Connecticut's Forest Resources, 2009

Research Note NRS-98

This publication provides an overview of forest resource attributes for Connecticut 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 2009	Sampling error (%)	Change since 2005 (%)
Forest Land Estimates			
Area (1,000 acres)	1,687	2.7	-6.0
Number of live trees 1-inch diameter or larger (million trees)	766	5.1	-16.3
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	119,796	3.5	-2.2
Net volume in live trees (1,000,000 ft^3)	4,114	3.7	-1.5
Annual net growth of live trees (1,000 ft^3/year)	85,231	13.6	NA
Annual mortality of live trees (1,000 ft^3/year)	36,355	22.4	NA
Annual harvest removals of live trees (1,000 ft^3/year)	26,388	47.0	NA
Annual other removals of live trees (1,000 ft^3/year)	5,274	72.0	NA
Timberland Estimates			
Area (1,000 acres)	1,659	2.8	-5.0
Number of live trees 1-inch diameter or larger (million trees)	756	5.1	-16.3
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	119,377	3.5	-0.6
Net volume in live trees (1,000,000 ft^3)	4,104	3.7	0.4
Net volume of growing-stock trees (1,000,000 ft^3)	3,781	3.9	-1.4
Annual net growth of growing-stock trees (1,000 ft^3/year)	90,777	15.7	NA
Annual mortality of growing-stock trees (1,000 ft^3/year)	24,848	26.0	NA
Annual harvest removals of growing-stock trees (1,000 ft^3/year)	20,668	49.7	NA
Annual other removals of growing-stock trees (1,000 ft^3/year)	2,114	98.5	NA

Note: When available, sampling errors/bars provided in figures and tables represent 68 percent confidence intervals.

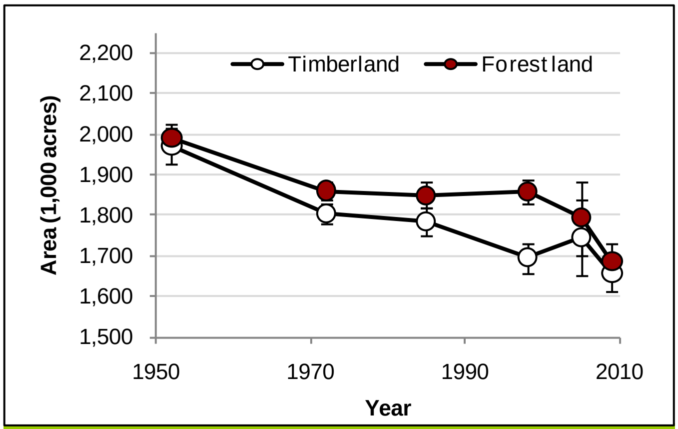


Figure 1. – Area of timberland and forest land by year.

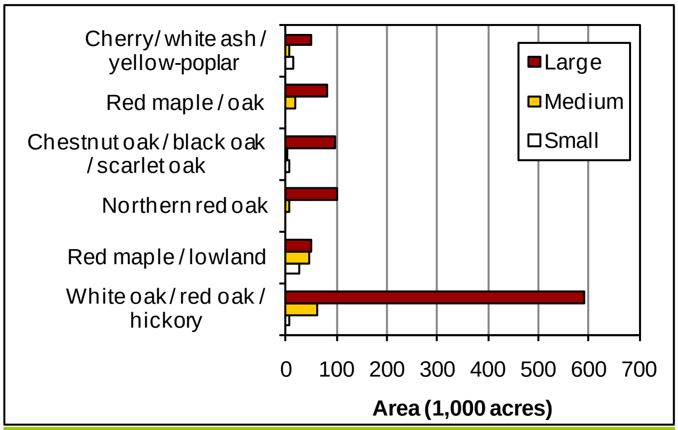


Figure 2. – Area of forest land by top six forest types and stand-size class, 2005-2009.

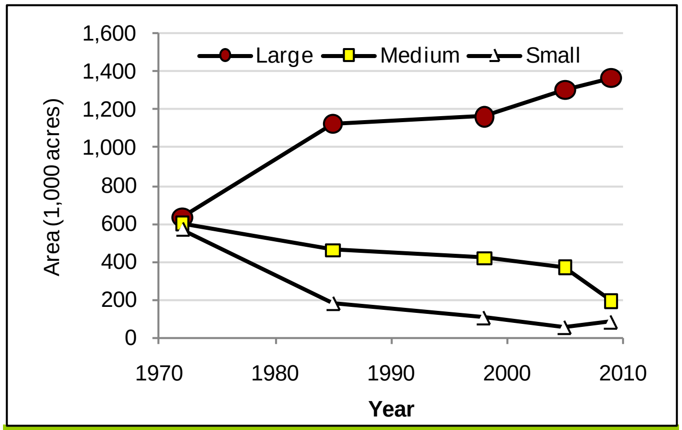


Figure 3. – Area of timberland by stand-size class and year.

