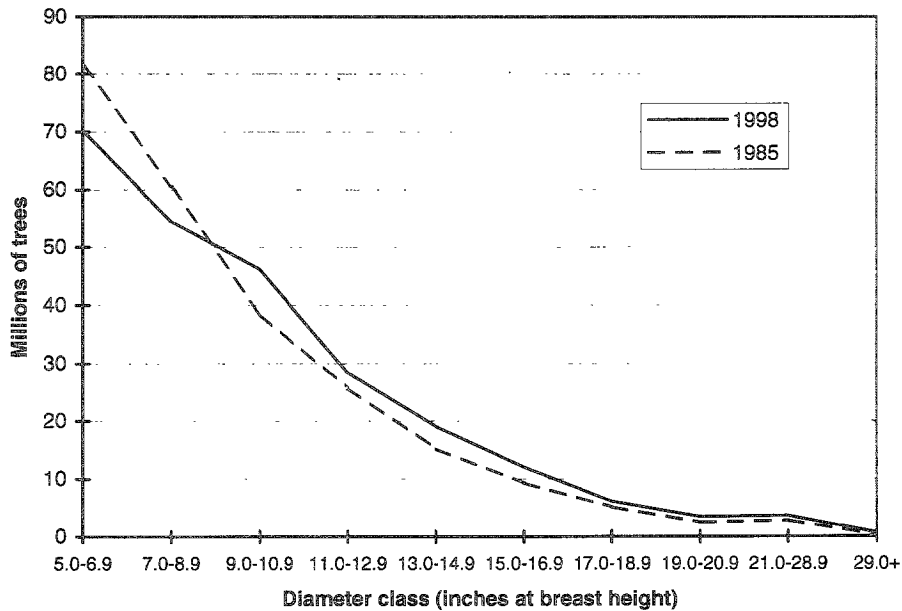
Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Spruce/fir	1,050	0	0	0	0	27	0	0	0	0	1,077	97.5
Red pine	0	71	543	443	191	27	16	0	0	0	1,291	96.4
Pitch pine	504	289	192	73	0	0	0	0	0	0	1,058	71.3
White pine	3,547	2,680	1,332	1,371	745	349	374	171	319	75	10,964	20.5
Eastern hemlock	6,028	4,152	2,419	2,008	1,157	500	509	284	295	48	17,400	18.2
Other softwoods	2,159	1,205	299	133	20	0	0	0	0	0	3,816	31.6
Total softwoods	13,288	8,398	4,785	4,027	2,113	903	900	455	614	123	35,606	12.0
Red maple	23,876	17,796	9,768	5,554	2,899	1,801	1,053	433	459	20	63,658	8.4
Sugar maple	3,105	2,278	1,528	1,046	601	353	134	196	217	0	9,458	14.5
Yellow birch	1,563	1,322	894	306	214	63	43	0	37	0	4,443	18.6
Sweet birch	8,584	5,843	2,826	1,657	818	460	181	25	16	0	20,409	11.8
Paper birch	948	860	151	102	57	23	0	0	0	0	2,141	34.0
Hickory	4,236	3,350	2,254	1,293	870	177	176	75	0	7	12,438	14.2
Beech	1,598	1,218	571	349	146	148	82	30	27	0	4,169	18.0
White ash	3,962	3,414	1,943	1,060	679	593	166	88	71	10	11,986	15.5
Aspen	459	495	270	250	75	0	0	0	9	8	1,565	25.5
Black cherry	1,634	902	560	248	133	68	0	0	0	0	3,545	22.9
White oak	4,680	3,079	2,634	1,935	1,023	832	413	169	216	6	14,987	12.7
Northern red oak	4,795	4,953	4,551	4,324	3,201	2,177	1,141	515	576	39	26,273	8.7
Other red oaks	5,301	4,675	4,116	2,676	1,914	1,153	564	308	439	6	21,152	11.0
Elm	747	413	187	109	21	18	0	0	0	0	1,495	26.1
Other hardwoods	2,859	1,631	1,487	829	421	523	297	212	129	26	8,415	20.7
Total hardwoods	68,347	52,229	33,740	21,737	13,072	8,388	4,250	2,050	2,196	123	206,133	3.3
All species	81,635	60,627	38,525	25,764	15,185	9,291	5,149	2,505	2,810	245	241,739	3.0
SE	5.4	4.9	4.9	4.8	5.4	6.4	8.4	10.4	11.2	25.7	3.0	

Table 23.--Number of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class, Connecticut, 1998

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0+		
Spruce/fir	1,056	336	41	81	0	81	0	0	0	0	1,596	80.7
Red pine	41	244	122	122	0	0	0	0	0	0	530	92.5
Pitch pine	127	0	40	0	0	0	0	0	0	0	167	62.1
White pine	3,887	2,737	1,763	1,192	1,101	698	548	284	468	123	12,801	17.8
Eastern hemlock	5,447	4,784	3,212	1,934	1,830	1,078	410	118	125	42	18,981	16.1
Other softwoods	2,332	1,257	125	83	122	0	0	0	0	0	3,919	25.2
Total softwoods	12,891	9,359	5,303	3,412	3,053	1,857	958	403	592	165	37,995	10.9
Red maple	21,183	14,441	12,403	5,841	3,849	2,576	1,073	748	454	207	62,775	7.7
Sugar maple	3,238	1,827	1,381	1,033	643	409	79	163	164	81	9,018	12.8
Yellow birch	2,283	1,582	1,030	625	368	209	0	42	0	0	6,139	16.9
Sweet birch	9,780	5,491	4,461	2,206	1,157	816	125	125	0	0	24,161	8.6
Paper birch	434	569	509	212	0	0	0	0	0	0	1,724	30.4
Hickory	4,028	2,856	2,388	1,831	958	504	127	123	0	0	12,815	11.7
Beech	2,370	847	1,169	420	245	166	124	40	91	0	5,472	16.2
White ash	2,619	2,498	1,637	876	612	222	327	205	242	41	9,278	13.8
Aspen	725	1,013	207	254	124	0	0	0	37	0	2,360	26.3
Black cherry	1,073	959	571	628	326	128	125	40	86	0	3,935	18.2
White oak	2,156	2,796	2,834	1,961	1,321	832	613	126	249	0	12,888	10.1
Northern red oak	2,739	4,386	5,344	4,097	3,355	2,621	1,395	830	1,003	43	25,814	9.2
Other red oaks	2,452	3,569	5,044	3,504	2,549	1,321	906	409	539	91	20,385	11.4
Elm	421	534	328	126	41	124	0	40	0	0	1,614	21.4
Other hardwoods	1,821	1,739	1,551	1,384	505	249	290	162	161	42	7,904	16.5
Total hardwoods	57,321	45,107	40,858	24,998	16,053	10,174	5,183	3,055	3,026	505	206,282	3.3
All species	70,211	54,466	46,161	28,411	19,107	12,031	6,142	3,457	3,619	671	244,277	3.3
SE	5.0	5.1	4.6	4.9	5.8	7.3	9.0	11.3	12.1	27.7	3.3	

Number of growing-stock trees on timberland, Connecticut, 1985 and 1998



Number of growing-stock trees on timberland, top 10 species, Connecticut, 1985 and 1998

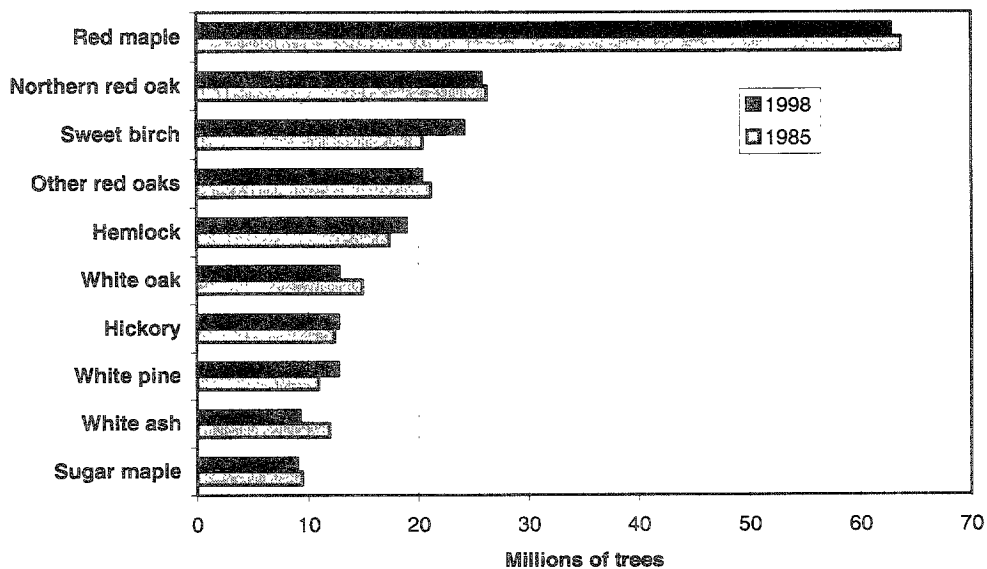


Table 24.--Number of seedlings and saplings on timberland by species and stand-size class, Connecticut, 1998

(In millions of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Eastern redcedar	6	8	0	0	13	36.4
Larch	0	0	2	0	2	100.0
Spruce species	0	1	0	0	1	100.0
Eastern white pine	119	80	12	0	211	33.6
Eastern hemlock	75	0	0	0	75	33.0
Boxelder	1	0	0	0	1	100.0
Striped maple	17	13	0	0	30	48.8
Red maple	393	107	86	0	586	11.7
Sugar maple	132	35	15	0	182	19.4
Serviceberry	131	42	6	0	180	29.4
Yellow birch	72	25	9	0	106	29.4
Sweet birch	217	57	58	0	332	22.6
Paper birch	25	32	20	0	77	45.6
Gray birch	0	42	31	0	73	57.9
American hornbeam	277	18	0	0	295	24.1
Hickory species	0	4	0	0	4	88.0
Bitternut hickory	23	2	2	0	27	55.3
Pignut hickory	81	10	5	0	96	19.1
Shagbark hickory	5	7	0	0	12	47.2
Mockernut hickory	0	11	0	0	11	84.8
American chestnut	27	0	67	0	95	72.0
Flowering dogwood	24	1	0	0	25	48.8
Hawthorn species	3	0	1	0	4	59.4
American beech	243	47	0	0	290	24.8
White ash	74	21	17	0	113	24.1
Black ash	1	2	0	0	3	72.2
Yellow-poplar	6	2	0	0	7	47.1
Apple species	0	1	0	0	1	74.3
Black tupelo	53	67	0	0	120	55.7
Eastern hophornbeam	143	17	11	0	171	35.1
Paulownia	0	0	0	0	0	100.0
Bigtooth aspen	2	0	1	0	2	80.9
Quaking aspen	0	2	1	0	2	80.1
Pin cherry	7	2	6	0	15	52.9
Black cherry	294	100	37	0	432	14.8
Chokecherry	68	12	0	0	80	54.5
White oak	133	123	17	0	272	20.3
Scarlet oak	9	4	0	0	13	46.8
Pin oak	5	0	0	0	5	100.0
Chestnut oak	9	10	10	0	29	43.6
Northern red oak	180	45	44	0	270	19.9
Black oak	88	45	22	0	155	23.5
Black locust	2	0	1	0	2	80.2
Sassafras	79	35	3	0	117	23.2
Elm species	0	0	0	1	1	100.0
American elm	1	4	0	0	5	49.5
Unknown tree	3	18	2	0	23	78.2
All species	3,031	1,052	486	1	4,569	6.9
SE	8.8	16.3	28.5	100.0	6.9	

Table 25.--Number of standing dead trees (5.0+ inches d.b.h.) on timberland by species, condition class, and diameter class, Connecticut, 1998

(In thousands of trees)

