USDA Forest Service, US Department of Agriculture
Northern Research Station

Maine's Forest Resources, 2010

Research Note NRS-110

This publication provides an overview of forest resource attributes for Maine 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 estimates, along with web-posted core tables, will be updated annually. For more information please refer to page 4 of this report.

Table 1. – Annual estimates, uncertainty, and change

	Estimate (2010)	Sampling error (%)	Change (%) since 2005
Forest Land Estimates			
Area (1,000 acres)	17,665	0.4	0.0
Number of live trees > 1-inch diameter (million trees)	23,954	1.5	6.7
Dry biomass of live trees > 1-inch diameter (1,000 tons)	668,686	1.0	2.0
Net volume in live trees > 5-inch diameter (1,000,000 ft^3)	25,489	1.2	0.4
Annual net growth of live trees > 5-inch diameter (1,000 ft^3/year)	664,326	2.4	22.0
Annual mortality of live trees > 5-inch diameter (1,000 ft^3/year)	326,015	2.9	-13.1
Annual harvest removals of live trees > 5-inch diameter (1,000 ft^3/year)	645,609	5.1	6.7
Annual other removals of live trees > 5-inch diameter (1,000 ft^3/year)	5,334	55.3	132.7
Timberland Estimates			
Area (1,000 acres)	17,192	0.5	0.2
Number of live trees > 1-inch diameter (million trees)	23,379	1.6	7.0
Biomass of live trees > 1-inch diameter (1,000 tons)	653,616	1.0	2.5
Net volume of live trees > 5-inch diameter (1,000,000 ft^3)	24,888	1.2	0.8
Net volume of growing-stock trees (1,000,000 ft^3)	23,365	1.3	0.6
Annual net growth of growing-stock trees (1,000 ft^3/year)	663,239	2.6	27.7
Annual mortality of growing-stock trees (1,000 ft^3/year)	248,262	3.2	-14.0
Annual harvest removals of growing-stock trees (1,000 ft^3/year)	572,956	5.1	8.5
Annual other removals of growing-stock trees (1,000 ft^3/year)	14,768	37.4	-52.7

Note: When available, sampling errors/bars provided in figures and tables represent 68 percent confidence interval. Change in growth estimates are from 2004-2006 period.

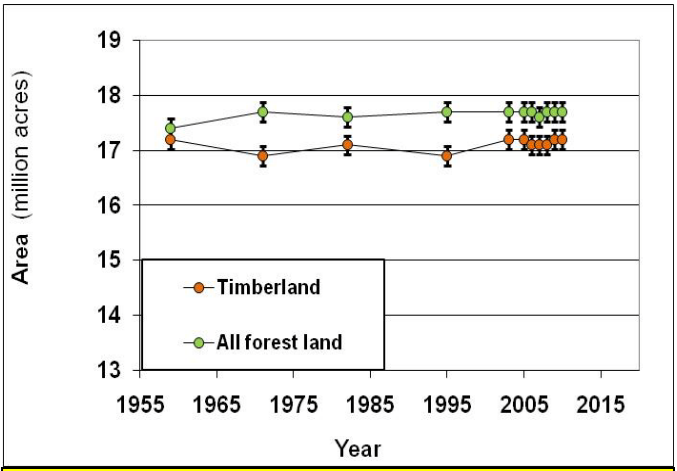

Figure 1. – Area of timberland and forest land by year.

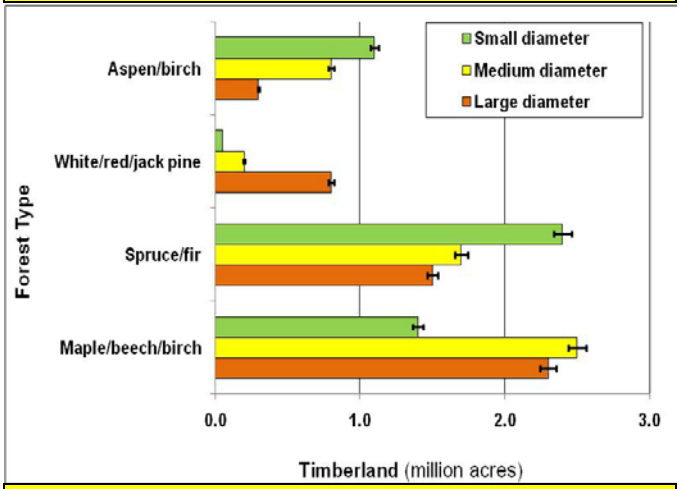

Figure 2. – Area of forest land area by top four forest-type groups and stand size classes, 2006-2010.

