USDA United States Department of Agriculture
Forest Service
Northern Research Station

New Hampshire's Forest Resources, 2006

Research Note NRS-17

This publication provides an overview of forest resource attributes for New Hampshire based on an annual inventory conducted by the Forest Inventory and Analysis (FIA) program at the Northern Research Station of the U.S. Forest Service. These annual estimates, along with web-posted core tables, will be updated annually. For more information regarding past inventory reports for this state, inventory program information, and sampling/estimation procedures, please refer to the citations at the end of this report.

Table 1 - Annual estimates, uncertainty, and change

	Estimate	Sampling error (%)	Change since 2005 (%)
Forest Land Estimates			
Area (1,000 acres)	4,730.7	1.2	-2.5
Number of live trees 1 inch diameter or larger (million trees)	3,996.9	3.1	-1.9
Dry biomass of live trees 1 inch diameter or larger (1,000 tons)	308,064.3	2.0	-2.6
Net volume of live trees (1,000,000 ft^3)	9,759.3	2.2	-3.1
Net volume of growing stock trees (1,000,000 ft^3)	9,080.2	2.3	-3.2
Annual net growth of live trees (1,000 ft^3/year)	80,612.0	17.0	NA
Annual mortality of live trees (1,000 ft^3/year)	113,577.0	8.0	NA
Annual removals of live trees (1,000 ft^3/year)	162,100.0	14.0	NA
Timberland Estimates			
Area (1,000 acres)	4,539.6	1.4	-3.2
Number of live trees 1 inch diameter or larger (million trees)	3,749.7	3.1	-2.5
Dry biomass of live trees 1 inch diameter or larger (1,000 tons)	299,496.6	2.1	-2.9
Net volume of live trees (1,000,000 ft^3)	9,516.1	2.4	-3.4
Net volume of growing stock trees (1,000,000 ft^3)	8,850.5	2.4	-3.5
Annual net growth of growing stock trees (1,000 ft^3/year)	117,147.0	13.0	NA
Annual mortality of growing stock trees (1,000 ft^3/year)	83,690.0	8.0	NA
Annual removals of growing stock trees (1,000 ft^3/year)	139,755.0	14.0	NA