Species	Intact trees				Broken trees				All classes
	5.0- 10.9	11.0- 14.9	15+	Total intact	5.0- 10.9	11.0- 14.9	15+	Total broken	
Spruce/fir	0	0	0	0	42	0	0	42	42
Red pine	83	0	0	83	82	0	0	82	166
Pitch pine	0	0	0	0	80	42	0	122	122
White pine	513	83	0	596	782	127	212	1,121	1,717
Eastern hemlock	488	126	125	740	1,186	257	152	1,596	2,335
Other softwoods	164	0	41	205	501	0	0	501	707
Total softwoods	1,249	210	166	1,625	2,674	427	364	3,465	5,089
Red maple	413	0	42	455	2,798	290	208	3,295	3,750
Sugar maple	41	0	0	41	212	42	41	295	336
Yellow birch	79	0	0	79	330	0	40	370	449
Sweet birch	42	0	0	42	695	293	0	988	1,030
Paper birch	0	0	0	0	375	0	0	375	375
Hickory	120	57	0	177	219	0	0	219	397
Beech	82	0	0	82	182	0	40	222	304
White ash	201	0	0	201	632	162	79	873	1,073
Aspen	42	0	0	42	125	123	0	248	289
Black cherry	290	0	0	290	413	41	0	454	744
White oak	737	42	83	863	1,132	123	0	1,256	2,118
Northern red oak	411	127	163	701	669	168	83	920	1,621
Other red oaks	261	40	41	343	617	164	41	822	1,165
Elm	338	0	0	338	155	85	0	240	578
Other commercial hardwoods	334	93	0	427	292	80	90	462	889
Noncommercial hardwoods	331	0	0	331	209	0	0	209	539
Total hardwoods	3,722	360	330	4,411	9,053	1,573	622	11,249	15,660
All species	4,971	569	496	6,036	11,727	2,000	987	14,713	20,749

Table 26.--Net volume of all trees on timberland by class of timber and species group, Connecticut, 1998

(In millions of cubic feet)

Class of timber	Species group				All groups	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	174.6	169.7	508.4	970.2	1,822.8	4.5
Upper stem	18.4	20.8	116.6	224.2	379.9	4.2
Total sawtimber trees	192.9	190.5	625.0	1,194.3	2,202.8	4.4
Poletimber trees	29.9	57.0	381.4	508.8	977.2	4.2
Total growing-stock trees	222.9	247.5	1,006.4	1,703.1	3,179.9	3.5
Rough trees:						
Sawtimber size	9.9	23.9	52.4	36.3	122.5	15.4
Poletimber size	1.6	5.7	24.0	15.3	46.6	10.3
Total rough trees	11.5	29.6	76.4	51.6	169.1	11.7
Rotten trees:						
Sawtimber size	.8	.3	17.3	11.0	29.3	18.2
Poletimber size	.0	.0	2.8	2.2	5.0	22.3
Total rotten trees	.8	.3	20.1	13.2	34.3	16.2
Salvable dead^a trees:						
Sawtimber size	.5	2.2	2.3	7.1	12.1	39.1
Poletimber size	.3	2.5	3.8	2.4	9.0	18.5
Total salvable dead trees	.8	4.7	6.1	9.5	21.2	25.8
All classes	236.0	282.1	1,109.0	1,777.4	3,404.5	3.4
SE	19.8	16.1	7.0	5.0	3.4	

^a Includes noncommercial species.

Table 27.--Net volume of all live, growing-stock, and sawtimber trees on timberland
by species group and ownership class, Connecticut, 1998

(In millions of cubic feet)

Species group	Owner class				All classes
	National Forest	Other public	Forest industry	Other private	
<u>All live</u>					
(In millions of cubic feet)					
Softwoods	.0	68.9	.0	443.6	512.6
Hardwoods	.0	504.6	.0	2,366.2	2,870.8
Total all live	.0	573.5	.0	2,809.8	3,383.3
<u>Growing stock</u>					
(In millions of cubic feet)					
Softwoods	.0	67.3	.0	403.1	470.4
Hardwoods	.0	488.1	.0	2,221.4	2,709.5
Total growing stock	.0	555.4	.0	2,624.5	3,179.9
<u>Sawtimber</u>					
(In millions of board feet)					
Softwoods	.0	256.8	.0	1,340.8	1,597.5
Hardwoods	.0	1,421.0	.0	6,150.6	7,571.7
Total sawtimber	.0	1,677.8	.0	7,491.4	9,169.2

^a For all board-foot volume tables, International 1/4-inch rule is used.

Table 28.--Net volume of growing-stock trees on timberland by forest-type group and stand-size class, Connecticut, 1998

(In millions of cubic feet)

Forest-type group	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
White/red pine	303.3	18.7	.0	.0	322.0	21.6
Spruce/fir	.0	4.8	.0	.0	4.8	100.0
Hard pine	1.1	.0	.0	.0	1.1	88.7
Oak/pine	58.5	7.5	.1	.0	66.1	58.5
Oak/hickory	1,334.0	251.0	9.0	.0	1,594.0	7.3
Elm/ash/red maple	158.3	107.1	.2	.0	265.7	21.6
Northern hardwoods	769.7	127.3	17.6	.4	915.0	11.4
Aspen/birch	.0	5.3	5.9	.0	11.2	50.4
All groups	2,624.9	521.7	32.9	.4	3,179.9	3.5
SE	5.0	12.1	33.4	100.0	3.5	

Table 29.--**Net volume of growing-stock trees on timberland by species and forest-type group, Connecticut, 1985

(In millions of cubic feet)

Species	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Spruce/fir	.0	2.7	.0	.8	.0	.0	.0	.0	.0	3.5	79.6
Red pine	21.3	.0	.0	.0	1.1	.0	.0	.0	.0	22.4	95.0
Pitch pine	4.5	.0	.0	1.5	.0	.0	.0	.3	.0	6.3	67.9
White pine	67.6	.0	2.4	16.8	52.5	.0	1.7	25.7	.0	166.6	20.2
Eastern hemlock	146.7	.0	.0	.0	31.1	.0	.0	38.6	.0	216.4	18.3
Other softwoods	4.0	.0	4.5	2.1	3.4	.0	.3	1.9	.0	16.1	34.2
Total softwoods	244.0	2.7	6.9	21.3	88.2	.0	1.9	66.4	.0	431.4	12.3
Red maple	26.8	.0	.9	2.9	200.1	.0	217.3	187.1	.0	635.1	9.1
Sugar maple	3.5	.0	.0	.0	27.1	.0	.6	92.1	.0	123.3	16.4
Yellow birch	3.4	.0	.0	.0	11.3	.0	3.8	23.1	.0	41.6	16.6
Sweet birch	21.8	.0	.0	.1	55.8	.0	2.3	91.3	.0	171.3	12.7
Paper birch	2.0	.0	.0	.7	6.3	.0	.0	4.2	.0	13.2	28.1
Hickory	2.3	.0	.0	.0	103.6	.0	.1	28.3	.0	134.3	13.1
Beech	2.8	.0	.0	.0	24.8	.0	.0	16.4	.0	44.0	21.9
White ash	6.2	.0	.0	.0	48.3	.0	6.6	78.3	.0	139.3	15.5
Aspen	.7	.0	.0	.4	6.8	.0	3.2	5.7	.0	16.8	26.3
Black cherry	.7	.0	.0	.0	5.5	.0	1.0	19.1	.0	26.2	22.4
White oak	5.3	.0	.0	1.8	141.1	.0	2.0	25.2	.0	175.4	10.6
Northern red oak	24.9	.0	.3	2.5	343.7	.0	2.8	60.3	.0	434.5	8.4
Other red oaks	6.5	.0	.2	6.1	250.1	.0	1.8	26.1	.0	290.8	9.4
Elm	.0	.0	.0	.0	.5	.0	3.5	4.9	.0	8.9	29.0
Other hardwoods	6.2	.0	.0	.2	82.2	.0	4.9	21.7	.0	115.2	15.6
Total hardwoods	113.1	.0	1.3	14.7	1,307.1	.0	250.0	683.6	.0	2,369.9	3.3
All species	357.1	2.7	8.2	36.0	1,395.3	.0	251.9	750.0	.0	2,801.3	2.8
SE	21.0	100.0	70.8	56.0	7.0	.0	20.5	11.7	.0	2.8	

Table 30.--Net volume of growing-stock trees on timberland by species and forest-type group, Connecticut, 1998

(In millions of cubic feet)

Species	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Spruce/fir	4.5	3.9	.0	.0	.3	.0	.0	.1	.0	8.7	67.9
Red pine	6.5	.0	.0	.0	.0	.0	.0	.0	.1	6.6	98.3
Pitch pine	.1	.0	.0	.0	.3	.0	.0	.2	.0	.6	64.0
White pine	89.3	.0	.0	33.6	26.7	.0	6.7	57.3	.1	213.7	21.1
Eastern hemlock	119.4	.0	.0	9.6	36.8	.0	3.3	56.2	.0	225.3	17.6
Other softwoods	.3	.0	.6	3.6	8.9	.0	.8	1.3	.0	15.5	27.6
Total softwoods	220.1	3.9	.6	46.7	73.1	.0	10.8	115.1	.2	470.4	12.7
Red maple	22.0	.3	.0	2.5	197.9	.0	193.7	270.8	5.0	692.1	8.3
Sugar maple	9.6	.0	.0	.5	22.5	.0	1.5	85.5	.1	119.8	17.4
Yellow birch	1.0	.0	.0	.0	10.7	.0	2.8	36.9	.0	51.5	17.8
Sweet birch	20.5	.0	.0	1.0	89.9	.0	3.8	111.6	.0	226.7	11.2
Paper birch	1.5	.0	.0	.0	11.5	.0	.1	4.2	.0	17.4	35.8
Hickory	3.6	.0	.0	.6	115.2	.0	2.0	33.4	.0	154.8	13.4
Beech	4.1	.0	.0	.0	45.8	.0	.3	12.2	.0	62.4	23.8
White ash	3.6	.4	.0	.0	40.0	.0	11.8	77.6	.0	133.3	17.9
Aspen	1.3	.0	.0	.0	8.3	.0	5.0	5.4	3.1	23.1	27.1
Black cherry	2.0	.0	.4	.6	4.5	.0	4.5	41.4	.4	53.7	29.0
White oak	6.0	.0	.0	1.2	155.9	.0	.0	14.5	.3	177.9	11.8
Northern red oak	13.0	.0	.1	5.0	429.9	.0	3.0	57.3	.9	509.2	9.3
Other red oaks	7.7	.0	.0	8.0	301.7	.0	2.1	29.1	1.3	349.8	11.2
Elm	.8	.3	.0	.0	4.7	.0	4.3	4.8	.0	14.9	28.3
Other hardwoods	5.2	.0	.0	.0	82.3	.0	20.1	15.3	.0	122.8	20.4
Total hardwoods	101.9	1.0	.5	19.4	1,521.0	.0	254.9	799.9	11.0	2,709.5	3.8
All species	322.0	4.8	1.1	66.1	1,594.0	.0	265.7	915.0	11.2	3,179.9	3.5
SE	21.6	100.0	88.7	58.5	7.3	.0	21.6	11.4	50.4	3.5	

Table 31.--**Net volume of growing-stock trees on timberland by species and stand-size class, Connecticut, 1985

(In millions of cubic feet)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Spruce/fir	.0	.8	2.7	.0	3.5	79.6
Red pine	21.3	1.1	.0	.0	22.4	95.0
Pitch pine	4.5	1.8	.0	.0	6.3	67.9
White pine	132.9	31.9	1.9	.0	166.6	20.2
Eastern hemlock	183.8	31.5	1.1	.0	216.4	18.3
Other softwoods	2.6	12.7	.8	.0	16.1	34.2
Total softwoods	345.1	79.8	6.5	.0	431.4	12.3
Red maple	413.6	215.7	5.8	.0	635.1	9.1
Sugar maple	94.7	28.0	.5	.0	123.3	16.4
Yellow birch	26.2	14.1	1.3	.0	41.6	16.6
Sweet birch	104.9	64.6	1.8	.0	171.3	12.7
Paper birch	5.2	8.0	.0	.0	13.2	28.1
Hickory	76.8	55.6	2.0	.0	134.3	13.1
Beech	35.5	8.5	.0	.0	44.0	21.9
White ash	80.0	53.3	6.0	.0	139.3	15.5
Aspen	7.5	8.3	1.0	.0	16.8	26.3
Black cherry	6.2	16.1	3.9	.0	26.2	22.4
White oak	123.1	48.7	3.5	.0	175.4	10.6
Northern red oak	289.4	139.6	5.5	.0	434.5	8.4
Other red oaks	162.4	123.0	5.5	.0	290.8	9.4
Elm	3.8	5.1	.0	.0	8.9	29.0
Other hardwoods	59.0	44.8	11.4	.0	115.2	15.6
Total hardwoods	1,488.3	833.4	48.1	.0	2,369.9	3.3
All species	1,833.4	913.3	54.6	.0	2,801.3	2.8
SE	5.9	8.8	26.6	.0	2.8	

