USDA United States Department of Agriculture
Forest Service
Northern Research Station

West Virginia's Forest Resources, 2006

Research Note NRS-23

This publication provides an overview of forest resource attributes for this state 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)	12,001	1.0	0.0
Number of live trees 1 inch diameter or larger (million trees)	6,156	2.1	0.9
Dry biomass of live trees 1 inch diameter or larger (1,000 tons)	842,338	1.6	1.0
Net volume in live trees (1,000,000 ft^3)	24,655	1.8	2.2
Net volume of growing stock trees (1,000,000 ft^3)	23,663	1.8	2.5
Annual net growth of live trees (1,000 ft^3/year)	518,924	6.0	NA
Annual mortality of live trees (1,000 ft^3/year)	216,156	10.0	NA
Annual removals of live trees (1,000 ft^3/year)	315,846	12.0	NA
Timberland Estimates			
Area (1,000 acres)	11,731	1.1	-0.7
Number of live trees 1 inch diameter or larger (million trees)	5,998	2.2	-0.2
Biomass of live trees 1 inch diameter or larger (1,000 tons)	820,145	1.7	0.0
Net volume in live trees (1,000,000 ft^3)	23,981	1.9	1.4
Net volume of growing stock trees (1,000,000 ft^3)	23,016	2.0	1.7
Annual net growth of growing stock trees (1,000 ft^3/year)	394,835	7.0	NA
Annual mortality of growing stock trees (1,000 ft^3/year)	167,780	12.0	NA
Annual removals of growing stock trees (1,000 ft^3/year)	276,779	12.0	NA

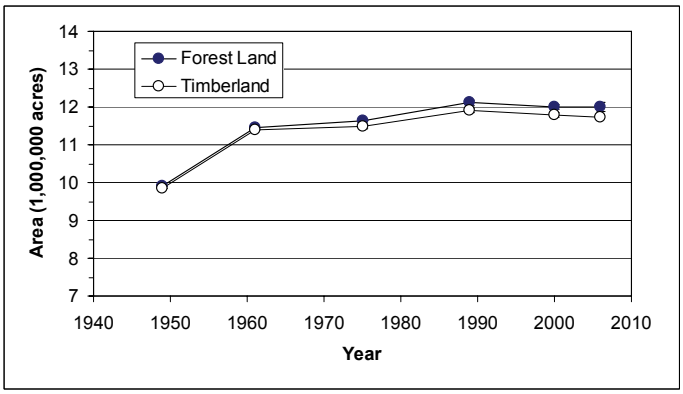

Figure 1. – Area of timberland and forest land by year.

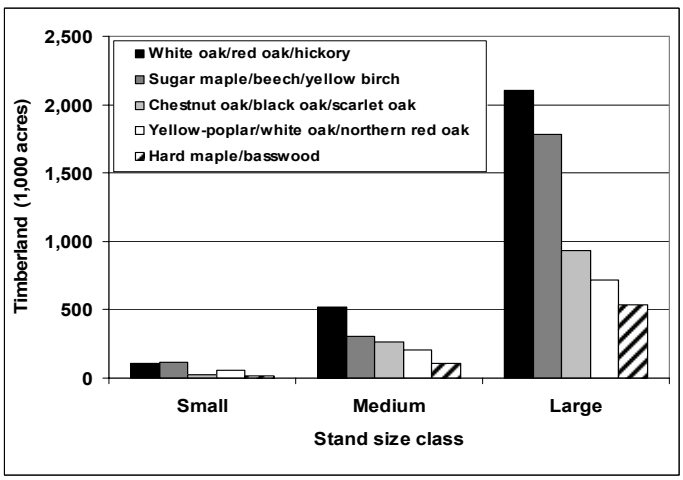

Figure 2. – Area of timberland for top six forest types by stand size class.

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	Yellow-poplar	3,707.8	5.9	5.6	15,364.9	6.8	4.7
2	Red maple	2,171.4	5.4	6.2	5,636.8	7.3	14.4
3	White oak	2,099.7	5.8	-7.4	7,210.1	6.7	-6.5
4	Chestnut oak	2,044.2	6	-3.5	6,089.3	7.1	-0.4
5	Northern red oak	1,772.9	6.5	9.3	7,292.7	7.3	12.0
6	Sugar maple	1,734.8	6.4	1.4	4,592.4	9.2	-2.2
7	Black oak	1,015.3	7.7	-9.6	3,923.7	8.8	-9.2
8	American beech	896.2	8.8	2.1	2,807.0	10.9	3.9
9	Black cherry	841.6	10.9	23.5	3,041.7	13.5	32.9
10	American basswood	750.4	12.5	9.4	3,089.9	14.7	12.9
	Other softwood species	1,211.2	9.1	1466.9	3,906.0	11.6	2,078.5
	Other hardwood species	5,735.7	3.1	83.4	15,481.5	4.2	88.7
	All species	23,981.2	1.9	1.4	78,436.0	2.5	2.7

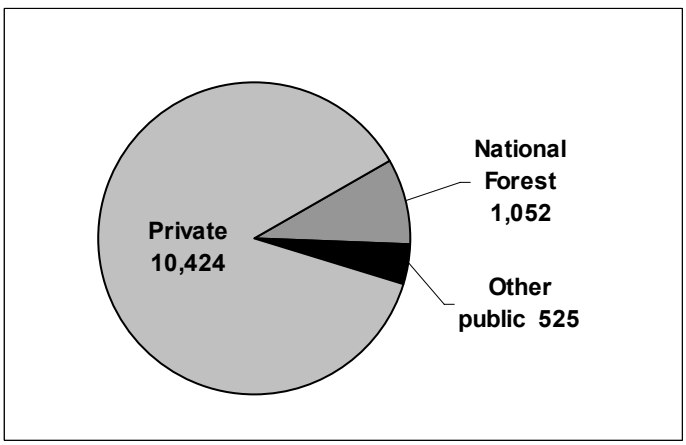

Figure 3. – Area of forest land (1,000 acres) by ownership group.

