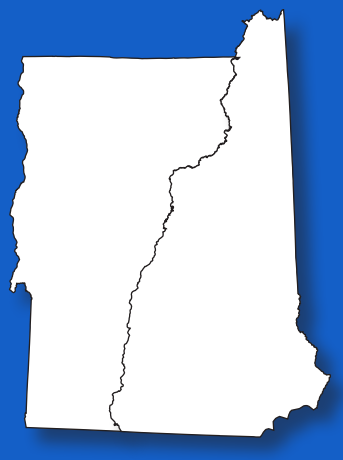
Forests of Vermont and New Hampshire 2012: Statistics, Methods, and Quality Assurance



Forest Inventory Methods

Strategic Model

The Forest Inventory and Analysis (FIA) program of the Northern Research Station (NRS-FIA) is part of the national enhanced FIA program that focuses on a set of six strategic objectives (McRoberts 2005):

- A standard set of variables with nationally consistent meanings and measurements
- Field inventories of all forested lands
- Nationally consistent estimation
- Adherence to national precision standards
- Consistent reporting and data distribution
- Credibility with users and stakeholders

To ensure that these objectives are achieved, 10 strategic approaches have been prescribed:

- A national set of prescribed core variables with a national field manual that prescribes measurement procedures and protocols for each variable
- A nationally consistent plot configuration
- A nationally consistent sampling design
- Estimation using standardized formulas for sample-based estimators
- A national database of FIA data with core standards and user-friendly public access
- A national information management system
- A nationally consistent set of tables of estimates of prescribed core variables
- Publication of statewide tables with estimates of prescribed core variables at 5-year intervals
- Documentation of the technical aspects of the FIA program including procedures, protocols, and techniques
- Peer review and publication of the technical documentation for general access

The result of the strategic objectives and approaches is an inventory program with identifiably new features and a nationally consistent plot configuration, a nationally consistent sampling design for all lands, annual measurement of a proportion of plots in each state, nationally consistent estimation techniques and algorithms, and integration of the ground sampling components of the FIA inventory and the detection monitoring by the U.S. Forest Service's Forest Health Monitoring (FHM) program.

Plot Configuration

The national FIA plot design consists of four 24-foot-radius subplots (1/24th acre) configured as a central subplot and three peripheral subplots (Fig. 86). Centers of the peripheral subplots are located at distances of 120 feet from the central subplot at azimuths of 0°, 120°, and 240° from the center of the central subplot. Each tree with a diameter at breast height (d.b.h.) of 5 inches or greater is measured on these subplots. Each subplot contains a 6.8-foot-radius microplot with center located 12 feet east of the subplot center on which each tree with d.b.h. between 1 and 5 inches is measured. Forest conditions that occur on any of the four subplots are identified and recorded. If the area of the condition is 1 acre or greater, the condition is mapped on the subplot. Factors that differentiate forest conditions include forest type, stand-size class, stand origin, land use, ownership, and density.

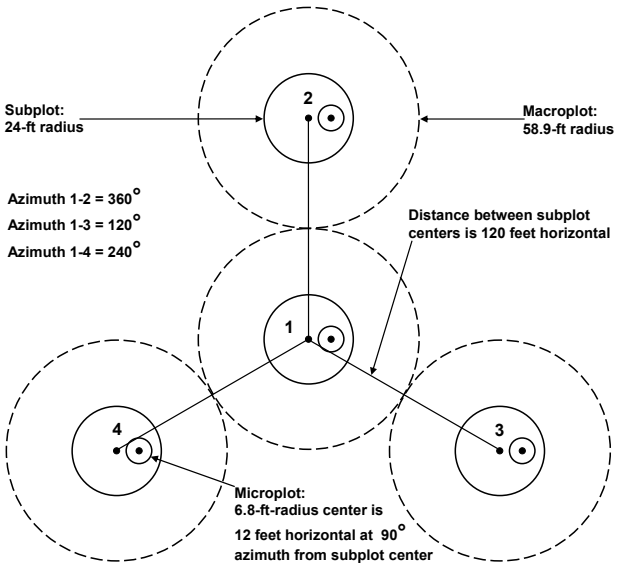


Figure 86.—National Forest Inventory and Analysis plot design (adapted from Bechtold and Patterson 2005).

Sample Design

Based on historic sampling errors, a sampling intensity of approximately one plot per 6,000 acres is necessary to satisfy national FIA precision guidelines. Therefore, FIA divided the area of the United States into nonoverlapping, 5,937-acre hexagons and has established a sample plot location in each hexagon. This array of field plots is designated the federal base sample and is considered an equal probability sample; its measurement is funded by the Federal government.

The federal base sample is divided into five interpenetrating, panels or subsamples, each of which provides complete, systematic coverage of a state. Each year, plots in a single panel are measured and panels are selected on a 5-year, rotating basis (McRoberts 1999) that is the plots measured in 2007 were measured again in 2012 and the plots measured in 2003 were measured again in 2008. For estimation purposes, the measurement of each panel of plots is considered an independent, equal probability sample of all lands in a state and the remeasurement of a panel is considered an equal probability sample of change occurring on all lands in a state.

Three-phase Inventory

FIA conducts inventories in three phases. Phase 1 (P1) uses remotely sensed data to obtain initial plot land cover observations and to stratify land area in the population of interest to increase the precision of estimates. In Phase 2 (P2), field crews visit the physical locations of permanent field plots to measure traditional inventory variables such as tree species, diameter, and height. In Phase 3 (P3), field crews visit a subset of P2 plots to obtain measurements for an additional suite of variables associated with forest and ecosystem health. The three phases of the enhanced FIA program are discussed in greater detail in the following sections.

Phase 1

Aerial photographs, digital orthoquads (DOQs: digitally scanned aerial photographs), and satellite imagery are used for initial plot measurement and stratification. P1 plot measurement consists of observations of conditions at the plot locations using aerial photographs or DOQs. Analysts determine a digitized geographic location for each field plot, and a human interpreter assigns the plot a land cover/use. Lands satisfying FIA's definition of forest land include commercial timberland, some pastured land with trees, forest plantations, unproductive forested land, and reserved, noncommercial forested land. In addition, forest land requires minimum stocking levels, a 1-acre minimum area, and a minimum bole-to-bole width of 120 feet with continuous canopy. Forest land excludes wooded strips and windbreaks less than 120 feet wide and idle farmland or other previously nonforest land that currently is below minimum stocking levels. All plot locations that could possibly contain forest land, plus any additional plots that contained forest land at the previous measurement are selected for further measurement via field-crew visits in P2.

The combination of natural variability among plots and budgetary constraints prohibits measurement of a sufficient number of plots to satisfy national precision standards for most inventory variables unless the

estimation process is enhanced using ancillary data. Thus, the land area is stratified by using remotely sensed data to facilitate stratified estimation.

NRS-FIA uses canopy density classes to derive strata. Canopy density information was obtained from the 2001 National Land Cover Database (NLCD). The NLCD 2001 canopy density layer for the United States was produced through a cooperative project conducted by the Multi-Resolution Land Characteristics (MRLC) Consortium (http://www.mrlc.gov/). The layer characterizes subtle variations of forest canopy density as a percentage estimate of forest canopy cover (0–100) within every 30-m pixel over the United States. The method employed to map canopy density for NLCD 2001 is described in detail in Homer et al. (2007).

Strata Construction

The strata construction methods used by Northern FIA were developed to work well across the entire 24-state region. Using plot location information (center of the center subplot), a percent canopy density value was assigned to each plot. Plots were then aggregated into one of the five canopy cover classes based on the center of the center subplot. The percent canopy cover classification scheme consists of five groupings: (1) 0 to 5 percent, (2) 6 to 50 percent, (3) 51 to 65 percent, (4) 66 to 80 percent, and (5) 81 to 100 percent (Figs. 87 and 88). These groupings were based on observed natural clumping of pixel values.

In addition to the classification of every pixel into one of the five canopy cover classes, every pixel was also assigned to an ownership class. The Protected Areas Database (Conservation Biology Institute 2010) was initially used and then state-specific data were added. The largest ownership class, based on pixel counts, was private ownership at over 5.0 million acres in Vermont and 4.6 million acres in New Hampshire. Every pixel was also assigned to a county based on the location of the pixel center. If there were not a sufficient number of plots within a canopy cover class/ownership class/county for valid estimation purposes then specific collapsing

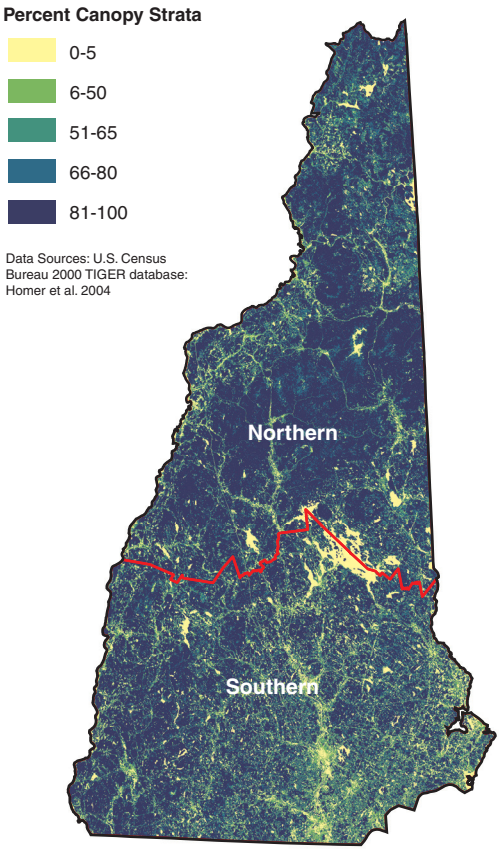


Figure 87.—New Hampshire percent canopy strata groupings.

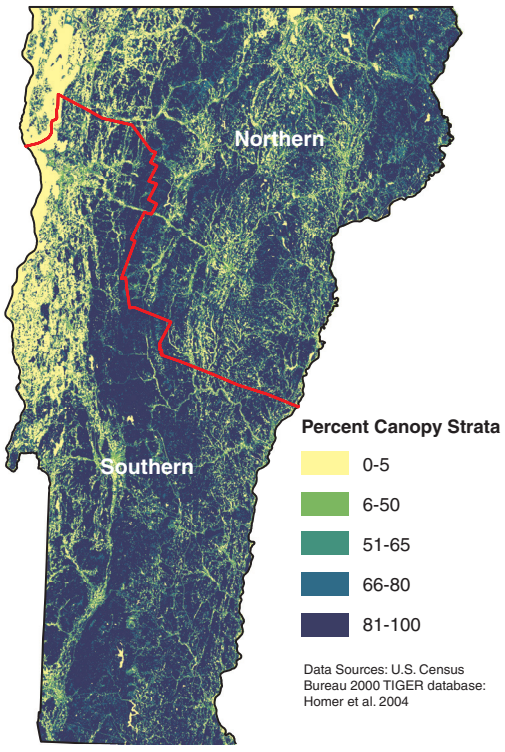


Figure 88.—Vermont percent canopy strata groupings.

rules were used to combine classes until sufficient sample sizes were obtained. These collapsed classes defined the strata used in the estimation. NRS-FIA required a minimum of 10 plots per stratum. Stratified estimation requires that two tasks be accomplished. First, each plot must be assigned to a stratum. Next, the proportion of the total area in each stratum must be calculated. The first task is accomplished by assigning each plot to the stratum assigned for the pixel containing the center of the center subplot. The second task is accomplished by calculating the proportion of pixels in each stratum. The population estimate for a variable is calculated as the sum across all strata of the product of each stratum's observed proportion (from P1) and the variable's estimated mean per unit area for the stratum (from P2). Details of the stratum assignments used are presented in the estimation section of this report that follows the P2 and P3 descriptions.

Phase 2

In P2, field crews record a variety of data for plot locations determined in P1 to determine whether a field visit is required, i.e., forested plots last time regardless of current forest land use. Before visiting plot locations, field crews consult county land records to determine the ownership of plots and then seek permission from private landowners to measure plots on their lands. At the plot field crews determine the location of the geographic center of the center subplot using global positioning system (GPS) receivers. They record condition-level observations that include land cover, forest type, stand origin, stand age, stand-size class, site-productivity class, history of forest disturbance, and land use for every condition (major land use of forest stand at least 1 acre in size) that occurs on the plot. They also record information on condition boundaries when multiple conditions are found on a plot. For each tree, field crews record a variety of observations and measurements, including condition, species, live/dead status, lean, diameter, height, crown ratio (percent of tree height represented by crown), crown class (dominant, codominant, suppressed), damage, and decay status. All trees measured in the previous measurement of the plot are remeasured or otherwise accounted for and any new trees that have grown onto the plot are measured. Office staff use statistical models based on field-crew measurements to calculate values for additional variables, including individual-tree volume, volume, and biomass by plot, condition, species group, and live/dead status. The remeasurement of every tree enables the calculation of components of change including growth, mortality, and removals. Details of the data collection procedures used in P2 are available at http://www.nrs.fs.fed.us/fia/data-collection/ and on the DVD included with this report.

Phase 3

The third phase of the enhanced FIA program focuses on forest health. P3 is administered cooperatively by the FIA program, other Forest Service programs, other Federal agencies, State natural resource agencies, and universities, and it is partially integrated with the Forest Health Monitoring (FHM) program. The FHM program consists of four interrelated and complementary activities: detection monitoring, evaluation monitoring, intensive site ecosystem monitoring, and research on monitoring techniques. Detection monitoring consists of systematic aerial and ground surveys designed to collect baseline information on the current condition of forest ecosystems and to detect changes from those baselines over time. Evaluation monitoring studies examine the extent, severity, and probable causes of changes in forest health identified through the detection monitoring surveys. The intensive site ecosystem monitoring program conducts research into regionally specific ecological processes at a network of sites located in representative forested ecosystems. Research on monitoring techniques focuses on developing and refining indicator measurements to improve the efficiency and reliability of data collection and analysis at all levels of the program.

The ground survey portion of the FHM detection monitoring program was integrated into the FIA program as P3 in 1999. The P3 sample consists of a 1:16 subset of the P2 plots with one P3 plot for

approximately every 96,000 acres. P3 measurements are obtained by field crews during the growing season and include an extended suite of ecological data: soil quality (erosion, compaction, and chemistry), vegetation diversity and structure, and down woody material. The incidence and severity of ozone injury for selected bioindicator species also are monitored as part of an associated sampling scheme. All P2 measurements are collected on each P3 plot at the same time as the P3 measurements. Additional information on the collection procedures used in P3 is available at http://www.nrs.fs.fed.us/fia/topics/.

P3 variables are selected to address specific criteria outlined by the Montreal Process Working Group for the conservation and sustainable management of temperate and boreal forests (Montreal Process 1995) and are based on the concept of indicator variables. Observations of an indicator variable represent an index of ecosystem functions that can be monitored over time to assess trends. Indicator variables are used in conjunction with each other, P2 data, data from FHM evaluation monitoring studies, and ancillary data to address ecological issues such as vegetation diversity, fuel loading, regional air-quality gradients, and carbon storage. The P2 and P3 data of the enhanced FIA program are a primary source of reporting data for the Montreal Process Criteria and Indicators (for more information, see Woodall et al. 2011).

Estimation

Most of the estimates and analysis presented in this report (Core Tables 1-32, 54-61a, and 65) are based on averages observed on 1,100 plots located across Vermont and 1,091 plots located across New Hampshire. These plots are located within 17 unique strata in Vermont and 15 unique strata in New Hampshire (Tables VT-A and NH-A) defined by combinations of the five P1 canopy cover classes: (1) 0 to 5 percent, (2) 6 to 50 percent, (3) 51 to 65 percent, (4) 66 to 80 percent, and (5) 81 to 100 percent, a land ownership classification created from the Protected Areas Database, and county groups (FIA units). Nationally consistent algorithms were used to assign forest type and stand-size class to each condition observed on a plot. For NRS-FIA, panels are measured on an annual basis so that five panel estimates are equivalent to 5-year moving average estimates. Field plot measurements are combined with P1 estimates in the compilation process and table production. Procedures described in Bechtold and Patterson (2005) for stratified estimation with observed stratum areas were used in conjunction with the strata presented in Tables VT-A and NH-A to produce all estimates. Table VT-A and NH-A show the total area and number of plots within each stratum.

Integration with Previous Inventories

In 2012, FIA completed the second full annual inventory of plots within Vermont and New Hampshire. The 2012 panels, along with those surveyed in 2008, 2009, 2010, and 2011, comprise the datasets for these second annual inventories referred to as the 2012 annual inventories of Vermont and New Hampshire. Previous forest inventories in Vermont were completed in 1948 (McGuire and Wray 1952), 1965 (Kingsley and Barnard 1968), 1973 (Frieswyk and Malley 1985b; Kingsley 1977), 1983 (Frieswyk and Malley 1985b, Frieswyk and Widmann 2000b), 1997 (Frieswyk and Widmann 2000b), and 2007 (Morin et al. 2011b). Previous forest inventories in New Hampshire were completed in 1952 (U.S. Forest Service 1954), 1960 (Ferguson and Jensen 1963), 1973 (Frieswyk and Malley 1985a; Kingsley 1976), 1983 (Frieswyk and Malley 1985a; Frieswyk and Widmann 2000a), 1997 (Frieswyk and Widmann 2000a), and 2007 (Morin et al. 2011a).

Data from new inventories often are compared with data from earlier inventories to determine trends in forest resources. However, for the comparisons to be valid, the procedures used in the two inventories must be similar. Identical classification procedures were used for the 2007 and 2012 inventories; therefore comparisons made between these inventories are relatively uncomplicated.

Comparisons with the earlier inventories are more problematic as there were changes in plot design,

measurements taken, and classification methods between each of these inventories. For the sake of consistency, a new, national plot design was implemented by all five regional FIA units in 1999. The new design uses fixed-radius subplots exclusively. In Vermont and New Hampshire, this design was used in the1997 inventories. Prior to this new plot design, fixed and variable-radius subplots were used. Both designs have strong points, but they often produce different classifications for individual plot characteristics. Procedures for assigning condition attributes such as forest type, stand age, and stocking changed significantly with the introduction of the new annual plot design. Unpublished FIA research comparing these plot designs, however, showed no noticeable difference in volume and tree-count estimates.

For additional information on the sample protocols and estimation procedures for the first two phases of the FIA program, see Bechtold and Patterson (2005). For additional information on P3 indicator sampling protocols, see the P3 field guides and database documentation which can be found at http://www.fia.fs.fed.us/library/ and on the DVD included with this report.

Quality of the Estimates

The four primary sources of error common to all sample-based estimates are sampling, measurement, prediction, and nonresponse error. For each of these sources of error, a definition within the context of the FIA inventory is provided along with a discussion of methods used to quantify and reduce this error.

Sampling Error

The process of sampling (selecting a random subset of a population and calculating estimates from this subset) causes estimates to contain error they would not have if every member of the population had been observed. The 2012 FIA inventory of Vermont is based on a sample of 1,100 plots across the State (a total area of 6,152,904 acres), a sampling rate of about one plot for every 5,594 acres. The 2012 FIA inventory of New Hampshire is based on a sample of 1,091 plots across the State (a total area of 5,940,491 acres), a sampling rate of about one plot for every 5,445 acres.

The procedures for statistical estimation outlined in the previous section and described in detail in Bechtold and Patterson (2005) provide the estimates of the population totals and means presented in this report. Along with every estimate is an associated sampling error that is typically expressed as a percentage of the estimated value but that can also be expressed in the same units as the estimate or as a confidence interval (the estimated value plus or minus the sampling error). This sampling error is the primary measure of the reliability of an estimate. A sampling error can be interpreted to mean that had a 100-percent inventory been taken using these methods, the chances are two out of three that the results would have been within the limits indicated (i.e., 68-percent confidence interval).

The sampling errors for State-level estimates of the major attributes presented in this report are shown in Tables VT-B and NH-B. Tables VT-65 and NH-65 present sampling errors for these estimates at the inventory unit and county group levels.

Estimates for classifications smaller than the State totals presented in Tables VT-B and NH-B will have larger sampling errors. For example, Table VT-65 shows that the sampling error for timberland area in any county is higher than that for total timberland area in the State. To compute an approximate sampling error for an estimate that is smaller than a State total, use the following formula:

$$E = \frac{(SE)\sqrt{(\text{State total estimate})}}{\sqrt{(\text{Smaller estimate})}} \qquad (1)$$

where:

E = approximate sampling error for smaller estimate
SE = sampling error for State total estimate (percent)

For example, to compute the approximate error on the area of National Forest System forest land in the State, proceed as follows:

The total National Forest System forest land area in the State from Table NH-2 is estimated at 782,100 acres.

The total area of all forest land in the State from Table NH-2 is 4,833,300 acres.

The State total error for forest land area from Table NH-B is 0.98 percent.

Using formula (1):

$$\textit{Sampling error} = E = \frac{(0.98)\sqrt{(4{,}833{,}300)}}{\sqrt{(782{,}100)}} = \textit{2.4 percent.}$$

This approximation works well for estimates of area, volume, number of trees, and biomass. It is less effective for estimates of growth, removals, or mortality. Individuals seeking more accurate sampling errors should use the estimation tools available at http://fiatools.fs.fed.us.

The estimators used by FIA are unbiased under the assumptions that the sample plots are a random sample of the total population and the observed value for any plot is the true value for that plot. Deviations from these basic assumptions are not reflected in the computation of sampling errors. The following sections on measurement, prediction, and nonresponse error address possible departures from these basic assumptions.

Measurement Error

Errors associated with the methods and instruments used to observe and record the sample attributes are called measurement errors. On FIA plots, attributes such as the diameter and height of a tree are measured with different instruments, and other attributes such as species and crown class are observed without the aid of an instrument. On a typical FIA plot, 30 to 70 trees are observed with 15 to 20 attributes recorded on each tree. In addition, many attributes that describe the plot and conditions on the plot are observed. Errors in any of these observations affect the quality of the estimates. If a measurement is biased (such as tree diameter consistently taken at an incorrect place on the tree), then the estimates that use this observation (such as volume) will reflect this bias. Even if measurements are unbiased, high levels of random error in the measurements will add to the total random error of the estimation process.

To ensure that all FIA observations are made to the highest standards possible, a regular program of quality assurance and quality control is an integral part of all FIA data collection efforts. This program begins with the documentation of protocols and procedures used in the inventory followed by intensive crew training. To assess the quality of the data collected by these trained crews, a random sample of at least 4 percent of all plots are measured independently by a different expert crew. These independent measurements are referred to as blind checks. The purpose of these blind checks is to assess the quality of field measurements. The second measurement on these blind check plots is done by a Quality Assurance (QA) crew. In all cases, QA crews have as much or more experience and training in FIA field measurements than standard FIA crews.

The quality of field measurements is assessed nationally through a set of measurement quality objectives (MQOs)

that are set for every data item we collect. Each MQO consists of two parts: a tolerance or acceptable level of measurement error, and an objective in terms of the percent of measurements within tolerance. The blind check measurements are used to observe how often individual field crews are meeting these objectives and to assess the overall compliance among all crews. Tables VT-C and NH-C shows the compliance rates for various measurements used to compute the estimates included in this report and in other NRS-FIA reports. The columns labeled Vermont and New Hampshire come from blind check measurements of plots used in this report, and the columns labeled All NRS- FIA States come from all measurements made by FIA crews within the entire 24-state area where the Northern Research Station implemented the FIA program over 2008-2012. Training and supervision of crews is a regional effort and crews often work in more than one state. Regional data quality observations reflect the overall measurement quality of all data collected by FIA in the NRS region.

In addition to the percent compliance to measurement quality objectives, the blind check observations were used to test for relative bias in the field crew measurements. Relative bias is defined here as a tendency for the standard field crew measurements to be higher or lower than those measurements taken by the QA crews. The estimated relative bias and limits of 95-percent confidence intervals (based on parametric bootstrap estimates) for the relative bias are presented in Tables VT-D and NH-D.

The blind check measurements do not provide direct observations of true bias in field measurements (average difference between field measurements and true values) because they are paired observations of two field measurements. The QA crew in these blind checks typically has more training and experience with FIA field measurements than the first crew, but both crews use the same methods and instruments to obtain the measurements. These methods were the best available and were selected for use nationwide by FIA; they are commonly used by other similar natural resource inventories. A basic assumption is that the methods, when correctly applied, provide unbiased observations of the attribute they are designed to measure. Under this assumption, relative bias observations in Tables VT-D and NH-D provide observations of bias due to the difference in experience and training between the field and QA crews. In most cases there is no significant bias.

Prediction Error

Errors associated with using mathematical models (such as volume models) to provide observations of the attributes of interest based on sample attributes are referred to as prediction errors. Area, volume, biomass, growth, removals, and mortality are the primary attributes of interest presented in this report. Area and number of trees estimates are based on direct observation and do not involve the use of prediction models; however, FIA estimates of volume, biomass, growth, removals, and mortality use model-based predictions in the estimation process. Models are used to predict volume and biomass estimates of individual trees. Change estimates such as growth, mortality, and removals are based on these model-based predictions of volume from both the current plot measurements and the measurements taken in the previous inventory.

In comparing FIA estimates to other data sources, users need to be aware of the prediction models used in both estimates. If both estimates are based on the same prediction models with matching fitted parameter values, then the prediction bias of one estimate should cancel out that of the other estimate. If the estimates are based on different prediction models, then the user should be aware of the prediction error of both models.

Nonresponse Error

Nonresponse error refers to the error caused by not being able to observe some of the elements in the sample. In FIA, nonresponse occurs when crews are unable to measure a plot (or a portion of a plot) at a selected location. Nonresponse falls into the following three classes:

Denied access – Entire plots or portions of plots where the field crew is unable to obtain permission from the landowner and is therefore unable to measure the trees on the plot.

Hazardous/inaccessible – Entire plots or portions of plots where the conditions present prevent a crew from safely getting to the plot or measuring the trees on the plot.

Other – Plots where the field crew is unable to obtain a valid measurement for a variety of reasons other than those stated above.

Nonresponse has two effects on the sample. First, it reduces the sample size. The reduced sample size is reflected in the sampling errors discussed in that section. Second, nonresponse can bias the estimates if the portion of the population not being sampled differs from the portion being sampled. In FIA, unlike many survey samples, nonresponse rates are relatively low. In the 2012 Vermont inventory, a total of 941 sample plots were selected to be field visited. Of the total sample plots selected for field visit, 869 are in the sample used for the estimation of current resources. There were 72 plots where crews were unable to obtain owner permission to measure the plot or where hazardous conditions prevented the crew from measuring the plot. In the 2012 New Hampshire inventory, a total of 1,017 sample plots were selected to be field visited. Of the total sample plots selected for field visit, 938 are in the sample used for the estimation of current resources. There were 79 plots where crews were unable to obtain owner permission to measure the plot or where hazardous conditions prevented the crew from measuring the plot.

Even though an overall response rate of 92 percent is very high, it can cause considerable bias if not properly accounted for. The major source of nonresponse is denied access to plots. Denied access plots primarily occur on lands in private ownership. Also, the observations needed for plots on nonforest and water land classes do not usually require crews to physically enter the land and permission is not needed to obtain the observation because it can be obtained from aerial photos or other remotely sensed information sources.

The stratified estimation process used by FIA with strata defined by three ownership classes (inland census water, public, and private) and five canopy cover classes reduces the possible effects of bias caused by nonresponse. Under the stratified estimation process used by FIA, nonresponses are removed from the sample, and stratum estimates are obtained from only those plots with valid observations. The nonresponse rate in one stratum does not affect the estimate in other strata. The response rate within each stratum is presented in Tables VT-E and NH-E for the Vermont and New Hampshire 2012 inventories and for all FIA inventories conducted by the Northern Research Station over the same period.

The nonresponse plots in this inventory were not permanently removed from the FIA system of plots. In future inventories, we will again attempt to measure these plots. At that time we may be able to obtain permission to access these plots, the hazardous conditions may have changed, or other circumstances that caused us to drop plots from estimation for a specific inventory cycle will probably be different.

Glossary

Accretion: The estimated net growth on 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 growth on trees cut during the period or those trees that died. This component uses the incremental change in volume between two inventories.

Average annual mortality of growing stock: The average annual change in cubic-foot volume of sound wood in growing-stock trees that died over a defined measurement cycle.

Average annual mortality of sawtimber: The average annual change in board-foot volume of sound wood in sawtimber trees that died over a defined measurement cycle.

Average annual net growth of growing stock: The average annual change in cubic-foot volume of sound wood in live growing-stock trees, and the total volume of trees entering diameter classes greater than 5.0 inches d.b.h., through ingrowth, less volume losses resulting from natural causes. Natural causes include mortality except that due to logging damage, timber stand improvement, or conversion to a nonforest land use.

Average annual net growth of sawtimber: The average annual change in the board-foot volume of live sawtimber trees, and the total volume of trees reaching sawtimber size, less volume losses resulting from natural causes. Natural causes include mortality except that due to logging damage, timber stand improvement, or conversion to a nonforest land use.

Average annual removals from growing stock: The average cubic-foot volume of wood in live growing-stock trees removed annually for roundwood forest products, in addition to the volume in logging residues or mortality due to logging damage (harvest removals). This component of change also includes the volumes of growing-stock trees removed due to land use changes (other removals).