Table 32.--Net volume of growing-stock trees on timberland by species and stand-size class, Connecticut, 1998

(In millions of cubic feet)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Spruce/fir	4.6	4.0	.0	.0	8.7	67.9
Red pine	6.5	.0	.1	.0	6.6	98.3
Pitch pine	.1	.5	.0	.0	.6	64.0
White pine	175.9	33.0	4.8	.0	213.7	21.1
Eastern hemlock	219.7	5.5	.1	.0	225.3	17.6
Other softwoods	9.7	5.7	.1	.0	15.5	27.6
Total softwoods	416.5	48.8	5.1	.0	470.4	12.7
Red maple	531.1	154.3	6.7	.0	692.1	8.3
Sugar maple	101.8	11.3	6.7	.0	119.8	17.4
Yellow birch	38.9	12.5	.1	.0	51.5	17.8
Sweet birch	196.1	28.3	2.3	.0	226.7	11.2
Paper birch	12.5	4.8	.1	.0	17.4	35.8
Hickory	126.8	26.2	1.9	.0	154.8	13.4
Beech	60.8	1.7	.0	.0	62.4	23.8
White ash	107.9	23.1	2.4	.0	133.3	17.9
Aspen	15.7	6.4	.7	.4	23.1	27.1
Black cherry	49.1	4.4	.2	.0	53.7	29.0
White oak	148.8	25.3	3.8	.0	177.9	11.8
Northern red oak	447.8	60.6	.8	.0	509.2	9.3
Other red oaks	262.1	86.4	1.3	.0	349.8	11.2
Elm	9.0	6.0	.0	.0	14.9	28.3
Other hardwoods	100.2	21.8	.8	.0	122.8	20.4
Total hardwoods	2,208.4	472.9	27.8	.4	2,709.5	3.8
All species	2,624.9	521.7	32.9	.4	3,179.9	3.5
SE	5.0	12.1	33.4	100.0	3.5	

Table 33.--**Net volume of growing-stock trees on timberland by species and diameter class, Connecticut, 1985

(In millions of cubic feet)

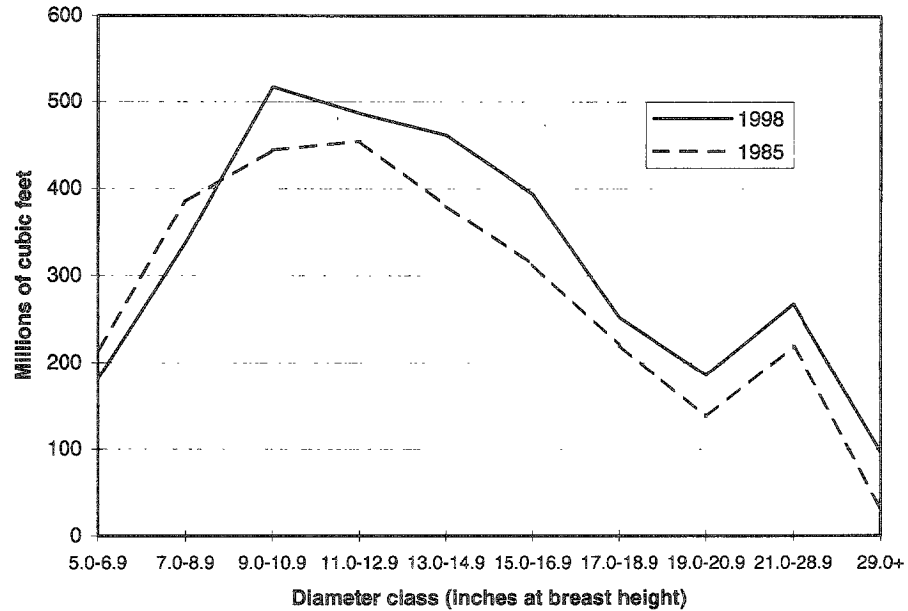
Species	Diameter class (inches at breast height)										All classes	SE
	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0+		
Spruce/fir	2.7	.0	.0	.0	.0	.8	.0	.0	.0	.0	3.5	79.6
Red pine	.0	.5	6.9	8.5	4.8	1.1	.6	.0	.0	.0	22.4	95.0
Pitch pine	1.3	1.9	2.0	1.1	.0	.0	.0	.0	.0	.0	6.3	67.9
White pine	9.6	17.6	16.6	24.3	18.9	13.2	14.9	10.4	30.9	10.3	166.6	20.2
Eastern hemlock	17.7	26.0	26.3	34.3	26.7	17.3	20.7	15.5	25.0	7.0	216.4	18.3
Other softwoods	5.2	5.7	3.2	1.6	.4	.0	.0	.0	.0	.0	16.1	34.2
Total softwoods	36.4	51.7	55.0	69.8	50.8	32.5	36.2	25.9	55.8	17.2	431.4	12.3
Red maple	60.7	112.0	113.0	101.2	77.2	63.1	46.0	23.3	36.0	2.5	635.1	9.1
Sugar maple	8.4	15.4	17.5	18.9	16.4	12.5	5.6	11.4	17.2	.0	123.3	16.4
Yellow birch	4.4	8.6	11.0	5.7	5.2	2.2	1.9	.0	2.6	.0	41.6	16.6
Sweet birch	23.4	37.2	34.3	29.9	20.1	16.3	7.7	1.4	1.1	.0	171.3	12.7
Paper birch	2.6	4.9	1.6	1.8	1.4	.8	.0	.0	.0	.0	13.2	28.1
Hickory	10.1	24.1	27.8	25.4	25.3	6.5	9.3	4.8	.0	1.1	134.3	13.1
Beech	4.3	7.3	6.8	7.5	4.4	5.8	3.9	1.8	2.1	.0	44.0	21.9
White ash	11.9	25.1	25.0	19.4	18.1	20.1	7.7	5.3	5.4	1.2	139.3	15.5
Aspen	1.5	3.5	3.5	4.5	2.0	.0	.0	.0	.8	.9	16.8	26.3
Black cherry	3.8	5.6	5.4	4.9	3.5	3.0	.0	.0	.0	.0	26.2	22.4
White oak	11.7	17.3	27.5	31.0	23.6	24.9	16.9	7.9	13.7	.9	175.4	10.6
Northern red oak	12.6	31.3	51.3	74.4	76.2	69.6	46.7	26.6	40.8	5.0	434.5	8.4
Other red oaks	14.3	29.8	46.6	45.4	45.8	36.3	24.1	16.5	31.2	.8	290.8	9.4
Elm	1.8	2.3	2.0	1.8	.4	.5	.0	.0	.0	.0	8.9	29.0
Other hardwoods	6.6	9.1	16.1	13.1	9.8	18.7	14.1	12.6	12.2	2.9	115.2	15.6
Total hardwoods	178.1	333.5	389.5	384.9	329.5	280.3	183.9	111.6	163.2	15.3	2,369.9	3.3
All species	214.5	385.2	444.5	454.7	380.3	312.8	220.2	137.5	219.1	32.5	2,801.3	2.8
SE	5.3	4.9	4.9	4.8	5.4	6.3	8.4	10.4	11.9	26.2	2.8	

Table 34.--Net volume of growing-stock trees on timberland by species and diameter class, Connecticut, 1998

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0+		
Spruce/fir	2.6	1.7	.4	1.2	.0	2.9	.0	.0	.0	.0	8.7	67.9
Red pine	.1	2.4	1.7	2.4	.0	.0	.0	.0	.0	.0	6.6	98.3
Pitch pine	.3	.0	.3	.0	.0	.0	.0	.0	.0	.0	.6	64.0
White pine	10.7	15.8	20.8	20.6	27.8	23.0	22.1	14.6	35.7	22.4	213.7	21.1
Eastern hemlock	14.5	27.9	33.8	32.2	41.1	34.4	16.5	7.5	10.2	7.0	225.3	17.6
Other softwoods	5.1	5.9	1.1	1.1	2.3	.0	.0	.0	.0	.0	15.5	27.6
Total softwoods	33.3	53.6	58.2	57.5	71.2	60.4	38.7	22.1	45.9	29.4	470.4	12.7
Red maple	51.7	88.2	137.1	101.4	94.6	84.0	40.5	38.4	32.9	23.3	692.1	8.3
Sugar maple	8.5	10.8	15.9	17.8	17.1	13.7	3.3	8.4	13.3	11.0	119.8	17.4
Yellow birch	6.0	8.5	11.0	10.6	8.4	5.9	.0	1.2	.0	.0	51.5	17.8
Sweet birch	26.9	37.1	53.1	39.4	30.4	28.5	4.8	6.4	.0	.0	226.7	11.2
Paper birch	1.7	4.5	6.2	4.9	.0	.0	.0	.0	.0	.0	17.4	35.8
Hickory	9.7	20.3	30.0	34.8	26.4	17.9	7.4	8.3	.0	.0	154.8	13.4
Beech	5.4	5.4	13.3	7.7	5.8	6.4	5.8	2.7	10.1	.0	62.4	23.8
White ash	8.3	17.3	20.6	15.8	16.5	7.1	14.8	11.9	17.1	3.9	133.3	17.9
Aspen	2.2	6.8	2.8	4.8	3.0	.0	.0	.0	3.5	.0	23.1	27.1
Black cherry	2.5	5.6	5.7	11.0	8.2	5.3	5.6	2.0	7.8	.0	53.7	29.0
White oak	5.8	16.2	29.2	29.8	28.8	24.7	23.3	5.9	14.1	.0	177.9	11.8
Northern red oak	7.7	27.1	59.6	68.6	78.8	83.6	59.0	44.1	74.7	6.1	509.2	9.3
Other red oaks	6.0	22.8	54.9	58.6	60.7	42.6	36.2	22.7	34.6	10.7	349.8	11.2
Elm	.9	2.9	2.7	1.9	.9	3.4	.0	2.3	.0	.0	14.9	28.3
Other hardwoods	4.4	10.2	16.6	21.9	11.0	10.4	13.0	9.3	13.8	12.1	122.8	20.4
Total hardwoods	147.7	283.7	458.8	429.0	390.4	333.6	213.6	163.8	221.9	67.0	2,709.5	3.8
All species	181.0	337.4	517.0	486.5	461.7	394.0	252.2	185.9	267.8	96.4	3,179.9	3.5
SE	5.3	5.4	4.7	5.0	5.9	7.6	9.1	11.5	12.8	29.2	3.5	

Net volume of growing-stock trees on timberland, Connecticut, 1985 and 1998



Net volume of growing-stock trees on timberland, top 10 species, Connecticut, 1985 and 1998

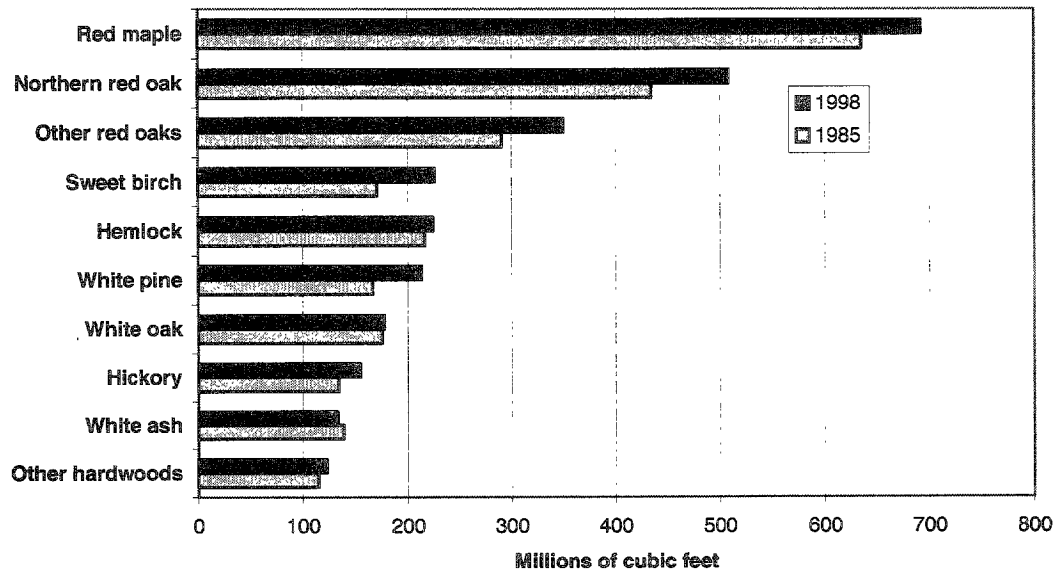


Table 35.--Net volume of growing stock in the sawlog portion of sawtimber trees on timberland by species and diameter class, Connecticut, 1998

