



# Forests of New Hampshire, 2017

This publication provides an overview of the forest resources in New Hampshire based upon inventories conducted by the USDA Forest Service, Forest Inventory and Analysis (FIA) program of the Northern Research Station. Information about the national and regional FIA program is available online at [www.fia.fs.fed.us](http://www.fia.fs.fed.us).

Since 2002, FIA has implemented an annual inventory measuring 14 percent of sample plots each year. For the 2017 inventory, estimates for current variables, such as area, volume, and biomass, are based on 1,162 (1,047 forested) plots inventoried from 2011–2017. Change variables, such as net growth, removals, and mortality, are based on 923 (813 forested) plots inventoried in 2008–2012 and resampled in 2011–2017. Estimates from earlier annual and periodic inventories are included for comparison. See Bechtold and Patterson (2005) and

O’Connell et al.(2017) for definitions and technical details. Additional data and reports are available online ([www.nrs.fs.fed.us/fia/data-tools/state-reports/NH](http://www.nrs.fs.fed.us/fia/data-tools/state-reports/NH)). A complete set of inventory tables is available at <https://doi.org/10.2737/FS-RU-163>.

## Overview

New Hampshire contains an estimated 4.7 million acres of forest land (Table 1) and covers 82.7 percent of the land area in the State. Most of the forest land, 94.1 percent, is classified as timberland, meaning that it exceeds a minimum level of productivity and is not legislatively reserved from timber harvesting.

On the forest land in New Hampshire, there are an estimated 4.3 billion live trees that are at least 1 inch in diameter (Table 1). These trees have a total above ground biomass of 291.6 million tons and trees at least 5 inches in diameter have a total net volume of 11.2 billion ft<sup>3</sup>. The ratio of net growth to removals is 1.8:1.

**Table 1.—New Hampshire forest statistics, 2017 and 2012. Volumes are for trees 5 inches and larger in diameter. Number of trees and biomass are for trees 1 inch and larger in diameter. Sampling errors and error bars shown in tables and figures in this report represent 68 percent confidence intervals.**

	2017 Estimate	Sampling error (percent)	2012 Estimate	Sampling error (percent)	Change since 2012 (percent)
<b>Forest Land</b>					
Area (thousand acres)	4,741	0.9	4,833	1.0	-1.9
Number of live trees (million trees)	4,274	2.5	4,270	2.6	0.1
Aboveground biomass of live trees (thousand oven-dry tons)	291,568	1.6	285,084	1.8	2.3
Net volume of live trees (million ft <sup>3</sup> )	11,216	1.8	11,023	1.9	1.7
Annual net growth of live trees (thousand ft <sup>3</sup> /yr)	201,351	3.8	197,914	5.0	1.7
Annual mortality of trees (thousand ft <sup>3</sup> /yr)	102,831	5.7	117,106	5.4	-12.2
Annual harvest removals of live trees (thousand ft <sup>3</sup> /yr)	110,159	12.9	125,451	11.9	-12.2
<b>Timberland</b>					
Area (thousand acres)	4,463	1.1	4,532	1.2	-1.5
Number of live trees (million trees)	3,927	2.7	3,914	2.9	0.3
Aboveground biomass of live trees (thousand oven-dry tons)	275,352	1.8	268,962	2.0	2.4
Net volume of live trees (million ft <sup>3</sup> )	10,574	2.0	10,388	2.1	1.8
Net volume of growing stock trees (million ft <sup>3</sup> )	9,481	2.1	9,560	2.2	-0.8
Annual net growth of growing stock trees (thousand ft <sup>3</sup> /yr)	180,787	3.4	190,270	4.0	-5.0
Annual mortality of growing stock trees (thousand ft <sup>3</sup> /yr)	69,187	6.3	79,189	5.9	-12.6
Annual harvest removals of growing stock trees (thousand ft <sup>3</sup> /yr)	92,688	13.1	105,184	12.1	-11.9



# Forest Area

New Hampshire's forest land area has decreased since 2012 (Fig. 1). An estimated 72.2 percent of the forest land is privately owned and 27.8 percent is publicly owned (Fig. 2). Currently, 64.2, 24.8, and 10.7 percent of the timberland in New Hampshire is in large, medium, and small stand sizes, respectively (Fig. 3).

The most common forest-type group is maple/beech/birch, representing 51.9 percent of New Hampshire's forest land area (Fig. 4). The next most common forest-type groups are white/red/jack pine, oak/hickory, and spruce/fir.