Average annual removals from sawtimber: The average board-foot volume of wood in live sawtimber trees removed annually for roundwood forest products, in addition to the volume of logging residues or mortality due to logging damage (harvest removals). This component of change also includes the volumes of sawtimber trees removed due to land use changes (other removals).

Basal area: Tree area in square feet of the cross section at breast height of a single tree. When the basal areas of all trees in a stand are summed, the result is usually expressed as square feet of basal area per acre.

Bioindicator species: A tree, woody shrub, or nonwoody herb species that responds to ambient levels of ozone pollution with distinct visible foliar symptoms that is easy to diagnose.

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

Bulk density: The mass of soil per unit of volume. A measure of the ratio of pore space to solid materials in a given soil. It is expressed in units of grams per cubic centimeter of oven-dry soil.

Census water: Lakes, reservoirs, ponds, and similar bodies of water 4.5 acres in size or larger; and rivers or canals more than 200 feet wide (U.S. Census definition).

Coarse woody debris (CWD): Dead branches, twigs, and wood splinters 3.0 inches in diameter and larger measured at the smallest end.

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

Compacted live crown ratio: The percent of the total length of the tree that supports a full, live crown. To determine compacted live crown ratio for trees that have uneven length crowns, lower branches are visually transferred to fill holes in the upper portions of the crown, until a full, even crown is created.

Condition: A delineation of a land area based upon land use, forest type, stand size, regeneration status, reserved status, tree density, and owner class.

Corporate: An ownership class of private lands owned by corporations.

County and municipal: A class of public lands owned by counties or local public agencies, or lands leased by these governmental units for more than 50 years.

Cropland: Land under cultivation within the last 24 months, including cropland harvested, crop failures, cultivated summer fallow, idle cropland used only for pasture, orchards, active Christmas tree plantations indicated by annual shearing, nurseries, and land in soil improvement crops, but excluding land cultivated in developing improved pasture.

Crown: The part of a tree or woody plant bearing live branches or foliage.

Crown dieback: Recent mortality of branches with fine twigs, which begins at the terminal portion of a branch and proceeds toward the trunk. Dieback is considered only when it occurs in the upper and outer portions of the tree. When whole branches are dead in the upper crown, without obvious signs of damage such as breaks or animal injury, it is assumed the branches died from the terminal portion of the branch. Dead branches in the lower portion of the live crown are assumed to have died from competition and shading.

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

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

Cull tree: A live tree, 5.0 inches in d.b.h. or larger, that is unmerchantable for saw logs now or prospectively because of rot, roughness, or species. (See definitions for rotten and rough trees.)

Decay class: Qualitative assessment of stage of decay (five classes) of coarse woody debris based on visual assessments of color of wood, presence/absence of twigs and branches, texture of rotten portions, and structural integrity.

Diameter at breast height (d.b.h.): The diameter outside bark of a standing tree measured 4.5 feet above the ground.

Diameter at root collar (d.r.c.): The diameter outside bark of a bole measured at the root collar of a shrub or tree. Also called basal diameter.

Diameter class: A classification of trees based on diameter outside bark measured at breast height (4.5 feet above ground). With 2-inch diameter classes, the 6-inch class, for example, includes trees 5.0 through 6.9 inches diameter at breast height (d.b.h).

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

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

Down woody material (DWM): Woody pieces of trees and shrubs that have been uprooted (no longer supporting growth) or severed from their root system, not self-supporting, and lying on the ground.

Duff: A soil layer dominated by organic material derived from the decomposition of plant and animal litter and deposited on either an organic or a mineral surface. This layer is distinguished from the litter layer in that the original organic material has undergone sufficient decomposition that the source of this material (e.g., individual plant parts) can no longer be identified.

Effective cation exchange capacity (ECEC): The sum of cations that a soil can adsorb in its natural pH. Expressed in units of centimoles of positive charge per kilogram of soil.

Federal: An ownership class of public lands owned by the U.S. Government.

Fiber products: Products derived from wood and bark residues, such as pulp, composition board products, and wood chips.

Fine materials: Wood residues not suitable for chipping, such as planer shavings and sawdust.

Fine woody debris (FWD): Dead branches, twigs, and wood splinters 0.1 to 2.9 inches in diameter.

Forest industry: An ownership class of private lands owned by companies or individuals operating wood-using plants.

Forest land: Land at least 10 percent stocked by forest trees of any size, including land that formerly had such tree cover and that will be naturally or artificially regenerated. Forest land includes transition zones, such as areas between heavily forested and nonforested lands that are at least 10 percent stocked with forest trees and forest areas adjacent to urban and builtup lands. Also included are pinyon-juniper and chaparral areas in the West and afforested areas. The minimum area for classification of forest land is 1 acre. Roadside, streamside, and shelterbelt strips of trees must have a crown width of at least 120 feet to qualify as forest land. Unimproved roads and trails, streams, and clearings in forest areas are classified as forest if less than 120 feet wide.

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

Forest-type group: A combination of forest types that share closely associated species or site requirements and are generally combined for brevity of reporting. The major forest-type groups for the eastern United States are:

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

Oak-pine: Forests in which hardwoods (usually upland oaks) comprise a plurality of the stocking, but in which pine or eastern redcedar comprises 25 to 50 percent of the stocking. Common associates include gum, hickory, and yellow-poplar.

Oak-hickory: Forests in which upland oaks or hickory, singly or in combination, comprise a plurality of the stocking except where pines comprise 25 to 50 percent, in which case the stand is classified as oak-pine. Common associates include yellow-poplar, elm, maple, and black walnut.

Oak-gum-cypress: Bottomland forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, comprise a plurality of the stocking except where pines comprise 25 to 50 percent, in which case the stand is classified as oak-pine. Common associates include cottonwood, willow, ash, elm, hackberry, and maple.

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

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

Aspen-birch: Forests in which aspen, balsam poplar, paper birch, or gray birch, singly or in combination, comprise a plurality of the stocking. Common associates include maple and balsam fir.

Fuel class: Categories of forest fire fuels defined by the approximate amount of time it takes for moisture conditions to fluctuate. Large coarse woody debris pieces take longer to dry out than smaller fine woody pieces.

1,000-hour fuels: Coarse woody debris with a transect diameter ≥ 3.0 inches and ≥ 3.0 feet long.

100-hour fuels: Fine woody debris with a transect diameter between 1.0 and 2.9 inches.

10-hour fuels: Fine woody debris with a transect diameter between 0.25 and 0.9 inches.

1-hour fuels: Fine woody debris with a transect diameter < 0.24 inches.

Gross growth: The sum of accretion and ingrowth.

Growing stock: A classification of timber inventory that includes live trees of commercial species meeting specified standards of quality or vigor. Cull trees are excluded. When associated with volume, this includes only trees 5.0 inches d.b.h. and larger.

Growing-stock volume: Net or gross volume in cubic feet of growing-stock trees 5.0 inches and larger d.b.h. measured from the 1-foot stump to a minimum 4.0-inch top diameter outside bark on the central stem, or to the point where the central stem splits into limbs. Net volume equals gross volume minus deduction for cull defects.

Hardwood: A dicotyledonous tree, usually broad-leaved and deciduous.

Soft hardwoods: A category of hardwood species with wood generally of low specific gravity (less than 0.5). Notable examples include red maple, paper birch, quaking aspen, and American elm.

Hard hardwoods: A category of hardwood species with wood generally of high specific gravity (greater than 0.5). Notable examples include sugar maple, yellow birch, black walnut, and oaks.

Industrial wood: All commercial roundwood products except fuelwood.

Ingrowth: The estimated net volume of trees that became 5.0 inches and larger d.b.h. 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 trees 5.0 inches and larger d.b.h. that are growing on land that was reclassified from noncommercial forest land or nonforest land to timberland.

Introduction: The intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity. "Introduced" is not synonymous and should not be confused with the term "invasive" (USDA definition).

Invasive species: Those species whose introduction does, or is likely to, cause economic or environmental harm or harm to human health. For the purpose of this policy only, a plant species is considered "invasive" only when it occurs on the Federal or State-specific noxious weed list or a list developed by the State-specific Department of Agriculture with their partners and approved by the State Technical Committee that prohibits or cautions its use due to invasive qualities (USDA definition).

Land area: 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.

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

Litter: Undecomposed or only partially decomposed organic material that can be readily identified (e.g., plant leaves, twigs).

Live aboveground biomass: The aboveground volume of live trees (including bark but excluding foliage) reported in dry tons (dry weight). Biomass has four components:

Bole: Biomass of a tree from 1 foot above the ground to a 4-inch top outside bark or to a point where the central stem breaks into limbs.

Tops and limbs: Total biomass of a tree from a 1-foot stump minus the bole.

Saplings: Total aboveground biomass of a tree from 1.0 to 4.9 inches d.b.h.

Stump: Biomass of a tree 5 inches d.b.h. and larger from the ground to a height of 1 foot.

Live cull: A classification that includes live, cull trees. When associated with volume, it is the net volume in live, cull trees that are 5.0 inches d.b.h. and larger.

Logging residues: The unused portions of growing-stock and nongrowing-stock trees cut or killed by logging and left in the woods.

Merchantable: Refers to a pulpwood or saw log section that meets pulpwood or saw log specifications, respectively.

National Forest: An ownership class of Federal lands, designated by Executive order or statute as National Forests or purchase units, and other lands under the administration of the Forest Service including experimental areas.

Net cubic-foot volume: The gross volume in cubic feet less deductions for rot, roughness, and poor form. Volume is computed for the central stem from a 1-foot stump to a minimum 4.0-inch top diameter outside bark, or to the point where the central stem breaks into limbs.

Net board-foot volume: The gross volume in board feet less the deductions for rot, roughness, and poor form. Volume is computed from the 1-foot stump to a minimum 7.0-inch diameter outside bark for softwoods and a minimum 9.0-inch outside bark for hardwoods on the central stem. This estimate includes all softwoods 9.0 inches d.b.h. and larger, and all hardwoods 11.0 inches d.b.h. and larger.

Noncensus water: Streams/rivers 120 to 200 feet wide and bodies of water 1 to 4.5 acres in size, where the U.S. Bureau of the Census (1990) classifies such water as land.

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

Nonforest land: Land that has never supported forests and lands formerly forested where use of timber management is precluded by development for other uses. (Note: Includes area used for crops, improved pasture, residential areas, city parks, improved roads of any width and adjoining clearings, powerline clearings of any width, and 1- to 4.5-acre areas of water classified by the U.S. Bureau of the Census as land. If intermingled in forest areas, unimproved roads and nonforest strips must be more than 120 feet wide, and clearings, etc., must be more than 1 acre in area to qualify as nonforest land.)

Nonindustrial private: An ownership class of private lands where the owner does not operate wood-using plants.

Nonnative species: Within a particular ecosystem, any species (including its seeds, eggs, spores, or other biological material capable of propagating that species;) that is not native to that ecosystem (USDA definition). Nonstocked areas: Timberland less than 10 percent stocked with all live trees.

Ownership unit: A classification of ownership encompassing all types of legal entities having an ownership interest in land, regardless of the number of people involved. A unit may be an individual; a combination of persons; a legal entity such as a corporation, partnership, club, or trust; or a public agency. An ownership unit has control of a parcel or group of parcels of land.

Owner class: A classification of land into categories of ownership.

Forest industry: Land owned by private companies that operate primary wood-using mills.

Nonindustrial private: Land owned by other corporate, individuals, or trusts (NGOs) that do not operate primary wood-using mills.

Other corporate: Land owned by timber investment or real estate companies.

Public: Land owned by federal, state, county, or municipal government.

Ozone: A regional, gaseous air pollutant produced primarily through sunlight-driven chemical reactions of nitrogen dioxide and hydrocarbons in the atmosphere and causing foliar injury to deciduous trees, conifers, shrubs, and herbaceous species.

Ozone bioindicator site: An open area used for ozone injury evaluations on ozone-sensitive species. The area must meet certain site selection guidelines on size, condition, and plant counts to be used for ozone injury evaluations in FIA.

Physiographic class: A measure of soil and water conditions that affect tree growth on a site. The physiographic classes are:

Xeric: Very dry soils where excessive drainage seriously limits both growth and species occurrence. These sites are usually on upland and upper half slopes.

Xeromesic: Moderately dry soils where excessive drainage limits growth and species occurrence to some extent. These sites are usually on the lower half slopes.

Mesic: Deep, well-drained soils. Growth and species occurrence are limited only by climate. These include all cove sites and bottomlands along intermittent streams.

Hydromesic: Moderately wet soils where insufficient drainage or infrequent flooding limits growth and species occurrence to some extent.

Hydric: Very wet sites where excess water seriously limits both growth and species occurrence.

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

Primary wood-using mill: A mill that converts roundwood products into other wood products. Common examples are sawmills that convert saw logs into lumber and pulp mills that convert pulpwood into paper.

Productivity class: A classification of forest land in terms of potential annual cubic-foot volume growth per acre at culmination of mean annual increment in fully stocked natural stands.

Pulpwood: Roundwood, whole-tree chips, or wood residues used for the production of wood pulp.

Reserved forest land: Forest land withdrawn from timber utilization through statute, administrative regulation, or designation without regard to productive status. Examples include national forest wilderness areas, national parks, and national monuments.

Residues: Bark and woody materials that are generated in primary wood-using mills when roundwood products are converted to other products. Examples are slabs, edgings, trimmings, miscuts, sawdust, shavings, veneer cores and clippings, and pulp screenings. Includes bark residues and wood residues (both coarse and fine materials) but excludes logging residues.

Rotten tree: A live tree of commercial species that does not contain a saw log now or prospectively primarily because of rot (that is, when rot accounts for more than 50 percent of the total cull volume).

Rough tree: (a) A live tree of commercial species that does not contain a saw log now or prospectively primarily because of roughness (that is, when sound cull due to such factors as poor form, splits, or cracks accounts for more than 50 percent of the total cull volume); or (b) a live tree of noncommercial species.

Roundwood products: Logs, bolts, and other round timber generated from harvesting trees for industrial or consumer use. Roundwood products include saw logs, veneer, cooperage logs, bolts, pulpwood logs, fuelwood, pilings, poles posts, ties, mine timbers, and various other round or split products.

Salvable dead tree: A downed or standing dead tree considered currently or potentially merchantable by regional standards.

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

Saw log: A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with a minimum diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods, or meeting other combinations of size and defect specified by regional standards.

Sawtimber tree: A live tree of commercial species containing at least a 12-foot saw log or two noncontiguous saw logs 8 feet or longer, and meeting regional specifications for freedom from defect. Softwoods must be at least 9.0 inches d.b.h. Hardwoods must be at least 11.0 inches diameter outside bark (d.o.b.).

Sawtimber volume: Net or gross volume in board-foot (International ¼-inch rule) or cubic-foot of the saw log portion of live sawtimber trees measured from the 1-foot stump to a minimum 7.0-inch top diameter outside bark (for softwoods) or a 9.0-inch top diameter outside bark (for hardwoods), on the central stem, or to the point where the central stem splits into smaller limbs. Net volume equals gross volume minus deduction for rough and rotten cull.

Seedling: Live tree smaller than 1.0 inch d.b.h./d.r.c. and at least 6.0 inches in height for softwoods and 12.0 inches in height for hardwoods.

Site index: An expression of forest site quality based on the height of a free-growing dominant or codominant tree of a representative species in the forest type at age 50.

Snag: A standing dead tree. In the current inventory, a snag must be 5.0 inches d.b.h./d.r.c. and 4.5 feet tall, and have a lean angle less than 45 degrees from vertical. A snag may be either self-supported by its roots or supported by another tree or snag.

Softwood: A coniferous tree, usually evergreen, having needles or scale-like leaves.

Sound dead: The net volume in salvable dead trees.

Species group: A combination of tree species that share closely associated understory plants or site requirements.

Stand: A group of trees on a minimum of 1 acre of forest land that is stocked by forest trees of any size.

Standing dead tree: A standing dead tree must be at least 5 inches d.b.h. or larger, at least 4.5 feet in height, and have a lean of less than 45 degrees from the vertical. A snag should be self-supported or supported by another tree.

Stand-size class: A classification of forest land based on the size class of live trees in the area. The classes are:

Nonstocked: Forest land stocked with less than 10 percent of full stocking with live trees. Examples are recently cutover areas or recently reverted agricultural fields.

Sapling-seedling: Forest land stocked with at least 10 percent of full stocking with live trees with half or more of such stocking in seedlings or saplings or both.

Poletimber: Forest land stocked with at least 10 percent of full stocking with live trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of poletimber exceeds that of sawtimber.

Sawtimber: Forest land stocked with at least 10 percent of full stocking with live trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of sawtimber is at least equal to that of poletimber.

State: An ownership class of public lands owned by states or lands leased by states for more than 50 years.

Stocking: The degree of occupancy of land by trees, measured by basal area or number of trees by size and spacing, or both, compared to a stocking standard; that is, the basal area or number of trees, or both, required to fully utilize the growth potential of the land.

Stocking class: At the tree level, stocking is the density expressed as a percent of total tree density required to fully utilize the growth potential of the land. At the stand level it is expressed as the sum of the stocking values of all trees sampled. The classes include:

Overstocked: Forest stand with stocking ≥100 percent.

Fully stocked: Forest stand that contains 60 to 99 percent of full stocking.

Moderately stocked: Forest stand that contains 35 to 59 percent of full stocking.

Poorly stocked: Forest stand that contains only 10 to 34 percent of full stocking.

Nonstocked: Forest stand with less than 10 percent of full stocking.

Sum06: The sum of all hourly average ozone concentrations greater than or equal to 0.06 ppm that occur between June 1 and August 31. It is a widely recognized threshold for ozone injury to sensitive plants.

Timberland: Forest land that is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation. (Note: Areas qualifying as timberland are capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands. Currently inaccessible and inoperable areas are included.)

Timber products output: All timber products cut from roundwood and byproducts of wood manufacturing plants. Roundwood products include logs, bolts, or other round sections cut from growing-stock trees, cull trees, salvable dead trees, trees on nonforest land, noncommercial species, sapling-size trees, and limbwood. Byproducts from primary manufacturing plants include slabs, edging, trimmings, miscuts, sawdust, shavings, veneer cores and clippings, and screenings of pulp mills that are used as pulpwood chips or other products.

Tree: A woody plant usually having one or more erect perennial stems, a stem diameter at breast height of at least 3 inches, a more or less definitely formed crown of foliage, and a height of at least 15 feet at maturity.

Tree class: A classification of tree quality or condition of the tree for saw log production. Tree class for sawtimber-size trees is based on current conditions. Tree class for poletimber-size trees is based on the prospected determination or forecast of the potential tree quality when the tree reaches sawtimber size.

Tree size class: A classification of trees based on diameter at breast height, including sawtimber trees, poletimber trees, saplings, and seedlings.

Tops: The wood of a tree above the merchantable height (or above the point on the stem 4.0 inches diameter outside bark (d.o.b.) or to the point where the central stem breaks into limbs). It includes the usable material in the uppermost stem.

Total live tree biomass: The total mass of live trees and associated saplings expressed in pounds or tons (dry weight) per unit area. The total tree and sapling biomass (excluding foliage) has five components:

Bole: Biomass of a tree from 1 foot above the ground to a 4-inch top outside bark or to a point where the central stem splits into smaller limbs. This includes protruding twigs from the central stem.

Tops and limbs: Total biomass of a tree from the 12-inch stump minus the bole. This does not include any twigs protruding from the central stem below the 4-inch top.

Sapling trees: Total biomass of a tree from 1 to 4.9 inches diameter measured at the root collar (d.r.c.) or at breast height (d.b.h.)

Stump: Total biomass of a tree 5 inches d.b.h. and larger from the ground to a height of 1 foot.

Belowground: Total biomass of the belowground portion of the stump and the coarse roots of all trees and saplings.

Urban forest land: Land that would otherwise meet the criteria for timberland but is in an urban-suburban area surrounded by commercial, industrial, or residential development and not likely to be managed for the production of industrial wood products on a continuing basis. Wood removed would be for land clearing, fuelwood, or esthetic purposes. Such forest land may be associated with industrial, commercial, residential subdivision, industrial parks, golf course perimeters, airport buffer strips, and public urban parks that qualify as forest land.

Unreserved forest land: Forest land not withdrawn from harvest by statute or administrative regulation. Includes forest lands that are not capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands.

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

Weight: The weight of wood and bark, oven-dry basis (approximately 12 percent moisture content).

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Growth, Mortality, and Removals

Table NH-21.—Average annual net growth of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, by owner class and forest-land status, New Hampshire, 2007 to 2012

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Table NH-23.—Average annual net growth of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, New Hampshire, 2007 to 2012

Table NH-24.—Average annual net growth of growing-stock trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on timberland by species group and ownership group, New Hampshire, 2007 to 2012

Table NH-25.—Average annual mortality of trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, by owner class and forest-land status, New Hampshire, 2007 to 2012

Table NH-26.—Average annual mortality of trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by forest-type group and stand-size class, New Hampshire, 2007 to 2012

Table NH-27.—Average annual mortality of trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, New Hampshire, 2007 to 2012

Table NH-28.—Average annual mortality of growing-stock trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on timberland by species group and ownership group, New Hampshire, 2007 to 2012

Table NH-29.—Average annual removals of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, New Hampshire, 2007 to 2012

Table NH-30.—Average annual removals of growing-stock trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on timberland by species group and ownership group, New Hampshire, 2007 to 2012

Weight

Table NH-31.—Aboveground dry weight of live trees (at least 1 inch d.b.h./d.r.c.), in thousand dry short tons, by owner class and forest-land status, New Hampshire, 2012

Table NH-32.—Aboveground dry weight of live trees (at least 1 inch d.b.h./d.r.c.), in thousand dry short tons, on forest land by species group and diameter class, New Hampshire, 2012

County-Level

Table NH-54.—Area of forest land, in thousand acres, by inventory unit, county, and forest-land status, New Hampshire, 2012

Table NH-55.—Area of forest land, in thousand acres, by inventory unit, county, ownership group, and forest-land status, New Hampshire, 2012

Table NH-57.—Area of timberland, in thousand acres, by inventory unit, county, and stand-size class, New Hampshire, 2012

Table NH-58.—Area of timberland, in thousand acres, by inventory unit, county, and stocking class, New Hampshire, 2012

Table NH-59.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (International ¼-inch rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2012

Table NH-59a.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (Doyle rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2012

Table NH-60.—Average annual net growth of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (International ¼-inch rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2007 to 2012

Table NH-60a.—Average annual net growth of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees in million board feet (Doyle rule), on timberland by inventory unit, on timberland by Forest Survey Unit, county, and major species group, New Hampshire, 2007 to 2012

Table NH-61.—Average annual removals of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (International ¼-inch rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2007 to 2012

Table NH-61a.—Average annual removals of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (Doyle rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2007 to 2012

Table NH-65.—Sampling errors, in percent, for net volume, average annual net growth, average annual removals, and average annual mortality on timberland, and forest and timberland area by inventory unit and county, New Hampshire, 2012

Table VT-A.—Area and number of plots in each stratum used for stratification and estimation, Vermont, 2012

Unit code	Estimation unit description[a]	Canopy cover stratum[b]	Acres	Selected[c]	Office selected[d]	Field selected[e]	Field sampled[f]	Field sampled forested[g]	Total plots sampled for change[h]	Field sampled plots for change[i]	Not measured[j]
2	Green NF	Canopy cover 81 - 100	9,580	3	0	3	3	3	2	2	0
2	Inland Census Water Unit 2	Canopy cover 0 - 100	139,623	14	13	1	1	1	14	1	0
2	Private Unit 2	Canopy cover 0 - 5	563,844	102	55	47	43	34	99	33	4
2	Private Unit 2	Canopy cover 51 - 65	134,908	17	1	16	13	13	15	12	3
2	Private Unit 2	Canopy cover 6 - 50	180,992	36	3	33	29	27	33	26	4
2	Private Unit 2	Canopy cover 66 - 80	341,317	60	0	60	52	52	57	50	8
2	Private Unit 2	Canopy cover 81 - 100	1,427,956	248	0	248	229	229	238	222	19
2	Public Unit 2	Canopy cover 0 - 80	94,705	11	0	11	11	10	11	10	0
2	Public Unit 2	Canopy cover 81 - 100	174,753	26	0	26	26	26	26	26	0
3	Green NF	Canopy cover 0 - 80	50,421	20	0	20	20	20	17	17	0
3	Green NF	Canopy cover 81 - 100	335,304	105	0	105	104	104	75	75	1
3	Inland Census Water Unit 3	Canopy cover 0 - 100	93,774	14	12	2	2	1	14	1	0
3	Private Unit 3	Canopy cover 0 - 5	623,809	125	70	55	45	31	119	30	10
3	Private Unit 3	Canopy cover 6 - 65	141,444	22	3	19	17	15	20	14	2
3	Private Unit 3	Canopy cover 66 - 80	168,059	31	0	31	31	30	30	29	0
3	Private Unit 3	Canopy cover 81 - 100	1,497,527	234	2	232	212	208	228	204	20
3	Public Unit 3	Canopy cover 0 - 100	174,888	32	0	32	31	30	30	29	1

a Estimation unit description: Description of the sub-population undergoing post-stratification. County groups are defined by one or more contiguous counties used for population estimation.

b Canopy cover stratum: A stratum within each estimation unit defined by partitioning the full range of percent canopy (0 - 100%) into 5 strata

c Selected: The number of plots selected when the sample was drawn

d Office selected: The number of plots determined to have no chance of being forested during a prefield interpretation procedure. These plots are withheld from field sampling and considered remotely sampled.

e Field selected: The number of plots determined to have some chance of being forested, or that were forested or non-sampled on a previous visit.

f Field sampled: The number of field selected plots that were successfully sampled in the field.

g Field sampled forested: The number of field selected plots that were successfully sampled in the field and found to intersect forest land.

h Total plots sampled for change: The number of plots included in the sample that were successfully sampled in the previous cycle.

i Field sampled plots for change: The number of plots included in the sample that were successfully sampled in the previous cycle and that were sent to the field for sampling.

j Not measured: The number of plots that were selected as part of the sample, but were completely non-sampled.

Table VT-B.—State-level estimates of major forest resource attributes and their sampling errors, Vermont, 2012

Item	State total	Sampling error
Growing stock on timberland	*million cubic feet*	*percent*
Volume	9,101.3	1.97
Average annual net growth	185.1	4.16
Average annual removals	96.0	13.22
Average annual mortality	73.4	6.59
Sawtimber on timberland	*million board feet* [a]	
Volume	28,758.2	2.67
Average annual net growth	855.7	4.09
Average annual removals	330.5	13.90
Average annual mortality	187.4	11.20
Area	*thousand acres*	
Forest land	4,595.7	0.98
Timberland	4475.3	1.07
Biomass (above-ground live trees and saplings)	*million dry tons*	
Forest land	284.1	1.62
Timberland	277.3	1.71

[a]International ¼-inch rule.