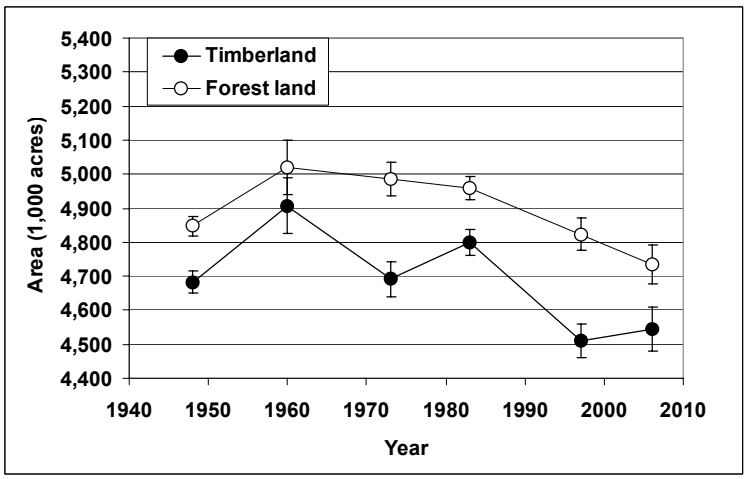

Figure 1 - Area of timberland and forest land by year

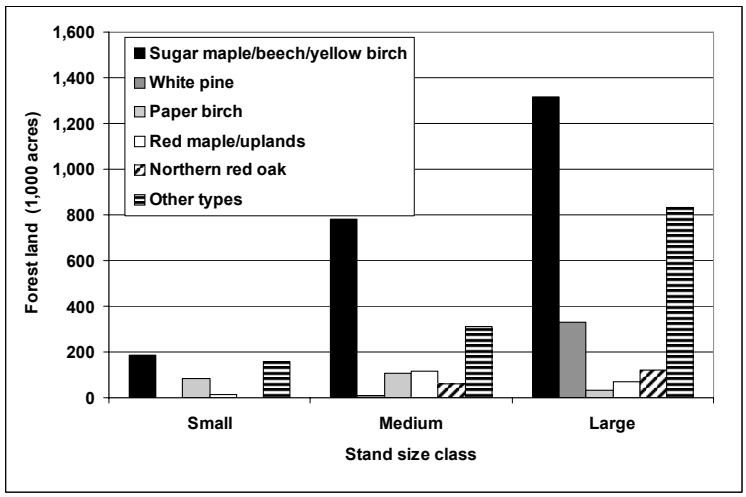

Figure 2 - Area of forest land for top six forest types by stand size class

Table 2 - Top 10 species by statewide volume estimates

Rank	Species	Volume of live trees on timberland (1,000,000 ft^3)	Sampling error (%)	Change since 2005 (%)	Volume of sawtimber trees on timberland (1,000,000 bdft)	Sampling error (%)	Change since 2005 (%)
1	Eastern white pine	2,028.3	6.8	-2.60	8,199.7	7.4	-3.50
2	Red maple	1,514.6	4.9	-3.70	2,623.8	7.4	-1.90
3	Eastern hemlock	1,080.9	8.1	-1.30	2,181.6	10.0	0.20
4	Northern red oak	852.9	7.8	-0.10	2,789.0	9.2	9.20
5	Sugar maple	707.8	8.5	0.30	1,763.1	10.9	-0.30
6	Red spruce	526.8	10.6	-8.60	1,256.8	12.8	-7.80
7	Paper birch	471.6	7.2	-11.20	795.2	11.3	-12.70
8	Yellow birch	467.8	7.5	-0.40	1,063.9	10.7	5.10
9	American beech	440.6	9.1	1.30	1,020.3	13.6	-1.10
10	Balsam fir	406.3	10.0	-10.80	557.8	12.4	-10.10
	Other softwoods	122.6	30.6	25.20	345.7	25.9	25.60
	Other hardwoods	895.9	6.5	197.70	2,065.8	8.7	194.40
	All species	9,516.2	2.4	-3.40	24,662.7	3.4	-1.70

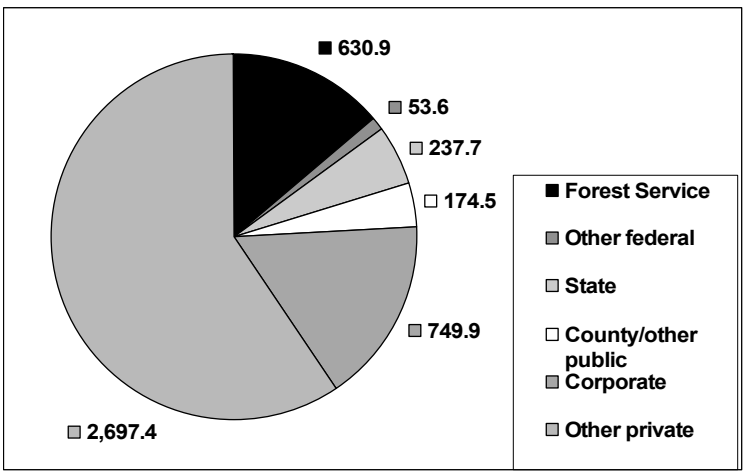

Figure 3 - Area of forest land (1,000 acres) by ownership group

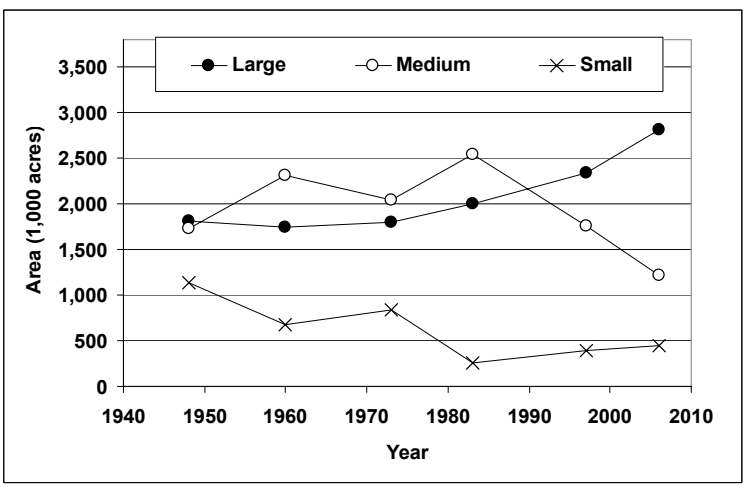

Figure 4 - Area of timberland by stand-size class and year

New Hampshire Issue Update – Characterization of Fragmented Forests

Forest fragmentation as associated with urbanization continues to be of great concern in the Northeast and could affect many facets of natural ecosystems. New Hampshire has a rapidly expanding population and the associated development is causing fragmentation and urbanization of the State's forests. The extent, location, and magnitude of forest fragmentation/urbanization are particularly important.