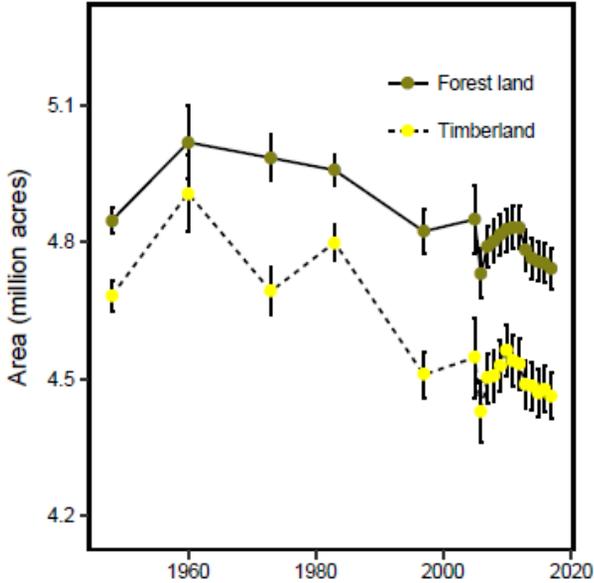


Figure 1.—Area of forest land and timberland, New Hampshire.

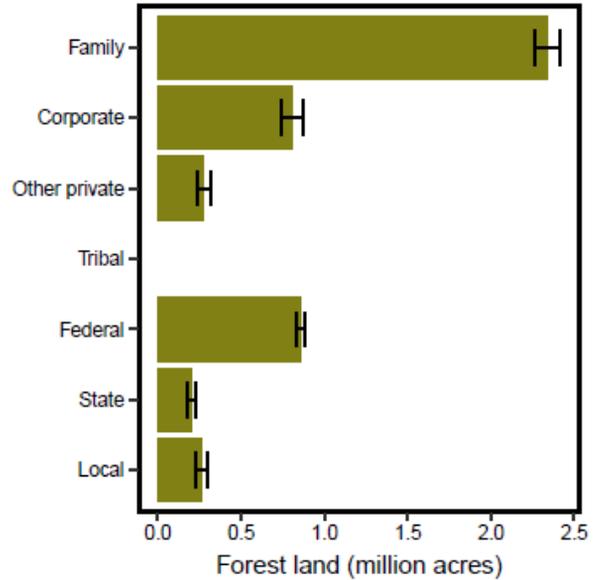


Figure 2.—Area of forest land by ownership group, New Hampshire, 2017.

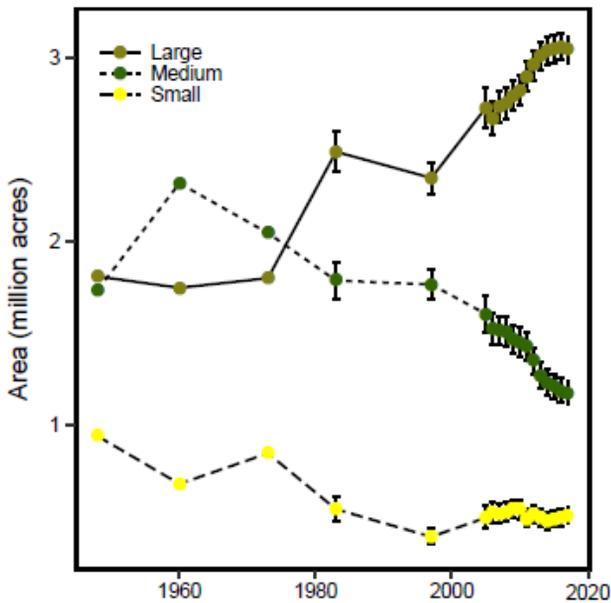


Figure 3.—Area of timberland by stand-size class, New Hampshire.

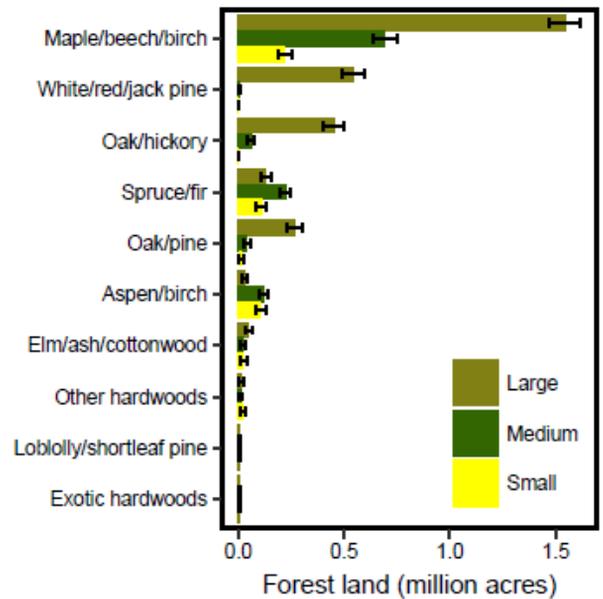


Figure 4.—Area of forest land by forest-type group, New Hampshire, 2017.