Table VT-C.—Compliance to measurement quality objectives (MQO) tolerances of variables based on blind check plots, Vermont, 2012

Variable	Tolerance	Objective (%)	Vermont		All NRS States	
			% of data within tolerance	Observations	% of data within tolerance	Observations
Plot Level						
National Variables						
Distance to Road	No Tolerance	90.0	84.2	38	81.9	2,265
Water on Plot	No Tolerance	90.0	92.1	38	86.2	2,265
Elevation	±50 feet	99.0	89.2	37	88.1	2,082
Latitude - decimal degrees	±0.0001 degree	99.0	100.0	37	100.0	2,085
Longitude - decimal degrees	±0.0001 degree	99.0	91.9	37	88.0	2,085
Number of plots				38		2,371
Condition Level						
Condition Status	No Tolerance	99.0	100.0	57	98.5	5,845
Reserve Status	No Tolerance	99.0	98.2	57	99.6	5,845
Owner Group	No Tolerance	99.0	100.0	44	97.5	3,153
Forest Type (Type)	No Tolerance	95.0	100.0	44	89.4	3,153
Forest Type (Group)	No Tolerance	99.0	100.0	44	94.0	3,153
Stand Size	No Tolerance	99.0	100.0	44	90.6	3,153
Regeneration Status	No Tolerance	99.0	100.0	44	98.4	3,153
Tree Density	No Tolerance	99.0	100.0	44	96.4	3,153
Owner Class	No Tolerance	99.0	100.0	44	94.9	3,153
Owner Status	No Tolerance	99.0	100.0	44	98.9	3,153
Regeneration Species	No Tolerance	99.0	100.0	44	98.4	3,153
Stand Age	±10 percent	95.0	97.7	44	86.0	3,153
Disturbance 1	No Tolerance	99.0	93.2	44	90.7	3,093
Disturbance Year 1	±1 year	99.0	100.0	7	89.2	306
Disturbance 2	No Tolerance	99.0	100.0	10	88.8	556
Disturbance Year 2	±1 year	99.0	100.0	1	78.6	28
Disturbance 3	No Tolerance	99.0	100.0	1	98.8	82
Disturbance Year 3	±1 year	99.0	.	.	50.0	2
Treatment 1	No Tolerance	99.0	100.0	44	97.8	3,093
Treatment Year 1	±1 year	99.0	100.0	5	97.0	199
Treatment 2	No Tolerance	99.0	80.0	5	84.7	261

(Table VT-C continued on next page)

(Table VT-C continued)

Variable	Tolerance	Objective (%)	Vermont		All NRS States	
			% of data within tolerance	Observations	% of data within tolerance	Observations
Treatment Year 2	±1 year	99.0	100.0	1	98.1	52
Treatment 3	No Tolerance	99.0	100.0	2	96.7	90
Treatment Year 3	±1 year	99.0	.	.	75.0	4
Physiographic Class	No Tolerance	80.0	95.5	44	84.6	3,153
Present Nonforest Use	No Tolerance	99.0	96.5	57	89.1	5,845
Number of conditions				57		5,845
Boundary Level						
Boundary Change	No Tolerance	99.0	100.0	7	82.2	794
Constrasting Condition	No Tolerance	99.0	100.0	7	95.3	794
Left Azimuth	±10 degrees	90.0	100.0	7	87.4	794
Corner Mapped	No Tolerance	90.0	100.0	7	95.5	794
Corner Azimuth	±10 degrees	90.0	.	.	94.1	68
Corner Distance	±1 foot	90.0	.	.	91.2	68
Right Azimuth	±10 degrees	90.0	100.0	7	87.2	794
Number of boundaries				7		794
Subplot Level						
Subplot Center Condition	No Tolerance	99.0	100.0	152	98.2	9,484
Microplot Center Condition	No Tolerance	99.0	100.0	152	98.0	9,484
Slope	±10 percent	90.0	98.7	149	98.5	8,051
Aspect	±10 degrees	90.0	97.2	144	93.7	7,838
Snow/Water Depth	±0.5 foot		58.7	150	69.3	8,276
Number of subplots				152		9,484
Tree Level						
DBH	±0.1 inch per 20 inches	95.0	98.5	678	95.6	35,321
DRC	±0.1 inch per 20 inches	95.0	.	.	72.3	47
Azimuth	±10 degrees	90.0	99.9	779	99.3	39,772
Horizontal Distance	±0.2 foot per 1.0 foot	90.0	99.2	779	98.7	39,772
Species	No Tolerance	95.0	99.6	779	98.4	40,057
Tree Genus	No Tolerance	99.0	100.0	779	99.6	40,013

(Table VT-C continued on next page)

(Table VT-C continued)

Variable	Tolerance	Objective (%)	Vermont		All NRS States	
			% of data within tolerance	Observations	% of data within tolerance	Observations
Tree Status	No Tolerance	95.0	99.6	779	98.9	40,080
Rotten/Missing Cull	±10 percent	90.0	97.8	511	98.3	25,851
Total Length	±10 percent	90.0	76.1	511	79.2	25,599
Actual Length	±10 percent	90.0	73.4	79	73.3	3,218
Compacted Crown Ratio	±10 percent	80.0	87.3	606	83.5	32,802
Uncompacted Crown Ratio (P3)	±10 percent	90.0	.	.	66.7	15
Crown Class	No Tolerance	85.0	83.5	606	81.7	32,802
Decay Class	±1 class	90.0	98.5	135	95.8	5,989
Cause of Death	No Tolerance	80.0	99.3	135	83.9	5,989
Condition	No Tolerance	99.0	100.0	779	98.4	40,080
Crown Position	No Tolerance		.	.	71.4	14
Crown Light Exposure	±1 class	85.0	.	.	73.3	15
Sapling Crown Vigor Class	No Tolerance	85.0	.	.	100.0	1
Crown Density	±10 percent	90.0	.	.	57.1	14
Crown Dieback	±10 percent	90.0	.	.	100.0	14
Transparency	±10 percent	90.0	.	.	71.4	14
Tree Class	No Tolerance	90.0	95.0	680	92.0	35,658
Damage Agent 1	No Tolerance	90.0	85.0	606	87.3	32,802
Damage Agent 2	No Tolerance	90.0	78.5	177	78.9	8,106
Tree Grade	No Tolerance	90.0	83.7	178	74.3	7,695
DBH-Live & Trees with Decay Code 1 or 2	±0.1 inch per 20 inches	95.0	98.4	629	95.4	33,668
DBH-Trees with Decay Codes 3, 4 or 5	±1 inch per 20 inches	95.0	100.0	49	99.5	1,648
Total Length-trees 40 feet and greater	±10 percent	90.0	80.4	419	81.0	20,300
Total Length-trees less than 40 feet	±10 percent	90.0	56.5	92	72.4	5,299
Total Length-trees less than 5 inches DBH	±10 percent	90.0	.	.	65.3	288
Number of trees				779		40,057

(Table VT-C continued on next page)

(Table VT-C continued)

Variable	Tolerance	Objective (%)	Vermont		All NRS States	
			% of data within tolerance	Observations	% of data within tolerance	Observations
Seedling Level						
Species	No Tolerance	85.0	99.3	146	92.6	8,215
Genus	No Tolerance	90.0	99.3	146	96.7	8,215
Seedling Count	±20 percent	90.0	74.7	146	63.8	8,215
Seedling Count (coded)	No Tolerance	90.0	82.2	146	69.4	8,215
Number of microplots				57		3,349
Site Tree Level						
Condition List	No Tolerance	99.0	100.0	13	93.4	2,810
Diameter	±0.1 inch per 20 inches	95.0	100.0	13	97.7	2,810
Species	No Tolerance	95.0	100.0	13	99.3	2,810
Genus	No Tolerance	99.0	100.0	13	100.0	2,810
Azimuth	±10 degrees	90.0	100.0	13	98.9	2,810
Distance	±5 feet	90.0	100.0	13	99.1	2,810
Total Length	±10 percent	90.0	100.0	13	98.4	2,810
Diameter Age	±5 years	95.0	100.0	13	97.7	2,810
Number of site trees				13		2,810

Table VT-D.—Observed relative bias values (Average [field crew—QA crew]) for measurement variables on blind check plots, Vermont, 2012

Variable	Unit of measure	Vermont				All NRS States			
			95% CI limits				95% CI limits		
		Relative bias	Lower	Upper	Number of observations	Relative bias	Lower	Upper	Number of observations
Plot Level									
National Variables									
Distance to Road	code	0.08	-0.05	0.24	38	-0.02	-0.06	0.00	2,265
Water on Plot	code	-4.81	-17.09	7.16	38	0.08	0.01	0.14	2,265
Elevation	foot				37	284.94	93.90	499.18	2,082
Latitude - decimal degrees	degree	0.00	0.00	0.00	37	0.00	0.00	0.00	2,085
Longitude - decimal degrees	degree	-0.01	-0.05	0.01	37	0.00	-0.01	0.00	2,085
Number of plots					38				2,371
Condition Level									
Condition Status	code	0.00	0.00	0.00	57	0.00	-0.01	0.00	5,845
Reserve Status	code	-0.02	-0.06	0.00	57	0.00	0.00	0.00	5,845
Owner Group	code	0.00	0.00	0.00	44	0.15	-0.03	0.33	3,153
Forest Type (Type)	code	0.00	0.00	0.00	44	2.27	-1.40	6.14	3,153
Forest Type (Group)	code	0.00	0.00	0.00	44	2.32	-1.47	6.17	3,153
Stand Size	code	0.00	0.00	0.00	44	0.01	-0.01	0.02	3,153
Regeneration Status	code	0.00	0.00	0.00	44	0.00	-0.01	0.00	3,153
Tree Density	code	0.00	0.00	0.00	44	0.00	0.00	0.01	3,153
Owner Class	code	0.00	0.00	0.00	44	0.14	-0.05	0.33	3,153
Owner Status	code	0.00	0.00	0.00	44	0.00	0.00	0.00	3,153
Regeneration Species	code	0.00	0.00	0.00	44	-0.55	-2.14	1.03	3,153
Stand Age	year	0.11	0.00	0.34	44	-0.55	-1.31	0.08	3,153
Disturbance 1	code	0.59	-1.14	2.91	44	-0.75	-1.20	-0.32	3,093
Disturbance Year 1	year	0.00	0.00	0.00	7	313.35	39.18	574.47	306
Disturbance 2	code	0.00	0.00	0.00	10	-2.37	-3.62	-1.03	556
Disturbance Year 2	year	0.00	0.00	0.00	1	-570.43	-1712.07	285.89	28
Disturbance 3	code	0.00	0.00	0.00	1	0.24	0.00	0.73	82
Disturbance Year 3	year					1.00	0.00	2.00	2
Treatment 1	code	0.00	0.00	0.00	44	0.00	-0.10	0.11	3,093

(Table VT-D continued on next page)

(Table VT-D continued)

Variable	Unit of measure	Vermont				All NRS States			
		Relative bias	95% CI limits		Number of observations	Relative bias	95% CI limits		Number of observations
			Lower	Upper			Lower	Upper	
Treatment Year 1	year	0.00	0.00	0.00	5	0.06	-0.02	0.12	199
Treatment 2	code	8.00	0.00	24.00	5	2.11	0.56	3.83	261
Treatment Year 2	year	0.00	0.00	0.00	1	-0.02	-0.21	0.13	52
Treatment 3	code	0.00	0.00	0.00	2	-0.78	-2.39	0.22	90
Treatment Year 3	year					-0.50	-1.50	0.00	4
Physiographic Class	code	0.00	-0.07	0.05	44	0.07	-0.03	0.22	3,153
Present Nonforest Use	code	-0.32	-1.05	0.11	57	0.04	-0.06	0.14	5,845
Number of conditions					57				5,845
Boundary Level									
Boundary Change	code	0.00	0.00	0.00	7	-0.05	-0.09	0.00	794
Constrasting Condition	cond	0.00	0.00	0.00	7	0.02	0.00	0.03	794
Left Azimuth	degree	-0.86	-2.14	0.00	7	1.18	-1.79	4.08	794
Corner Mapped	code	0.00	0.00	0.00	7	-0.01	-0.02	0.00	794
Corner Azimuth	degree					-0.21	-2.08	1.54	68
Corner Distance	foot					0.15	-0.14	0.55	68
Right Azimuth	degree	-1.00	-2.43	0.00	7	0.24	-2.87	3.42	794
Number of boundaries					7				794
Subplot Level									
Subplot Center Condition	code	0.00	0.00	0.00	152	0.00	0.00	0.00	9,484
Microplot Center Condition	code	0.00	0.00	0.00	152	0.00	0.00	0.00	9,484
Slope	percent	-0.84	-2.27	-0.01	149	0.06	-0.03	0.17	8,051
Aspect	degree	-0.12	-1.50	0.76	144	0.46	-0.28	1.11	7,838
Snow/Water Depth	foot	0.41	-0.35	1.18	150	-0.21	-0.29	-0.09	8,276
Number of subplots					152				9,484

(Table VT-D continued on next page)

(Table VT-D continued)

Variable	Unit of measure	Vermont				All NRS States			
		Relative bias	95% CI limits		Number of observations	Relative bias	95% CI limits		Number of observations
			Lower	Upper			Lower	Upper	
Tree Level									
DBH	inch	0.00	0.00	0.01	678	0.00	0.00	0.00	35,321
DRC	inch					0.03	-0.20	0.23	47
Azimuth	degree	-0.07	-0.16	0.03	779	-0.02	-0.08	0.05	39,772
Horizontal Distance	foot	0.00	-0.01	0.01	779	0.00	0.00	0.01	39,772
Species	code	0.00	-0.01	0.01	779	0.15	-0.07	0.38	40,057
Tree Genus	code	0.00	0.00	0.00	779	0.13	-0.04	0.36	40,013
Tree Status	code	0.00	-0.01	0.00	779	0.00	0.00	0.00	40,080
Rotten/Missing Cull	percent	0.34	0.07	0.63	511	-0.15	-0.19	-0.09	25,851
Total Length	foot	-2.52	-3.35	-1.70	511	0.30	0.14	0.44	25,599
Actual Length	foot	-3.41	-5.88	-1.08	79	-2.06	-3.23	-1.12	3,218
Compacted Crown Ratio	percent	-1.05	-1.69	-0.40	606	0.01	-0.10	0.12	32,802
Uncompacted Crown Ratio (P3)	percent					6.33	-4.83	12.67	15
Crown Class	code	0.07	0.03	0.11	606	-0.02	-0.02	-0.01	32,802
Decay Class	code	-0.01	-0.07	0.07	135	-0.03	-0.05	-0.01	5,989
Cause of Death	code	-0.07	-0.22	0.00	135	2.26	1.91	2.66	5,989
Condition	code	0.00	0.00	0.00	779	0.00	0.00	0.00	40,080
Crown Position	code					0.07	-0.32	0.36	14
Crown Light Exposure	code					-0.40	-1.07	0.23	15
Sapling Crown Vigor Class	code					0.00	0.00	0.00	1
Crown Density	percent					-0.36	-9.11	7.86	14
Crown Dieback	percent					-1.43	-3.21	-0.36	14
Transparency	percent					-4.29	-8.75	0.36	14
Tree Class	code	0.00	-0.02	0.03	680	0.00	0.00	0.01	35,658
Damage Agent 1	code	-2.90	-14.72	7.77	606	5.53	4.35	6.77	32,802
Damage Agent 2	code	27.90	-2.25	56.67	177	20.31	16.73	24.00	8,106
Tree Grade	code	0.06	-0.04	0.16	178	-0.02	-0.05	0.01	7,695
DBH-Live & Trees with Decay Code 1 or 2	inch	0.00	0.00	0.01	629	0.00	0.00	0.00	33,668
DBH-Trees with Decay Codes 3, 4 or 5	inch	0.00	-0.04	0.04	49	-0.02	-0.03	-0.01	1,648
Total Length-trees 40 feet and greater	foot	-1.37	-2.10	-0.62	419	0.82	0.68	0.95	20,300

(Table VT-D continued on next page)

(Table VT-D continued)

Variable	Unit of measure	Vermont				All NRS States			
		Relative bias	95% CI limits		Number of observations	Relative bias	95% CI limits		Number of observations
			Lower	Upper			Lower	Upper	
Total Length-trees less than 40 feet	foot	-7.76	-10.26	-5.19	92	-1.71	-2.41	-1.18	5,299
Total Length-trees less than 5 inches DBH	foot					-1.45	-2.88	0.23	288
Number of trees					779				40,057
Seedling Level									
Species	code	-0.01	-0.02	0.00	146	0.00	-0.01	0.00	8,215
Genus	code	-0.01	-0.02	0.00	146	0.00	-0.01	0.00	8,215
Seedling Count	number	-1.63	-7.13	2.66	146	-15.39	-20.09	-11.80	8,127
Seedling Count (coded)	number	0.03	-0.05	0.11	146	-0.01	-0.03	0.01	8,215
Number of microplots					57				3,349
Site Tree Level									
Condition List	code	0.00	0.00	0.00	13	1.28	-4.47	7.39	2,810
Diameter	inch	0.00	0.00	0.00	13	0.00	-0.01	0.01	2,810
Species	code	0.00	0.00	0.00	13	0.01	-0.07	0.08	2,810
Genus	code	0.00	0.00	0.00	13	0.03	0.00	0.09	2,810
Azimuth	degree	0.00	0.00	0.00	13	0.05	-0.37	0.41	2,810
Distance	foot	0.00	0.00	0.00	13	0.04	0.00	0.09	2,810
Total Length	foot	0.00	0.00	0.00	13	-0.06	-0.30	0.12	2,810
Diameter Age	year	0.00	0.00	0.00	13	0.04	-0.06	0.13	2,810
Number of site trees					13				2,810

Table VT-E.—FIA nonresponse by strata, Vermont, 2012

Owner and strata (um)		Number of plots selected	Sampled	Denied access	Hazardous	Other	Response Rate (%)
				number of plots			
National Forest:	5	108	106.5	0	1	0.5	98.61
	1, 2, 3, 4	20	20	0	0	0	100
Public:	5	26	26.0	0.0	0.0	0.0	100.0
	1, 2, 3, 4	11	10.75	0	0.25	0	97.73
	1, 2, 3, 4, 5	32	31	1	0	0	96.88
Private:							
	1	102	97.5	4.25	0.25	0	95.59
	2	36	31.75	4	0.25	0	88.19
	3	17	14	3	0	0	82.35
	4	60	51.75	8.25	0	0	86.25
	5	248	226.98	20.52	0.5	0	91.53
	1	125	114.75	10	0.25	0	91.8
	4	31	31	0	0	0	100
	5	234	213.5	20	0.5	0	91.24
	2, 3	22	20	2	0	0	90.91
Census Water:							
	1, 2, 3, 4, 5	14	14	0	0	0	100
	1, 2, 3, 4, 5	14	14	0	0	0	100
Total		1,100.0	1,023.5	73.0	3.0	1	98.4

Strata codes:

1: Canopy cover 0 - 5

2: Canopy cover 6 - 50

3: Canopy cover 51 - 65

4: Canopy cover 66 - 80

5: Canopy cover 81 - 100

Table NH-A.—Area and number of plots in each stratum used for stratification and estimation, New Hampshire, 2012

Unit code	Estimation unit description[a]	Canopy cover stratum[b]	Acres	Selected[c]	Office selected[d]	Field selected[e]	Field sampled[f]	Field sampled forested[g]	Total plots sampled for change[h]	Field sampled plots for change[i]	Not measured[j]
2	Inland Census Water Unit 2	Canopy cover 0 - 100	80,808	14	11	3	3	2	13	2	0
2	Private Unit 2	Canopy cover 0 - 5	197,668	27	8	19	17	14	27	14	2
2	Private Unit 2	Canopy cover 6 - 65	149,895	20	1	19	16	12	18	12	3
2	Private Unit 2	Canopy cover 66 - 80	240,309	32	1	31	29	29	30	28	2
2	Private Unit 2	Canopy cover 81 - 100	1,346,425	248	1	247	222	221	243	217	25
2	Public Unit 2	Canopy cover 0 - 100	175,135	33	1	32	32	32	31	30	0
2	White Mountain NF	Canopy cover 0 - 80	48,310	15	1	14	13	13	8	8	1
2	White Mountain NF	Canopy cover 81 - 100	688,544	199	0	199	197	197	110	110	2
3	Inland Census Water Unit 3	Canopy cover 0 - 100	120,237	20	15	5	5	4	20	4	0
3	Private Unit 3	Canopy cover 0 - 5	470,494	76	27	49	45	32	75	31	4
3	Private Unit 3	Canopy cover 51 - 65	108,474	16	1	15	14	13	16	13	1
3	Private Unit 3	Canopy cover 6 - 50	132,932	23	3	20	18	15	23	15	2
3	Private Unit 3	Canopy cover 66 - 80	255,029	47	1	46	40	38	46	38	6
3	Private Unit 3	Canopy cover 81 - 100	1,723,909	282	2	280	250	247	279	245	30
3	Public Unit 3	Canopy cover 0 - 100	202,322	39	1	38	37	37	39	37	1

a Estimation unit description: Description of the sub-population undergoing post-stratification. County groups are defined by one or more contiguous counties used for population estimation.

b Canopy cover stratum: A stratum within each estimation unit defined by partitioning the full range of percent canopy (0 - 100%) into 5 strata

c Selected: The number of plots selected when the sample was drawn

d Office selected: The number of plots determined to have no chance of being forested during a prefield interpretation procedure. These plots are withheld from field sampling and considered remotely sampled.

e Field selected: The number of plots determined to have some chance of being forested, or that were forested or non-sampled on a previous visit.

f Field sampled: The number of field selected plots that were successfully sampled in the field.

g Field sampled forested: The number of field selected plots that were successfully sampled in the field and found to intersect forest land.

h Total plots sampled for change: The number of plots included in the sample that were successfully sampled in the previous cycle.

i Field sampled plots for change: The number of plots included in the sample that were successfully sampled in the previous cycle and that were sent to the field for sampling.

j Not measured: The number of plots that were selected as part of the sample, but were completely non-sampled.

Table NH-B.—State-level estimates of major forest resource attributes and their sampling errors, New Hampshire, 2012

Item	State total	Sampling error
Growing stock on timberland	*million cubic feet*	*percent*
Volume	9,821.2	2.11
Average annual net growth	195.4	4.29
Average annual removals	112.9	11.79
Average annual mortality	83.1	5.83
Sawtimber on timberland	*million board feet*[a]	
Volume	30,648.2	2.88
Average annual net growth	867.9	3.98
Average annual removals	328.7	13.39
Average annual mortality	197.4	9.59
Area	*thousand acres*	
Forest land	4,833.3	0.98
Timberland	4638.2	1.14
Biomass (above-ground live trees and saplings)	*million dry tons*	
Forest land	285.1	1.76
Timberland	276.0	1.88

[a]International ¼-inch rule.

Table NH-C.—Compliance to measurement quality objectives (MQO) tolerances of variables based on blind check plots, New Hampshire, 2012

Variable	Tolerance	Objective (%)	New Hampshire		All NRS States	
			% of data within tolerance	Observations	% of data within tolerance	Observations
Plot Level						
National Variables						
Distance to Road	No Tolerance	90.0	95.7	46	81.9	2,265
Water on Plot	No Tolerance	90.0	95.7	46	86.2	2,265
Elevation	±50 feet	99.0	84.8	46	88.1	2,082
Latitude - decimal degrees	±0.0001 degree	99.0	100.0	46	100.0	2,085
Longitude - decimal degrees	±0.0001 degree	99.0	93.5	46	88.0	2,085
Number of plots				47		2,371
Condition Level						
Condition Status	No Tolerance	99.0	100.0	74	98.5	5,845
Reserve Status	No Tolerance	99.0	100.0	74	99.6	5,845
Owner Group	No Tolerance	99.0	100.0	64	97.5	3,153
Forest Type (Type)	No Tolerance	95.0	96.9	64	89.4	3,153
Forest Type (Group)	No Tolerance	99.0	98.4	64	94.0	3,153
Stand Size	No Tolerance	99.0	96.9	64	90.6	3,153
Regeneration Status	No Tolerance	99.0	98.4	64	98.4	3,153
Tree Density	No Tolerance	99.0	95.3	64	96.4	3,153
Owner Class	No Tolerance	99.0	98.4	64	94.9	3,153
Owner Status	No Tolerance	99.0	100.0	64	98.9	3,153
Regeneration Species	No Tolerance	99.0	98.4	64	98.4	3,153
Stand Age	±10 percent	95.0	98.4	64	86.0	3,153
Disturbance 1	No Tolerance	99.0	87.5	64	90.7	3,093
Disturbance Year 1	±1 year	99.0	100.0	4	89.2	306
Disturbance 2	No Tolerance	99.0	100.0	12	88.8	556
Disturbance Year 2	±1 year	99.0	.	.	78.6	28
Disturbance 3	No Tolerance	99.0	.	.	98.8	82
Disturbance Year 3	±1 year	99.0	.	.	50.0	2
Treatment 1	No Tolerance	99.0	95.3	64	97.8	3,093
Treatment Year 1	±1 year	99.0	100.0	6	97.0	199
Treatment 2	No Tolerance	99.0	88.9	9	84.7	261
Treatment Year 2	±1 year	99.0	100.0	1	98.1	52

(Table NH-C continued on next page)

(Table NH-C continued)

Variable	Tolerance	Objective (%)	New Hampshire		All NRS States	
			% of data within tolerance	Observations	% of data within tolerance	Observations
Treatment 3	No Tolerance	99.0	100.0	2	96.7	90
Treatment Year 3	±1 year	99.0	.	.	75.0	4
Physiographic Class	No Tolerance	80.0	93.8	64	84.6	3,153
Present Nonforest Use	No Tolerance	99.0	98.6	74	89.1	5,845
Number of conditions				74		5,845
Boundary Level						
Boundary Change	No Tolerance	99.0	100.0	7	82.2	794
Constrasting Condition	No Tolerance	99.0	100.0	7	95.3	794
Left Azimuth	±10 degrees	90.0	100.0	7	87.4	794
Corner Mapped	No Tolerance	90.0	100.0	7	95.5	794
Corner Azimuth	±10 degrees	90.0	100.0	1	94.1	68
Corner Distance	±1 foot	90.0	100.0	1	91.2	68
Right Azimuth	±10 degrees	90.0	100.0	7	87.2	794
Number of boundaries				7		794
Subplot Level						
Subplot Center Condition	No Tolerance	99.0	100.0	188	98.2	9,484
Microplot Center Condition	No Tolerance	99.0	100.0	188	98.0	9,484
Slope	±10 percent	90.0	98.3	173	98.5	8,051
Aspect	±10 degrees	90.0	95.3	169	93.7	7,838
Snow/Water Depth	±0.5 foot		90.0	180	69.3	8,276
Number of subplots				188		9,484
Tree Level						
DBH	±0.1 inch per 20 inches	95.0	98.3	990	95.6	35,321
DRC	±0.1 inch per 20 inches	95.0	.	.	72.3	47
Azimuth	±10 degrees	90.0	99.7	1,071	99.3	39,772
Horizontal Distance	±0.2 foot per 1.0 foot	90.0	98.7	1,071	98.7	39,772
Species	No Tolerance	95.0	99.7	1,071	98.4	40,057
Tree Genus	No Tolerance	99.0	99.7	1,071	99.6	40,013
Tree Status	No Tolerance	95.0	99.9	1,071	98.9	40,080

(Table NH-C continued on next page)

(Table NH-C continued)

Variable	Tolerance	Objective (%)	New Hampshire		All NRS States	
			% of data within tolerance	Observations	% of data within tolerance	Observations
Rotten/Missing Cull	±10 percent	90.0	99.5	659	98.3	25,851
Total Length	±10 percent	90.0	76.9	659	79.2	25,599
Actual Length	±10 percent	90.0	61.8	131	73.3	3,218
Compacted Crown Ratio	±10 percent	80.0	88.8	866	83.5	32,802
Uncompacted Crown Ratio (P3)	±10 percent	90.0	.	.	66.7	15
Crown Class	No Tolerance	85.0	83.4	866	81.7	32,802
Decay Class	±1 class	90.0	99.5	183	95.8	5,989
Cause of Death	No Tolerance	80.0	98.4	183	83.9	5,989
Condition	No Tolerance	99.0	100.0	1,071	98.4	40,080
Crown Position	No Tolerance		.	.	71.4	14
Crown Light Exposure	±1 class	85.0	.	.	73.3	15
Sapling Crown Vigor Class	No Tolerance	85.0	.	.	100.0	1
Crown Density	±10 percent	90.0	.	.	57.1	14
Crown Dieback	±10 percent	90.0	.	.	100.0	14
Transparency	±10 percent	90.0	.	.	71.4	14
Tree Class	No Tolerance	90.0	94.7	992	92.0	35,658
Damage Agent 1	No Tolerance	90.0	87.1	866	87.3	32,802
Damage Agent 2	No Tolerance	90.0	77.9	226	78.9	8,106
Tree Grade	No Tolerance	90.0	87.8	180	74.3	7,695
DBH-Live & Trees with Decay Code 1 or 2	±0.1 inch per 20 inches	95.0	98.1	887	95.4	33,668
DBH-Trees with Decay Codes 3, 4 or 5	±1 inch per 20 inches	95.0	100.0	103	99.5	1,648
Total Length-trees 40 feet and greater	±10 percent	90.0	78.7	483	81.0	20,300
Total Length-trees less than 40 feet	±10 percent	90.0	72.2	176	72.4	5,299
Total Length-trees less than 5 inches DBH	±10 percent	90.0	.	.	65.3	288
Number of trees				1,071		40,057
Seedling Level						
Species	No Tolerance	85.0	97.9	234	92.6	8,215
Genus	No Tolerance	90.0	99.6	234	96.7	8,215
Seedling Count	±20 percent	90.0	81.2	234	63.8	8,215
Seedling Count (coded)	No Tolerance	90.0	80.8	234	69.4	8,215
Number of microplots				77		3,349

(Table NH-C continued on next page)

(Table NH-C continued)

Variable	Tolerance	Objective (%)	New Hampshire		All NRS States	
			% of data within tolerance	Observations	% of data within tolerance	Observations
Site Tree Level						
Condition List	No Tolerance	99.0	100.0	18	93.4	2,810
Diameter	±0.1 inch per 20 inches	95.0	100.0	18	97.7	2,810
Species	No Tolerance	95.0	100.0	18	99.3	2,810
Genus	No Tolerance	99.0	100.0	18	100.0	2,810
Azimuth	±10 degrees	90.0	100.0	18	98.9	2,810
Distance	±5 feet	90.0	100.0	18	99.1	2,810
Total Length	±10 percent	90.0	94.4	18	98.4	2,810
Diameter Age	±5 years	95.0	88.9	18	97.7	2,810
Number of site trees				18		2,810

Table NH-D.—Observed relative bias values (Average [field crew—QA crew]) for measurement variables on blind check plots, New Hampshire, 2012