Table 2. – Top 10 tree species by statewide volume estimates, 2005-2009

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	859	8.5	-0.2	2,235	11.3	16.6
2	Northern red oak	582	10.0	4.3	2,294	10.7	13.1
3	Black oak	328	13.1	-4.2	1,346	14.5	1.6
4	Sweet birch	297	9.8	-5.2	665	14.5	-8.2
5	Eastern white pine	274	20.2	-6.4	1,112	24.2	-6.7
6	White oak	268	10.8	-11.9	976	12.5	-7.8
7	Eastern hemlock	208	17.9	-2.9	566	20.3	-10.4
8	White ash	193	16.5	-12.9	702	20.7	-16.8
9	Sugar maple	182	16.7	4.1	528	22.2	-14.9
10	Scarlet oak	151	15.9	25.1	522	16.7	46.8
	Other softwoods	31	38.5	-6.5	83	56.3	90.2
	Other hardwoods	742	8.4	0.2	2,389	12.0	22.9
	All Species	**4,114**	**3.7**	**-1.5**	**13,420**	**4.7**	**5.8**

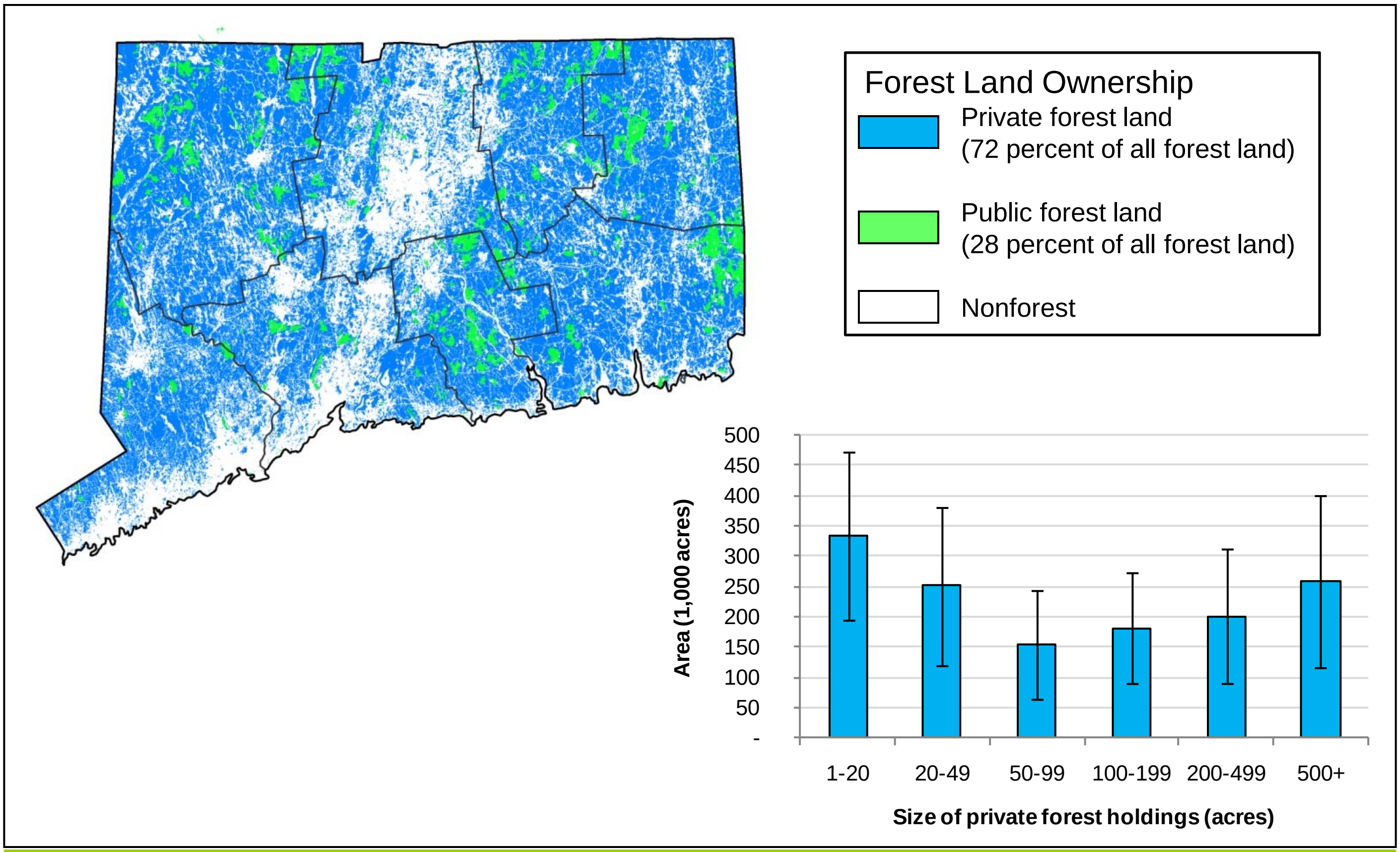


Figure 4. – Area of forest land by major owner group and size of private forest landholding (2002-2006).