## Forest Composition

New Hampshire’s forests contain a wide variety of tree species with over 60 species sampled in 2017. This composition looks different depending on whether the number or volume of trees are examined.

In terms of volume, eastern white pine is the most common tree in New Hampshire followed by red maple (*Acer rubrum*) and northern red oak (*Quercus rubra*) (Table 2). Collectively, the 10 most voluminous tree species account for 89.0 percent of the total volume of live trees on forest land in New Hampshire. Of these species, red spruce (*Picea rubens*), northern red oak, and sugar maple (*Acer saccharum*) showed the most substantial increases in volume since 2012.

In terms of number of trees, balsam fir (*Abies balsamea*) is the most numerous species in New Hampshire with 19.8 percent of the tree stems in the State (Fig. 5). Other common species include red maple, American beech (*Fagus grandifolia*), red spruce, and eastern hemlock (*Tsuga canadensis*). The ten most common species, in terms of numbers of stems, account for 83.6 percent of the trees in the State.

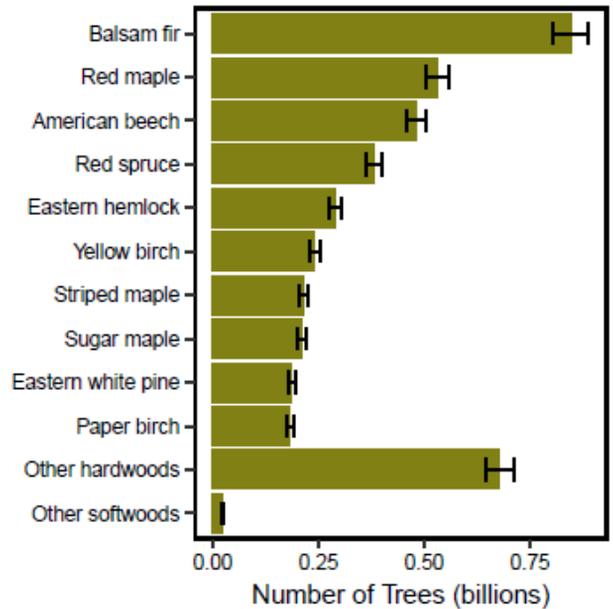


Figure 5.—Number of trees at least 1 inch in diameter by species, New Hampshire, 2017.

Table 2.—Net volume and percentage change in net volume on forest land; sawtimber volume and percentage change on timberland, New Hampshire, 2017 (top 10 species by net volume).

Rank	Species	Volume of live trees on forest land (million ft <sup>3</sup> )	Sampling error (%)	Change since 2012 (%)	Volume of sawtimber trees on timberland (million board ft)	Sampling error (%)	Change since 2012 (%)
1	Eastern white pine	2,151.3	6.3	-1.7	9,540.3	6.9	0.1
2	Red maple	1,667.4	4.0	-1.2	3,002.2	5.9	-4.5
3	Northern red oak	1,273.1	6.6	8.6	4,405.7	7.9	13.4
4	Eastern hemlock	1,188.7	7.1	2.1	3,113.6	8.6	0.5
5	Sugar maple	875.8	7.3	3.9	2,236.7	9.5	6.3
6	Yellow birch	663.3	5.4	2.7	1,352.1	8.3	3.4
7	Red spruce	654.4	8.1	16.9	1,537.2	10.9	18.9
8	Balsam fir	529.6	6.9	0.9	633.2	11.8	0.1
9	American beech	525.0	6.8	0.1	897.2	11.4	-12.9
10	Paper birch	457.3	5.8	-10.3	646.2	10.0	-13.7
	Other softwood	111.1	24.6	-17.1	319.5	23.5	-9.1
	Other hardwood	1,119.2	5.8	4.7	2,774.7	8.3	3.4
	All species	11,216.2	2.1	1.8	30,458.6	3.0	2.2

## Literature Cited

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### How to Cite This Publication

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