Variable	Unit of measure	New Hampshire				All NRS States			
			95% CI limits				95% CI limits		
		Relative bias	Lower	Upper	Number of observations	Relative bias	Lower	Upper	Number of observations
Plot Level									
National Variables									
Distance to Road	code	0.04	0.00	0.11	46	-0.02	-0.06	0.00	2,265
Water on Plot	code	0.00	-0.07	0.04	46	0.08	0.01	0.14	2,265
Elevation	foot	-3.65	-13.47	7.46	46	284.94	93.90	499.18	2,082
Latitude - decimal degrees	degree	0.00	0.00	0.00	46	0.00	0.00	0.00	2,085
Longitude - decimal degrees	degree	0.00	0.00	0.00	46	0.00	-0.01	0.00	2,085
Number of plots					47				2,371
Condition Level									
Condition Status	code	0.00	0.00	0.00	74	0.00	-0.01	0.00	5,845
Reserve Status	code	0.00	0.00	0.00	74	0.00	0.00	0.00	5,845
Owner Group	code	0.00	0.00	0.00	64	0.15	-0.03	0.33	3,153
Forest Type (Type)	code	-10.88	-38.44	0.38	64	2.27	-1.40	6.14	3,153
Forest Type (Group)	code	-10.94	-38.28	0.00	64	2.32	-1.47	6.17	3,153
Stand Size	code	0.00	-0.05	0.05	64	0.01	-0.01	0.02	3,153
Regeneration Status	code	-0.02	-0.05	0.00	64	0.00	-0.01	0.00	3,153
Tree Density	code	0.02	-0.03	0.06	64	0.00	0.00	0.01	3,153
Owner Class	code	-0.03	-0.13	0.00	64	0.14	-0.05	0.33	3,153
Owner Status	code	0.00	0.00	0.00	64	0.00	0.00	0.00	3,153
Regeneration Species	code	-10.31	-30.94	0.00	64	-0.55	-2.14	1.03	3,153
Stand Age	year	-0.05	-0.52	0.38	64	-0.55	-1.31	0.08	3,153
Disturbance 1	code	-1.25	-3.75	1.02	64	-0.75	-1.20	-0.32	3,093
Disturbance Year 1	year	0.00	0.00	0.00	4	313.35	39.18	574.47	306
Disturbance 2	code	0.00	0.00	0.00	12	-2.37	-3.62	-1.03	556
Disturbance Year 2	year					-570.43	-1712.07	285.89	28
Disturbance 3	code					0.24	0.00	0.73	82
Disturbance Year 3	year					1.00	0.00	2.00	2
Treatment 1	code	0.16	-0.31	0.63	64	0.00	-0.10	0.11	3,093

(Table NH-D continued on next page)

(Table NH-D continued)

Variable	Unit of measure	New Hampshire				All NRS States			
		Relative bias	95% CI limits		Number of observations	Relative bias	95% CI limits		Number of observations
			Lower	Upper			Lower	Upper	
Treatment Year 1	year	0.00	0.00	0.00	6	0.06	-0.02	0.12	199
Treatment 2	code	4.44	0.00	13.33	9	2.11	0.56	3.83	261
Treatment Year 2	year	0.00	0.00	0.00	1	-0.02	-0.21	0.13	52
Treatment 3	code	0.00	0.00	0.00	2	-0.78	-2.39	0.22	90
Treatment Year 3	year					-0.50	-1.50	0.00	4
Physiographic Class	code	0.06	0.02	0.13	64	0.07	-0.03	0.22	3,153
Present Nonforest Use	code	0.39	0.00	1.57	74	0.04	-0.06	0.14	5,845
Number of conditions					74				5,845
Boundary Level									
Boundary Change	code	0.00	0.00	0.00	7	-0.05	-0.09	0.00	794
Constrasting Condition	cond	0.00	0.00	0.00	7	0.02	0.00	0.03	794
Left Azimuth	degree	0.00	0.00	0.00	7	1.18	-1.79	4.08	794
Corner Mapped	code	0.00	0.00	0.00	7	-0.01	-0.02	0.00	794
Corner Azimuth	degree	0.00	0.00	0.00	1	-0.21	-2.08	1.54	68
Corner Distance	foot	0.00	0.00	0.00	1	0.15	-0.14	0.55	68
Right Azimuth	degree	0.00	0.00	0.00	7	0.24	-2.87	3.42	794
Number of boundaries					7				794
Subplot Level									
Subplot Center Condition	code	0.00	0.00	0.00	188	0.00	0.00	0.00	9,484
Microplot Center Condition	code	0.00	0.00	0.00	188	0.00	0.00	0.00	9,484
Slope	percent	0.25	-0.17	0.66	173	0.06	-0.03	0.17	8,051
Aspect	degree	3.04	-0.65	7.85	169	0.46	-0.28	1.11	7,838
Snow/Water Depth	foot	0.07	-0.23	0.35	180	-0.21	-0.29	-0.09	8,276
Number of subplots					188				9,484

(Table NH-D continued on next page)

(Table NH-D continued)

Variable	Unit of measure	New Hampshire				All NRS States			
		Relative bias	95% CI limits		Number of observations	Relative bias	95% CI limits		Number of observations
			Lower	Upper			Lower	Upper	
Tree Level									
DBH	inch	0.00	-0.01	0.01	990	0.00	0.00	0.00	35,321
DRC	inch					0.03	-0.20	0.23	47
Azimuth	degree	-0.02	-0.14	0.12	1,071	-0.02	-0.08	0.05	39,772
Horizontal Distance	foot	-0.01	-0.04	0.01	1,071	0.00	0.00	0.01	39,772
Species	code	-0.51	-2.01	0.23	1,071	0.15	-0.07	0.38	40,057
Tree Genus	code	-0.51	-2.01	0.23	1,071	0.13	-0.04	0.36	40,013
Tree Status	code	0.00	0.00	0.00	1,071	0.00	0.00	0.00	40,080
Rotten/Missing Cull	percent	-0.05	-0.22	0.11	659	-0.15	-0.19	-0.09	25,851
Total Length	foot	-0.74	-1.58	0.05	659	0.30	0.14	0.44	25,599
Actual Length	foot	-4.02	-7.02	-1.47	131	-2.06	-3.23	-1.12	3,218
Compacted Crown Ratio	percent	0.05	-0.54	0.63	866	0.01	-0.10	0.12	32,802
Uncompacted Crown Ratio (P3)	percent					6.33	-4.83	12.67	15
Crown Class	code	-0.02	-0.04	0.01	866	-0.02	-0.02	-0.01	32,802
Decay Class	code	0.06	-0.04	0.13	183	-0.03	-0.05	-0.01	5,989
Cause of Death	code	0.38	0.00	0.93	183	2.26	1.91	2.66	5,989
Condition	code	0.00	0.00	0.00	1,071	0.00	0.00	0.00	40,080
Crown Position	code					0.07	-0.32	0.36	14
Crown Light Exposure	code					-0.40	-1.07	0.23	15
Sapling Crown Vigor Class	code					0.00	0.00	0.00	1
Crown Density	percent					-0.36	-9.11	7.86	14
Crown Dieback	percent					-1.43	-3.21	-0.36	14
Transparency	percent					-4.29	-8.75	0.36	14
Tree Class	code	0.00	-0.02	0.02	992	0.00	0.00	0.01	35,658
Damage Agent 1	code	-2.69	-11.66	5.80	866	5.53	4.35	6.77	32,802
Damage Agent 2	code	7.75	-20.90	30.70	226	20.31	16.73	24.00	8,106
Tree Grade	code	-0.01	-0.09	0.08	180	-0.02	-0.05	0.01	7,695
DBH-Live & Trees with Decay Code 1 or 2	inch	0.00	-0.01	0.01	887	0.00	0.00	0.00	33,668
DBH-Trees with Decay Codes 3, 4 or 5	inch	0.00	-0.01	0.02	103	-0.02	-0.03	-0.01	1,648
Total Length-trees 40 feet and greater	foot	-0.24	-1.16	0.60	483	0.82	0.68	0.95	20,300

(Table NH-D continued on next page)

(Table NH-D continued)

Variable	Unit of measure	New Hampshire				All NRS States			
		Relative bias	95% CI limits		Number of observations	Relative bias	95% CI limits		Number of observations
			Lower	Upper			Lower	Upper	
Total Length-trees less than 40 feet	foot	-2.12	-3.63	-0.30	176	-1.71	-2.41	-1.18	5,299
Total Length-trees less than 5 inches DBH	foot					-1.45	-2.88	0.23	288
Number of trees					1,071				40,057
Seedling Level									
Species	code	0.01	0.00	0.03	234	0.00	-0.01	0.00	8,215
Genus	code	0.00	0.00	0.01	234	0.00	-0.01	0.00	8,215
Seedling Count	number	-3.31	-7.04	0.52	234	-15.39	-20.09	-11.80	8,127
Seedling Count (coded)	number	0.00	-0.08	0.07	234	-0.01	-0.03	0.01	8,215
Number of microplots					77				3,349
Site Tree Level									
Condition List	code	0.00	0.00	0.00	18	1.28	-4.47	7.39	2,810
Diameter	inch	0.01	0.00	0.02	18	0.00	-0.01	0.01	2,810
Species	code	0.00	0.00	0.00	18	0.01	-0.07	0.08	2,810
Genus	code	0.00	0.00	0.00	18	0.03	0.00	0.09	2,810
Azimuth	degree	0.11	0.00	0.28	18	0.05	-0.37	0.41	2,810
Distance	foot	-0.02	-0.07	0.00	18	0.04	0.00	0.09	2,810
Total Length	foot	-0.65	-2.28	0.00	18	-0.06	-0.30	0.12	2,810
Diameter Age	year	1.50	0.00	3.75	18	0.04	-0.06	0.13	2,810
Number of site trees					18				2,810

Table NH-E.—FIA nonresponse by strata, New Hampshire, 2012

Owner and strata (um)		Number of plots selected	Sampled	Denied access	Hazardous	Other	Response Rate (%)
				number of plots			
National Forest:	5	199	196	1	1.25	0.75	98.49
	1, 2, 3, 4	15	14	0	1	0	93.33
Public:	1, 2, 3, 4, 5	33	33	0	0	0	100
	1, 2, 3, 4, 5	39	37.75	1	0.25	0	96.79
Private:	1	27	25	2	0	0	92.59
	4	32	30	2	0	0	93.75
	5	248	222.75	25	0.25	0	89.82
	2, 3	20	17	3	0	0	85
	1	76	72	4	0	0	94.74
	2	23	21	2	0	0	91.3
	3	16	14.75	1	0.25	0	92.19
	4	47	40.75	6	0.25	0	86.7
	5	282	249.75	31.75	0.5	0	88.56
Census Water:	1, 2, 3, 4, 5	14	14	0	0	0	100
	1, 2, 3, 4, 5	20	19.75	0	0.25	0	98.75
Total		1,091.0	1,007.5	78.8	4.0	1	98.4

Strata codes:

1: Canopy cover 0 - 5

2: Canopy cover 6 - 50

3: Canopy cover 51 - 65

4: Canopy cover 66 - 80

5: Canopy cover 81 - 100

Table VT-1.—Percentage of area by land status, Vermont, 2012

Land status	Percentage of area
Accessible forest land	
Unreserved forest land	
Timberland	67.1
Unproductive	0.3
Total unreserved forest land	67.4
Reserved forest land	
Productive	1.6
Unproductive	- -
Total reserved forest land	1.6
All accessible forest land	69.0
Nonforest and other land	
Nonforest land	20.0
Water	
Census	3.4
Non-Census	0.3
All nonforest and other land	23.7
Nonsampled land	
Access denied	7.0
Hazardous conditions	0.2
Other	0.0
All land	100.0
Total area (thousands of acres)	6,153

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the percentage rounds to less than 0.1 percent. Columns and rows may not add to their totals due to rounding.

Table VT-2.—Area of forest land, in thousand acres, by owner class and forest-land status, Vermont, 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	344.0	- -	344.0	92.6	- -	92.6	436.5
Other Federal							
National Park Service	- -	- -	- -	9.9	- -	9.9	9.9
Fish and Wildlife Service	25.6	- -	25.6	- -	- -	- -	25.6
Department of Defense or Energy	13.5	- -	13.5	- -	- -	- -	13.5
Other Federal	5.4	- -	5.4	- -	- -	- -	5.4
State and local government							
State	379.8	6.6	386.4	- -	- -	- -	386.4
Local (county, municipal, etc.)	46.9	- -	46.9	- -	- -	- -	46.9
Private							
Undifferentiated private	3,660.1	11.4	3,671.5	- -	- -	- -	3,671.5
All owners	4,475.3	18.0	4,493.3	102.4	- -	102.4	4,595.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-3.—Area of forest land, in thousand acres, by forest-type group and productivity class, Vermont, 2012

Forest-type group	Site-productivity class (cubic feet/acre/year)							All classes
	0-19	20-49	50-84	85-119	120-164	165-224	225+	
White / red / jack pine group	- -	31.7	190.6	120.6	72.4	- -	- -	415.2
Spruce / fir group	10.9	47.8	92.1	142.4	34.7	- -	- -	327.9
Exotic softwoods group	- -	4.0	- -	6.3	5.4	- -	- -	15.8
Oak / pine group	- -	24.0	56.8	10.0	- -	- -	- -	90.8
Oak / hickory group	- -	68.9	56.5	8.0	7.0	- -	- -	140.4
Elm / ash / cottonwood group	7.1	32.0	20.9	13.6	- -	- -	- -	73.5
Maple / beech / birch group	- -	1,717.3	1,051.5	365.5	83.7	- -	- -	3,218.0
Aspen / birch group	- -	89.7	105.4	26.7	14.2	- -	- -	236.1
Other hardwoods group	- -	15.8	14.0	16.9	9.6	- -	- -	56.3
Nonstocked	- -	13.8	1.4	6.6	- -	- -	- -	21.8
All forest-type groups	18.0	2,045.0	1,589.1	716.5	227.1	- -	- -	4,595.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-4.—Area of forest land, in thousand acres, by forest-type group, ownership group, and forest-land status, Vermont, 2012

Forest-type group	Forest Service		Other Federal		State and local government		Undifferentiated private		All forest land
	Timber-land	Other forest land	Timber-land	Other forest land	Timber-land	Other forest land	Timber-land	Other forest land	
White / red / jack pine group	8.1	--	--	4.2	16.4	--	386.5	--	415.2
Spruce / fir group	24.2	11.3	--	--	30.8	6.6	250.5	4.3	327.9
Exotic softwoods group	--	--	--	--	--	--	15.8	--	15.8
Oak / pine group	--	--	2.5	--	--	--	88.2	--	90.8
Oak / hickory group	7.0	--	--	--	13.8	--	119.6	--	140.4
Elm / ash / cottonwood group	--	--	--	--	13.3	--	53.2	7.1	73.5
Maple / beech / birch group	290.9	72.2	42.0	5.6	329.6	--	2,477.6	--	3,218.0
Aspen / birch group	13.0	9.0	--	--	18.4	--	195.7	--	236.1
Other hardwoods group	0.8	--	--	--	4.3	--	51.2	--	56.3
Nonstocked	--	--	--	--	--	--	21.8	--	21.8
All forest-type groups	344.0	92.6	44.5	9.9	426.7	6.6	3,660.1	11.4	4,595.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-5.—Area of forest land, in thousand acres, by forest-type group and stand-size class, Vermont, 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Nonstocked	
White / red / jack pine group	389.9	21.0	4.3	- -	- -	415.2
Spruce / fir group	169.2	101.3	57.4	- -	- -	327.9
Exotic softwoods group	10.3	5.4	- -	- -	- -	15.8
Oak / pine group	71.3	19.5	- -	- -	- -	90.8
Oak / hickory group	120.6	12.1	7.7	- -	- -	140.4
Elm / ash / cottonwood group	31.9	32.2	9.4	- -	- -	73.5
Maple / beech / birch group	2,194.7	873.3	149.9	- -	- -	3,218.0
Aspen / birch group	50.3	96.5	89.2	- -	- -	236.1
Other hardwoods group	13.3	25.6	17.5	- -	- -	56.3
Nonstocked	- -	- -	- -	- -	21.8	21.8
All forest-type groups	3,051.6	1,186.8	335.5	- -	21.8	4,595.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-6.—Area of forest land, in thousand acres, by forest-type group and stand-age class, Vermont, 2012

Forest-type group	Non stocked	Stand-age class (years)											All classes
		1-20	21-40	41-60	61-80	81-100	101-120	121-140	141-160	161-180	181-200	201+	
White / red / jack pine group	--	4.3	7.3	71.4	208.9	86.7	17.2	19.4	--	--	--	--	415.2
Spruce / fir group	--	26.6	16.2	128.0	108.3	42.5	6.3	--	--	--	--	--	327.9
Exotic softwoods group	--	--	5.4	6.5	--	3.8	--	--	--	--	--	--	15.8
Oak / pine group	--	--	--	49.9	17.5	23.4	--	--	--	--	--	--	90.8
Oak / hickory group	--	3.6	--	34.0	56.0	37.8	9.0	--	--	--	--	--	140.4
Elm / ash / cottonwood group	--	9.4	1.4	23.5	33.6	--	5.6	--	--	--	--	--	73.5
Maple / beech / birch group	--	56.9	169.6	698.6	1,323.2	830.9	132.3	6.5	--	--	--	--	3,218.0
Aspen / birch group	--	26.9	56.6	70.0	59.7	15.8	7.0	--	--	--	--	--	236.1
Other hardwoods group	--	0.8	9.7	13.3	32.5	--	--	--	--	--	--	--	56.3
Nonstocked	21.8	--	--	--	--	--	--	--	--	--	--	--	21.8
All forest-type groups	21.8	128.5	266.3	1,095.2	1,839.7	1,040.9	177.4	25.9	--	--	--	--	4,595.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-7.—Area of forest land, in thousand acres, by forest-type group and stand origin, Vermont, 2012

Forest-type group	Stand origin		All forest land
	Natural stands	Artificial regeneration	
White / red / jack pine group	401.7	13.5	415.2
Spruce / fir group	323.7	4.2	327.9
Exotic softwoods group	11.7	4.0	15.8
Oak / pine group	89.2	1.6	90.8
Oak / hickory group	140.4	- -	140.4
Elm / ash / cottonwood group	73.5	- -	73.5
Maple / beech / birch group	3,218.0	- -	3,218.0
Aspen / birch group	236.1	- -	236.1
Other hardwoods group	56.3	- -	56.3
Nonstocked	21.8	- -	21.8
All forest-type groups	4,572.4	23.3	4,595.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-8.—Area of forest land, in thousand acres, by forest-type group and primary disturbance class, Vermont, 2012

Forest-type group	Disturbance class									All forest land
	None	Insects	Disease	Weather	Fire	Domestic animals	Wild animals	Human	Other	
White / red / jack pine group	406.6	--	--	--	--	8.6	--	--	--	415.2
Spruce / fir group	322.1	--	--	5.8	--	--	--	--	--	327.9
Exotic softwoods group	15.8	--	--	--	--	--	--	--	--	15.8
Oak / pine group	90.8	--	--	--	--	--	--	--	--	90.8
Oak / hickory group	126.3	--	14.0	--	--	--	--	--	--	140.4
Elm / ash / cottonwood group	68.4	--	--	5.1	--	--	--	--	--	73.5
Maple / beech / birch group	2,866.2	--	289.9	31.4	2.4	14.0	--	7.0	7.0	3,218.0
Aspen / birch group	225.0	--	--	--	--	11.1	--	--	--	236.1
Other hardwoods group	49.3	--	--	7.0	--	--	--	--	--	56.3
Nonstocked	17.7	--	--	--	--	--	4.1	--	--	21.8
All forest-type groups	4,188.3	--	303.9	49.3	2.4	33.7	4.1	7.0	7.0	4,595.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-9.—Area of timberland, in thousand acres, by forest-type group and stand-size class, Vermont, 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Nonstocked	
White / red / jack pine group	385.7	21.0	4.3	- -	- -	411.0
Spruce / fir group	163.5	95.6	46.5	- -	- -	305.6
Exotic softwoods group	10.3	5.4	- -	- -	- -	15.8
Oak / pine group	71.3	19.5	- -	- -	- -	90.8
Oak / hickory group	120.6	12.1	7.7	- -	- -	140.4
Elm / ash / cottonwood group	31.9	32.2	2.4	- -	- -	66.5
Maple / beech / birch group	2,133.7	857.9	148.6	- -	- -	3,140.1
Aspen / birch group	50.3	87.5	89.2	- -	- -	227.1
Other hardwoods group	13.3	25.6	17.5	- -	- -	56.3
Nonstocked	- -	- -	- -	- -	21.8	21.8
All forest-type groups	2,980.6	1,156.7	316.1	- -	21.8	4,475.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-10.—Number of live trees (at least 1 inch d.b.h./d.r.c.), in thousand trees, on forest land by species group and diameter class, Vermont 2012

Species group	Diameter class (inches)															All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups																
Eastern softwood species groups																
Other yellow pines	--	472	151	341	114	151	76	58	--	--	--	--	--	--	--	1,362
Eastern white and red pines	11,166	3,666	4,936	5,440	6,007	6,093	4,429	3,982	2,569	1,743	2,120	543	246	42	42	53,024
Spruce and balsam fir	429,754	106,626	52,665	29,638	17,549	9,043	4,521	1,634	1,230	219	122	54	--	--	--	653,056
Eastern hemlock	55,275	28,844	22,730	18,217	13,133	10,369	6,831	5,184	3,450	1,798	1,561	437	122	--	--	167,950
Other eastern softwoods	28,284	14,811	7,064	5,662	3,658	2,219	1,002	514	146	80	113	--	--	--	--	63,553
All softwoods	524,479	154,418	87,547	59,298	40,462	27,876	16,857	11,372	7,395	3,841	3,915	1,033	368	42	42	938,945
Hardwood species groups																
Eastern hardwood species groups																
Select white oaks	504	--	240	376	286	286	169	--	84	42	38	--	42	--	--	2,067
Select red oaks	7,134	6,098	1,616	1,528	1,580	1,879	1,700	1,184	1,209	617	568	193	42	34	40	25,422
Other white oaks	--	530	33	--	42	84	127	84	42	--	--	--	--	--	--	943
Other red oaks	--	--	--	84	127	--	84	--	--	--	--	--	--	--	--	295
Hickory	7,705	2,650	1,009	1,102	606	555	253	235	42	--	33	--	--	--	--	14,189
Yellow birch	119,777	38,882	16,778	12,480	10,228	6,919	5,253	2,990	1,486	688	484	301	62	--	--	216,328
Hard maple	239,595	77,280	43,221	37,392	29,079	19,289	13,769	8,254	4,514	2,312	2,074	1,221	169	113	275	478,557
Soft maple	139,856	59,606	34,281	27,827	18,626	14,234	8,362	4,772	1,662	738	787	40	94	33	--	310,917
Beech	371,297	74,499	26,710	17,854	9,883	6,408	2,843	1,566	894	460	368	38	19	--	--	512,840
Ash	96,357	27,173	12,072	7,393	5,824	4,449	2,808	2,203	988	549	266	42	118	122	--	160,365
Cottonwood and aspen	24,010	14,724	5,616	3,472	2,193	1,962	1,612	653	551	145	195	38	--	--	--	55,172
Basswood	3,528	959	653	476	514	370	350	199	72	69	--	--	--	--	--	7,189
Other eastern soft hardwoods	110,586	43,151	22,905	16,416	10,925	7,311	3,678	1,387	744	132	260	--	--	--	--	217,495
Other eastern hard hardwoods	25,060	5,784	5,115	4,167	2,321	2,206	842	312	84	192	42	--	--	--	--	46,125
Eastern noncommercial hardwoods	389,049	83,020	19,388	5,897	1,123	399	38	80	--	--	--	--	--	--	--	498,994
All hardwoods	1,534,457	434,356	189,635	136,465	93,356	66,351	41,888	23,919	12,372	5,945	5,115	1,874	547	302	316	2,546,898
All species groups	2,058,936	588,774	277,181	195,763	133,818	94,226	58,745	35,292	19,767	9,786	9,030	2,908	915	344	358	3,485,843

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the number of trees rounds to less than 1 thousand trees. Columns and rows may not add to their totals due to rounding.

Table VT-11.—Number of growing-stock trees (at least 5 inches d.b.h.), in thousand trees, on timberland by species group and diameter class, Vermont 2012

Species group	Diameter class (inches)													All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups														
Eastern softwood species groups														
Other yellow pines	151	151	76	38	--	--	--	--	--	--	--	--	--	416
Eastern white and red pines	4,155	4,810	5,142	5,290	4,166	3,686	2,279	1,595	1,822	505	246	42	--	33,738
Spruce and balsam fir	48,843	27,618	15,988	8,405	4,047	1,481	906	200	122	19	--	--	--	107,630
Eastern hemlock	19,001	15,630	11,049	8,476	5,883	4,587	3,060	1,552	1,135	289	42	--	--	70,704
Other eastern softwoods	6,461	4,745	2,899	1,738	816	409	146	--	33	--	--	--	--	17,246
All softwoods	78,611	52,955	35,154	23,946	14,913	10,163	6,390	3,347	3,112	813	288	42	--	229,735
Hardwood species groups														
Eastern hardwood species groups														
Select white oaks	165	376	244	253	169	--	84	42	38	--	--	--	--	1,371
Select red oaks	1,377	1,430	1,472	1,804	1,615	1,184	1,124	537	568	193	42	34	40	11,422
Other white oaks	33	--	42	84	127	84	42	--	--	--	--	--	--	413
Other red oaks	--	84	127	--	84	--	--	--	--	--	--	--	--	295
Hickory	807	962	574	480	253	235	42	--	--	--	--	--	--	3,352
Yellow birch	11,405	8,530	7,704	5,397	3,977	2,241	987	405	310	222	42	--	--	41,219
Hard maple	35,158	32,085	25,362	16,726	12,625	7,197	3,994	1,879	1,498	697	75	42	42	137,381
Soft maple	28,784	23,768	15,847	11,712	6,996	4,146	1,315	599	582	40	--	33	--	93,822
Beech	15,678	12,730	6,720	4,263	1,829	1,123	485	299	210	38	--	--	--	43,375
Ash	9,792	6,818	5,406	4,253	2,746	2,165	955	549	266	42	80	--	--	33,074
Cottonwood and aspen	5,303	3,152	2,055	1,886	1,430	653	551	103	195	--	--	--	--	15,328
Basswood	526	273	246	256	315	118	72	69	--	--	--	--	--	1,875
Other eastern soft hardwoods	17,143	12,375	8,686	6,426	2,851	1,173	664	100	104	--	--	--	--	49,521
Other eastern hard hardwoods	4,609	4,006	2,129	1,994	800	312	84	192	42	--	--	--	--	14,167
All hardwoods	130,779	106,590	76,612	55,534	35,818	20,631	10,399	4,774	3,813	1,233	239	109	83	446,615
All species groups	209,391	159,545	111,767	79,480	50,731	30,794	16,789	8,121	6,925	2,046	527	151	83	676,350

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the number of trees rounds to less than 1 thousand trees. Columns and rows may not add to their totals due to rounding.