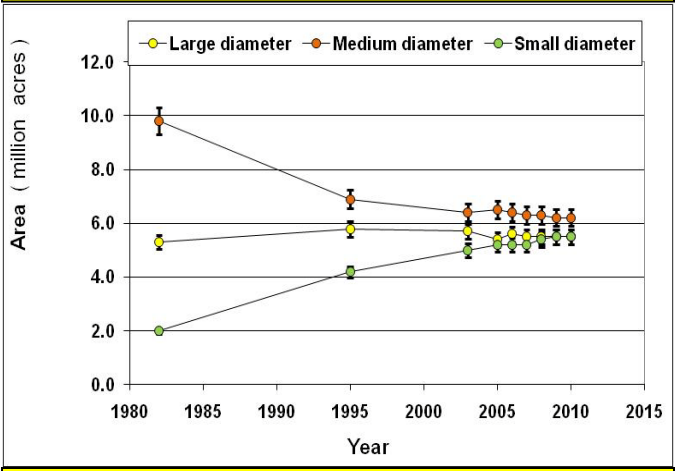

Figure 3. – Area of timberland by stand size class and year.

Table 2. – Top 10 tree species by statewide volume estimates, Maine 2006-2010

Rank	Species	Volume of live trees on forest land (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	Red maple	3,186	2.8	2.1	4,824	4.8	3.4
2	Red spruce	3,050	3.7	-5.5	7,848	4.7	-3.2
3	Eastern white pine	2,769	5.2	5.3	10,403	5.8	7.8
4	Balsam fir	2,240	3.0	3.9	2,595	5.2	-5.9
5	Northern white-cedar	2,216	4.8	4.0	4,744	5.7	10.2
6	Sugar maple	2,038	5.4	-6.0	5,624	6.9	-5.4
7	Eastern hemlock	1,955	5.0	6.6	5,563	5.8	11.4
8	Yellow birch	1,594	3.9	-1.1	3,742	6.5	-0.5
9	Paper birch	1,136	4.2	-6.0	1,160	7.6	-7.8
10	American beech	878	5.6	-11.4	1,079	9.7	-20.0
	Other softwoods	**1,446**	**5.6**	**2.2**	**3,286**	**7.2**	**5.4**
	Other hardwoods	**2,979**	**3.5**	**2.7**	**6,494**	**5.2**	**8.3**
	All species	**25,489**	**1.2**	**0.4**	**57,363**	**1.9**	**2.6**