FIA inventory data were used to characterize forests in New Hampshire with respect to forest type, successional stage, diversity, and health, according to the level of fragmentation surrounding the plots. Landscape diversity (or level of landscape fragmentation) and the relative area of urban land use surrounding plots varied considerably by forest-type group (Fig. 5). The six major forest-type groups in New Hampshire appear to be divided into three distinct levels of landscape diversity. The oak/hickory and white/red/jack pine type groups reside in areas that appear more fragmented than the other forest-type groups. These types are more prevalent in southern New Hampshire, which is experiencing rapid growth and development. Landscape diversity was significantly higher surrounding plots where invasive shrub species were present, suggesting that more highly fragmented forests are more susceptible to invasion by exotic shrub species (Fig. 6).

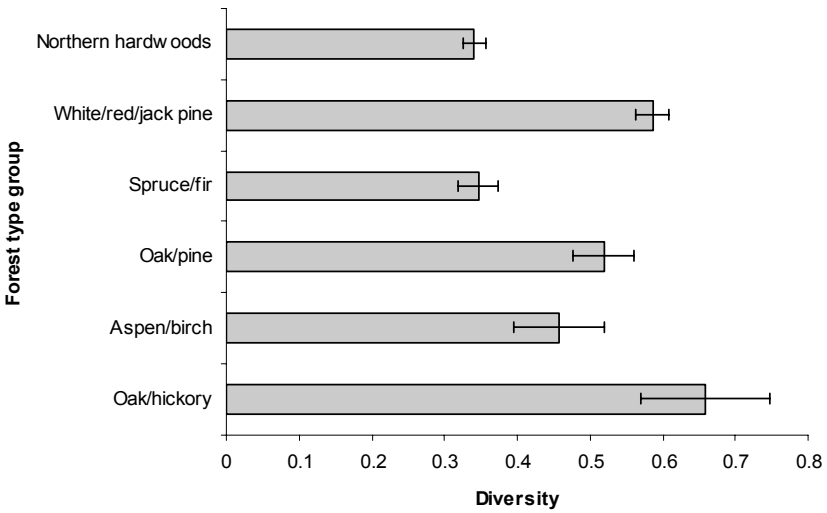

Figure 5 - Mean landscape diversity value by forest-type groups (67-percent confidence intervals are shown)

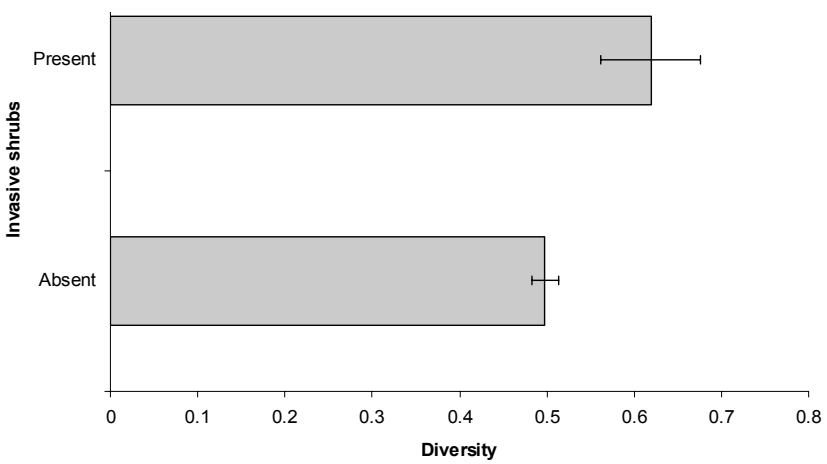

Figure 6 - Mean landscape diversity value by presence/absence of invasive shrubs (67-percent confidence intervals are shown)

Citation for this Publication

Morin, R.S.; Tansey, M. 2008. Vermont's forest resources, 2006. Research Note NRS-17. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p.

FIA Program Information

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Additional New Hampshire Inventory Information

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Kingsley, N.P. 1976. The forest resources of New Hampshire. Res. Bull. NE-43. Upper Darby, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 71 p.

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