Table VT-12.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, by owner class and forest-land status, Vermont, 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	877.1	--	877.1	220.8	--	220.8	1,097.8
Other Federal							
National Park Service	--	--	--	26.6	--	26.6	26.6
Fish and Wildlife Service	64.0	--	64.0	--	--	--	64.0
Department of Defense or Energy	34.3	--	34.3	--	--	--	34.3
Other Federal	23.3	--	23.3	--	--	--	23.3
State and local government							
State	870.4	0.2	870.6	--	--	--	870.6
Local (county, municipal, etc.)	112.1	--	112.1	--	--	--	112.1
Private							
Undifferentiated private	8,285.3	0.1	8,285.4	--	--	--	8,285.4
All owners	10,266.3	0.3	10,266.7	247.4	--	247.4	10,514.0

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-13.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by forest-type group and stand-size class, Vermont, 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Nonstocked	
White / red / jack pine group	1,388.6	56.9	0.8	- -	- -	1,446.3
Spruce / fir group	462.6	179.3	17.5	- -	- -	659.4
Exotic softwoods group	42.0	5.2	- -	- -	- -	47.2
Oak / pine group	206.1	28.2	- -	- -	- -	234.3
Oak / hickory group	320.8	15.3	2.3	- -	- -	338.4
Elm / ash / cottonwood group	76.0	48.2	1.5	- -	- -	125.7
Maple / beech / birch group	5,796.9	1,368.7	60.8	- -	- -	7,226.4
Aspen / birch group	158.4	162.0	26.2	- -	- -	346.6
Other hardwoods group	46.9	32.6	7.9	- -	- -	87.5
Nonstocked	- -	- -	- -	- -	2.2	2.2
All forest-type groups	8,498.2	1,896.6	117.1	- -	2.2	10,514.0

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-14.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, Vermont, 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	- -	8.4	8.4
Eastern white and red pines	13.5	12.1	23.3	930.8	979.8
Spruce and balsam fir	122.1	3.5	93.0	749.8	968.4
Eastern hemlock	47.8	24.1	82.4	1,000.1	1,154.4
Other eastern softwoods	0.7	- -	1.6	144.3	146.7
All softwoods	184.1	39.8	200.5	2,833.4	3,257.7
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	- -	29.9	29.9
Select red oaks	21.1	13.4	48.6	251.2	334.3
Other white oaks	1.7	- -	- -	7.9	9.6
Other red oaks	- -	- -	- -	4.2	4.2
Hickory	- -	- -	5.8	44.6	50.4
Yellow birch	178.3	9.5	98.3	473.7	759.7
Hard maple	303.3	35.7	305.4	1,824.0	2,468.4
Soft maple	151.8	10.8	103.9	1,030.0	1,296.4
Beech	120.5	24.4	75.0	385.2	605.0
Ash	51.3	1.4	41.4	475.7	569.9
Cottonwood and aspen	3.1	5.0	25.8	198.0	232.0
Basswood	0.4	3.7	8.0	31.7	43.9
Other eastern soft hardwoods	70.4	3.5	54.0	500.7	628.6
Other eastern hard hardwoods	5.2	- -	11.3	142.1	158.6
Eastern noncommercial hardwoods	6.6	0.9	4.7	53.1	65.3
All hardwoods	913.8	108.3	782.2	5,452.0	7,256.3
All species groups	1,097.8	148.1	982.7	8,285.4	10,514.0

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-15.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and diameter class, Vermont, 2012

Species group	Diameter class (inches)													All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups														
Eastern softwood species groups														
Other yellow pines	0	2	1	2	1	2	--	--	--	--	--	--	--	8
Eastern white and red pines	14	34	69	108	118	143	121	96	164	58	40	9	7	980
Spruce and balsam fir	136	188	206	169	122	60	57	14	10	5	--	--	--	968
Eastern hemlock	54	99	130	161	152	165	144	92	101	42	15	--	--	1,154
Other eastern softwoods	14	26	30	28	20	14	6	3	6	--	--	--	--	147
All softwoods	218	349	436	468	414	384	328	206	281	104	55	9	7	3,258
Hardwood species groups														
Eastern hardwood species groups														
Select white oaks	0	2	3	5	4	--	4	2	3	--	5	--	--	30
Select red oaks	4	10	17	33	44	44	56	36	44	23	7	6	10	334
Other white oaks	0	--	0	1	3	3	2	--	--	--	--	--	--	10
Other red oaks	--	0	1	--	2	--	--	--	--	--	--	--	--	4
Hickory	2	8	8	11	7	10	2	--	1	--	--	--	--	50
Yellow birch	40	74	114	126	133	103	61	35	35	31	8	--	--	760
Hard maple	113	241	353	365	382	310	217	135	150	118	20	16	48	2,468
Soft maple	76	167	210	256	220	173	76	42	57	4	8	7	--	1,296
Beech	55	106	111	114	70	54	41	25	24	5	1	--	--	605
Ash	32	50	74	92	81	89	51	37	22	5	18	20	--	570
Cottonwood and aspen	15	23	27	40	45	26	30	8	16	2	--	--	--	232
Basswood	2	3	5	7	11	8	4	5	--	--	--	--	--	44
Other eastern soft hardwoods	59	100	125	136	97	52	36	7	16	--	--	--	--	629
Other eastern hard hardwoods	13	27	26	40	22	12	4	11	4	--	--	--	--	159
Eastern noncommercial hardwoods	30	21	7	4	1	2	--	--	--	--	--	--	--	65
All hardwoods	440	832	1,085	1,231	1,121	885	584	343	373	187	66	49	58	7,256
All species groups	659	1,181	1,522	1,699	1,535	1,269	912	548	655	291	121	58	65	10,514

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-16.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by forest-type group and stand origin, Vermont, 2012

Forest-type group	Stand origin		All forest land
	Natural stands	Artificial regeneration	
White / red / jack pine group	1,382.1	64.1	1,446.3
Spruce / fir group	659.3	0.1	659.4
Exotic softwoods group	24.7	22.5	47.2
Oak / pine group	229.0	5.3	234.3
Oak / hickory group	338.4	- -	338.4
Elm / ash / cottonwood group	125.7	- -	125.7
Maple / beech / birch group	7,226.4	- -	7,226.4
Aspen / birch group	346.6	- -	346.6
Other hardwoods group	87.5	- -	87.5
Nonstocked	2.2	- -	2.2
All forest-type groups	10,422.0	92.0	10,514.0

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-17.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, on timberland by species group and diameter class, Vermont, 2012

Species group	Diameter class (inches)													All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups														
Eastern softwood species groups														
Other yellow pines	0	1	1	1	--	--	--	--	--	--	--	--	--	3
Eastern white and red pines	12	31	61	97	113	135	109	91	147	55	40	9	--	901
Spruce and balsam fir	128	177	190	159	111	55	44	13	10	2	--	--	--	889
Eastern hemlock	48	88	113	136	135	149	130	82	76	28	6	--	--	991
Other eastern softwoods	13	23	25	23	17	11	6	--	3	--	--	--	--	121
All softwoods	202	321	391	416	376	351	288	185	236	85	46	9	--	2,905
Hardwood species groups														
Eastern hardwood species groups														
Select white oaks	0	2	3	4	4	--	4	2	3	--	--	--	--	24
Select red oaks	4	9	17	33	42	44	53	33	44	23	7	6	10	324
Other white oaks	0	--	0	1	3	3	2	--	--	--	--	--	--	10
Other red oaks	--	0	1	--	2	--	--	--	--	--	--	--	--	4
Hickory	2	7	8	10	7	10	2	--	--	--	--	--	--	47
Yellow birch	29	55	90	102	107	82	45	23	25	27	7	--	--	591
Hard maple	98	216	317	329	356	280	198	120	122	79	11	8	10	2,144
Soft maple	68	148	187	221	193	157	63	36	45	4	--	7	--	1,131
Beech	37	82	85	85	53	45	27	19	18	5	--	--	--	457
Ash	28	47	70	88	80	88	50	37	22	5	14	--	--	528
Cottonwood and aspen	15	21	26	40	42	26	30	7	16	--	--	--	--	222
Basswood	2	2	3	5	10	5	4	5	--	--	--	--	--	36
Other eastern soft hardwoods	47	81	104	122	79	45	34	7	9	--	--	--	--	527
Other eastern hard hardwoods	12	27	25	37	21	12	4	11	4	--	--	--	--	152
All hardwoods	342	698	937	1,078	1,000	798	516	299	308	142	38	21	20	6,197
All species groups	544	1,019	1,328	1,493	1,376	1,148	804	484	544	227	84	30	20	9,101

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-18.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, on timberland by species group and ownership group, Vermont, 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	--	--	--	2.7	2.7
Eastern white and red pines	12.1	2.7	22.6	863.3	900.7
Spruce and balsam fir	84.0	3.5	88.3	713.0	888.9
Eastern hemlock	38.5	12.7	78.2	861.8	991.2
Other eastern softwoods	0.7	--	1.1	119.5	121.3
All softwoods	135.3	19.0	190.2	2,560.2	2,904.8
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	--	--	--	23.7	23.7
Select red oaks	21.1	13.4	48.0	241.4	323.9
Other white oaks	1.7	--	--	7.9	9.6
Other red oaks	--	--	--	4.2	4.2
Hickory	--	--	5.8	41.3	47.1
Yellow birch	114.2	7.5	82.4	387.2	591.4
Hard maple	240.1	33.8	270.6	1,599.4	2,144.0
Soft maple	102.5	10.6	94.3	923.3	1,130.8
Beech	65.6	19.2	60.7	311.1	456.7
Ash	48.8	1.4	39.5	438.6	528.3
Cottonwood and aspen	3.0	5.0	25.2	189.1	222.3
Basswood	0.4	2.4	7.3	26.0	36.1
Other eastern soft hardwoods	42.1	3.4	43.5	437.9	526.8
Other eastern hard hardwoods	5.2	--	11.3	135.1	151.6
All hardwoods	644.8	96.8	688.6	4,766.3	6,196.5
All species groups	780.2	115.8	878.8	7,326.5	9,101.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-19.—Net volume of sawtimber trees (International ¼-inch rule), in million board feet, on timberland by species group and diameter class, Vermont, 2012

Species group	Diameter class (inches)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups												
Eastern softwood species groups												
Other yellow pines	2	2	--	--	--	--	--	--	--	--	--	4
Eastern white and red pines	202	392	511	646	543	468	768	296	226	49	--	4,102
Spruce and balsam fir	641	663	513	272	219	65	60	12	--	--	--	2,444
Eastern hemlock	346	486	515	600	540	337	327	126	27	--	--	3,306
Other eastern softwoods	64	77	67	49	24	--	13	--	--	--	--	293
All softwoods	1,255	1,620	1,606	1,567	1,326	869	1,167	434	254	49	--	10,149
Hardwood species groups												
Eastern hardwood species groups												
Select white oaks	--	16	18	--	21	12	18	--	--	--	--	84
Select red oaks	--	109	172	201	253	164	234	129	42	39	65	1,409
Other white oaks	--	4	13	12	8	--	--	--	--	--	--	36
Other red oaks	--	--	10	--	--	--	--	--	--	--	--	10
Hickory	--	36	30	44	12	--	--	--	--	--	--	123
Yellow birch	--	373	453	371	221	119	135	155	40	--	--	1,867
Hard maple	--	1,172	1,475	1,290	967	607	674	467	65	53	68	6,838
Soft maple	--	715	769	693	303	183	237	22	--	44	--	2,966
Beech	--	301	226	214	140	102	98	31	--	--	--	1,112
Ash	--	307	332	415	245	193	124	27	84	--	--	1,727
Cottonwood and aspen	--	139	175	124	148	34	85	--	--	--	--	705
Basswood	--	18	43	26	19	27	--	--	--	--	--	132
Other eastern soft hardwoods	--	433	341	207	169	34	45	--	--	--	--	1,229
Other eastern hard hardwoods	--	131	87	55	20	56	21	--	--	--	--	371
All hardwoods	--	3,754	4,144	3,653	2,524	1,531	1,672	831	231	136	133	18,609
All species groups	1,255	5,374	5,751	5,220	3,850	2,400	2,840	1,265	485	185	133	28,758

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 million board feet. Columns and rows may not add to their totals due to rounding.

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Table VT-19a.—Net volume of sawtimber trees (Doyle rule), in million board feet, on timberland by species group and diameter class, Vermont, 2012

Species group	Diameter class (inches)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups												
Eastern softwood species groups												
Other yellow pines	1	1	--	--	--	--	--	--	--	--	--	2
Eastern white and red pines	70	187	306	446	417	401	690	283	251	55	--	3,106
Spruce and balsam fir	221	317	307	188	168	55	55	11	--	--	--	1,323
Eastern hemlock	120	233	309	415	415	289	286	120	30	--	--	2,216
Other eastern softwoods	22	37	40	34	18	--	12	--	--	--	--	163
All softwoods	434	775	963	1,083	1,019	745	1,042	414	281	55	--	6,810
Hardwood species groups												
Eastern hardwood species groups												
Select white oaks	--	7	9	--	14	8	15	--	--	--	--	53
Select red oaks	--	45	88	118	166	118	188	119	48	45	74	1,010
Other white oaks	--	2	7	7	5	--	--	--	--	--	--	20
Other red oaks	--	--	5	--	--	--	--	--	--	--	--	5
Hickory	--	15	16	26	8	--	--	--	--	--	--	64
Yellow birch	--	155	232	218	145	85	110	145	45	--	--	1,136
Hard maple	--	489	755	759	635	436	544	420	74	60	77	4,249
Soft maple	--	298	393	408	199	131	189	19	--	50	--	1,688
Beech	--	126	116	126	92	73	78	27	--	--	--	637
Ash	--	128	170	244	161	138	99	24	95	--	--	1,059
Cottonwood and aspen	--	58	89	73	97	24	67	--	--	--	--	409
Basswood	--	7	22	15	12	19	--	--	--	--	--	76
Other eastern soft hardwoods	--	181	175	122	111	24	36	--	--	--	--	649
Other eastern hard hardwoods	--	55	45	33	13	40	17	--	--	--	--	203
All hardwoods	--	1,566	2,121	2,148	1,658	1,099	1,343	753	262	154	151	11,257
All species groups	434	2,341	3,084	3,231	2,677	1,844	2,385	1,168	543	209	151	18,067

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 million board feet. Columns and rows may not add to their totals due to rounding.

Table VT-20.—Net volume of sawtimber trees, in million cubic feet, on timberland by species group and ownership group, Vermont, 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	- -	1.1	1.1
Eastern white and red pines	11.1	2.4	18.5	747.4	779.4
Spruce and balsam fir	51.1	2.9	50.4	407.0	511.4
Eastern hemlock	31.5	10.0	57.8	669.1	768.3
Other eastern softwoods	0.7	- -	0.4	73.9	74.9
All softwoods	94.4	15.2	127.1	1,898.4	2,135.2
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	- -	15.0	15.0
Select red oaks	17.2	11.2	35.2	180.9	244.5
Other white oaks	1.5	- -	- -	6.0	7.4
Other red oaks	- -	- -	- -	1.9	1.9
Hickory	- -	- -	3.5	20.3	23.8
Yellow birch	73.6	3.1	49.4	211.8	337.8
Hard maple	147.7	17.3	154.1	912.1	1,231.2
Soft maple	67.0	7.8	49.3	459.1	583.3
Beech	31.1	8.8	32.3	129.8	202.0
Ash	36.3	1.1	24.8	249.7	311.8
Cottonwood and aspen	1.0	4.1	16.5	107.9	129.6
Basswood	0.3	2.0	5.6	16.2	24.1
Other eastern soft hardwoods	19.4	2.3	15.4	196.4	233.5
Other eastern hard hardwoods	4.4	- -	4.9	60.4	69.8
All hardwoods	399.6	57.7	391.0	2,567.4	3,415.7
All species groups	494.1	72.9	518.1	4,465.8	5,550.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-21.—Average annual net growth of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, by owner class and forest-land status, Vermont, 2007 to 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	2.8	- -	2.8	1.8	- -	1.8	4.6
Other Federal							
National Park Service	- -	- -	- -	0.6	- -	0.6	0.6
Fish and Wildlife Service	0.9	- -	0.9	- -	- -	- -	0.9
Department of Defense or Energy	0.9	- -	0.9	- -	- -	- -	0.9
Other Federal	0.4	- -	0.4	- -	- -	- -	0.4
State and local government							
State	6.0	0.0	6.0	- -	- -	- -	6.0
Local (county, municipal, etc.)	1.6	- -	1.6	- -	- -	- -	1.6
Private							
Undifferentiated private	176.0	0.0	176.0	- -	- -	- -	176.0
All owners	188.7	0.0	188.7	2.4	- -	2.4	191.1

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-22.—Average annual net growth of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by forest-type group and stand-size class, Vermont, 2007 to 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Non stocked	
White / red / jack pine group	28.9	1.5	0.7	- -	- -	31.1
Spruce / fir group	8.5	4.2	1.2	- -	- -	13.9
Exotic softwoods group	1.1	0.3	- -	- -	- -	1.4
Oak / pine group	6.0	2.4	- -	- -	- -	8.4
Oak / hickory group	5.0	0.1	0.8	- -	- -	5.9
Elm / ash / cottonwood group	-1.2	2.4	0.2	- -	- -	1.5
Maple / beech / birch group	71.3	38.7	5.1	- -	- -	115.0
Aspen / birch group	3.9	3.8	4.5	- -	- -	12.2
Other hardwoods group	1.0	0.2	0.3	- -	- -	1.5
Nonstocked	- -	- -	- -	- -	0.1	0.1
All forest-type groups	124.6	53.7	12.7	- -	0.1	191.1

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-23.—Average annual net growth of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, Vermont, 2007 to 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	- -	0.1	0.1
Eastern white and red pines	0.3	0.6	0.3	27.2	28.4
Spruce and balsam fir	1.3	0.1	2.8	13.6	17.7
Eastern hemlock	0.5	0.7	1.7	21.7	24.6
Other eastern softwoods	0.0	0.0	0.1	5.1	5.2
All softwoods	2.1	1.5	4.8	67.7	76.0
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	0.0	- -	0.8	0.9
Select red oaks	- -	0.5	-1.9	7.9	6.5
Other white oaks	- -	- -	0.0	0.1	0.2
Other red oaks	- -	0.0	- -	0.0	0.0
Hickory	- -	- -	0.2	1.3	1.5
Yellow birch	2.1	0.4	0.3	9.4	12.2
Hard maple	1.8	0.7	3.2	32.2	37.9
Soft maple	0.4	0.2	-0.6	24.2	24.2
Beech	-2.7	0.6	0.4	5.1	3.4
Ash	1.2	0.0	1.0	14.8	17.0
Cottonwood and aspen	0.2	-1.0	0.2	6.7	6.2
Basswood	0.0	0.1	0.3	0.0	0.3
Other eastern soft hardwoods	-0.4	-0.3	-0.7	0.0	-1.4
Other eastern hard hardwoods	- -	0.0	0.4	5.0	5.5
Eastern noncommercial hardwoods	0.1	0.0	0.1	0.7	0.8
All hardwoods	2.6	1.4	2.8	108.3	115.1
All species groups	4.6	2.8	7.7	176.0	191.1

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-24.—Average annual net growth of growing-stock trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on timberland by species group and ownership group, Vermont, 2007 to 2012

Species group	Ownership group				All owners
	Forest Service	Other Federal	State and local government	Undifferentiated private	
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	--	--	--	0.1	0.1
Eastern white and red pines	0.3	0.4	0.2	23.3	24.2
Spruce and balsam fir	0.8	0.1	2.6	14.0	17.5
Eastern hemlock	0.3	0.5	1.5	18.8	21.1
Other eastern softwoods	0.0	0.0	0.1	4.8	4.9
All softwoods	1.4	1.0	4.4	61.0	67.8
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	--	0.0	--	0.5	0.5
Select red oaks	--	0.4	-1.1	6.7	6.0
Other white oaks	--	--	0.0	0.1	0.1
Other red oaks	--	0.0	--	0.0	0.0
Hickory	--	--	0.2	1.1	1.3
Yellow birch	1.6	0.3	1.0	8.7	11.6
Hard maple	2.0	0.6	3.6	32.7	38.8
Soft maple	0.8	0.2	0.4	22.6	24.0
Beech	-0.2	0.4	1.4	8.0	9.7
Ash	0.8	0.0	0.7	12.7	14.3
Cottonwood and aspen	0.2	-0.4	0.1	6.3	6.2
Basswood	0.0	0.0	0.2	0.3	0.5
Other eastern soft hardwoods	-0.3	-0.3	-0.9	1.1	-0.4
Other eastern hard hardwoods	--	0.0	0.4	4.3	4.7
All hardwoods	5.0	1.4	5.8	105.1	117.3
All species groups	6.4	2.4	10.2	166.1	185.1

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-25.—Average annual mortality of trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, by owner class and forest-land status, Vermont, 2007 to 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	12.9	--	12.9	1.7	--	1.7	14.6
Other Federal							
Fish and Wildlife Service	0.8	--	0.8	--	--	--	0.8
Department of Defense or Energy	0.4	--	0.4	--	--	--	0.4
State and local government							
State	13.2	--	13.2	--	--	--	13.2
Local (county, municipal, etc.)	2.1	--	2.1	--	--	--	2.1
Private							
Undifferentiated private	79.8	0.1	79.8	--	--	--	79.8
All owners	109.2	0.1	109.2	1.7	--	1.7	110.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-26.—Average annual mortality of trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by forest-type group and stand-size class, Vermont, 2007 to 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Non stocked	
White / red / jack pine group	8.7	0.1	0.0	- -	- -	8.8
Spruce / fir group	4.2	4.9	0.1	- -	- -	9.2
Exotic softwoods group	0.0	0.0	- -	- -	- -	0.0
Oak / pine group	0.8	0.1	- -	- -	- -	0.9
Oak / hickory group	2.0	- -	- -	- -	- -	2.0
Elm / ash / cottonwood group	2.2	0.9	0.2	- -	- -	3.3
Maple / beech / birch group	60.7	18.2	1.2	- -	- -	80.1
Aspen / birch group	1.9	2.7	0.7	- -	- -	5.3
Other hardwoods group	- -	1.0	0.0	- -	- -	1.1
All forest-type groups	80.7	27.9	2.3	- -	- -	110.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-27.—Average annual mortality of trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, Vermont, 2007 to 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	- -	0.1	0.1
Eastern white and red pines	- -	- -	- -	6.4	6.4
Spruce and balsam fir	2.4	- -	0.2	14.2	16.8
Eastern hemlock	0.3	- -	0.1	2.8	3.2
Other eastern softwoods	- -	- -	- -	1.2	1.2
All softwoods	2.8	- -	0.3	24.6	27.6
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	0.0	- -	- -	0.0
Select red oaks	- -	- -	3.0	0.2	3.1
Other red oaks	- -	0.0	- -	- -	0.0
Hickory	- -	- -	- -	0.2	0.2
Yellow birch	2.1	- -	1.8	5.2	9.1
Hard maple	1.8	- -	1.8	10.1	13.7
Soft maple	1.8	- -	3.2	7.3	12.4
Beech	4.3	0.1	2.4	9.1	15.9
Ash	0.0	- -	0.2	3.6	3.9
Cottonwood and aspen	0.0	0.6	0.6	3.3	4.5
Basswood	- -	- -	0.1	0.2	0.3
Other eastern soft hardwoods	1.3	0.4	2.0	13.9	17.6
Other eastern hard hardwoods	- -	- -	- -	0.1	0.1
Eastern noncommercial hardwoods	0.4	- -	0.1	1.9	2.5
All hardwoods	11.8	1.1	15.1	55.3	83.3
All species groups	14.6	1.1	15.3	79.8	110.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-28.—Average annual mortality of growing-stock trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on timberland by species group and ownership group, Vermont, 2007 to 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Eastern white and red pines	- -	- -	- -	4.7	4.7
Spruce and balsam fir	1.9	- -	0.2	12.4	14.4
Eastern hemlock	0.3	- -	0.1	2.2	2.6
Other eastern softwoods	- -	- -	- -	0.5	0.5
All softwoods	2.1	- -	0.3	19.7	22.1
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	0.0	- -	- -	0.0
Select red oaks	- -	- -	2.0	0.1	2.2
Other red oaks	- -	0.0	- -	- -	0.0
Hickory	- -	- -	- -	0.0	0.0
Yellow birch	1.0	- -	0.7	2.3	4.1
Hard maple	1.3	- -	1.2	6.4	8.9
Soft maple	1.1	- -	1.9	4.9	7.9
Beech	2.3	0.1	0.5	4.8	7.7
Ash	0.0	- -	0.2	3.1	3.3
Cottonwood and aspen	0.0	0.5	0.5	2.9	4.0
Basswood	- -	- -	0.1	0.2	0.2
Other eastern soft hardwoods	0.8	0.3	1.7	9.9	12.8
Other eastern hard hardwoods	- -	- -	- -	0.1	0.1
All hardwoods	6.6	1.0	8.8	34.8	51.2
All species groups	8.8	1.0	9.0	54.5	73.4

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-29.—Average annual removals of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, Vermont, 2007 to 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Eastern white and red pines	0.6	--	--	24.2	24.8
Spruce and balsam fir	0.1	--	--	17.7	17.8
Eastern hemlock	--	--	0.8	4.6	5.4
Other eastern softwoods	--	--	--	1.7	1.7
All softwoods	0.6	--	0.8	48.2	49.6
Hardwood species groups					
Eastern hardwood species groups					
Select red oaks	--	--	--	1.3	1.3
Yellow birch	--	0.0	--	5.1	5.1
Hard maple	0.1	--	--	13.8	14.0
Soft maple	0.5	--	0.6	8.9	10.0
Beech	--	--	--	1.1	1.1
Ash	--	--	--	2.6	2.6
Cottonwood and aspen	--	--	--	4.5	4.5
Basswood	--	--	--	0.1	0.1
Other eastern soft hardwoods	0.1	--	0.0	5.7	5.9
Other eastern hard hardwoods	--	--	--	1.5	1.5
Eastern noncommercial hardwoods	--	--	--	0.3	0.3
All hardwoods	0.8	0.0	0.6	45.0	46.4
All species groups	1.4	0.0	1.4	93.2	95.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-30.—Average annual removals of growing-stock trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on timberland by species group and ownership group, Vermont, 2007 to 2012

Species group	Ownership group				All owners
	Forest Service	Other Federal	State and local government	Undifferentiated private	
Softwood species groups					
Eastern softwood species groups					
Eastern white and red pines	0.5	--	--	21.0	21.5
Spruce and balsam fir	2.6	--	--	16.8	19.5
Eastern hemlock	0.0	--	0.7	3.1	3.8
Other eastern softwoods	--	--	--	1.4	1.4
All softwoods	3.2	--	0.7	42.4	46.3
Hardwood species groups					
Eastern hardwood species groups					
Select red oaks	--	--	--	1.2	1.2
Yellow birch	3.2	0.0	--	3.5	6.7
Hard maple	3.2	--	--	11.6	14.8
Soft maple	1.8	--	0.5	6.5	8.8
Beech	3.6	--	--	0.6	4.3
Ash	--	--	--	2.4	2.4
Cottonwood and aspen	--	--	--	4.1	4.1
Basswood	--	--	--	0.1	0.1
Other eastern soft hardwoods	1.2	--	0.0	4.9	6.1
Other eastern hard hardwoods	--	--	--	1.3	1.3
All hardwoods	13.0	0.0	0.5	36.1	49.7
All species groups	16.2	0.0	1.3	78.5	96.0

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table VT-31.—Aboveground dry weight of live trees (at least 1 inch d.b.h./d.r.c.), in thousand dry short tons, by owner class and forest-land status, Vermont, 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	25,261	--	25,261	6,261	--	6,261	31,522
Other Federal							
National Park Service	--	--	--	557	--	557	557
Fish and Wildlife Service	1,813	--	1,813	--	--	--	1,813
Department of Defense or Energy	976	--	976	--	--	--	976
Other Federal	529	--	529	--	--	--	529
State and local government							
State	24,691	26	24,717	--	--	--	24,717
Local (county, municipal, etc.)	2,967	--	2,967	--	--	--	2,967
Private							
Undifferentiated private	221,018	19	221,037	--	--	--	221,037
All owners	277,255	45	277,300	6,818	--	6,818	284,117

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the aboveground tree biomass rounds to less than 1 thousand dry tons. Columns and rows may not add to their totals due to rounding.

Table VT-32.—Aboveground dry weight of live trees (at least 1 inch d.b.h./d.r.c.), in thousand dry short tons, on forest land by species group and diameter class, Vermont, 2012

Species group	Diameter class (inches)															All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
Softwood species groups																
Eastern softwood species groups																
Other yellow pines	--	16	9	39	21	48	31	39	--	--	--	--	--	--	--	203
Eastern white and red pines	24	51	232	584	1,173	1,851	2,012	2,437	2,077	1,699	1,371	1,561	770	236	992	17,070
Spruce and balsam fir	1,035	1,569	2,158	2,936	3,204	2,634	1,933	955	934	219	49	125	92	--	--	17,843
Eastern hemlock	142	418	1,014	1,833	2,393	2,961	2,782	3,028	2,632	1,730	1,389	579	563	231	301	21,996
Other eastern softwoods	92	211	210	383	455	412	317	235	89	70	72	41	--	--	--	2,587
All softwoods	1,294	2,265	3,624	5,775	7,245	7,907	7,074	6,695	5,731	3,718	2,880	2,306	1,425	467	1,292	59,700
Hardwood species groups																
Eastern hardwood species groups																
Select white oaks	1	--	16	66	97	156	137	--	132	73	--	100	--	--	214	992
Select red oaks	26	184	138	315	553	1,054	1,368	1,376	1,776	1,154	866	545	255	452	717	10,778
Other white oaks	--	15	2	--	14	41	103	88	54	--	--	--	--	--	--	317
Other red oaks	--	--	--	13	45	--	71	--	--	--	--	--	--	--	--	129
Hickory	27	57	84	258	273	375	243	302	74	--	44	--	--	--	--	1,736
Yellow birch	523	1,081	1,245	2,215	3,304	3,590	3,809	2,915	1,848	1,068	470	540	170	685	221	23,685
Hard maple	1,103	2,524	3,647	7,452	10,603	10,906	11,371	9,167	6,441	4,026	2,499	2,282	2,310	1,595	2,871	78,796
Soft maple	639	1,634	2,079	4,372	5,386	6,444	5,531	4,338	1,934	1,079	990	510	101	--	409	35,448
Beech	1,168	1,659	1,692	3,111	3,207	3,256	2,035	1,542	1,202	741	437	305	143	--	34	20,534
Ash	305	667	975	1,454	2,108	2,577	2,292	2,503	1,454	1,049	511	129	131	--	1,286	17,440
Cottonwood and aspen	97	274	328	456	537	777	867	512	580	155	311	--	40	--	--	4,935
Basswood	8	20	32	47	89	119	182	135	64	85	--	--	--	--	--	781
Other eastern soft hardwoods	464	1,092	1,611	2,617	3,209	3,423	2,449	1,291	929	180	325	100	--	--	--	17,691
Other eastern hard hardwoods	96	217	428	848	814	1,216	661	357	122	342	--	116	--	--	--	5,218
Eastern noncommercial hardwoods	1,623	1,975	1,034	774	277	158	22	75	--	--	--	--	--	--	--	5,937
All hardwoods	6,081	11,397	13,311	23,999	30,518	34,090	31,140	24,600	16,611	9,954	6,453	4,627	3,151	2,733	5,753	224,418
All species groups	7,375	13,663	16,935	29,774	37,763	41,997	38,215	31,295	22,341	13,672	9,333	6,934	4,576	3,200	7,045	284,117

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the aboveground tree biomass rounds to less than 1 thousand dry tons. Columns and rows may not add to their totals due to rounding.