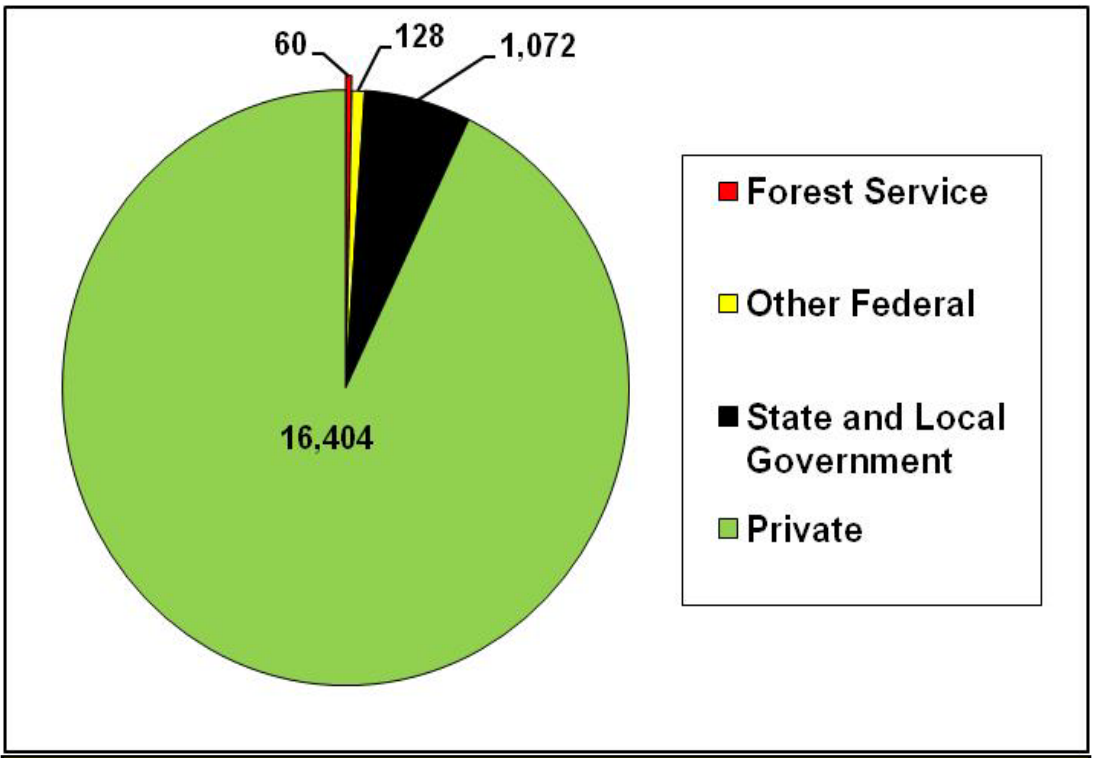

Figure 4. – Area of forest land area (1000 acres) by ownership group, Maine, 2010.

Maine – American beech mortality continues to accumulate.

Beech bark disease (BBD) is an insect-fungus complex involving the exotic beech scale insect (*Cryptococcus fagisuga* Lind.*)* and the exotic canker fungus *Neonectria coccinea* (Pers.Fr) *var. faginata* Lohm. or the native *Neonectria galligena* Bres. that kills or injures American beech (*Fagus grandifolia*). BBD was first discovered in Maine in 1935 and by 1950 it had spread throughout most of the State (Figure 5; Morin et. al 2007).

Although BBD has been active in Maine's forests for over 70 years, it continues to increase the beech mortality rate and the incidence of rough and rotten trees. Maine has the highest annual mortality rate for beech in the eastern United States. The statewide mortality rate of 3.5 percent is more than twice the rate for other eastern states (1.5 percent; Figure 6). More than 30 percent of beech sawtimber-sized trees (trees > 11.0 inches d.b.h.) are either standing dead or graded as rough and rotten trees. By contrast, less than 10 percent of the sawtimber-sized trees for Maine's sugar maple trees are standing dead, and rough or rotten trees (Figure 7).

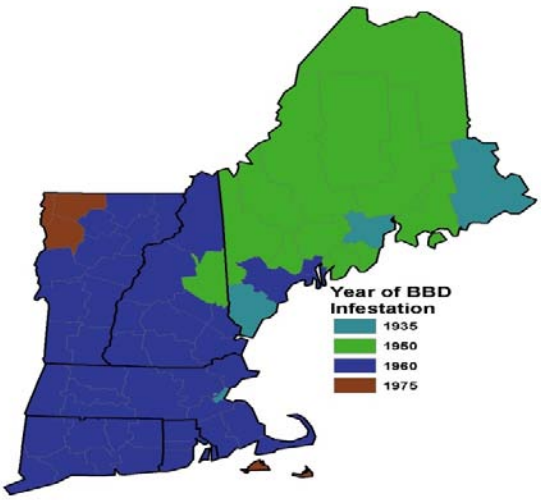

Figure 5. – Spread of beech bark disease by year.