(In millions of cubic feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Spruce/fir	.3	1.0	.0	2.7	.0	.0	.0	.0	4.0	100.0
Red pine	1.4	2.1	.0	.0	.0	.0	.0	.0	3.5	100.0
Pitch pine	.3	.0	.0	.0	.0	.0	.0	.0	.3	100.0
White pine	17.5	18.0	24.9	21.0	20.4	13.6	33.4	20.9	169.6	22.8
Eastern hemlock	28.5	28.0	36.8	31.3	15.3	7.0	9.5	6.6	163.0	18.9
Other softwoods	1.0	.9	2.0	.0	.0	.0	.0	.0	3.9	44.8
Total softwoods	49.0	50.0	63.7	55.0	35.7	20.6	42.9	27.5	344.3	14.3
Red maple	-	74.7	76.6	70.6	34.4	32.7	27.9	19.8	336.7	10.9
Sugar maple	-	13.1	13.8	11.5	2.8	7.2	11.3	9.3	69.0	21.7
Yellow birch	-	7.8	6.8	4.9	.0	1.1	.0	.0	20.5	23.1
Sweet birch	-	29.0	24.6	24.0	4.1	5.5	.0	.0	87.1	16.9
Paper birch	-	3.6	.0	.0	.0	.0	.0	.0	3.6	80.8
Hickory	-	25.6	21.4	15.0	6.3	7.1	.0	.0	75.3	16.5
Beech	-	5.6	4.7	5.3	4.9	2.3	8.6	.0	31.4	31.7
White ash	-	11.6	13.4	6.0	12.6	10.1	14.5	3.3	71.5	24.2
Aspen	-	3.6	2.4	.0	.0	.0	2.9	.0	8.9	43.4
Black cherry	-	8.1	6.7	4.5	4.7	1.7	6.6	.0	32.3	36.1
White oak	-	21.9	23.3	20.8	19.8	5.1	12.0	.0	102.9	14.7
Northern red oak	-	50.5	63.8	70.3	50.2	37.5	63.5	5.2	340.9	10.5
Other red oaks	-	43.1	49.2	35.8	30.8	19.3	29.4	9.1	216.7	12.4
Elm	-	1.4	.7	2.8	.0	1.9	.0	.0	6.9	43.0
Other hardwoods	-	16.1	8.9	8.7	11.0	7.9	11.8	10.3	74.8	25.8
Total hardwoods	-	315.8	316.3	280.2	181.5	139.2	188.7	57.0	1,478.6	5.0
All species	49.0	365.8	379.9	335.2	217.2	159.8	231.5	84.5	1,822.8	4.5
SE	16.4	5.0	5.9	7.6	9.1	11.5	12.9	29.5	4.5	

Table 36.--**Net volume of sawtimber trees on timberland by species and diameter class, Connecticut, 1985

(In millions of board feet)

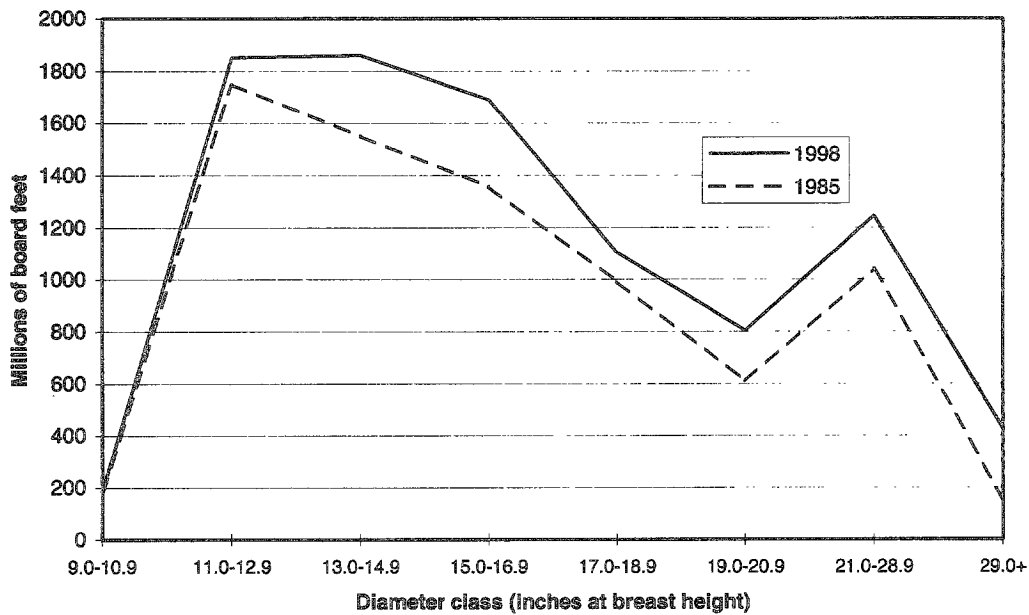
Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Spruce/fir	.0	.0	.0	3.3	.0	.0	.0	.0	3.3	100.0
Red pine	24.1	33.3	21.6	5.2	2.9	.0	.0	.0	87.1	94.5
Pitch pine	6.7	3.9	.0	.0	.0	.0	.0	.0	10.6	66.1
White pine	56.4	91.8	80.5	60.2	81.1	52.0	148.7	52.2	622.9	21.7
Eastern hemlock	82.6	129.9	108.9	76.6	107.3	76.8	123.2	38.0	743.4	20.9
Other softwoods	9.7	5.0	1.5	.0	.0	.0	.0	.0	16.2	45.4
Total softwoods	179.5	263.9	212.6	145.3	191.3	128.8	271.9	90.2	1,483.5	14.3
Red maple	-	379.8	295.4	264.3	196.6	102.2	162.8	10.1	1,411.1	12.1
Sugar maple	-	69.7	64.4	52.7	18.4	47.4	73.9	.0	326.5	21.2
Yellow birch	-	22.4	22.0	9.0	7.6	.0	11.7	.0	72.7	23.3
Sweet birch	-	118.3	86.7	67.8	30.3	5.8	4.8	.0	313.7	16.0
Paper birch	-	7.1	5.7	3.2	.0	.0	.0	.0	16.1	44.7
Hickory	-	103.7	110.7	31.4	49.6	25.0	.0	4.6	325.0	18.0
Beech	-	32.3	16.7	28.8	16.1	5.1	9.0	.0	108.0	29.3
White ash	-	80.0	73.4	78.3	31.0	19.6	23.9	3.6	309.7	19.3
Aspen	-	18.6	8.6	.0	.0	.0	4.1	2.5	33.7	40.7
Black cherry	-	19.7	13.8	14.2	.0	.0	.0	.0	47.8	28.2
White oak	-	118.1	95.4	107.7	75.6	36.0	58.4	3.8	495.1	12.4
Northern red oak	-	286.2	312.7	304.4	201.3	109.6	196.5	23.7	1,434.3	9.7
Other red oaks	-	174.1	188.7	160.6	106.0	67.8	149.5	4.0	850.6	10.8
Elm	-	6.9	1.6	2.3	.0	.0	.0	.0	10.8	56.4
Other hardwoods	-	48.6	41.2	86.4	67.6	62.3	72.9	12.4	391.4	20.1
Total hardwoods	-	1,485.5	1,336.8	1,211.3	800.1	480.8	767.5	64.7	6,146.5	4.7
All species	179.5	1,749.4	1,549.4	1,356.6	991.3	609.6	1,039.4	154.9	7,630.1	4.2
SE	19.1	4.8	5.4	6.4	8.3	10.5	12.1	27.7	4.2	

Table 37.--Net volume of sawtimber trees on timberland by species and diameter class, Connecticut, 1998

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Spruce/fir	1.3	3.8	.0	12.9	.0	.0	.0	.0	17.9	100.0
Red pine	7.1	10.9	.0	.0	.0	.0	.0	.0	17.9	100.0
Pitch pine	1.0	.0	.0	.0	.0	.0	.0	.0	1.0	100.0
White pine	69.6	78.1	117.3	101.6	103.4	70.7	176.2	111.6	828.5	23.1
Eastern hemlock	106.0	120.4	160.1	145.0	75.6	37.4	34.1	38.1	716.6	19.8
Other softwoods	3.0	3.3	9.2	.0	.0	.0	.0	.0	15.5	46.5
Total softwoods	187.9	216.5	286.6	259.4	179.0	108.1	210.3	149.7	1,597.5	14.8
Red maple	-	373.5	364.4	346.6	168.3	154.0	144.9	108.9	1,660.5	11.0
Sugar maple	-	65.4	67.1	57.4	9.2	36.3	53.8	44.1	333.6	21.1
Yellow birch	-	40.5	33.9	23.3	.0	5.6	.0	.0	103.3	23.7
Sweet birch	-	153.7	129.6	121.2	19.2	25.0	.0	.0	448.7	17.0
Paper birch	-	19.3	.0	.0	.0	.0	.0	.0	19.3	80.1
Hickory	-	143.1	115.1	82.8	36.0	42.3	.0	.0	419.3	16.8
Beech	-	31.2	26.3	34.9	25.5	9.3	41.3	.0	168.4	30.7
White ash	-	63.5	66.4	27.2	61.0	45.9	73.4	8.8	346.2	22.7
Aspen	-	21.5	13.2	.0	.0	.0	16.5	.0	51.3	42.8
Black cherry	-	41.4	30.4	24.0	24.1	10.3	41.0	.0	171.2	39.0
White oak	-	116.0	121.6	108.4	103.2	22.9	63.6	.0	535.7	15.1
Northern red oak	-	261.0	312.7	358.2	263.4	190.3	360.5	26.1	1,772.2	10.6
Other red oaks	-	214.5	246.9	185.9	157.2	99.1	162.6	58.0	1,124.2	12.8
Elm	-	7.5	3.4	16.8	.0	11.0	.0	.0	38.7	43.9
Other hardwoods	-	83.3	42.8	44.4	58.4	43.4	77.5	29.3	379.1	25.6
Total hardwoods	-	1,635.4	1,573.7	1,431.0	925.5	695.5	1,035.2	275.3	7,571.7	5.0
All species	187.9	1,851.9	1,860.3	1,690.4	1,104.5	803.6	1,245.5	425.0	9,169.2	4.5
SE	16.7	5.1	6.1	7.7	9.4	11.8	13.0	29.7	4.5	

Net volume of sawtimber trees on timberland, Connecticut, 1985 and 1998



Net volume of sawtimber trees on timberland, top 10 species, Connecticut, 1985 and 1998