Table VT-54.—Area of forest land, in thousand acres, by inventory unit, county, and forest-land status, Vermont, 2012

Inventory unit and county	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Northern							
Caledonia	336.6	--	336.6	--	--	--	336.6
Essex	411.3	4.3	415.6	--	--	--	415.6
Lamoille	279.3	--	279.3	--	--	--	279.3
Orange	335.2	--	335.2	--	--	--	335.2
Orleans	358.3	6.6	364.9	--	--	--	364.9
Washington	317.1	--	317.1	--	--	--	317.1
Franklin/Grand Isle	288.0	--	288.0	--	--	--	288.0
Total	2,325.7	10.9	2,336.6	--	--	--	2,336.6
Southern							
Addison	237.1	--	237.1	36.5	--	36.5	273.6
Bennington	312.3	--	312.3	47.1	--	47.1	359.4
Chittenden	218.7	--	218.7	--	--	--	218.7
Rutland	477.4	7.1	484.5	3.2	--	3.2	487.7
Windham	440.0	--	440.0	--	--	--	440.0
Windsor	464.0	--	464.0	15.5	--	15.5	479.6
Total	2,149.6	7.1	2,156.7	102.4	--	102.4	2,259.1
All counties	4,475.3	18.0	4,493.3	102.4	--	102.4	4,595.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-55.— Area of forest land, in thousand acres, by inventory unit, county, ownership group, and forest-land status, Vermont, 2012

Inventory unit and county	Forest Service		Other Federal		State and local government		Undifferentiated private		All forest land
	Timber-land	Other forest land	Timber-land	Other forest land	Timber-land	Other forest land	Timber-land	Other forest land	
Northern									
Caledonia	--	--	--	--	44.5	--	292.1	--	336.6
Essex	--	--	22.3	--	64.2	--	324.8	4.3	415.6
Lamoille	--	--	--	--	57.3	--	222.0	--	279.3
Orange	--	--	--	--	22.9	--	312.3	--	335.2
Orleans	--	--	--	--	27.3	6.6	330.9	--	364.9
Washington	8.9	--	--	--	44.3	--	263.9	--	317.1
Franklin/Grand Isle	--	--	--	--	13.4	--	274.5	--	288.0
Total	8.9	--	22.3	--	273.9	6.6	2,020.6	4.3	2,336.6
Southern									
Addison	65.4	36.5	--	--	0.5	--	171.1	--	273.6
Bennington	122.1	47.1	--	--	10.3	--	179.8	--	359.4
Chittenden	--	--	11.0	--	38.7	--	169.1	--	218.7
Rutland	91.7	3.2	3.3	--	36.9	--	345.5	7.1	487.7
Windham	44.8	--	2.5	--	13.3	--	379.4	--	440.0
Windsor	11.0	5.6	5.4	9.9	53.0	--	394.6	--	479.6
Total	335.1	92.6	22.3	9.9	152.7	--	1,639.5	7.1	2,259.1
All counties	344.0	92.6	44.5	9.9	426.7	6.6	3,660.1	11.4	4,595.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-57.—Area of timberland, in thousand acres, by inventory unit, county, and stand-size class, Vermont, 2012

Inventory unit and county	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Nonstocked	
Northern						
Caledonia	190.8	95.7	44.2	- -	5.9	336.6
Essex	148.0	204.4	55.0	- -	3.9	411.3
Lamoille	183.8	87.1	8.3	- -	- -	279.3
Orange	246.6	76.3	12.4	- -	- -	335.2
Orleans	173.3	113.8	64.7	- -	6.6	358.3
Washington	209.2	86.7	21.2	- -	- -	317.1
Franklin/Grand Isle	151.0	112.2	24.8	- -	- -	288.0
Total	1,302.7	776.1	230.6	- -	16.4	2,325.7
Southern						
Addison	171.7	48.3	11.8	- -	5.4	237.1
Bennington	272.7	39.6	- -	- -	- -	312.3
Chittenden	144.6	54.9	19.3	- -	- -	218.7
Rutland	371.0	82.4	24.0	- -	- -	477.4
Windham	346.3	82.5	11.2	- -	- -	440.0
Windsor	371.7	73.0	19.3	- -	- -	464.0
Total	1,678.0	380.6	85.5	- -	5.4	2,149.6
All counties	2,980.6	1,156.7	316.1	- -	21.8	4,475.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-58.—Area of timberland, in thousand acres, by inventory unit, county, and stocking class, Vermont, 2012

Inventory unit and county	Stocking class of growing-stock trees					
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked	All classes
Northern						
Caledonia	5.9	66.8	127.8	121.9	14.2	336.6
Essex	4.0	44.1	212.4	141.8	8.9	411.3
Lamoille	1.4	33.2	100.1	138.2	6.3	279.3
Orange	6.3	58.4	124.9	144.0	1.6	335.2
Orleans	8.7	59.1	156.0	134.5	- -	358.3
Washington	- -	17.4	179.7	118.6	1.4	317.1
Franklin/Grand Isle	4.1	32.2	109.5	137.8	4.4	288.0
Total	30.4	311.3	1,010.2	936.8	36.9	2,325.7
Southern						
Addison	5.4	35.5	83.0	101.3	11.8	237.1
Bennington	- -	24.5	128.8	159.0	- -	312.3
Chittenden	12.7	30.5	61.8	102.2	11.6	218.7
Rutland	- -	34.5	214.2	221.6	7.1	477.4
Windham	- -	26.0	115.1	289.2	9.6	440.0
Windsor	0.6	41.5	177.4	232.9	11.7	464.0
Total	18.7	192.5	780.3	1,106.3	51.8	2,149.6
All counties	49.1	503.9	1,790.6	2,043.1	88.6	4,475.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table VT-59.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (International ¼-inch rule), on timberland by inventory unit, county, and major species group, Vermont, 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Caledonia	102.4	157.5	118.8	175.8	554.5	444.8	416.2	271.0	518.0	1,650.1
Essex	3.6	137.7	118.7	276.0	536.0	15.8	302.4	217.9	639.8	1,175.9
Lamoille	4.4	171.9	135.7	265.0	576.9	20.4	516.9	297.6	820.3	1,655.1
Orange	125.0	190.7	83.0	300.0	698.7	546.0	556.9	222.7	956.3	2,281.9
Orleans	38.5	155.2	111.6	223.7	529.0	182.0	396.3	237.5	523.0	1,338.9
Washington	63.8	179.9	151.9	232.8	628.4	300.9	559.3	337.0	685.2	1,882.4
Franklin/Grand Isle	29.1	141.8	150.1	206.9	527.9	127.4	418.7	287.9	641.6	1,475.6
Total	366.8	1,134.5	869.8	1,680.2	4,051.4	1,637.4	3,166.8	1,871.6	4,784.2	11,459.9
Southern										
Addison	49.9	66.0	106.5	268.8	491.2	201.9	210.6	315.0	878.4	1,605.9
Bennington	20.9	87.9	171.1	454.6	734.5	100.5	308.3	583.2	1,660.9	2,652.9
Chittenden	40.4	37.8	115.2	257.6	451.1	185.9	110.3	340.5	871.3	1,508.0
Rutland	119.8	203.9	193.9	563.3	1,080.9	534.3	683.7	572.7	1,856.6	3,647.3
Windham	147.7	295.7	274.8	488.2	1,206.4	704.7	990.3	815.0	1,625.2	4,135.1
Windsor	157.8	175.5	199.1	553.4	1,085.9	741.6	572.9	539.6	1,895.0	3,749.1
Total	536.6	866.9	1,060.6	2,585.9	5,050.0	2,468.9	2,876.1	3,165.9	8,787.4	17,298.3
All counties	903.3	2,001.5	1,930.4	4,266.1	9,101.3	4,106.2	6,042.8	5,037.5	13,571.7	28,758.2

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table VT-59a.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (Doyle rule), on timberland by inventory unit, county, and major species group, Vermont, 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Caledonia	102.4	157.5	118.8	175.8	554.5	327.7	225.2	151.8	288.3	993.0
Essex	3.6	137.7	118.7	276.0	536.0	13.7	160.7	109.8	336.4	620.6
Lamoille	4.4	171.9	135.7	265.0	576.9	13.5	301.3	157.9	484.5	957.2
Orange	125.0	190.7	83.0	300.0	698.7	379.1	343.8	126.7	614.3	1,464.0
Orleans	38.5	155.2	111.6	223.7	529.0	145.5	205.5	121.8	302.5	775.3
Washington	63.8	179.9	151.9	232.8	628.4	239.8	341.7	179.3	421.0	1,181.9
Franklin/Grand Isle	29.1	141.8	150.1	206.9	527.9	87.1	249.3	156.7	394.4	887.5
Total	366.8	1,134.5	869.8	1,680.2	4,051.4	1,206.6	1,827.4	1,004.0	2,841.4	6,879.4
Southern										
Addison	49.9	66.0	106.5	268.8	491.2	126.7	130.6	170.5	553.4	981.2
Bennington	20.9	87.9	171.1	454.6	734.5	82.0	195.3	370.4	1,083.9	1,731.7
Chittenden	40.4	37.8	115.2	257.6	451.1	134.3	69.9	193.9	534.3	932.4
Rutland	119.8	203.9	193.9	563.3	1,080.9	383.0	453.9	332.0	1,114.5	2,283.4
Windham	147.7	295.7	274.8	488.2	1,206.4	602.5	650.2	455.1	1,049.9	2,757.8
Windsor	157.8	175.5	199.1	553.4	1,085.9	572.7	374.5	297.9	1,256.0	2,501.1
Total	536.6	866.9	1,060.6	2,585.9	5,050.0	1,901.3	1,874.3	1,820.0	5,592.0	11,187.5
All counties	903.3	2,001.5	1,930.4	4,266.1	9,101.3	3,107.8	3,701.8	2,824.0	8,433.3	18,066.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table VT-60.—Average annual net growth of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (International ¼-inch rule), on timberland by inventory unit, county, and major species group, Vermont, 2007 to 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Caledonia	5.1	3.9	2.7	5.0	16.7	27.3	16.1	9.8	19.8	73.0
Essex	0.2	4.6	1.8	6.2	12.7	0.5	13.5	2.8	25.8	42.7
Lamoille	0.2	3.0	1.4	3.7	8.3	1.3	14.6	9.9	15.9	41.8
Orange	3.0	3.1	0.8	4.6	11.4	18.3	11.7	4.0	15.1	49.1
Orleans	1.6	4.5	2.5	6.6	15.2	9.1	18.7	10.9	18.8	57.4
Washington	2.5	3.6	2.7	5.4	14.2	13.8	16.9	12.3	24.8	67.7
Franklin/Grand Isle	1.1	3.2	5.3	6.0	15.7	6.7	14.2	14.4	26.0	61.3
Total	13.6	25.9	17.3	37.5	94.2	76.9	105.8	64.0	146.2	392.9
Southern										
Addison	1.2	1.4	1.2	4.5	8.4	7.3	5.5	4.6	20.0	37.3
Bennington	0.7	1.5	2.7	7.2	12.2	4.5	7.3	15.6	37.9	65.2
Chittenden	0.8	0.8	3.8	4.9	10.3	4.8	3.2	13.5	23.9	45.4
Rutland	3.5	2.7	1.1	10.8	18.1	19.7	13.3	8.2	50.6	91.9
Windham	2.3	7.4	1.7	10.9	22.4	14.5	32.0	15.7	53.6	115.8
Windsor	2.2	3.6	3.3	10.3	19.4	16.5	14.5	22.1	54.0	107.1
Total	10.7	17.6	13.9	48.6	90.8	67.4	75.8	79.7	240.0	462.8
All counties	24.3	43.5	31.2	86.1	185.1	144.3	181.6	143.7	386.2	855.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table VT-60a.—Average annual net growth of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees in million board feet (Doyle rule), on timberland by inventory unit, on timberland by Forest Survey Unit, county, and major species group, Vermont, 2007 to 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Caledonia	5.1	3.9	2.7	5.0	16.7	19.4	7.1	4.9	9.2	40.6
Essex	0.2	4.6	1.8	6.2	12.7	0.4	6.0	0.8	11.6	18.7
Lamoille	0.2	3.0	1.4	3.7	8.3	0.8	7.4	4.6	8.1	20.9
Orange	3.0	3.1	0.8	4.6	11.4	12.4	5.8	2.2	0.6	21.0
Orleans	1.6	4.5	2.5	6.6	15.2	6.7	8.5	4.8	8.9	28.9
Washington	2.5	3.6	2.7	5.4	14.2	9.9	8.6	5.7	13.1	37.2
Franklin/Grand Isle	1.1	3.2	5.3	6.0	15.7	4.4	7.1	7.1	13.5	32.0
Total	13.6	25.9	17.3	37.5	94.2	54.0	50.5	30.0	64.9	199.4
Southern										
Addison	1.2	1.4	1.2	4.5	8.4	4.5	2.7	2.1	10.0	19.3
Bennington	0.7	1.5	2.7	7.2	12.2	3.5	3.9	9.3	21.7	38.4
Chittenden	0.8	0.8	3.8	4.9	10.3	3.4	1.6	6.9	12.9	24.9
Rutland	3.5	2.7	1.1	10.8	18.1	13.1	8.1	4.7	26.2	52.1
Windham	2.3	7.4	1.7	10.9	22.4	12.4	17.7	8.0	31.9	70.0
Windsor	2.2	3.6	3.3	10.3	19.4	12.7	8.4	11.1	29.7	61.9
Total	10.7	17.6	13.9	48.6	90.8	49.7	42.3	42.2	132.4	266.6
All counties	24.3	43.5	31.2	86.1	185.1	103.7	92.8	72.1	197.3	466.0

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table VT-61.—Average annual removals of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (International ¼-inch rule), on timberland by inventory unit, county, and major species group, Vermont, 2007 to 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Caledonia	0.8	2.3	1.3	1.1	5.5	3.7	7.3	4.1	1.6	16.7
Essex	0.1	3.4	3.6	3.7	10.9	0.3	10.1	7.3	13.5	31.3
Lamoille	- -	0.7	0.8	0.8	2.4	- -	2.8	3.3	3.5	9.7
Orange	4.8	1.3	- -	1.3	7.5	21.7	3.9	- -	6.6	32.3
Orleans	3.7	7.3	0.9	3.5	15.4	18.4	24.0	2.1	15.6	60.1
Washington	- -	0.8	1.4	1.1	3.2	- -	2.7	5.2	5.4	13.2
Franklin/Grand Isle	3.4	0.6	0.2	0.1	4.3	17.3	2.5	- -	- -	19.8
Total	12.8	16.5	8.2	11.7	49.2	61.4	53.4	22.0	46.3	183.0
Southern										
Addison	- -	2.3	1.0	1.2	4.5	- -	4.5	0.8	3.6	8.9
Bennington	0.9	0.3	2.9	12.0	16.1	4.3	0.7	11.9	36.5	53.4
Chittenden	1.9	0.1	0.1	0.0	2.2	9.1	0.3	- -	- -	9.4
Rutland	0.6	4.8	0.6	3.3	9.3	2.5	14.3	- -	9.7	26.5
Windham	2.5	0.4	2.6	0.2	5.7	11.8	0.9	8.1	- -	20.8
Windsor	2.9	0.4	3.6	2.3	9.1	13.3	0.8	11.7	2.6	28.4
Total	8.7	8.3	10.8	19.0	46.8	40.9	21.5	32.6	52.4	147.4
All counties	21.5	24.7	19.1	30.7	96.0	102.3	74.9	54.6	98.7	330.5

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table VT-61a.—Average annual removals of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (Doyle rule), on timberland by inventory unit, county, and major species group, Vermont, 2007 to 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Caledonia	0.8	2.3	1.3	1.1	5.5	2.2	3.7	2.5	0.5	8.9
Essex	0.1	3.4	3.6	3.7	10.9	0.1	4.6	3.3	7.2	15.2
Lamoille	--	0.7	0.8	0.8	2.4	--	1.7	1.7	1.9	5.3
Orange	4.8	1.3	--	1.3	7.5	14.3	1.7	--	4.6	20.7
Orleans	3.7	7.3	0.9	3.5	15.4	14.1	12.0	1.4	11.6	39.0
Washington	--	0.8	1.4	1.1	3.2	--	1.1	2.7	4.1	8.0
Franklin/Grand Isle	3.4	0.6	0.2	0.1	4.3	14.4	1.6	--	--	16.0
Total	12.8	16.5	8.2	11.7	49.2	45.1	26.5	11.6	29.9	113.0
Southern										
Addison	--	2.3	1.0	1.2	4.5	--	2.0	0.3	2.6	4.9
Bennington	0.9	0.3	2.9	12.0	16.1	3.0	0.4	6.7	22.4	32.5
Chittenden	1.9	0.1	0.1	0.0	2.2	6.6	0.1	--	--	6.7
Rutland	0.6	4.8	0.6	3.3	9.3	1.2	8.1	--	5.1	14.4
Windham	2.5	0.4	2.6	0.2	5.7	9.7	0.4	6.1	--	16.3
Windsor	2.9	0.4	3.6	2.3	9.1	9.6	0.3	5.8	1.4	17.0
Total	8.7	8.3	10.8	19.0	46.8	30.2	11.3	18.9	31.4	91.9
All counties	21.5	24.7	19.1	30.7	96.0	75.3	37.8	30.5	61.3	204.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table VT-65.—Sampling errors, in percent, for net volume, average annual net growth, average annual removals, and average annual mortality on timberland, and forest and timberland area by inventory unit and county, Vermont, 2012

Inventory unit and county	Forest area	Timberland area	Growing stock				Sawtimber			
			Volume	Average annual net growth	Average annual removals	Average annual mortality	Volume	Average annual net growth	Average annual removals	Average annual mortality
Northern										
Caledonia	12.36	12.36	15.21	19.29	43.46	29.51	17.13	20.45	43.82	41.75
Essex	10.79	10.85	13.48	16.13	37.10	23.04	15.68	18.08	40.57	40.88
Lamoille	13.55	13.55	15.03	21.75	60.50	24.65	16.78	19.19	61.37	31.44
Orange	12.36	12.36	14.15	22.38	51.87	30.69	15.34	27.82	52.61	50.82
Orleans	11.76	11.83	14.02	15.83	40.55	24.11	16.05	17.75	41.51	33.61
Washington	12.45	12.45	14.28	16.78	43.50	27.88	15.67	16.02	46.99	36.04
Franklin/Grand Isle	13.31	13.31	15.91	16.58	63.57	28.14	18.13	18.37	66.50	47.75
Total	1.31	1.33	2.84	5.10	18.66	9.26	4.07	5.87	19.90	17.36
Southern										
Addison	13.33	14.57	18.35	27.47	78.66	31.31	20.14	26.37	76.20	39.34
Bennington	11.29	12.58	13.87	18.49	47.69	25.78	14.67	17.22	45.33	32.41
Chittenden	15.32	15.32	18.25	27.03	62.35	37.82	19.73	23.49	67.54	52.27
Rutland	9.78	9.89	11.49	16.64	45.47	21.17	12.57	15.64	50.12	25.47
Windham	10.19	10.19	11.41	18.00	43.85	19.24	12.33	15.21	47.34	24.43
Windsor	9.72	9.94	11.38	15.13	42.94	23.15	12.34	14.02	42.39	35.24
Total	1.43	1.81	3.01	6.35	22.09	8.92	3.74	5.18	21.63	12.27
All counties	0.94	1.09	2.08	4.06	14.44	6.44	2.77	3.88	14.65	10.13

Table NH-1.—Percentage of area by land status, New Hampshire, 2012

Land status	Percentage of area
Accessible forest land	
Unreserved forest land	
Timberland	71.3
Unproductive	0.3
Total unreserved forest land	71.6
Reserved forest land	
Productive	2.7
Unproductive	0.1
Total reserved forest land	2.9
All accessible forest land	74.5
Nonforest and other land	
Nonforest land	13.7
Water	
Census	3.1
Non-Census	0.5
All nonforest and other land	17.4
Nonsampled land	
Access denied	7.8
Hazardous conditions	0.3
Other	0.0
All land	100.0
Total area (thousands of acres)	5,940

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the percentage rounds to less than 0.1 percent. Columns and rows may not add to their totals due to rounding.

Table NH-2.—Area of forest land, in thousand acres, by owner class and forest-land status, New Hampshire, 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	611.8	3.5	615.2	159.9	7.0	166.9	782.1
Other national forest	3.5	--	3.5	--	--	--	3.5
Other Federal							
Fish and Wildlife Service	23.9	--	23.9	--	--	--	23.9
Department of Defense or Energy	32.9	--	32.9	--	--	--	32.9
State and local government							
State	211.5	--	211.5	--	--	--	211.5
Local (county, municipal, etc.)	225.9	5.3	231.2	5.3	--	5.3	236.5
Private							
Undifferentiated private	3,528.7	14.2	3,542.9	--	--	--	3,542.9
All owners	4,638.2	22.9	4,661.2	165.2	7.0	172.2	4,833.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-3.—Area of forest land, in thousand acres, by forest-type group and productivity class, New Hampshire, 2012

Forest-type group	Site-productivity class (cubic feet/acre/year)							All classes
	0-19	20-49	50-84	85-119	120-164	165-224	225+	
White / red / jack pine group	4.7	95.6	296.8	147.5	26.2	--	--	570.8
Spruce / fir group	24.5	129.7	193.5	84.9	39.3	--	--	472.0
Loblolly / shortleaf pine group	--	7.6	--	--	--	--	--	7.6
Oak / pine group	--	45.1	195.4	73.6	23.8	--	--	337.9
Oak / hickory group	--	208.6	208.8	62.4	19.0	--	--	498.8
Elm / ash / cottonwood group	0.7	66.1	22.4	4.0	--	--	--	93.1
Maple / beech / birch group	--	1,196.8	933.3	296.1	51.3	--	--	2,477.5
Aspen / birch group	--	143.8	104.5	56.1	9.4	--	--	313.9
Other hardwoods group	--	22.4	7.8	6.9	7.4	--	--	44.5
Exotic hardwoods group	--	4.0	--	--	--	--	--	4.0
Nonstocked	--	13.3	--	--	--	--	--	13.3
All forest-type groups	29.9	1,932.9	1,962.5	731.7	176.4	--	--	4,833.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-4.—Area of forest land, in thousand acres, by forest-type group, ownership group, and forest-land status, New Hampshire, 2012

Forest-type group	Forest Service		Other Federal		State and local government		Undifferentiated private		All forest land
	Timber-land	Other forest land	Timber-land	Other forest land	Timber-land	Other forest land	Timber-land	Other forest land	
White / red / jack pine group	16.6	--	11.9	--	78.0	--	459.6	4.7	570.8
Spruce / fir group	118.7	79.7	18.6	--	28.2	5.3	212.6	8.8	472.0
Loblolly / shortleaf pine group	--	--	--	--	--	--	7.6	--	7.6
Oak / pine group	--	--	--	--	33.0	--	304.9	--	337.9
Oak / hickory group	7.0	3.5	8.9	--	53.6	--	425.8	--	498.8
Elm / ash / cottonwood group	--	--	--	--	19.5	--	73.0	0.7	93.1
Maple / beech / birch group	395.5	43.9	16.0	--	198.7	--	1,823.4	--	2,477.5
Aspen / birch group	74.0	43.2	1.3	--	15.4	5.3	174.6	--	313.9
Other hardwoods group	3.5	--	--	--	5.3	--	35.6	--	44.5
Exotic hardwoods group	--	--	--	--	4.0	--	--	--	4.0
Nonstocked	--	--	--	--	1.7	--	11.6	--	13.3
All forest-type groups	615.3	170.3	56.8	--	437.4	10.6	3,528.7	14.2	4,833.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-5.—Area of forest land, in thousand acres, by forest-type group and stand-size class, New Hampshire, 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Nonstocked	
White / red / jack pine group	544.9	16.2	9.8	- -	- -	570.8
Spruce / fir group	121.1	208.6	142.3	- -	- -	472.0
Loblolly / shortleaf pine group	- -	6.0	1.5	- -	- -	7.6
Oak / pine group	285.4	46.5	6.0	- -	- -	337.9
Oak / hickory group	408.3	83.6	6.9	- -	- -	498.8
Elm / ash / cottonwood group	27.7	33.9	31.6	- -	- -	93.1
Maple / beech / birch group	1,508.4	792.6	176.6	- -	- -	2,477.5
Aspen / birch group	35.3	153.5	125.0	- -	- -	313.9
Other hardwoods group	23.4	7.3	13.8	- -	- -	44.5
Exotic hardwoods group	4.0	- -	- -	- -	- -	4.0
Nonstocked	- -	- -	- -	- -	13.3	13.3
All forest-type groups	2,958.4	1,348.1	513.5	- -	13.3	4,833.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-6.—Area of forest land, in thousand acres, by forest-type group and stand-age class, New Hampshire, 2012

Forest-type group	Non stocked	Stand-age class (years)											All classes
		1-20	21-40	41-60	61-80	81-100	101-120	121-140	141-160	161-180	181-200	201+	
White / red / jack pine group	--	14.5	1.3	124.9	255.4	151.4	22.4	0.9	--	--	--	--	570.8
Spruce / fir group	--	48.3	49.1	106.7	163.5	90.3	14.1	--	--	--	--	--	472.0
Loblolly / shortleaf pine group	--	1.5	--	6.0	--	--	--	--	--	--	--	--	7.6
Oak / pine group	--	--	17.8	117.8	151.2	43.1	7.9	--	--	--	--	--	337.9
Oak / hickory group	--	7.0	4.8	74.4	244.0	157.7	10.9	--	--	--	--	--	498.8
Elm / ash / cottonwood group	--	12.9	32.9	21.2	26.1	--	--	--	--	--	--	--	93.1
Maple / beech / birch group	--	124.7	83.7	634.4	1,007.1	465.7	152.3	9.6	--	--	--	--	2,477.5
Aspen / birch group	--	79.2	30.2	73.8	90.5	40.2	--	--	--	--	--	--	313.9
Other hardwoods group	--	11.7	--	8.9	23.9	--	--	--	--	--	--	--	44.5
Exotic hardwoods group	--	--	--	4.0	--	--	--	--	--	--	--	--	4.0
Nonstocked	13.3	--	--	--	--	--	--	--	--	--	--	--	13.3
All forest-type groups	13.3	299.9	219.9	1,172.2	1,961.8	948.4	207.5	10.4	--	--	--	--	4,833.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-7.—Area of forest land, in thousand acres, by forest-type group and stand origin, New Hampshire, 2012

Forest-type group	Stand origin		All forest land
	Natural stands	Artificial regeneration	
White / red / jack pine group	553.0	17.8	570.8
Spruce / fir group	472.0	- -	472.0
Loblolly / shortleaf pine group	7.6	- -	7.6
Oak / pine group	337.9	- -	337.9
Oak / hickory group	498.8	- -	498.8
Elm / ash / cottonwood group	88.3	4.9	93.1
Maple / beech / birch group	2,477.5	- -	2,477.5
Aspen / birch group	313.9	- -	313.9
Other hardwoods group	44.5	- -	44.5
Exotic hardwoods group	4.0	- -	4.0
Nonstocked	13.3	- -	13.3
All forest-type groups	4,810.6	22.7	4,833.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-8.—Area of forest land, in thousand acres, by forest-type group and primary disturbance class, New Hampshire, 2012

Forest-type group	Disturbance class									All forest land
	None	Insects	Disease	Weather	Fire	Domestic animals	Wild animals	Human	Other	
White / red / jack pine group	546.5	--	4.6	19.7	--	--	--	--	--	570.8
Spruce / fir group	464.9	--	--	7.0	--	--	--	--	--	472.0
Loblolly / shortleaf pine group	7.6	--	--	--	--	--	--	--	--	7.6
Oak / pine group	322.2	--	--	10.4	--	--	5.3	--	--	337.9
Oak / hickory group	483.2	--	12.4	--	--	--	--	--	3.2	498.8
Elm / ash / cottonwood group	84.5	--	--	4.0	--	--	4.7	--	--	93.1
Maple / beech / birch group	2,175.1	--	231.0	50.0	--	--	18.4	--	3.1	2,477.5
Aspen / birch group	306.8	--	--	3.5	--	--	--	--	3.5	313.9
Other hardwoods group	44.5	--	--	--	--	--	--	--	--	44.5
Exotic hardwoods group	--	--	--	--	--	--	--	--	4.0	4.0
Nonstocked	13.3	--	--	--	--	--	--	--	--	13.3
All forest-type groups	4,448.5	--	248.0	94.6	--	--	28.4	--	13.8	4,833.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-9.—Area of timberland, in thousand acres, by forest-type group and stand-size class, New Hampshire, 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Nonstocked	
White / red / jack pine group	540.2	16.2	9.8	- -	- -	566.1
Spruce / fir group	111.4	159.4	107.3	- -	- -	378.1
Loblolly / shortleaf pine group	- -	6.0	1.5	- -	- -	7.6
Oak / pine group	285.4	46.5	6.0	- -	- -	337.9
Oak / hickory group	404.8	83.6	6.9	- -	- -	495.3
Elm / ash / cottonwood group	27.7	33.9	30.9	- -	- -	92.5
Maple / beech / birch group	1,475.9	781.2	176.6	- -	- -	2,433.6
Aspen / birch group	32.6	111.3	121.5	- -	- -	265.4
Other hardwoods group	23.4	7.3	13.8	- -	- -	44.5
Exotic hardwoods group	4.0	- -	- -	- -	- -	4.0
Nonstocked	- -	- -	- -	- -	13.3	13.3
All forest-type groups	2,905.3	1,245.3	474.3	- -	13.3	4,638.2