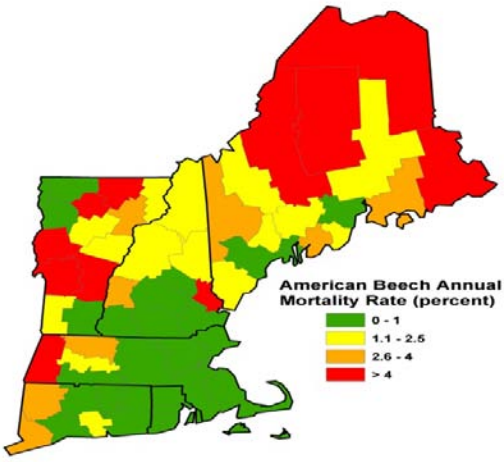

Figure 6. – American beech annual mortality as percent of total volume in New England, 2008.

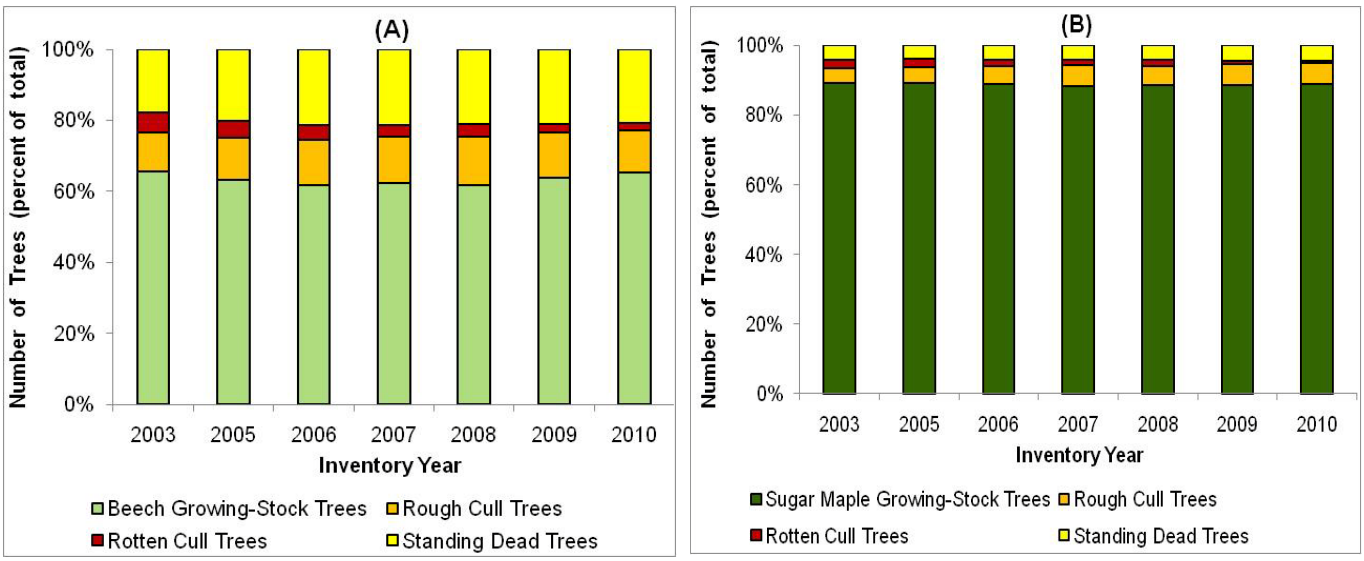

Figure 7. – Growing-stock, rough cull, rotten cull, and standing dead trees for American beech (A) and sugar maple (B) as percentages of the total number of trees with diameters greater than 11.0 inches d.b.h., Maine, 2003-2010.

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FIA Program Information

Bechtold, W.A.; Patterson, P.L., eds. 2005. **The enhanced forest inventory and analysis program: national sampling design and estimation procedures**. Gen. Tech. Rep. SRS-80. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 85 p.

Smith, W.B. 2002. **Forest inventory and analysis: a national inventory and monitoring program**. Environmental Pollution. 116: 233-242.

USDA Forest Service. 2007. **Forest inventory and analysis national core field guide-northern edition, vol. 1**, field data collection procedures for phase 2 plots, version 4.0. Washington D.C.: U.S. Department of Agriculture, Forest Service. Available **www.fia.fs.fed.us/library/field-guides-methods-proc (**verified July, 2007).

Additional Information

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Additional Maine Inventory Information

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