Woody Biomass across Southern New England

Harvesting woody biomass for energy production is a topic of lively discussion across the region (Manomet 2010). As part of the FIA inventory, estimates of the amount of woody biomass can be calculated (Table 1). Across Connecticut, Massachusetts, and Rhode Island there are 347 million dry tons of woody biomass (Fig. 5). This estimate includes the boles, stumps, tops, and limbs of all trees with a diameter at breast height of one inch or greater (Fig. 6); it does not include foliage, seedlings, downed woody material, belowground material, or any nontree species. Just because the biomass is on the landscape does not mean that it is available for energy production. We know that some of the trees are already used for solid wood products, such as boards, and some of the residual materials, such wood chips generated as a by-product of sawmills, are fully utilized. Of the remaining biomass, it is important to consider the social and biophysical availability of the resource. The biophysical characteristics describe the quantity, quality, and composition of the resource and the natural setting in which it exists. The social factors determine the desirability of the potential goods and services and the propensity for those who control a resource, such as wood, to utilize it themselves, allow others to do so, or do nothing with it. Examining just the family forest lands, the biophysical constraints reduce the availability by 6 to 9 percent while the social availability, particularly owner attitudes, reduce the availability by 68 to 79 percent (Butler et al. 2010). Then additional factors, such as harvesting costs, haul distances, and other economics factors musty also be considered. Knowing the total amount of biomass across the landscape is useful, but it is only part of a complex set of factors to be considered when making decisions regarding woody biomass use.

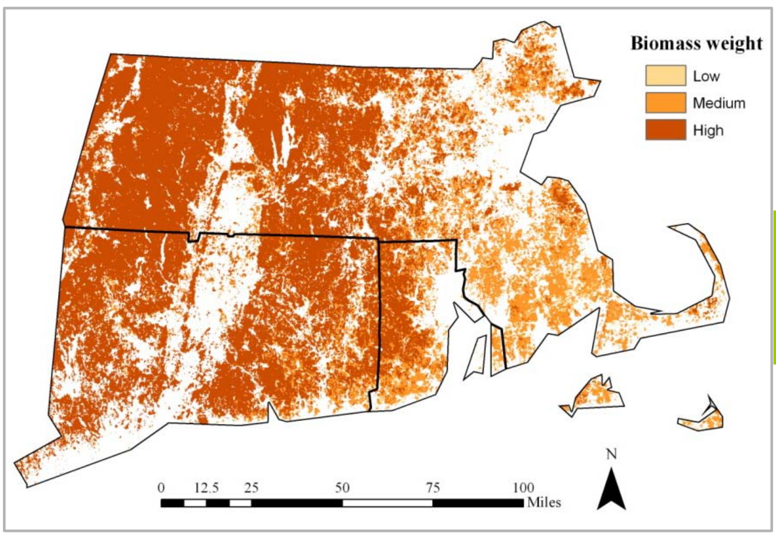
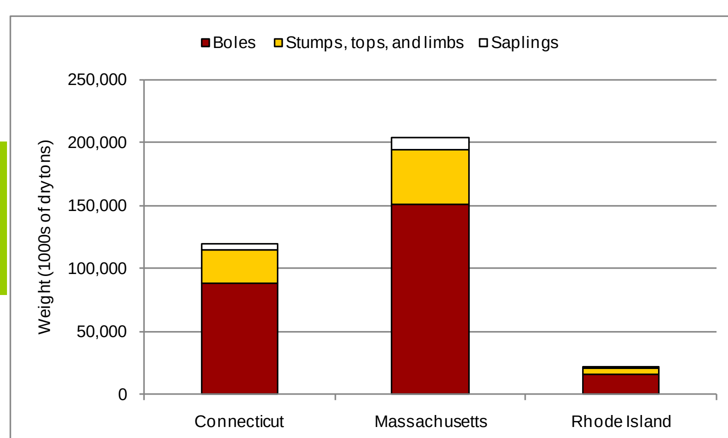


Figure 5. – Distribution of woody biomass across southern New England (Blackard et al. 2008).

Figure 6. – Distribution of woody biomass by tree component and state.



Citation for this Publication

Butler, Brett J.; Martin, Christopher. 2011. **Connecticut's forest resources, 2009.** Res. Note NRS-98. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p.

FIA Program Information

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Special Issue Citation

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Acknowledgments

Special thanks to Chuck Barnett, Susan Crocker, Mark Hansen, Ted Goodnight, Dacia Meneguzzo, Bryan Tirrell, and Chris Woodall for their contributions to this report. We are also grateful to Jeff Ward, Doug Emmerthal, and Jim Parda for reviewing earlier drafts of this report.

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