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-10.—Number of live trees (at least 1 inch d.b.h./d.r.c.), in thousand trees, on forest land by species group and diameter class, New Hampshire 2012

Species group	Diameter class (inches)															All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups																
Eastern softwood species groups																
Other yellow pines	971	906	800	1,273	581	256	74	36	36	32	--	--	--	--	--	4,967
Eastern white and red pines	84,615	23,306	16,202	15,327	12,626	10,743	8,970	7,191	5,283	3,763	4,645	2,265	612	220	74	195,842
Spruce and balsam fir	814,603	198,983	84,688	44,436	21,140	8,843	3,927	1,466	631	279	69	--	--	--	--	1,179,066
Eastern hemlock	158,391	48,533	31,893	21,817	15,879	11,756	8,346	5,169	3,182	1,308	974	212	94	--	--	307,555
Other eastern softwoods	7,923	263	596	260	600	482	146	117	--	85	--	48	48	--	--	10,567
All softwoods	1,066,504	271,992	134,179	83,113	50,826	32,081	21,463	13,979	9,133	5,467	5,689	2,525	753	220	74	1,697,997
Hardwood species groups																
Eastern hardwood species groups																
Select white oaks	4,369	1,035	1,487	1,069	941	849	526	291	197	121	--	--	--	117	--	11,001
Select red oaks	47,680	20,562	11,902	11,105	10,368	10,212	8,398	5,147	3,019	1,582	1,015	242	--	83	114	131,430
Other white oaks	--	--	125	--	38	--	--	--	--	--	--	--	--	--	--	162
Other red oaks	7,552	469	689	951	1,241	1,081	1,133	556	192	83	74	--	--	--	--	14,019
Hickory	517	1,509	779	789	498	130	121	39	--	--	--	--	--	--	--	4,383
Yellow birch	152,373	44,834	22,465	14,624	9,740	6,253	3,429	1,979	1,376	724	358	105	85	21	--	258,365
Hard maple	118,655	32,135	19,880	14,023	12,441	8,139	4,342	2,957	1,101	702	482	84	84	42	42	215,110
Soft maple	271,013	109,397	61,889	46,266	31,575	17,776	9,713	5,010	1,629	658	750	111	161	42	--	555,989
Beech	317,369	73,970	25,117	13,544	8,106	4,726	2,516	1,742	915	576	204	83	--	--	--	448,868
Tupelo and blackgum	517	--	120	39	79	42	42	--	--	--	--	--	--	--	--	839
Ash	54,407	13,949	8,661	5,852	4,100	3,116	1,793	1,181	402	137	161	21	38	42	--	93,859
Cottonwood and aspen	43,950	12,478	4,013	3,405	2,017	1,764	1,391	832	351	147	78	--	--	--	--	70,426
Basswood	2,266	--	539	515	371	166	153	77	42	--	--	--	--	--	36	4,166
Other eastern soft hardwoods	155,768	58,648	29,620	21,151	13,086	6,123	2,741	981	368	189	--	--	--	--	--	288,675
Other eastern hard hardwoods	37,884	10,596	6,751	5,054	2,618	1,100	820	247	115	86	--	--	--	--	--	65,271
Eastern noncommercial hardwoods	356,160	43,362	7,246	1,746	363	142	21	--	--	--	--	--	--	--	--	409,040
All hardwoods	1,570,481	422,946	201,282	140,132	97,580	61,618	37,140	21,041	9,707	5,005	3,121	645	367	346	192	2,571,604
All species groups	2,636,985	694,937	335,461	223,245	148,406	93,699	58,603	35,020	18,840	10,472	8,810	3,170	1,120	566	266	4,269,601

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the number of trees rounds to less than 1 thousand trees. Columns and rows may not add to their totals due to rounding.

Table NH-11.—Number of growing-stock trees (at least 5 inches d.b.h.), in thousand trees, on timberland by species group and diameter class, New Hampshire 2012

Species group	Diameter class (inches)													All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups														
Eastern softwood species groups														
Other yellow pines	800	1,273	581	220	74	36	36	32	--	--	--	--	--	3,053
Eastern white and red pines	15,224	14,472	11,784	10,545	8,854	6,864	5,105	3,726	4,571	2,265	612	220	--	84,244
Spruce and balsam fir	67,953	36,084	17,158	7,262	3,521	1,279	520	237	69	--	--	--	--	134,083
Eastern hemlock	27,371	19,045	13,525	9,316	6,839	4,411	2,680	1,025	777	129	94	--	--	85,211
Other eastern softwoods	408	260	564	482	110	117	--	--	--	--	--	--	--	1,940
All softwoods	111,756	71,135	43,612	27,826	19,398	12,706	8,342	5,021	5,418	2,394	706	220	--	308,533
Hardwood species groups														
Eastern hardwood species groups														
Select white oaks	1,287	947	858	811	418	291	197	121	--	--	--	117	--	5,047
Select red oaks	10,959	10,531	9,823	9,882	8,345	4,970	2,940	1,540	853	197	--	42	36	60,119
Other white oaks	125	--	--	--	--	--	--	--	--	--	--	--	--	125
Other red oaks	476	867	1,209	1,039	1,133	556	192	83	74	--	--	--	--	5,629
Hickory	779	709	498	89	121	39	--	--	--	--	--	--	--	2,235
Yellow birch	15,872	10,587	7,153	4,702	2,709	1,423	951	541	220	36	--	21	--	44,215
Hard maple	17,028	12,571	11,087	7,384	4,227	2,409	902	602	382	84	36	42	--	56,753
Soft maple	50,348	39,643	26,791	15,227	7,791	4,199	1,472	313	493	63	119	42	--	146,503
Beech	16,597	10,038	5,973	3,222	1,596	1,273	595	325	125	42	--	--	--	39,786
Tupelo and blackgum	81	39	79	42	42	--	--	--	--	--	--	--	--	282
Ash	7,841	5,435	3,817	2,935	1,725	1,103	342	137	119	21	38	42	--	23,554
Cottonwood and aspen	3,837	3,231	2,017	1,689	1,354	779	283	147	78	--	--	--	--	13,415
Basswood	498	515	371	125	153	38	42	--	--	--	--	--	--	1,742
Other eastern soft hardwoods	19,601	15,248	10,639	5,124	2,456	834	315	120	--	--	--	--	--	54,335
Other eastern hard hardwoods	6,394	4,740	2,465	1,058	787	247	115	86	--	--	--	--	--	15,892
All hardwoods	151,723	115,102	82,778	53,330	32,858	18,160	8,344	4,015	2,345	443	193	305	36	469,632
All species groups	263,479	186,236	126,390	81,156	52,256	30,867	16,686	9,036	7,762	2,837	899	525	36	778,165

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the number of trees rounds to less than 1 thousand trees. Columns and rows may not add to their totals due to rounding.

Table NH-12.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, by owner class and forest-land status, New Hampshire, 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	1,443.8	--	1,443.8	330.3	2.6	332.9	1,776.7
Other national forest	7.1	--	7.1	--	--	--	7.1
Other Federal							
Fish and Wildlife Service	26.5	--	26.5	--	--	--	26.5
Department of Defense or Energy	105.6	--	105.6	--	--	--	105.6
State and local government							
State	449.5	--	449.5	--	--	--	449.5
Local (county, municipal, etc.)	585.1	--	585.1	8.5	--	8.5	593.6
Private							
Undifferentiated private	8,052.0	12.3	8,064.2	--	--	--	8,064.2
All owners	10,669.5	12.3	10,681.8	338.8	2.6	341.4	11,023.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-13.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by forest-type group and stand-size class, New Hampshire, 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Nonstocked	
White / red / jack pine group	1,975.0	29.6	0.0	--	--	2,004.7
Spruce / fir group	300.7	408.4	52.7	--	--	761.7
Loblolly / shortleaf pine group	--	17.1	--	--	--	17.1
Oak / pine group	870.4	101.1	3.6	--	--	975.2
Oak / hickory group	1,226.1	134.1	--	--	--	1,360.1
Elm / ash / cottonwood group	44.0	42.3	5.4	--	--	91.7
Maple / beech / birch group	3,991.2	1,323.7	48.9	--	--	5,363.7
Aspen / birch group	78.7	290.9	37.5	--	--	407.1
Other hardwoods group	29.4	4.4	7.0	--	--	40.9
Exotic hardwoods group	1.0	--	--	--	--	1.0
Nonstocked	--	--	--	--	0.2	0.2
All forest-type groups	8,516.5	2,351.5	155.1	--	0.2	11,023.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-14.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, New Hampshire, 2012

Species group	Ownership group				All owners
	Forest Service	Other Federal	State and local government	Undifferentiated private	
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	2.3	23.2	25.6
Eastern white and red pines	13.7	40.5	264.2	1,907.6	2,226.0
Spruce and balsam fir	540.4	17.3	75.7	489.7	1,123.0
Eastern hemlock	127.3	10.6	105.5	921.2	1,164.6
Other eastern softwoods	0.5	- -	1.8	29.5	31.8
All softwoods	681.8	68.4	449.6	3,371.3	4,571.1
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	14.0	84.6	98.6
Select red oaks	38.0	28.3	142.2	963.7	1,172.2
Other white oaks	- -	- -	- -	0.4	0.4
Other red oaks	- -	2.3	11.6	97.0	110.8
Hickory	- -	- -	4.5	17.7	22.1
Yellow birch	247.2	1.7	56.7	340.5	646.1
Hard maple	192.0	2.7	71.9	576.1	842.7
Soft maple	195.5	12.9	148.1	1,347.5	1,704.0
Beech	171.3	1.1	24.2	327.9	524.4
Tupelo and blackgum	- -	- -	- -	3.5	3.5
Ash	24.2	4.5	40.3	262.0	331.0
Cottonwood and aspen	10.2	1.1	18.8	176.8	206.9
Basswood	0.3	1.1	3.3	21.6	26.2
Other eastern soft hardwoods	215.8	2.3	42.8	341.2	602.1
Other eastern hard hardwoods	0.4	5.6	13.3	120.3	139.6
Eastern noncommercial hardwoods	7.2	- -	2.1	12.2	21.5
All hardwoods	1,102.0	63.7	593.5	4,693.0	6,452.2
All species groups	1,783.8	132.1	1,043.1	8,064.2	11,023.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-15.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and diameter class, New Hampshire, 2012

Species group	Diameter class (inches)													All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups														
Eastern softwood species groups														
Other yellow pines	2	8	6	4	2	1	2	2	--	--	--	--	--	26
Eastern white and red pines	45	96	145	197	235	257	248	218	364	261	98	44	17	2,226
Spruce and balsam fir	217	284	246	163	106	53	31	18	6	--	--	--	--	1,123
Eastern hemlock	72	114	153	180	191	161	133	67	62	20	13	--	--	1,165
Other eastern softwoods	1	1	6	7	3	3	--	3	--	3	4	--	--	32
All softwoods	338	503	556	551	537	475	413	307	432	284	115	44	17	4,571
Hardwood species groups														
Eastern hardwood species groups														
Select white oaks	4	6	10	15	12	10	9	7	--	--	--	26	--	99
Select red oaks	28	70	118	186	219	184	138	94	75	25	--	12	24	1,172
Other white oaks	0	--	0	--	--	--	--	--	--	--	--	--	--	0
Other red oaks	2	5	14	20	30	20	9	5	6	--	--	--	--	111
Hickory	2	5	7	2	4	2	--	--	--	--	--	--	--	22
Yellow birch	55	88	106	110	88	67	56	38	25	6	5	4	--	646
Hard maple	50	90	151	156	121	107	53	43	36	9	10	8	8	843
Soft maple	134	278	352	320	246	175	76	32	49	12	22	8	--	1,704
Beech	50	80	92	85	66	61	40	28	14	9	--	--	--	524
Tupelo and blackgum	0	0	1	1	1	--	--	--	--	--	--	--	--	3
Ash	24	40	51	63	51	44	21	9	11	2	6	8	--	331
Cottonwood and aspen	11	23	26	36	42	34	17	10	7	--	--	--	--	207
Basswood	1	4	4	3	5	2	2	--	--	--	--	--	5	26
Other eastern soft hardwoods	74	132	150	112	73	36	16	9	--	--	--	--	--	602
Other eastern hard hardwoods	17	33	29	20	21	9	5	5	--	--	--	--	--	140
Eastern noncommercial hardwoods	11	6	3	2	0	--	--	--	--	--	--	--	--	22
All hardwoods	465	862	1,114	1,129	978	751	442	281	222	63	42	66	37	6,452
All species groups	803	1,364	1,671	1,680	1,515	1,226	855	589	653	347	157	110	54	11,023

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-16.—Net volume of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by forest-type group and stand origin, New Hampshire, 2012

Forest-type group	Stand origin		All forest land
	Natural stands	Artificial regeneration	
White / red / jack pine group	1,941.0	63.7	2,004.7
Spruce / fir group	761.7	- -	761.7
Loblolly / shortleaf pine group	17.1	- -	17.1
Oak / pine group	975.2	- -	975.2
Oak / hickory group	1,360.1	- -	1,360.1
Elm / ash / cottonwood group	89.0	2.7	91.7
Maple / beech / birch group	5,363.7	- -	5,363.7
Aspen / birch group	407.1	- -	407.1
Other hardwoods group	40.9	- -	40.9
Exotic hardwoods group	1.0	- -	1.0
Nonstocked	0.2	- -	0.2
All forest-type groups	10,956.9	66.4	11,023.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-17.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, on timberland by species group and diameter class, New Hampshire, 2012

Species group	Diameter class (inches)													All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups														
Eastern softwood species groups														
Other yellow pines	2	8	6	4	2	1	2	2	--	--	--	--	--	25
Eastern white and red pines	43	92	138	194	233	249	242	217	360	261	98	44	--	2,173
Spruce and balsam fir	175	232	203	135	96	47	26	15	6	--	--	--	--	935
Eastern hemlock	64	103	134	149	162	142	116	55	52	13	13	--	--	1,003
Other eastern softwoods	1	1	6	7	2	3	--	--	--	--	--	--	--	21
All softwoods	286	437	487	489	495	441	385	288	418	274	111	44	--	4,156
Hardwood species groups														
Eastern hardwood species groups														
Select white oaks	3	6	9	14	10	10	9	7	--	--	--	26	--	95
Select red oaks	27	67	113	181	218	179	135	91	64	21	--	8	10	1,115
Other white oaks	0	--	--	--	--	--	--	--	--	--	--	--	--	0
Other red oaks	1	5	14	20	30	20	9	5	6	--	--	--	--	109
Hickory	2	5	7	2	4	2	--	--	--	--	--	--	--	21
Yellow birch	41	67	82	86	72	53	43	32	17	4	--	4	--	501
Hard maple	45	84	139	145	119	92	45	39	30	9	6	8	--	762
Soft maple	118	250	311	286	211	155	69	18	37	8	19	8	--	1,489
Beech	37	64	74	64	48	51	30	21	12	5	--	--	--	405
Tupelo and blackgum	0	0	1	1	1	--	--	--	--	--	--	--	--	3
Ash	23	38	49	61	50	43	18	9	10	2	6	8	--	317
Cottonwood and aspen	11	22	26	34	41	32	14	10	7	--	--	--	--	198
Basswood	1	4	4	3	5	2	2	--	--	--	--	--	--	20
Other eastern soft hardwoods	52	99	126	96	66	32	14	7	--	--	--	--	--	493
Other eastern hard hardwoods	17	31	28	19	21	9	5	5	--	--	--	--	--	135
All hardwoods	380	742	985	1,012	895	678	394	244	183	49	31	62	10	5,665
All species groups	666	1,178	1,472	1,502	1,390	1,120	779	532	601	323	142	107	10	9,821

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-18.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, on timberland by species group and ownership group, New Hampshire, 2012

Species group	Ownership group				All owners
	Forest Service	Other Federal	State and local government	Undifferentiated private	
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	2.3	22.8	25.2
Eastern white and red pines	12.5	32.5	262.4	1,865.4	2,172.8
Spruce and balsam fir	370.1	17.3	73.3	474.7	935.4
Eastern hemlock	114.2	9.6	92.7	786.1	1,002.6
Other eastern softwoods	0.4	- -	1.8	18.3	20.5
All softwoods	497.3	59.4	432.5	3,167.3	4,156.5
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	13.2	81.7	94.9
Select red oaks	27.7	28.3	136.2	923.1	1,115.3
Other white oaks	- -	- -	- -	0.3	0.3
Other red oaks	- -	2.3	11.4	95.6	109.2
Hickory	- -	- -	4.5	16.8	21.3
Yellow birch	177.8	1.7	42.5	278.6	500.5
Hard maple	166.0	2.6	67.2	526.0	761.9
Soft maple	156.3	11.9	135.1	1,186.0	1,489.3
Beech	120.3	1.0	17.5	266.6	405.5
Tupelo and blackgum	- -	- -	- -	3.4	3.4
Ash	22.9	4.4	36.8	252.7	316.8
Cottonwood and aspen	8.2	1.1	14.7	174.0	198.0
Basswood	0.3	1.1	3.3	15.8	20.4
Other eastern soft hardwoods	143.8	1.6	36.0	311.5	492.8
Other eastern hard hardwoods	0.4	5.6	12.9	116.1	135.1
All hardwoods	823.7	61.6	531.2	4,248.2	5,664.7
All species groups	1,320.9	121.0	963.8	7,415.5	9,821.2

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-19.—Net volume of sawtimber trees (International ¼-inch rule), in million board feet, on timberland by species group and diameter class, New Hampshire, 2012

Species group	Diameter class (inches)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups												
Eastern softwood species groups												
Other yellow pines	19	15	7	5	7	8	--	--	--	--	--	59
Eastern white and red pines	454	788	1,055	1,191	1,201	1,128	1,878	1,417	552	253	--	9,917
Spruce and balsam fir	683	562	443	228	131	77	31	--	--	--	--	2,155
Eastern hemlock	405	533	623	569	482	226	226	59	58	--	--	3,181
Other eastern softwoods	16	24	10	13	--	--	--	--	--	--	--	63
All softwoods	1,576	1,921	2,138	2,007	1,821	1,438	2,135	1,476	610	253	--	15,375
Hardwood species groups												
Eastern hardwood species groups												
Select white oaks	--	51	42	47	45	37	--	--	--	169	--	391
Select red oaks	--	613	888	799	644	459	338	118	--	52	68	3,980
Other red oaks	--	68	120	90	45	26	29	--	--	--	--	379
Hickory	--	6	16	7	--	--	--	--	--	--	--	29
Yellow birch	--	310	307	243	210	163	86	21	--	25	--	1,364
Hard maple	--	519	490	422	217	198	167	53	39	51	--	2,157
Soft maple	--	921	833	678	327	91	190	43	112	49	--	3,244
Beech	--	228	207	241	155	112	67	30	--	--	--	1,040
Tupelo and blackgum	--	2	6	--	--	--	--	--	--	--	--	7
Ash	--	211	211	197	89	45	56	14	36	53	--	912
Cottonwood and aspen	--	118	174	149	68	54	38	--	--	--	--	601
Basswood	--	9	20	8	10	--	--	--	--	--	--	47
Other eastern soft hardwoods	--	341	279	147	71	34	--	--	--	--	--	872
Other eastern hard hardwoods	--	68	88	42	24	26	--	--	--	--	--	249
All hardwoods	--	3,465	3,682	3,070	1,907	1,244	971	279	187	399	68	15,273
All species groups	1,576	5,386	5,820	5,077	3,728	2,682	3,106	1,755	797	652	68	30,648

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 million board feet. Columns and rows may not add to their totals due to rounding.

Table NH-19a.—Net volume of sawtimber trees (Doyle rule), in million board feet, on timberland by species group and diameter class, New Hampshire, 2012

Species group	Diameter class (inches)											All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-24.9	25.0-28.9	29.0-32.9	33.0-36.9	37.0+	
Softwood species groups												
Eastern softwood species groups												
Other yellow pines	7	7	4	3	5	7	--	--	--	--	--	33
Eastern white and red pines	157	377	632	823	923	967	1,676	1,362	611	280	--	7,808
Spruce and balsam fir	236	269	266	158	101	66	27	--	--	--	--	1,121
Eastern hemlock	140	255	373	393	370	193	198	57	65	--	--	2,044
Other eastern softwoods	5	12	6	9	--	--	--	--	--	--	--	32
All softwoods	545	918	1,281	1,386	1,400	1,232	1,901	1,418	675	280	--	11,038
Hardwood species groups												
Eastern hardwood species groups												
Select white oaks	--	21	22	28	29	27	--	--	--	191	--	318
Select red oaks	--	256	455	470	423	330	269	103	--	59	77	2,442
Other red oaks	--	29	62	53	29	18	23	--	--	--	--	214
Hickory	--	3	8	4	--	--	--	--	--	--	--	15
Yellow birch	--	129	157	143	138	117	67	18	--	28	--	798
Hard maple	--	217	251	248	143	142	135	48	44	58	--	1,285
Soft maple	--	384	426	399	215	65	151	40	127	56	--	1,863
Beech	--	95	106	142	102	81	55	26	--	--	--	606
Tupelo and blackgum	--	1	3	--	--	--	--	--	--	--	--	4
Ash	--	88	108	116	59	32	45	12	41	61	--	561
Cottonwood and aspen	--	49	89	88	45	39	31	--	--	--	--	340
Basswood	--	4	10	5	7	--	--	--	--	--	--	25
Other eastern soft hardwoods	--	142	143	86	47	24	--	--	--	--	--	443
Other eastern hard hardwoods	--	28	45	25	16	18	--	--	--	--	--	133
All hardwoods	--	1,446	1,884	1,806	1,253	894	775	248	212	452	77	9,047
All species groups	545	2,364	3,165	3,192	2,652	2,126	2,677	1,666	887	733	77	20,084

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the volume rounds to less than 1 million board feet. Columns and rows may not add to their totals due to rounding.

Table NH-20.—Net volume of sawtimber trees, in million cubic feet, on timberland by species group and ownership group, New Hampshire, 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	2.1	11.4	13.5
Eastern white and red pines	11.4	29.5	221.4	1,596.9	1,859.2
Spruce and balsam fir	170.5	12.8	37.6	239.1	460.1
Eastern hemlock	93.9	7.9	68.7	576.2	746.7
Other eastern softwoods	0.3	- -	1.6	13.9	15.8
All softwoods	276.1	50.2	331.4	2,437.5	3,095.3
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	8.3	54.6	62.9
Select red oaks	20.7	21.6	92.0	606.3	740.7
Other red oaks	- -	1.9	8.3	62.0	72.2
Hickory	- -	- -	2.7	3.1	5.8
Yellow birch	101.7	1.2	17.7	129.7	250.3
Hard maple	94.3	0.5	32.4	270.0	397.2
Soft maple	84.4	5.0	62.6	493.9	645.9
Beech	66.3	- -	5.2	115.2	186.6
Tupelo and blackgum	- -	- -	- -	1.5	1.5
Ash	14.7	3.4	22.0	126.7	166.8
Cottonwood and aspen	3.1	- -	5.0	103.6	111.7
Basswood	- -	0.7	2.4	5.8	9.0
Other eastern soft hardwoods	52.8	- -	10.1	106.0	168.9
Other eastern hard hardwoods	0.3	2.0	4.1	40.9	47.3
All hardwoods	438.2	36.3	272.7	2,119.4	2,866.7
All species groups	714.3	86.5	604.2	4,557.0	5,961.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-21.—Average annual net growth of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, by owner class and forest-land status, New Hampshire, 2007 to 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	12.8	0.2	12.9	2.5	- -	2.5	15.4
Other Federal							
Fish and Wildlife Service	-0.9	- -	-0.9	- -	- -	- -	-0.9
Department of Defense or Energy	0.6	- -	0.6	- -	- -	- -	0.6
State and local government							
State	9.7	- -	9.7	0.3	- -	0.3	10.1
Local (county, municipal, etc.)	6.7	- -	6.7	0.4	- -	0.4	7.0
Other non-Federal lands	0.6	- -	0.6	- -	- -	- -	0.6
Private							
Undifferentiated private	165.3	0.0	165.3	- -	- -	- -	165.3
All owners	194.8	0.2	195.0	3.2	- -	3.2	198.2

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-22.—Average annual net growth of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by forest-type group and stand-size class, New Hampshire, 2007 to 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Non stocked	
White / red / jack pine group	34.6	1.1	0.0	- -	- -	35.8
Spruce / fir group	0.2	5.0	1.8	- -	- -	7.0
Loblolly / shortleaf pine group	0.0	0.2	- -	- -	- -	0.2
Oak / pine group	19.1	4.5	0.8	- -	- -	24.5
Oak / hickory group	19.7	4.5	0.5	- -	- -	24.7
Elm / ash / cottonwood group	0.6	0.5	0.3	- -	- -	1.4
Maple / beech / birch group	46.7	41.7	5.8	- -	- -	94.3
Aspen / birch group	1.6	4.2	2.9	- -	- -	8.8
Other hardwoods group	1.0	-0.2	0.7	- -	- -	1.4
Nonstocked	- -	- -	- -	- -	0.2	0.2
All forest-type groups	123.6	61.6	12.7	- -	0.2	198.2

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-23.—Average annual net growth of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, New Hampshire, 2007 to 2012

Species group	Ownership group				All owners
	Forest Service	Other Federal	State and local government	Undifferentiated private	
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	0.1	0.1	0.2
Eastern white and red pines	0.3	0.6	6.5	40.3	47.8
Spruce and balsam fir	8.1	-0.8	1.7	13.6	22.6
Eastern hemlock	2.5	0.2	1.7	26.6	31.0
Other eastern softwoods	0.0	- -	0.0	0.8	0.8
All softwoods	10.9	0.0	10.0	81.3	102.3
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	0.2	1.7	1.9
Select red oaks	0.1	0.2	4.0	27.2	31.6
Other white oaks	- -	- -	- -	0.0	0.0
Other red oaks	- -	0.0	0.1	2.9	3.0
Hickory	- -	- -	- -	0.7	0.7
Yellow birch	2.8	0.0	0.6	1.9	5.3
Hard maple	2.8	0.0	1.0	13.2	16.9
Soft maple	2.1	0.1	1.4	21.7	25.4
Beech	2.1	-0.2	0.1	5.7	7.7
Tupelo and blackgum	- -	- -	- -	0.0	0.0
Ash	0.3	0.0	0.2	4.3	4.8
Cottonwood and aspen	0.0	-0.1	0.8	3.5	4.3
Basswood	- -	0.0	0.1	0.2	0.3
Other eastern soft hardwoods	-5.8	-0.5	-1.2	-2.7	-10.3
Other eastern hard hardwoods	- -	0.1	0.3	3.7	4.1
Eastern noncommercial hardwoods	0.0	- -	0.1	-0.1	0.1
All hardwoods	4.5	-0.4	7.7	84.0	95.9
All species groups	15.4	-0.3	17.8	165.3	198.2

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-24.—Average annual net growth of growing-stock trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on timberland by species group and ownership group, New Hampshire, 2007 to 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	0.1	0.1	0.1
Eastern white and red pines	0.2	0.5	5.9	36.1	42.6
Spruce and balsam fir	9.6	-0.8	1.9	12.7	23.4
Eastern hemlock	2.1	0.2	1.8	22.3	26.3
Other eastern softwoods	0.0	- -	0.0	0.4	0.4
All softwoods	11.9	-0.1	9.7	71.5	92.9
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	0.2	1.4	1.6
Select red oaks	-0.2	0.2	3.2	26.1	29.4
Other white oaks	- -	- -	- -	0.0	0.0
Other red oaks	- -	0.1	0.1	2.6	2.7
Hickory	- -	- -	- -	0.7	0.7
Yellow birch	2.4	0.0	0.8	4.0	7.1
Hard maple	2.2	0.0	1.2	12.8	16.3
Soft maple	1.9	0.3	1.8	23.2	27.3
Beech	3.5	0.0	0.2	7.0	10.8
Tupelo and blackgum	- -	- -	- -	0.0	0.0
Ash	0.3	0.0	0.2	4.6	5.1
Cottonwood and aspen	0.0	-0.1	0.6	3.1	3.7
Basswood	- -	0.0	0.1	0.3	0.4
Other eastern soft hardwoods	-3.2	-0.5	-0.3	-2.3	-6.2
Other eastern hard hardwoods	- -	0.1	0.3	3.3	3.6
All hardwoods	7.1	0.1	8.5	86.8	102.5
All species groups	19.0	0.0	18.1	158.3	195.4