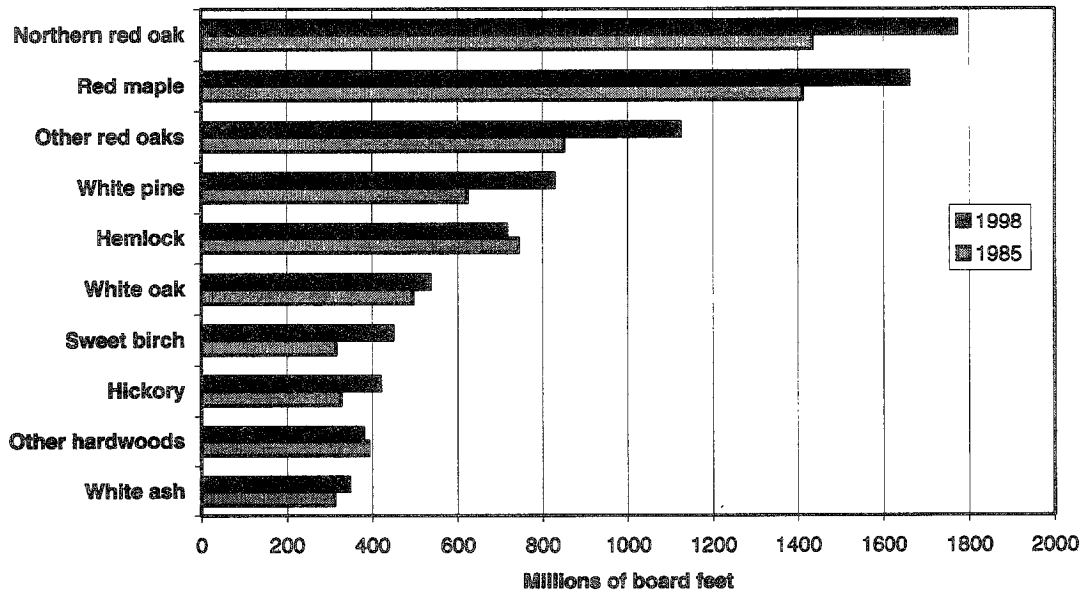


Table 38.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Connecticut, 1998

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades
Spruce/fir	12.9	-	-	-	.0	12.9	17.9	-	-	-	.0	17.9
Red pine	.0	.0	.0	-	.0	.0	.0	.0	17.9	-	.0	17.9
Pitch pine	.0	.0	.0	-	.0	.0	.0	.0	1.0	-	.0	1.0
White pine	35.0	42.4	149.2	139.7	197.1	563.5	39.2	89.1	264.7	214.7	220.7	828.5
Eastern hemlock	181.6	-	-	-	148.6	330.2	415.4	-	-	-	301.2	716.6
Other softwoods	.0	.0	.0	-	.0	.0	7.0	.0	4.3	-	4.2	15.5
Total softwoods	229.5	42.4	149.2	139.7	345.7	906.5	479.6	89.1	287.9	214.7	526.1	1,597.5
Red maple	141.9	190.2	229.0	34.1	327.5	922.7	141.9	391.8	703.7	51.9	371.3	1,660.5
Sugar maple	26.7	35.4	61.4	10.5	67.0	201.0	26.7	65.1	160.1	13.0	68.7	333.6
Yellow birch	7.9	.0	10.2	.0	10.9	28.9	7.9	15.8	65.3	2.2	12.1	103.3
Sweet birch	25.0	88.8	24.4	.0	27.3	165.4	25.0	156.4	223.0	.0	44.3	448.7
Paper birch	.0	.0	.0	.0	.0	.0	.0	.0	19.3	.0	.0	19.3
Hickory	56.5	89.2	3.2	12.3	.0	161.1	56.5	184.5	159.6	18.7	.0	419.3
Beech	7.4	59.1	18.1	.0	26.3	110.9	7.4	71.6	41.8	21.3	26.3	168.4
White ash	118.7	42.0	10.5	.0	45.1	216.3	118.7	89.8	92.6	.0	45.1	346.2
Aspen	16.5	.0	.0	.0	.0	16.5	16.5	5.0	27.2	2.6	.0	51.3
Black cherry	33.8	.0	16.0	.0	49.5	99.4	33.8	11.0	63.8	10.9	51.6	171.2
White oak	80.8	102.0	95.6	.0	19.6	298.1	80.8	184.0	231.4	15.4	24.1	535.7
Northern red oak	785.6	268.3	87.5	2.8	54.4	1,198.5	785.6	496.1	390.8	19.7	80.1	1,772.2
Other red oaks	330.3	170.9	104.4	.0	57.2	662.8	330.3	326.9	392.7	10.0	64.2	1,124.2
Elm	.0	6.7	21.2	.0	.0	27.8	.0	6.7	32.0	.0	.0	38.7
Other hardwoods	115.1	52.2	29.4	.0	56.3	253.0	115.1	80.1	118.2	4.9	60.8	379.1
Total hardwoods	1,746.3	1,104.7	710.9	59.6	741.1	4,362.5	1,746.3	2,084.7	2,721.5	170.5	848.6	7,571.7
All species	1,975.8	1,147.2	860.1	199.3	1,086.7	5,269.0	2,225.9	2,173.8	3,009.5	385.2	1,374.8	9,169.2

Net volume of 15+ inches d.b.h. sawtimber trees on timberland, top 10 species by tree grade, Connecticut, 1998

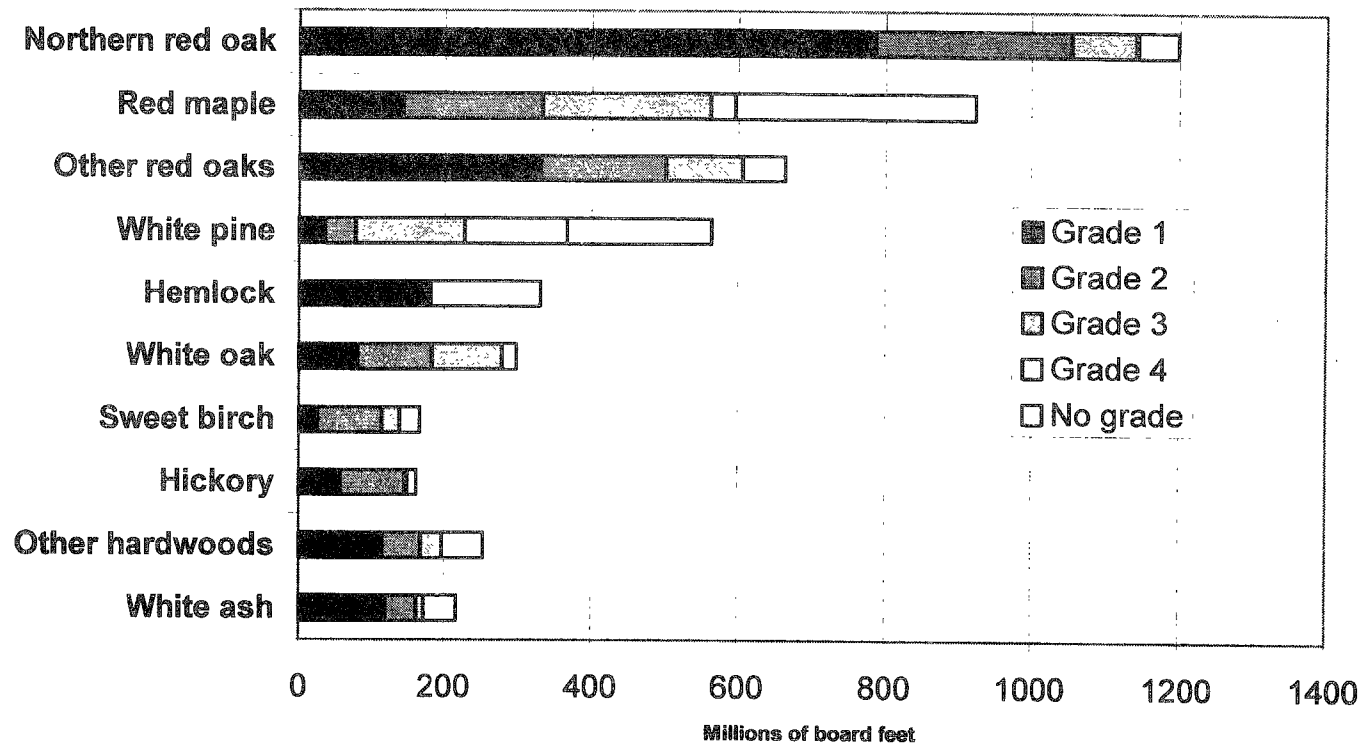


Table 39.--Average annual net change of growing-stock trees on timberland by species and component of change, Connecticut, 1984-97

(In thousands of cubic feet)

Species	Component of change										Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull decrement	Cull increment	Net growth	Harvest removals	Land use removals	Total removals	
Spruce/fir	111	71	183	0	0	-209	-26	0	0	0	-26
Red pine	0	6	6	0	0	0	6	-1,493	0	-1,493	-1,487
Pitch pine	0	28	28	-105	0	0	-77	0	0	0	-77
White pine	1,717	4,511	6,228	-527	81	-814	4,968	-924	-454	-1,379	3,589
Eastern hemlock	1,846	3,836	5,682	-932	0	-1,169	3,581	-285	0	-285	3,295
Other softwoods	159	230	389	-204	0	-187	-1	-34	-38	-72	-73
Total softwoods	3,834	8,683	12,517	-1,768	81	-2,379	8,451	-2,737	-492	-3,229	5,222
Red maple	6,017	10,319	16,336	-3,663	1,456	-3,839	10,291	-920	-4,001	-4,921	5,369
Sugar maple	694	1,691	2,385	-179	214	-557	1,862	-279	0	-279	1,584
Yellow birch	902	294	1,197	-79	63	-280	900	-220	-80	-301	599
Sweet birch	2,431	2,989	5,420	-414	125	-159	4,972	-979	0	-979	3,993
Paper birch	119	146	265	-487	0	0	-222	0	-70	-70	-292
Hickory	1,237	2,614	3,851	-1,143	0	-260	2,448	-1,286	-603	-1,889	558
Beech	893	1,237	2,131	0	145	-196	2,079	-318	0	-318	1,761
White ash	1,630	3,032	4,662	-2,116	77	-342	2,281	-226	-1,254	-1,480	801
Aspen	707	162	869	-463	0	-57	349	0	-227	-227	123
Black cherry	36	507	543	-121	89	-34	477	-81	-109	-190	287
White oak	1,027	2,496	3,524	-1,545	274	-267	1,985	-930	-722	-1,651	334
Northern red oak	3,418	8,633	12,051	-1,937	0	-677	9,437	-3,957	-422	-4,379	5,058
Other red oaks	2,685	5,588	8,274	-1,586	37	-370	6,355	-3,690	-1,319	-5,009	1,345
Elm	201	483	684	-326	0	0	357	0	0	0	357
Other hardwoods	1,219	2,950	4,169	-387	0	-129	3,653	-141	-465	-605	3,048
Total hardwoods	23,219	43,143	66,361	-14,449	2,479	-7,167	47,225	-13,026	-9,271	-22,297	24,928
All species	27,052	51,826	78,878	-16,217	2,560	-9,545	55,676	-15,763	-9,764	-25,526	30,150

Table 40.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Connecticut, 1984-97

(In thousands of cubic feet)

Species	Growth	Removals
Spruce/fir	-26	0
Red pine	6	1,493
Pitch pine	-77	0
White pine	4,968	1,379
Eastern hemlock	3,581	285
Other softwoods	-1	72
Total softwoods	8,451	3,229
Red maple	10,291	4,921
Sugar maple	1,862	279
Yellow birch	900	301
Sweet birch	4,972	979
Paper birch	-222	70
Hickory	2,448	1,889
Beech	2,079	318
White ash	2,281	1,480
Aspen	349	227
Black cherry	477	190
White oak	1,985	1,651
Northern red oak	9,437	4,379
Other red oaks	6,355	5,009
Elm	357	0
Other hardwoods	3,653	605
Total hardwoods	47,225	22,297
All species	55,676	25,526

Average annual net growth and average annual removals of growing-stock volume on timberland by species, Connecticut, 1984-97