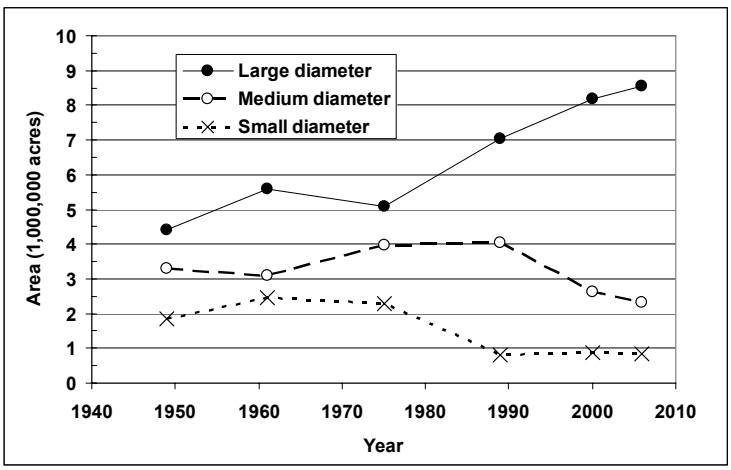

Figure 4. – Area of timberland by stand size class and year.

West Virginia Issue Update – Are Forests Being Managed Sustainability?

West Virginia's forests produce many benefits including wood for timber products, recreational opportunities, clean water, and sites for new homes. As demands for these benefits increase, there is growing concern about whether forest resources are being managed sustainably. FIA data can address sustainability in several ways.

One way is to look at the area of forest land. The 2006 estimate of the amount of forest land is nearly the same as in 2000 with no statistical difference between the estimates (Fig. 1). Although the acreage of forest land in West Virginia may have peaked in 1989, recent data shows very little change since 2000.

A second way to judge sustainability is to look at the components of inventory volume change—growth, removals, and mortality. The 2006 inventory revealed that since 2000, on an annual basis, the net growth of growing-stock trees in West Virginia averaged 395 million cubic feet versus 277 million cubic feet of removals (Fig. 5). The net change of 118 million cubic feet was about two-thirds of the annual increase for the 1989-2000 inventory period.

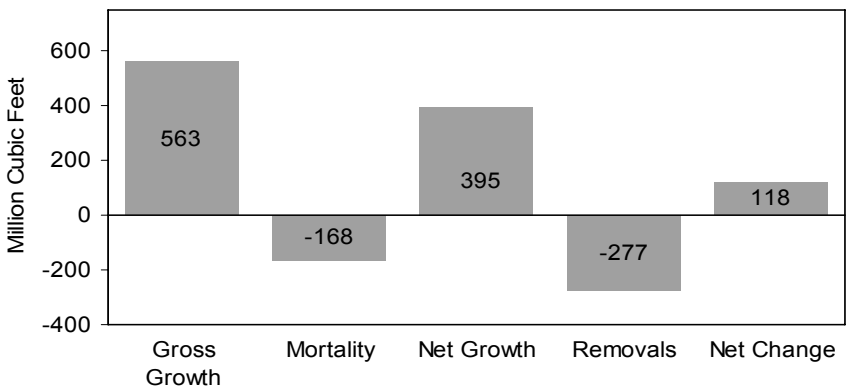

Figure 5. – Average annual components of change in growing-stock volume 2004-2006.

Although the total volume of trees continued to increase, some species did better than others, indicating a shift in the species composition of the forest resource. Of the top 10 species, yellow-poplar, red maple, and sugar maple increased by 10, 5, and 11 percent respectively, while white oak, northern red oak, and American beech declined by 3, 5, and 6 percent respectively (Fig. 6).

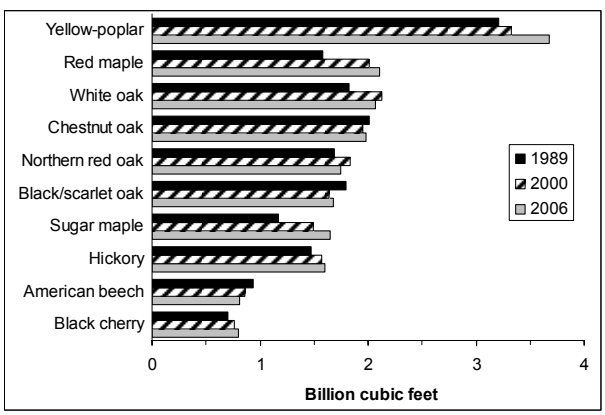

Figure 6. – Growing-stock volume by species on timberland, West Virginia, 1989, 2000, and 2006.

These two measures of sustainability indicate that in West Virginia, the forest land base is stable and more wood is being grown than is being lost to mortality, harvesting, and land-use change. Across its range, as well as in West Virginia, the sustainability of the oak resource is an ongoing concern. Annual forest inventories will continue to monitor this shift in species composition away from oak species.

Citation for this Publication

Widmann, Richard H.; Cook, Gregory W. 2008. West Virginia's forest resources, 2006. Res. Note. NRS-23. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p.

FIA Program Information

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Additional West Virginia Inventory Information

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