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-25.—Average annual mortality of trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, by owner class and forest-land status, New Hampshire, 2007 to 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	23.6	0.3	23.9	3.5	- -	3.5	27.4
Other Federal							
Fish and Wildlife Service	1.5	- -	1.5	- -	- -	- -	1.5
Department of Defense or Energy	0.9	- -	0.9	- -	- -	- -	0.9
State and local government							
State	4.9	- -	4.9	- -	- -	- -	4.9
Local (county, municipal, etc.)	4.4	- -	4.4	0.0	- -	0.0	4.4
Other non-Federal lands	0.0	- -	0.0	- -	- -	- -	0.0
Private							
Undifferentiated private	77.8	0.2	78.0	- -	- -	- -	78.0
All owners	113.1	0.5	113.6	3.5	- -	3.5	117.1

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-26.—Average annual mortality of trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by forest-type group and stand-size class, New Hampshire, 2007 to 2012

Forest-type group	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Non stocked	
White / red / jack pine group	16.2	0.8	- -	- -	- -	17.0
Spruce / fir group	5.2	7.1	1.3	- -	- -	13.6
Loblolly / shortleaf pine group	0.2	0.0	- -	- -	- -	0.2
Oak / pine group	5.8	1.8	0.1	- -	- -	7.7
Oak / hickory group	5.0	0.5	- -	- -	- -	5.4
Elm / ash / cottonwood group	0.6	1.0	0.3	- -	- -	1.8
Maple / beech / birch group	41.2	18.1	0.6	- -	- -	59.9
Aspen / birch group	3.2	7.0	0.6	- -	- -	10.7
Other hardwoods group	- -	0.5	0.1	- -	- -	0.6
All forest-type groups	77.3	36.8	2.9	- -	- -	117.1

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-27.—Average annual mortality of trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, New Hampshire, 2007 to 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	- -	0.2	0.2
Eastern white and red pines	- -	- -	1.2	13.6	14.9
Spruce and balsam fir	7.8	1.2	1.2	9.7	19.9
Eastern hemlock	0.7	- -	0.5	1.6	2.8
Other eastern softwoods	- -	- -	0.0	0.2	0.3
All softwoods	8.5	1.2	3.0	25.3	38.0
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	- -	0.2	0.2
Select red oaks	1.0	- -	0.0	4.6	5.6
Other red oaks	- -	0.1	- -	0.2	0.4
Hickory	- -	- -	- -	0.1	0.1
Yellow birch	2.1	- -	0.5	5.0	7.6
Hard maple	1.5	- -	0.8	3.5	5.8
Soft maple	2.7	0.2	2.1	13.7	18.7
Beech	2.2	0.2	0.7	5.3	8.4
Ash	0.2	- -	0.3	3.5	4.0
Cottonwood and aspen	0.4	0.1	0.1	4.8	5.3
Other eastern soft hardwoods	8.4	0.6	1.8	10.8	21.6
Other eastern hard hardwoods	- -	- -	- -	0.2	0.2
Eastern noncommercial hardwoods	0.3	- -	0.1	0.8	1.2
All hardwoods	18.9	1.2	6.3	52.7	79.1
All species groups	27.4	2.4	9.3	78.0	117.1

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-28.—Average annual mortality of growing-stock trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on timberland by species group and ownership group, New Hampshire, 2007 to 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Other yellow pines	- -	- -	- -	0.2	0.2
Eastern white and red pines	- -	- -	1.2	11.6	12.8
Spruce and balsam fir	5.2	1.2	1.2	9.0	16.5
Eastern hemlock	0.7	- -	- -	1.3	2.0
Other eastern softwoods	- -	- -	- -	0.2	0.2
All softwoods	5.9	1.2	2.3	22.3	31.7
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	- -	0.1	0.1
Select red oaks	0.9	- -	0.0	2.3	3.2
Other red oaks	- -	- -	- -	0.2	0.2
Hickory	- -	- -	- -	0.1	0.1
Yellow birch	1.4	- -	0.2	2.9	4.5
Hard maple	1.2	- -	0.6	1.4	3.2
Soft maple	1.9	- -	1.5	8.5	11.9
Beech	0.9	- -	0.5	3.2	4.6
Ash	0.2	- -	0.3	2.7	3.1
Cottonwood and aspen	0.3	0.1	0.0	4.2	4.7
Other eastern soft hardwoods	5.2	0.5	0.9	8.9	15.5
Other eastern hard hardwoods	- -	- -	- -	0.2	0.2
All hardwoods	11.9	0.6	4.1	34.7	51.3
All species groups	17.7	1.8	6.4	57.1	83.1

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-29.—Average annual removals of live trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on forest land by species group and ownership group, New Hampshire, 2007 to 2012

Species group	Ownership group				
	Forest Service	Other Federal	State and local government	Undifferentiated private	All owners
Softwood species groups					
Eastern softwood species groups					
Eastern white and red pines	- -	- -	1.7	29.2	30.9
Spruce and balsam fir	0.0	- -	0.5	17.2	17.7
Eastern hemlock	- -	- -	0.1	10.0	10.1
Other eastern softwoods	- -	- -	- -	0.6	0.6
All softwoods	0.0	- -	2.3	56.9	59.3
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	- -	- -	- -	0.1	0.1
Select red oaks	- -	- -	0.6	3.7	4.4
Other red oaks	- -	- -	- -	0.3	0.3
Hickory	- -	- -	- -	1.2	1.2
Yellow birch	0.4	- -	0.1	3.9	4.4
Hard maple	2.5	- -	0.1	12.6	15.2
Soft maple	0.6	- -	1.8	17.5	19.9
Beech	1.6	- -	- -	3.1	4.6
Ash	- -	- -	0.2	4.1	4.3
Cottonwood and aspen	- -	- -	0.4	5.4	5.8
Basswood	- -	- -	- -	0.1	0.1
Other eastern soft hardwoods	0.3	- -	0.6	4.5	5.4
Other eastern hard hardwoods	- -	- -	- -	2.8	2.8
Eastern noncommercial hardwoods	- -	- -	- -	0.2	0.2
All hardwoods	5.3	- -	3.9	59.5	68.7
All species groups	5.3	- -	6.2	116.5	128.0

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-30.—Average annual removals of growing-stock trees (at least 5 inches d.b.h./d.r.c.), in million cubic feet, on timberland by species group and ownership group, New Hampshire, 2007 to 2012

Species group	Ownership group				All owners
	Forest Service	Other Federal	State and local government	Undifferentiated private	
Softwood species groups					
Eastern softwood species groups					
Eastern white and red pines	--	--	1.6	23.7	25.3
Spruce and balsam fir	2.0	--	0.5	15.7	18.2
Eastern hemlock	0.2	--	--	7.5	7.8
Other eastern softwoods	--	--	--	0.6	0.6
All softwoods	2.2	--	2.1	47.5	51.8
Hardwood species groups					
Eastern hardwood species groups					
Select white oaks	--	--	--	0.1	0.1
Select red oaks	--	--	0.6	3.4	3.9
Other red oaks	--	--	--	0.3	0.3
Hickory	--	--	--	1.1	1.1
Yellow birch	1.1	--	0.1	3.1	4.2
Hard maple	2.7	--	0.1	10.3	13.1
Soft maple	0.9	--	1.6	14.0	16.5
Beech	1.6	--	--	2.4	4.0
Ash	--	--	0.2	3.7	3.9
Cottonwood and aspen	0.3	--	0.4	4.7	5.4
Basswood	--	--	--	0.1	0.1
Other eastern soft hardwoods	1.7	--	0.5	3.8	6.0
Other eastern hard hardwoods	--	--	--	2.4	2.4
All hardwoods	8.3	--	3.4	49.4	61.1
All species groups	10.5	--	5.5	96.9	112.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic feet. Columns and rows may not add to their totals due to rounding.

Table NH-31.—Aboveground dry weight of live trees (at least 1 inch d.b.h./d.r.c.), in thousand dry short tons, by owner class and forest-land status, New Hampshire, 2012

Owner class	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Forest Service							
National forest	38,955	--	38,955	8,511	77	8,588	47,543
Other national forest	224	--	224	--	--	--	224
Other Federal							
Fish and Wildlife Service	627	--	627	--	--	--	627
Department of Defense or Energy	2,633	--	2,633	--	--	--	2,633
State and local government							
State	11,763	--	11,763	--	--	--	11,763
Local (county, municipal, etc.)	14,614	--	14,614	246	--	246	14,859
Private							
Undifferentiated private	207,166	269	207,435	--	--	--	207,435
All owners	275,981	269	276,250	8,756	77	8,833	285,084

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the aboveground tree biomass rounds to less than 1 thousand dry tons. Columns and rows may not add to their totals due to rounding.

Table NH-32.—Aboveground dry weight of live trees (at least 1 inch d.b.h./d.r.c.), in thousand dry short tons, on forest land by species group and diameter class, New Hampshire, 2012

Species group	Diameter class (inches)															All classes
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0+	
Softwood species groups																
Eastern softwood species groups																
Other yellow pines	5	27	47	156	125	88	33	21	31	35	--	--	--	--	--	570
Eastern white and red pines	219	368	775	1,626	2,457	3,308	3,968	4,370	4,189	3,752	3,513	2,780	2,096	2,388	2,842	38,654
Spruce and balsam fir	1,885	2,808	3,436	4,412	3,824	2,538	1,668	835	483	279	93	--	--	--	--	22,261
Eastern hemlock	342	759	1,340	2,111	2,805	3,314	3,496	2,955	2,427	1,269	1,021	179	196	200	232	22,646
Other eastern softwoods	19	7	22	23	102	120	52	55	--	48	--	--	--	59	74	581
All softwoods	2,470	3,969	5,621	8,329	9,313	9,368	9,218	8,237	7,130	5,384	4,627	2,959	2,291	2,646	3,149	84,712
Hardwood species groups																
Eastern hardwood species groups																
Select white oaks	18	47	129	198	316	461	397	318	289	223	--	--	--	--	811	3,207
Select red oaks	218	692	977	2,280	3,754	5,866	6,831	5,731	4,345	2,956	1,740	699	799	--	1,250	38,139
Other white oaks	--	--	11	--	4	--	--	--	--	--	--	--	--	--	--	15
Other red oaks	25	12	55	176	431	630	904	629	286	154	171	--	--	--	--	3,474
Hickory	5	49	85	185	221	84	124	54	--	--	--	--	--	--	--	806
Yellow birch	675	1,308	1,712	2,595	3,055	3,131	2,506	1,933	1,687	1,128	667	56	180	--	268	20,902
Hard maple	566	1,019	1,616	2,786	4,546	4,644	3,591	3,194	1,581	1,280	626	481	194	81	822	27,027
Soft maple	1,180	2,967	3,676	7,284	9,018	8,049	6,196	4,403	1,904	896	1,021	297	182	137	755	47,966
Beech	1,097	1,741	1,536	2,349	2,649	2,432	1,900	1,751	1,162	857	218	190	282	--	--	18,165
Tupelo and blackgum	2	--	8	7	22	15	30	--	--	--	--	--	--	--	--	85
Ash	201	356	751	1,170	1,460	1,782	1,458	1,246	597	246	219	116	67	--	395	10,065
Cottonwood and aspen	121	211	243	471	509	688	806	651	336	199	59	76	--	--	--	4,369
Basswood	7	--	24	61	76	52	79	42	36	--	--	--	--	--	92	468
Other eastern soft hardwoods	670	1,510	2,059	3,465	3,842	2,835	1,846	918	412	240	--	--	--	--	--	17,796
Other eastern hard hardwoods	189	362	567	1,025	901	594	653	275	154	157	--	--	--	--	--	4,877
Eastern noncommercial hardwoods	1,243	1,055	357	213	87	49	6	--	--	--	--	--	--	--	--	3,010
All hardwoods	6,220	11,329	13,806	24,265	30,894	31,312	27,325	21,144	12,791	8,336	4,720	1,915	1,703	217	4,394	200,372
All species groups	8,690	15,297	19,427	32,594	40,207	40,680	36,543	29,381	19,921	13,720	9,347	4,874	3,995	2,864	7,543	285,084

All table cells without observations in the inventory sample are indicated by --. Table value of 0 indicates the aboveground tree biomass rounds to less than 1 thousand dry tons. Columns and rows may not add to their totals due to rounding.

Table NH-54.—Area of forest land, in thousand acres, by inventory unit, county, and forest-land status, New Hampshire, 2012

Inventory unit and county	Unreserved forests			Reserved forests			All forest land
	Timberland	Unproductive	Total	Productive	Unproductive	Total	
Northern							
Carroll	516.5	14.1	530.6	14.1	--	14.1	544.7
Coos	1,035.1	3.5	1,038.6	69.5	7.0	76.5	1,115.0
Grafton	845.6	--	845.6	81.7	--	81.7	927.2
Total	2,397.2	17.6	2,414.8	165.2	7.0	172.2	2,586.9
Southern							
Belknap	214.0	--	214.0	--	--	--	214.0
Cheshire	372.1	--	372.1	--	--	--	372.1
Hillsborough	403.9	--	403.9	--	--	--	403.9
Merrimack	534.2	--	534.2	--	--	--	534.2
Rockingham	249.9	5.3	255.3	--	--	--	255.3
Strafford	149.0	--	149.0	--	--	--	149.0
Sullivan	318.0	--	318.0	--	--	--	318.0
Total	2,241.1	5.3	2,246.4	--	--	--	2,246.4
All counties	4,638.2	22.9	4,661.2	165.2	7.0	172.2	4,833.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-55.—Area of forest land, in thousand acres, by inventory unit, county, ownership group, and forest-land status, New Hampshire, 2012

Inventory unit and county	Forest Service		Other Federal		State and local government		Undifferentiated private		All forest land
	Timber-land	Other forest land	Timber-land	Other forest land	Timber-land	Other forest land	Timber-land	Other forest land	
Northern									
Carroll	144.3	14.1	--	--	37.5	5.3	334.7	8.8	544.7
Coos	183.0	79.9	23.9	--	101.7	--	726.5	--	1,115.0
Grafton	288.0	76.3	5.3	--	23.3	5.3	529.0	--	927.2
Total	615.3	170.3	29.2	--	162.5	10.6	1,590.2	8.8	2,586.9
Southern									
Belknap	--	--	--	--	17.3	--	196.7	--	214.0
Cheshire	--	--	5.4	--	54.1	--	312.6	--	372.1
Hillsborough	--	--	6.7	--	42.9	--	354.3	--	403.9
Merrimack	--	--	15.5	--	75.4	--	443.3	--	534.2
Rockingham	--	--	--	--	45.9	--	204.0	5.3	255.3
Strafford	--	--	--	--	16.0	--	132.9	--	149.0
Sullivan	--	--	--	--	23.4	--	294.6	--	318.0
Total	--	--	27.6	--	275.0	--	1,938.5	5.3	2,246.4
All counties	615.3	170.3	56.8	--	437.4	10.6	3,528.7	14.2	4,833.3

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-57.—Area of timberland, in thousand acres, by inventory unit, county, and stand-size class, New Hampshire, 2012

Inventory unit and county	Stand-size class					All size classes
	Large diameter	Medium diameter	Small diameter	Chaparral	Nonstocked	
Northern						
Carroll	383.8	104.6	28.2	- -	- -	516.5
Coos	416.8	336.9	277.1	- -	4.3	1,035.1
Grafton	455.1	297.4	91.6	- -	1.5	845.6
Total	1,255.6	738.9	396.8	- -	5.8	2,397.2
Southern						
Belknap	147.6	62.9	3.5	- -	- -	214.0
Cheshire	308.1	59.4	4.6	- -	- -	372.1
Hillsborough	305.3	82.9	15.7	- -	- -	403.9
Merrimack	402.7	103.1	22.6	- -	5.8	534.2
Rockingham	183.8	59.9	6.2	- -	- -	249.9
Strafford	99.5	33.9	15.5	- -	- -	149.0
Sullivan	202.6	104.3	9.4	- -	1.7	318.0
Total	1,649.7	506.4	77.5	- -	7.5	2,241.1
All counties	2,905.3	1,245.3	474.3	- -	13.3	4,638.2

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-58.—Area of timberland, in thousand acres, by inventory unit, county, and stocking class, New Hampshire, 2012

Inventory unit and county	Stocking class of growing-stock trees					
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked	All classes
Northern						
Carroll	- -	53.0	193.3	250.1	20.1	516.5
Coos	10.9	118.1	407.8	419.5	78.8	1,035.1
Grafton	4.7	64.4	325.9	434.0	16.6	845.6
Total	15.6	235.6	927.0	1,103.6	115.5	2,397.2
Southern						
Belknap	1.2	35.5	78.6	93.7	5.0	214.0
Cheshire	1.2	27.2	106.4	235.4	1.9	372.1
Hillsborough	4.0	54.1	107.3	216.1	22.4	403.9
Merrimack	6.8	37.2	169.2	291.1	29.9	534.2
Rockingham	- -	35.8	94.1	111.7	8.4	249.9
Strafford	- -	5.3	83.9	53.6	6.2	149.0
Sullivan	1.7	35.7	145.7	133.6	1.2	318.0
Total	14.9	230.8	785.1	1,135.2	75.0	2,241.1
All counties	30.6	466.4	1,712.1	2,238.8	190.4	4,638.2

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the acres round to less than 0.1 thousand acres. Columns and rows may not add to their totals due to rounding.

Table NH-59.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (International ¼-inch rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Carroll	205.5	243.1	223.4	499.5	1,171.5	876.2	781.4	527.4	1,688.4	3,873.5
Coos	50.9	501.5	299.2	561.2	1,412.9	253.3	1,266.1	593.7	1,500.6	3,613.7
Grafton	193.4	422.6	432.5	554.3	1,602.8	816.0	1,009.0	912.6	1,602.1	4,339.7
Total	449.8	1,167.3	955.2	1,615.1	4,187.2	1,945.5	3,056.6	2,033.7	4,791.1	11,826.9
Southern										
Belknap	129.5	112.0	105.5	144.4	491.4	613.2	336.4	247.6	443.7	1,640.8
Cheshire	208.4	189.8	234.7	356.8	989.8	971.5	566.3	514.5	1,154.1	3,206.4
Hillsborough	367.6	101.1	227.9	332.4	1,029.0	1,681.8	304.8	439.3	1,035.2	3,461.2
Merrimack	497.7	201.1	328.8	427.9	1,455.6	2,308.6	600.4	729.6	1,354.4	4,993.1
Rockingham	254.8	50.9	116.0	242.4	664.1	1,132.8	131.8	305.1	767.3	2,336.9
Strafford	100.7	36.4	60.3	130.5	327.8	456.7	107.6	102.9	436.8	1,104.0
Sullivan	189.4	99.9	179.1	207.8	676.3	866.3	295.1	401.7	515.7	2,078.8
Total	1,748.2	791.3	1,252.3	1,842.2	5,634.0	8,030.9	2,342.4	2,740.7	5,707.2	18,821.3
All counties	2,198.0	1,958.5	2,207.5	3,457.2	9,821.2	9,976.5	5,399.0	4,774.4	10,498.4	30,648.2

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table NH-59a.—Net volume of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (Doyle rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Carroll	205.5	243.1	223.4	499.5	1,171.5	700.3	502.6	307.1	1,092.1	2,602.1
Coos	50.9	501.5	299.2	561.2	1,412.9	215.2	697.8	319.2	825.5	2,057.7
Grafton	193.4	422.6	432.5	554.3	1,602.8	627.5	573.0	494.8	938.4	2,633.7
Total	449.8	1,167.3	955.2	1,615.1	4,187.2	1,543.0	1,773.3	1,121.2	2,856.0	7,293.5
Southern										
Belknap	129.5	112.0	105.5	144.4	491.4	493.8	203.9	135.2	299.3	1,132.2
Cheshire	208.4	189.8	234.7	356.8	989.8	777.5	354.5	285.8	721.0	2,138.9
Hillsborough	367.6	101.1	227.9	332.4	1,029.0	1,271.3	189.5	226.5	631.0	2,318.3
Merrimack	497.7	201.1	328.8	427.9	1,455.6	1,848.1	376.4	469.3	824.5	3,518.3
Rockingham	254.8	50.9	116.0	242.4	664.1	881.7	73.5	173.3	460.8	1,589.3
Strafford	100.7	36.4	60.3	130.5	327.8	341.6	64.4	51.1	295.9	753.0
Sullivan	189.4	99.9	179.1	207.8	676.3	683.3	162.0	213.7	281.9	1,340.9
Total	1,748.2	791.3	1,252.3	1,842.2	5,634.0	6,297.3	1,424.1	1,555.1	3,514.4	12,790.9
All counties	2,198.0	1,958.5	2,207.5	3,457.2	9,821.2	7,840.3	3,197.4	2,676.3	6,370.4	20,084.4

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table NH-60.—Average annual net growth of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (International ¼-inch rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2007 to 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Carroll	4.2	4.4	2.0	10.7	21.2	22.8	18.2	12.7	39.0	92.8
Coos	1.3	14.3	2.9	13.8	32.2	7.1	47.2	14.9	51.9	121.2
Grafton	4.7	13.7	2.3	11.9	32.4	25.4	35.5	16.6	48.8	126.2
Total	10.1	32.3	7.1	36.3	85.9	55.3	101.0	44.2	139.7	340.2
Southern										
Belknap	1.7	2.2	1.9	4.2	9.9	10.6	7.7	9.1	15.9	43.2
Cheshire	3.0	3.4	2.4	7.6	16.3	19.6	14.2	11.0	35.3	80.1
Hillsborough	5.5	2.5	2.0	7.5	17.5	35.1	9.3	11.7	33.4	89.5
Merrimack	7.6	4.9	5.1	10.1	27.8	46.1	19.1	22.2	49.7	137.2
Rockingham	5.1	1.3	1.6	5.9	14.0	25.7	4.6	4.0	28.9	63.2
Strafford	2.8	1.9	2.3	1.5	8.6	16.0	6.8	5.7	7.3	35.8
Sullivan	6.8	1.7	3.0	4.1	15.6	37.5	7.0	16.8	17.4	78.7
Total	32.6	17.8	18.1	40.9	109.5	190.5	68.7	80.5	187.9	527.7
All counties	42.8	50.2	25.2	77.2	195.4	245.8	169.7	124.7	327.6	867.9

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table NH-60a.—Average annual net growth of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees in million board feet (Doyle rule), on timberland by inventory unit, on timberland by Forest Survey Unit, county, and major species group, New Hampshire, 2007 to 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Carroll	4.2	4.4	2.0	10.7	21.2	16.5	10.4	6.3	23.7	56.9
Coos	1.3	14.3	2.9	13.8	32.2	5.8	21.1	7.1	24.4	58.4
Grafton	4.7	13.7	2.3	11.9	32.4	16.4	16.4	6.4	21.9	61.2
Total	10.1	32.3	7.1	36.3	85.9	38.7	48.0	19.9	69.9	176.5
Southern										
Belknap	1.7	2.2	1.9	4.2	9.9	8.2	4.1	4.5	9.1	25.9
Cheshire	3.0	3.4	2.4	7.6	16.3	15.7	7.8	4.9	19.4	47.8
Hillsborough	5.5	2.5	2.0	7.5	17.5	24.8	5.0	5.6	18.4	53.8
Merrimack	7.6	4.9	5.1	10.1	27.8	34.8	10.1	11.1	26.5	82.5
Rockingham	5.1	1.3	1.6	5.9	14.0	17.9	2.3	2.3	16.0	38.4
Strafford	2.8	1.9	2.3	1.5	8.6	11.8	4.0	2.6	4.1	22.4
Sullivan	6.8	1.7	3.0	4.1	15.6	29.3	3.1	7.9	7.7	48.1
Total	32.6	17.8	18.1	40.9	109.5	142.4	36.4	38.9	101.2	318.9
All counties	42.8	50.2	25.2	77.2	195.4	181.1	84.4	58.8	171.2	495.4

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table NH-61.—Average annual removals of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (International ¼-inch rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2007 to 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Carroll	3.1	1.1	2.2	5.9	12.3	13.3	3.2	2.5	17.7	36.7
Coos	3.9	16.1	8.6	8.7	37.3	18.3	36.2	19.7	26.9	101.1
Grafton	4.2	6.0	7.7	7.4	25.2	18.1	15.8	11.4	17.7	63.0
Total	11.3	23.1	18.4	22.0	74.8	49.7	55.2	33.5	62.3	200.8
Southern										
Belknap	1.6	--	1.0	0.6	3.2	8.2	--	3.1	0.6	11.9
Cheshire	1.5	0.1	2.9	2.4	6.9	7.3	--	6.6	9.4	23.4
Hillsborough	4.4	0.7	0.3	0.7	6.1	20.8	1.2	0.4	2.2	24.6
Merrimack	2.7	0.2	1.8	1.6	6.4	12.4	0.1	3.8	3.3	19.6
Rockingham	--	0.5	1.1	3.8	5.4	--	1.3	2.2	12.4	15.8
Strafford	--	--	--	0.0	0.0	--	--	--	--	--
Sullivan	3.7	1.9	2.5	1.8	10.0	16.2	5.1	8.7	2.6	32.5
Total	14.0	3.4	9.7	11.0	38.1	64.9	7.7	24.7	30.5	127.8
All counties	25.3	26.5	28.1	33.0	112.9	114.6	63.0	58.3	92.8	328.7

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table NH-61a.—Average annual removals of growing-stock trees (at least 5 inches d.b.h.), in million cubic feet, and sawtimber trees, in million board feet (Doyle rule), on timberland by inventory unit, county, and major species group, New Hampshire, 2007 to 2012

Inventory unit and county	Growing stock					Sawtimber				
	Major species group					Major species group				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	All species
	(In million cubic feet)					(In million board feet)				
Northern										
Carroll	3.1	1.1	2.2	5.9	12.3	9.2	1.6	1.5	11.5	23.8
Coos	3.9	16.1	8.6	8.7	37.3	13.9	15.5	10.4	15.7	55.4
Grafton	4.2	6.0	7.7	7.4	25.2	11.7	8.8	4.7	7.4	32.6
Total	11.3	23.1	18.4	22.0	74.8	34.8	25.8	16.6	34.5	111.8
Southern										
Belknap	1.6	--	1.0	0.6	3.2	6.6	--	1.8	0.2	8.7
Cheshire	1.5	0.1	2.9	2.4	6.9	6.6	--	3.0	5.3	14.8
Hillsborough	4.4	0.7	0.3	0.7	6.1	14.6	0.7	0.2	1.0	16.5
Merrimack	2.7	0.2	1.8	1.6	6.4	8.2	--	1.5	1.4	11.2
Rockingham	--	0.5	1.1	3.8	5.4	--	0.6	1.3	9.5	11.4
Strafford	--	--	--	0.0	0.0	--	--	--	--	--
Sullivan	3.7	1.9	2.5	1.8	10.0	10.9	2.9	5.7	0.9	20.4
Total	14.0	3.4	9.7	11.0	38.1	46.9	4.2	13.5	18.4	83.0
All counties	25.3	26.5	28.1	33.0	112.9	81.7	30.0	30.1	52.9	194.8

All table cells without observations in the inventory sample are indicated by --. Table value of 0.0 indicates the volume rounds to less than 0.1 million cubic or board feet. Columns and rows may not add to their totals due to rounding.

Table NH-65.—Sampling errors, in percent, for net volume, average annual net growth, average annual removals, and average annual mortality on timberland, and forest and timberland area by inventory unit and county, New Hampshire, 2012

Inventory unit and county	Forest area	Timberland area	Growing stock				Sawtimber			
			Volume	Average annual net growth	Average annual removals	Average annual mortality	Volume	Average annual net growth	Average annual removals	Average annual mortality
Northern										
Carroll	9.22	9.50	11.11	15.84	33.51	22.67	12.35	16.22	37.10	32.23
Coos	5.57	5.83	8.23	10.82	21.97	14.31	10.01	10.76	22.87	19.94
Grafton	6.31	6.82	8.16	13.64	25.69	13.95	9.42	11.49	28.52	23.21
Total	1.05	1.65	3.48	6.47	14.53	8.36	4.75	5.91	15.63	13.70
Southern										
Belknap	15.50	15.50	17.93	22.24	54.06	32.00	19.31	24.51	59.97	43.42
Cheshire	11.40	11.40	12.66	16.83	40.17	28.52	13.49	16.17	45.50	46.62
Hillsborough	10.71	10.71	12.42	13.91	82.75	21.07	13.45	14.18	91.03	31.53
Merrimack	9.15	9.15	11.00	11.92	49.32	19.90	12.43	12.09	45.70	34.30
Rockingham	13.88	14.06	16.77	32.56	64.10	26.37	18.11	29.69	74.19	35.93
Strafford	18.59	18.59	21.81	40.56	97.59	50.36	23.67	35.02	- -	57.63
Sullivan	12.48	12.48	14.08	21.04	41.45	22.62	15.75	20.72	47.18	32.96
Total	1.60	1.62	2.94	6.18	22.70	8.56	3.82	5.64	26.27	14.04
All counties	0.93	1.16	2.25	4.47	12.31	6.00	2.98	4.12	14.01	9.81

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