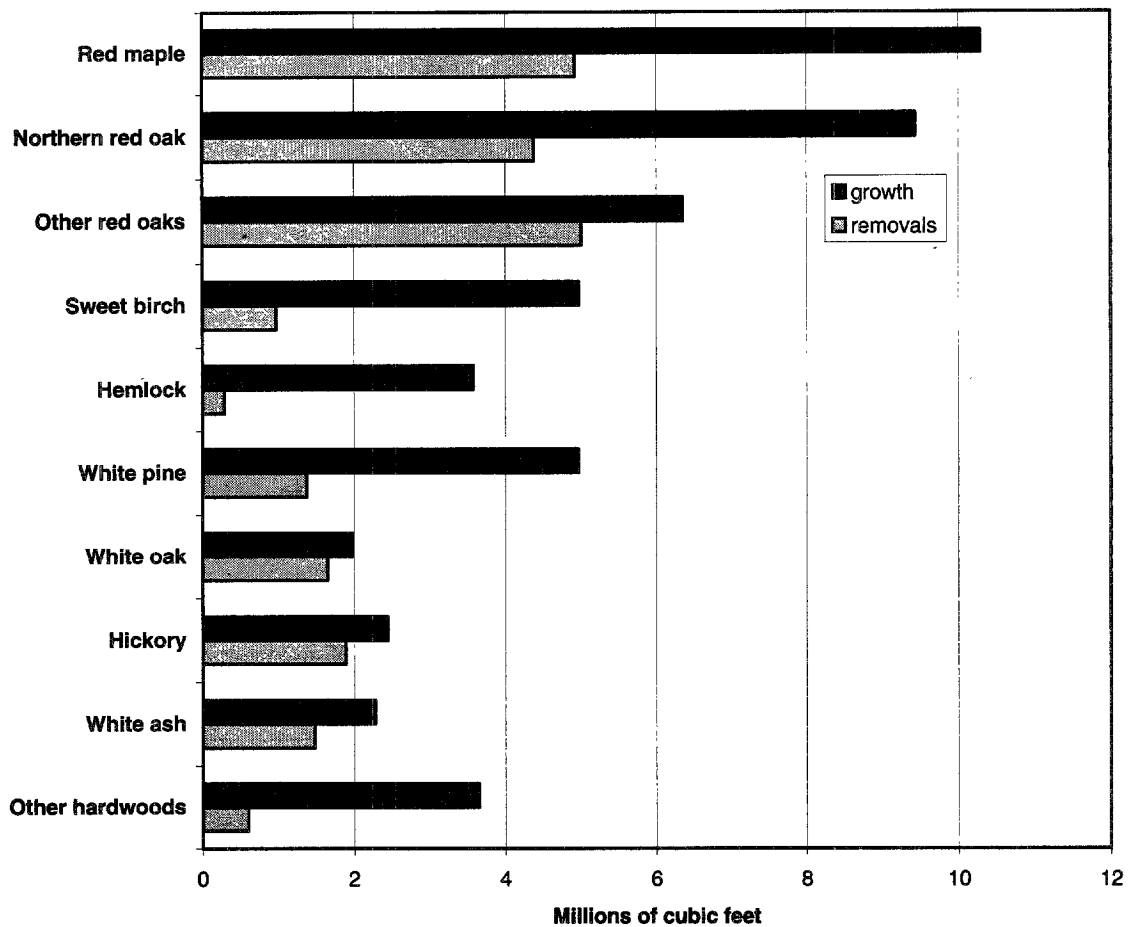


Table 41.--Average annual net growth and average
annual removals of sawtimber volume on
timberland by species, Connecticut, 1984-97

(In thousands of board feet)

Species	Growth	Removals
Spruce/fir	-454	0
Red pine	33	5,383
Pitch pine	84	0
White pine	19,623	5,541
Eastern hemlock	15,217	1,091
Other softwoods	749	88
Total softwoods	35,253	12,102
Red maple	38,668	14,901
Sugar maple	7,555	808
Yellow birch	2,439	566
Sweet birch	12,502	1,979
Paper birch	259	290
Hickory	8,187	5,367
Beech	2,965	1,026
White ash	6,580	3,508
Aspen	680	306
Black cherry	3,711	317
White oak	9,190	5,442
Northern red oak	41,267	18,747
Other red oaks	28,495	20,213
Elm	167	0
Other hardwoods	17,104	2,055
Total hardwoods	179,770	75,525
All species	215,023	87,627

Average annual net growth and average annual removals of sawtimber volume on timberland by species, Connecticut, 1984-97

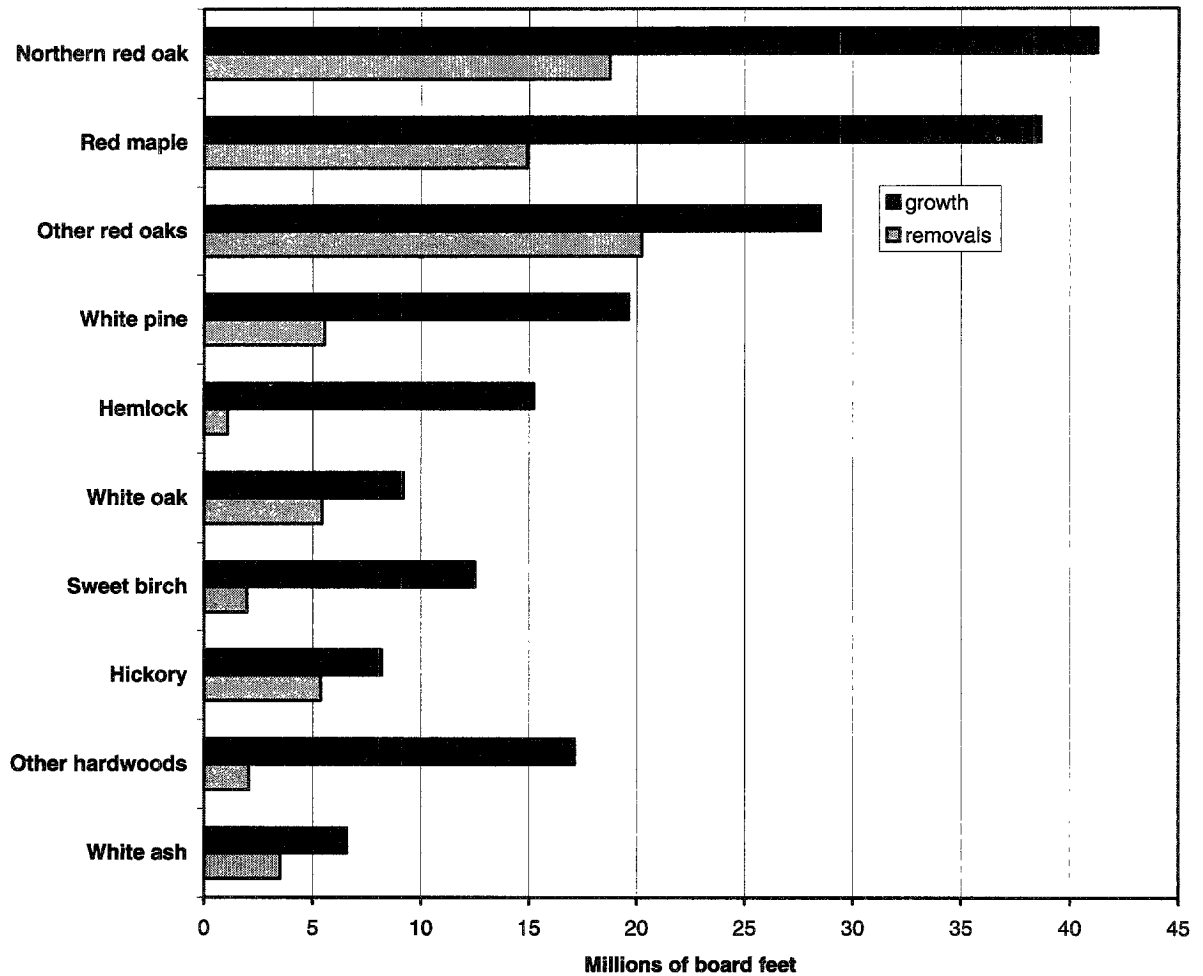


Table 42.--Average annual mortality of growing-stock and
sawtimber volume on timberland by species,
Connecticut, 1984-97

(In thousands of feet)

Species	Growing-stock (cubic)	Sawtimber (board)
Pitch pine	105	0
White pine	527	2,054
Eastern hemlock	932	3,213
Other softwoods	204	109
Total softwoods	1,768	5,376
Red maple	3,663	5,841
Sugar maple	179	171
Yellow birch	79	218
Sweet birch	414	763
Paper birch	487	323
Hickory	1,143	2,321
White ash	2,116	4,517
Aspen	463	825
Black cherry	121	0
White oak	1,545	4,117
Northern red oak	1,937	6,133
Other red oaks	1,586	4,027
Elm	326	1,052
Other hardwoods	387	1,403
Total hardwoods	14,449	31,711
All species	16,217	37,087

Table 43.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Connecticut, 1984-97

(In thousands of cubic feet)

Ownership class	Net Growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Other public	303	8,194	8,497	1,546	5,854	7,400
Other private	8,148	39,032	47,179	1,683	16,444	18,126
All classes	8,451	47,225	55,676	3,229	22,297	25,526

Table 44.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Connecticut, 1984-97

(In thousands of board feet)

Ownership class	Net Growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Other public	429	28,955	29,384	5,566	20,641	26,207
Other private	34,824	150,815	185,639	6,536	54,884	61,420
All classes	35,253	179,770	215,023	12,102	75,525	87,627

Table 45.--Change in area of timberland between inventories by
forest-type group, Connecticut, 1985 and 1998

(In thousands of acres)

Forest-type group	1985	1998	Change	Percent change
White/red pine	127.6	113.7	-13.9	-10.9
Oak/hickory	913.8	875.8	-38.0	-4.2
Elm/ash/red maple	194.0	159.6	-34.4	-17.7
Northern hardwoods	499.3	484.7	-14.6	-2.9
Other types	49.8	62.3	12.5	25.1
All types	1,784.5	1,696.1	-88.4	-5.0

Table 46.--Change in area of timberland between inventories by
stand-size class, Connecticut, 1985 and 1998

(In thousands of acres)

Stand-size class	1985	1998	Change	Percent change
Sawtimber	933.7	1,162.2	228.5	24.5
Poletimber	650.1	418.9	-231.2	-35.6
Sapling and seedling	200.7	108.2	-92.5	-46.1
Nonstocked	.0	6.9	6.9	100.0
All classes	1,784.5	1,696.1	-88.4	-5.0

Table 47.--Change in volume on timberland between inventories,
Connecticut, 1985 and 1998

Species group	1985	1998	Change	Percent change
Growing stock (Millions of cubic feet)				
Softwoods	431.4	470.4	39.0	9.0
Hardwoods	2,369.9	2,709.5	339.6	14.3
All groups	2,801.3	3,179.9	378.6	13.5
Sawtimber (Millions of board feet)				
Softwoods	1,483.5	1,597.5	114.0	7.7
Hardwoods	6,146.5	7,571.7	1,425.2	23.2
All groups	7,630.1	9,169.2	1,539.1	20.2

COUNTY TABLES

COUNTY TABLES

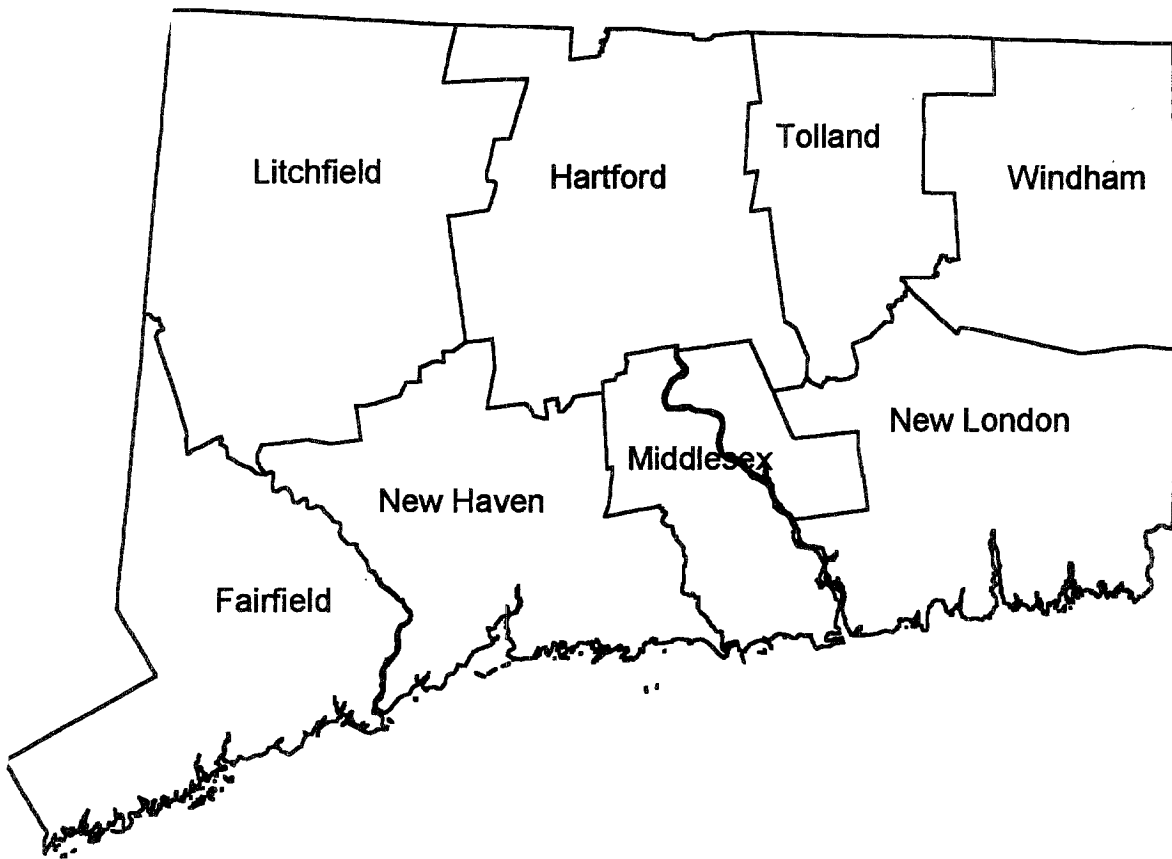


Table 48.--Land area by county and land class, Connecticut, 1998

(In thousands of acres)

County	Land class								All classes
	Timberland	Reserved productive	Urban forest	Other forest	Christmas trees	Reserved other forest	Total forest land	Nonforest land	
Fairfield	92.2	7.8	42.6	5.7	.0	.0	148.2	252.3	400.5
Hartford	230.4	.0	13.6	5.7	.0	.0	249.7	221.1	470.7
Litchfield	426.5	.0	6.9	7.2	.0	.0	440.6	148.2	588.8
Middlesex	162.7	.0	2.8	.0	.0	.0	165.5	70.8	236.3
New Haven	143.8	6.5	23.2	8.5	.0	.0	182.1	205.6	387.7
New London	262.4	.0	6.8	1.1	.0	.0	270.3	156.0	426.3
Tolland	178.9	.0	3.5	.0	.0	.0	182.4	80.0	262.5
Windham	199.0	.0	18.1	3.3	.0	.0	220.4	107.8	328.2
All counties	1,696.1	14.3	117.5	31.4	.0	.0	1,859.3	1,241.7	3,101.0

Table 49.--Area of all forest land by county and forest-type group, Connecticut, 1998

(In thousands of acres)

County	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Fairfield	12.4	.0	.0	.0	68.8	.0	21.2	45.7	.0	148.2	7.7
Hartford	11.7	.0	.0	8.9	111.3	.0	38.5	68.2	11.1	249.7	5.3
Litchfield	53.9	7.0	.0	.2	177.6	.0	32.5	169.4	.0	440.6	2.6
Middlesex	1.7	.0	.0	.0	99.4	.0	19.6	44.8	.0	165.5	2.7
New Haven	9.8	.0	.0	.0	91.8	.0	16.3	64.3	.0	182.1	6.6
New London	3.5	.0	5.9	3.4	172.5	.0	36.1	48.9	.0	270.3	2.9
Tolland	15.9	.0	.0	.0	86.4	.0	11.8	62.8	5.6	182.4	5.3
Windham	12.0	.0	.0	11.7	134.7	.0	18.9	31.3	11.9	220.4	4.7
All counties	120.9	7.0	5.9	24.2	942.3	.0	194.8	535.4	28.7	1,859.3	1.6
SE	20.1	100.0	71.5	45.9	5.6	.0	16.6	9.0	43.5	1.6	

Percent of forest land by county, Connecticut, 1998

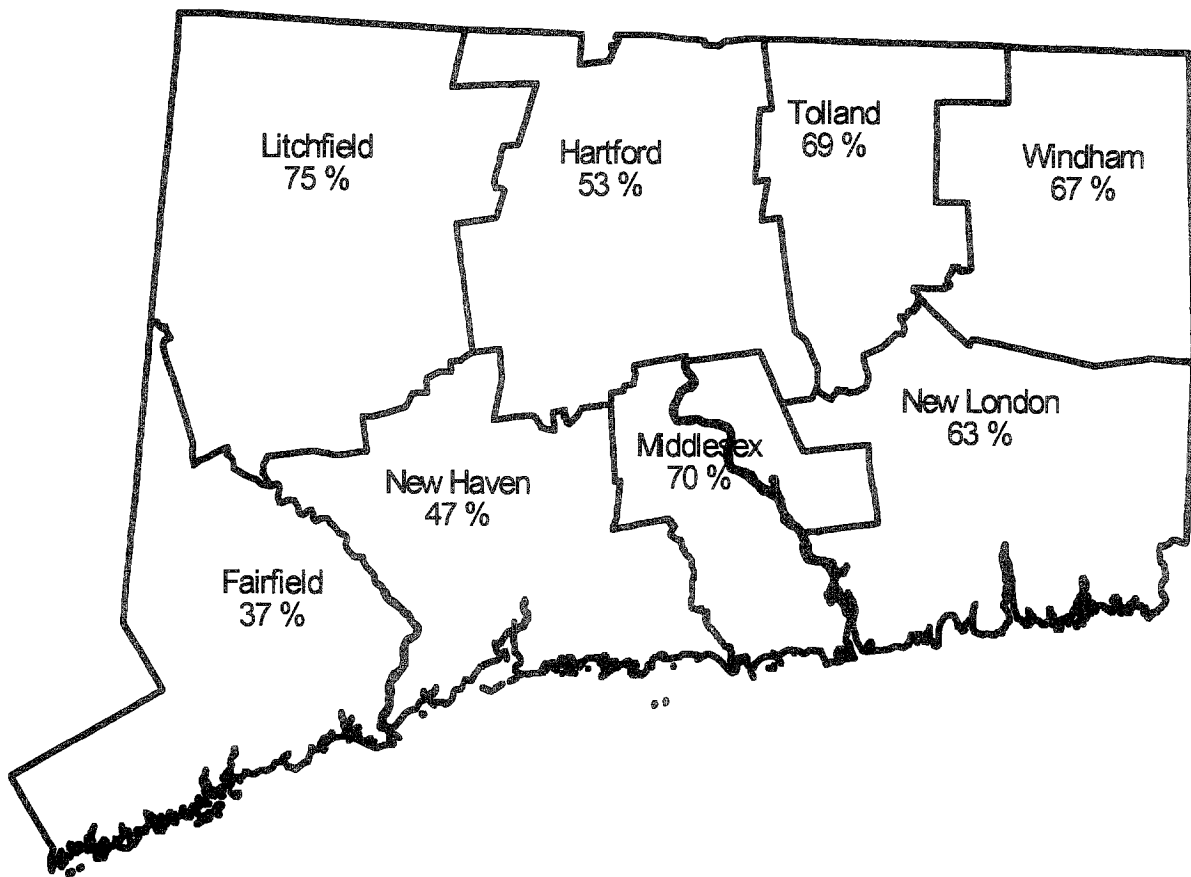


Table 50.--Area of all forest land by county and stand-size class, Connecticut, 1998

(In thousands of acres)

County	Stand-size class				All classes	SE
	Saw- timber	Pole- timber	Sapling and seedling	Non- stocked		
Fairfield	101.2	41.4	5.7	.0	148.2	7.7
Hartford	139.1	50.6	53.1	6.9	249.7	5.3
Litchfield	321.7	98.6	20.3	.0	440.6	2.6
Middlesex	132.4	31.4	1.7	.0	165.5	2.7
New Haven	127.6	52.8	1.7	.0	182.1	6.6
New London	164.3	93.4	12.7	.0	270.3	2.9
Tolland	118.8	58.0	5.6	.0	182.4	5.3
Windham	136.8	53.9	29.7	.0	220.4	4.7
All counties	1,241.9	480.0	130.5	6.9	1,859.3	1.6
SE	4.2	9.6	19.6	100.0	1.6	

Table 51.--Area of timberland by county and ownership class, Connecticut, 1998

(In thousands of acres)

County	Ownership class								All ownerships	SE
	National Forest	Misc. federal	State	County and municipal	Forest industry	Farmer	Corporate	Individual		
Fairfield	.0	.0	.0	.0	.0	.0	37.9	54.3	92.2	16.9
Hartford	.0	.0	38.6	36.3	.0	7.2	97.2	51.2	230.4	7.1
Litchfield	.0	.0	12.9	26.5	.0	.0	153.1	234.0	426.5	3.4
Middlesex	.0	.0	54.2	.0	.0	6.7	8.9	93.0	162.7	3.2
New Haven	.0	6.8	.0	26.8	.0	.0	42.8	67.5	143.8	10.4
New London	.0	.0	12.1	10.7	.0	5.2	63.6	170.9	262.4	3.7
Tolland	.0	.0	27.6	7.1	.0	.0	59.5	84.8	178.9	5.7
Windham	.0	.0	20.3	.0	.0	.0	28.1	150.7	199.0	6.7
All counties	.0	6.8	165.6	107.3	.0	19.1	491.1	906.2	1,696.1	2.2
SE	.0	100.0	18.4	23.9	.0	55.3	9.7	5.9	2.2	

Table 52.--Area of timberland by county and forest-type group, Connecticut, 1998

(In thousands of acres)

County	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Fairfield	6.9	.0	.0	.0	49.0	.0	11.1	25.2	.0	92.2	16.9
Hartford	11.7	.0	.0	8.9	105.6	.0	26.7	66.4	11.1	230.4	7.1
Litchfield	53.9	7.0	.0	.2	177.6	.0	25.3	162.5	.0	426.5	3.4
Middlesex	1.7	.0	.0	.0	99.4	.0	19.6	42.0	.0	162.7	3.2
New Haven	9.8	.0	.0	.0	67.1	.0	14.5	52.4	.0	143.8	10.4
New London	3.5	.0	5.9	3.4	172.5	.0	35.0	42.1	.0	262.4	3.7
Tolland	14.1	.0	.0	.0	84.5	.0	11.8	62.8	5.6	178.9	5.7
Windham	12.0	.0	.0	11.7	120.2	.0	15.5	31.3	8.4	199.0	6.7
All counties	113.7	7.0	5.9	24.2	875.8	.0	159.6	484.7	25.2	1,696.1	2.2
SE	20.9	100.0	71.5	45.9	5.9	.0	18.4	9.6	49.1	2.2	

Table 53.--Area of timberland by county and stand-size class, Connecticut, 1998

(In thousands of acres)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Fairfield	68.4	23.8	.0	.0	92.2	16.9
Hartford	130.7	41.4	51.4	6.9	230.4	7.1
Litchfield	319.9	93.5	13.1	.0	426.5	3.4
Middlesex	132.4	28.6	1.7	.0	162.7	3.2
New Haven	108.9	35.0	.0	.0	143.8	10.4
New London	164.3	86.6	11.6	.0	262.4	3.7
Tolland	115.3	58.0	5.6	.0	178.9	5.7
Windham	122.3	52.1	24.6	.0	199.0	6.7
All counties	1,162.2	418.9	108.2	6.9	1,696.1	2.2
SE	4.5	10.5	22.0	100.0	2.2	

Table 54.--Area of timberland by county and cubic-foot stand-volume class of growing-stock trees, Connecticut, 1998

(In thousands of acres)

County	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
Fairfield	4.3	12.1	12.8	37.7	5.0	20.3	92.2	16.9
Hartford	56.1	11.9	9.2	34.0	36.6	82.6	230.4	7.1
Litchfield	23.5	33.1	44.9	68.1	82.1	174.9	426.5	3.4
Middlesex	1.7	.0	50.9	64.1	33.5	12.4	162.7	3.2
New Haven	3.3	24.8	31.4	30.3	28.5	25.5	143.8	10.4
New London	43.7	28.0	80.9	49.9	34.6	25.3	262.4	3.7
Tolland	9.2	33.1	17.4	50.7	20.4	48.1	178.9	5.7
Windham	3.6	40.5	34.0	37.4	51.3	32.2	199.0	6.7
All counties	145.4	183.7	281.6	372.2	292.0	421.3	1,696.1	2.2
SE	17.9	17.3	13.3	11.4	13.4	9.6	2.2	

Table 55.--Area of timberland by county and stocking class of growing-stock trees, Connecticut, 1998

(In thousands of acres)

County	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
Fairfield	.0	9.5	39.0	36.8	6.9	92.2	16.9
Hartford	14.5	10.6	61.3	134.0	10.1	230.4	7.1
Litchfield	.0	37.2	111.8	255.6	21.9	426.5	3.4
Middlesex	.0	3.5	71.6	87.6	.0	162.7	3.2
New Haven	1.7	16.4	46.0	79.7	.0	143.8	10.4
New London	.0	38.3	112.9	107.9	3.4	262.4	3.7
Tolland	.0	8.8	62.4	101.2	6.5	178.9	5.7
Windham	.0	11.6	68.0	117.4	2.0	199.0	6.7
All counties	16.2	135.9	573.0	920.1	50.8	1,696.1	2.2
SE	64.2	18.9	8.5	5.8	34.4	2.2	

Table 56.--Area of timberland by county and site-productivity class, Connecticut, 1998

(In thousands of acres)

County	Productivity class(cuft/a/yr)				All classes	SE
	Very good (120+)	Good (85-119)	Fair (50-84)	Poor (20-49)		
Fairfield	.0	12.0	47.1	33.1	92.2	16.9
Hartford	33.8	25.6	61.3	109.8	230.4	7.1
Litchfield	22.8	6.8	175.9	221.0	426.5	3.4
Middlesex	.0	10.5	26.9	125.3	162.7	3.2
New Haven	.0	13.3	37.9	92.6	143.8	10.4
New London	.0	13.2	69.7	179.5	262.4	3.7
Tolland	.0	21.0	52.1	105.8	178.9	5.7
Windham	4.0	7.0	78.4	109.6	199.0	6.7
All counties	60.5	109.5	549.1	976.9	1,696.1	2.2
SE	29.9	23.7	9.1	5.7	2.2	

Table 57.--Biomass of all trees and shrubs on all forest land by county and component, Connecticut, 1998

(In thousands of dry tons)

County	Component								All trees, shrubs	SE
	Preferred/ acceptable	Cull	Total timber	Saplings	Seedlings	Total live trees	Shrubs	Salvable dead trees		
Fairfield	11,023	1,615	12,638	632	51	13,322	49	30	13,402	11.3
Hartford	17,608	661	18,269	1,076	130	19,475	121	104	19,700	10.5
Litchfield	37,068	2,855	39,923	2,054	205	42,182	171	394	42,746	5.1
Middlesex	12,218	587	12,805	609	176	13,589	128	155	13,872	5.9
New Haven	13,641	1,981	15,622	695	79	16,396	95	73	16,564	8.2
New London	16,672	2,738	19,410	1,019	132	20,561	119	28	20,708	7.3
Tolland	13,558	1,319	14,877	777	137	15,792	85	89	15,966	8.9
Windham	16,023	1,260	17,283	828	142	18,253	125	26	18,405	8.6
All counties	137,811	13,016	150,827	7,691	1,052	159,570	893	900	161,363	2.8
SE	3.2	8.7	2.9	5.9	7.3	2.8	9.4	27.3	2.8	

Table 58.--Biomass of growing stock on timberland by county and component, Connecticut, 1998

(In thousands of dry tons)

County	Growing stock			Total growing stock	SE
	Poletimber	Sawlog	Upper stem		
Fairfield	1,453	2,670	578	4,701	21.5
Hartford	3,325	6,622	1,338	11,286	13.1
Litchfield	6,674	15,256	3,152	25,082	5.8
Middlesex	2,666	4,682	1,047	8,394	7.4
New Haven	2,194	4,154	928	7,275	12.3
New London	3,468	6,509	1,466	11,443	8.9
Tolland	2,715	5,203	1,134	9,052	10.4
Windham	3,121	5,477	1,127	9,725	10.9
All counties	25,616	50,573	10,770	86,959	3.6
SE	3.9	4.6	4.3	3.6	

Table 59.--Biomass of all timber on timberland by county, class of timber, and component, Connecticut, 1998

(In thousands of dry tons)

County	Growing stock trees					Total timber	SE
	Growing stock	Branches	Foliage	Stump and roots	Cull trees		
Fairfield	4,701	564	179	1,386	723	7,553	20.6
Hartford	11,286	1,372	448	3,335	491	16,933	12.9
Litchfield	25,082	3,106	1,069	7,464	2,759	39,481	5.5
Middlesex	8,394	975	276	2,454	565	12,665	6.6
New Haven	7,275	869	267	2,153	1,653	12,218	11.0
New London	11,443	1,368	416	3,395	2,661	19,282	7.8
Tolland	9,052	1,109	348	2,702	1,316	14,527	9.4
Windham	9,725	1,230	432	2,925	1,130	15,442	10.1
All counties	86,959	10,595	3,435	25,814	11,299	138,102	3.3
SE	3.6	3.4	3.9	3.4	9.5	3.3	

Table 60.--Biomass of all trees and shrubs on timberland by county and class of material, Connecticut, 1998

(In thousands of dry tons)

County	Non-timber					Total trees and shrubs	SE
	Timber	Salvable dead trees	Saplings	Seedlings	Shrubs		
Fairfield	7,553	30	351	25	34	7,993	20.4
Hartford	16,933	90	952	117	110	18,201	11.9
Litchfield	39,481	389	1,994	194	161	42,219	5.4
Middlesex	12,665	155	609	176	126	13,730	6.2
New Haven	12,218	68	606	67	65	13,023	10.9
New London	19,282	28	1,013	132	114	20,568	7.5
Tolland	14,527	89	777	137	85	15,616	9.1
Windham	15,442	24	740	127	110	16,443	9.8
All counties	138,102	872	7,043	973	805	147,795	3.2
SE	3.3	28.1	6.3	7.7	10.0	3.2	

Table 61.--Net volume of growing-stock trees on timberland by county and forest-type group, Connecticut, 1998

(In millions of cubic feet)

County	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Fairfield	17.9	.0	.0	.0	81.8	.0	11.1	47.7	.0	158.5	21.8
Hartford	31.8	.0	.0	31.4	238.6	.0	39.9	115.3	4.1	461.0	12.3
Litchfield	153.5	4.8	.0	.0	345.6	.0	61.8	404.3	.0	970.1	5.5
Middlesex	4.2	.0	.0	.0	178.6	.0	29.8	71.1	.0	283.7	6.8
New Haven	31.6	.0	.0	.0	95.0	.0	30.3	98.7	.0	255.6	13.2
New London	3.9	.0	1.1	4.7	252.2	.0	40.5	56.4	.0	358.9	8.6
Tolland	38.5	.0	.0	.0	184.2	.0	27.0	85.6	1.9	337.1	10.4
Windham	40.6	.0	.0	29.9	217.9	.0	25.4	35.9	5.3	355.0	10.3
All counties	322.0	4.8	1.1	66.1	1,594.0	.0	265.7	915.0	11.2	3,179.9	3.5
SE	21.6	100.0	88.7	58.5	7.3	.0	21.6	11.4	50.4	3.5	

Table 62.--Net volume of growing-stock trees on timberland by county and stand-size class, Connecticut, 1998

(In millions of cubic feet)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Fairfield	133.0	25.6	.0	.0	158.5	21.8
Hartford	386.0	64.2	10.4	.4	461.0	12.3
Litchfield	843.5	119.9	6.8	.0	970.1	5.5
Middlesex	243.5	40.2	.0	.0	283.7	6.8
New Haven	219.2	36.4	.0	.0	255.6	13.2
New London	270.7	86.5	1.7	.0	358.9	8.6
Tolland	263.6	71.7	1.9	.0	337.1	10.4
Windham	265.6	77.2	12.1	.0	355.0	10.3
All counties	2,624.9	521.7	32.9	.4	3,179.9	3.5
SE	5.0	12.1	33.4	100.0	3.5	

Table 63.--Net volume of growing-stock and sawtimber trees on timberland by county and species group,
Connecticut, 1998

County	Growing stock (In millions of cubic feet)					Sawtimber (In millions of board feet)				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total
Fairfield	.0	15.6	35.9	107.1	158.5	.0	52.5	69.1	328.1	449.7
Hartford	36.8	35.3	167.1	221.8	461.0	144.9	99.8	413.2	646.1	1,304.0
Litchfield	52.8	143.1	297.8	476.4	970.1	198.2	454.3	810.1	1,434.0	2,896.6
Middlesex	1.6	5.4	81.6	195.2	283.7	4.0	13.5	190.3	610.1	817.9
New Haven	16.3	8.8	104.0	126.5	255.6	53.3	21.6	293.8	376.8	745.5
New London	12.6	15.3	107.5	223.5	358.9	43.6	37.3	286.9	651.1	1,018.9
Tolland	43.7	.1	127.2	166.1	337.1	184.3	.0	303.6	465.2	953.2
Windham	59.1	24.0	85.4	186.6	355.0	223.3	66.9	167.5	525.8	983.5
All counties	222.9	247.5	1,006.4	1,703.1	3,179.9	851.7	745.8	2,534.5	5,037.2	9,169.2
SE	20.5	16.2	7.2	5.2	3.5	22.5	19.2	9.6	6.3	4.5

Table 64.--Net volume of sawtimber trees on timberland by county and forest-type group, Connecticut, 1998

(In millions of board feet)

County	Forest-type group									Total	SE
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Fairfield	54.6	.0	.0	.0	239.9	.0	24.6	130.6	.0	449.7	24.6
Hartford	79.6	.0	.0	123.8	662.0	.0	64.2	374.3	.0	1,304.0	15.9
Litchfield	511.9	.0	.0	.0	1,046.0	.0	189.5	1,149.2	.0	2,896.6	7.1
Middlesex	11.2	.0	.0	.0	547.0	.0	54.9	204.8	.0	817.9	10.6
New Haven	97.1	.0	.0	.0	276.2	.0	63.1	309.0	.0	745.5	16.0
New London	10.4	.0	1.5	13.9	740.6	.0	104.5	148.1	.0	1,018.9	12.2
Tolland	122.9	.0	.0	.0	538.3	.0	60.5	224.8	6.7	953.2	14.8
Windham	143.5	.0	.0	89.0	576.8	.0	53.8	117.8	2.6	983.5	14.3
All counties	1,031.2	.0	1.5	226.7	4,626.9	.0	615.1	2,658.7	9.3	9,169.2	4.5
SE	22.4	.0	100.0	64.1	8.3	.0	25.8	12.5	77.5	4.5	

Table 65.--Net volume of sawtimber trees on timberland by county and stand-size class, Connecticut, 1998

(In millions of board feet)

County	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Fairfield	398.5	51.2	.0	.0	449.7	24.6
Hartford	1,227.6	62.3	14.0	.0	1,304.0	15.9
Litchfield	2,714.6	161.7	20.3	.0	2,896.6	7.1
Middlesex	760.8	57.1	.0	.0	817.9	10.6
New Haven	710.9	34.5	.0	.0	745.5	16.0
New London	852.2	166.7	.0	.0	1,018.9	12.2
Tolland	851.5	94.9	6.7	.0	953.2	14.8
Windham	861.3	91.4	30.8	.0	983.5	14.3
All counties	8,377.5	719.9	71.8	.0	9,169.2	4.5
SE	5.4	13.6	42.8	.0	4.5	

Table 66.--Average annual net growth of growing-stock and sawtimber volume on timberland by county and species group, Connecticut, 1984-97

County	Growing Stock (In thousands of cubic feet)			Sawtimber (In thousand of board feet)		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Fairfield	97	3,211	3,307	-286	14,230	13,944
Hartford	1,893	7,369	9,262	7,670	21,901	29,572
Litchfield	3,623	13,002	16,624	16,039	49,465	65,503
Middlesex	-140	7,191	7,051	480	24,337	24,818
New Haven	1,225	3,939	5,164	5,492	17,924	23,416
New London	315	4,146	4,461	1,127	19,966	21,093
Tolland	440	3,556	3,996	1,825	14,043	15,869
Windham	998	4,812	5,811	2,905	17,904	20,809
All counties	8,451	47,225	55,676	35,253	179,770	215,023

Table 67.--Average annual removals of growing-stock and sawtimber volume on timberland by county and species group, Connecticut, 1984-97

County	Growing Stock (In thousands of cubic feet)			Sawtimber (In thousand of board feet)		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Fairfield	0	2,381	2,381	0	7,673	7,673
Hartford	2,215	3,397	5,612	8,649	12,469	21,119
Litchfield	215	2,512	2,727	877	8,952	9,829
Middlesex	68	1,721	1,789	301	5,949	6,250
New Haven	91	3,716	3,807	183	12,721	12,904
New London	0	1,628	1,628	0	4,236	4,236
Tolland	0	2,974	2,974	0	11,627	11,627
Windham	640	3,968	4,608	2,091	11,898	13,988
All counties	3,229	22,297	25,526	12,102	75,525	87,627

Alerich, Carol L. 2000. **Forest statistics for Connecticut: 1985 and 1998**. Resour. Bull. NE-147. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 104 p.

A statistical report on the fourth forest inventory of Connecticut (1997-1998). Findings are displayed in 67 tables containing estimates of forest area, numbers of trees, wildlife habitat, timber volume, growth, change, and biomass. Data are presented at two levels: state and county.

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





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