



Maryland's Forest Resources, 2006

Research Note NRS-19

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 and uncertainty

	Estimate	Sampling Error (%)
Forest Land Estimates		
Area (1,000 acres)	2,437.8	3.3
Number of live trees 1 inch diameter or larger (million trees)	1,413.4	7.0
Dry biomass of live trees 1 inch diameter or larger (1,000 tons)	190,115.9	4.3
Net volume in live trees (1,000,000 ft ³)	6,272.8	4.8
Net volume of growing stock trees (1,000,000 ft ³)	6,124.4	4.8
Annual net growth of live trees (1,000 ft ³ /year)	119,041.2	11.3
Annual mortality of live trees (1,000 ft ³ /year)	52,762.5	13.5
Annual removals of live trees (1,000 ft ³ /year)	76,050.0	23.9
Timberland Estimates		
Area (1,000 acres)	2,294.7	3.7
Number of live trees 1 inch diameter or larger (million trees)	1,365.2	7.4
Biomass of live trees 1 inch diameter or larger (1,000 tons)	178,570.0	4.7
Net volume in live trees (1,000,000 ft ³)	5,887.5	5.1
Net volume of growing stock trees (1,000,000 ft ³)	5,754.9	5.1
Annual net growth of growing stock trees (1,000 ft ³ /year)	143,482.0	12.7
Annual mortality of growing stock trees (1,000 ft ³ /year)	39,852.0	15.7
Annual removals of growing stock trees (1,000 ft ³ /year)	75,652.0	24.7

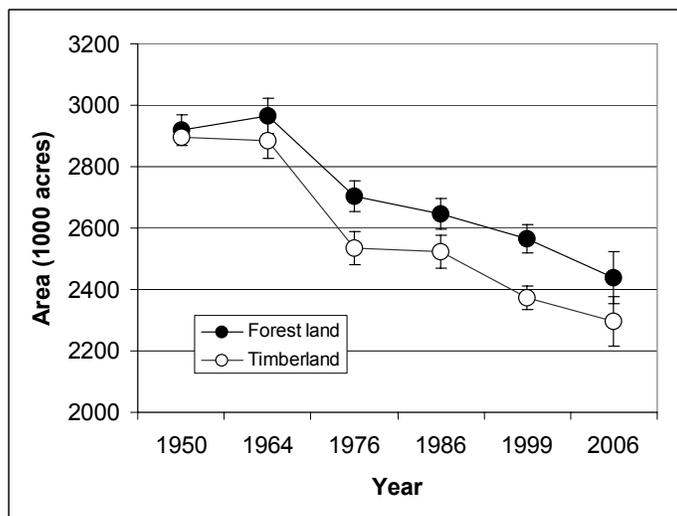


Figure 1. - Area of timberland and forest land by year.

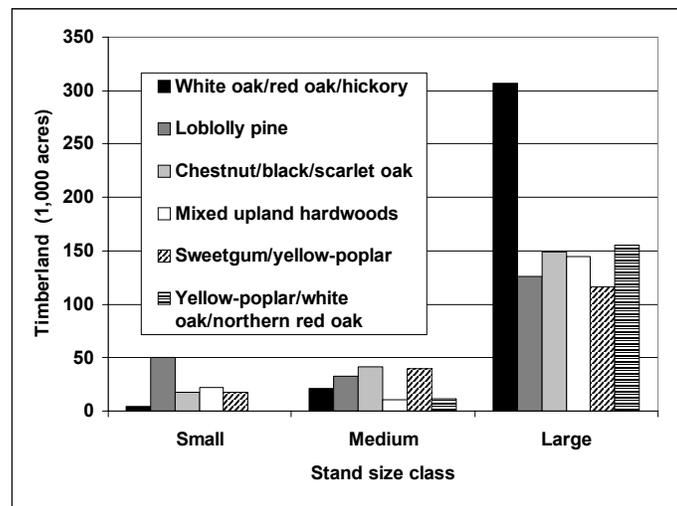


Figure 2. - Timberland area of top six forest types by stand size class.



Table 2. - Top 10 species by statewide volume estimates

Rank	Species	Volume of live trees on timberland (1,000,000 ft ³)	Sampling Error (%)	Volume of sawtimber trees on timberland (1,000,000 bdf)	Sampling Error (%)
1	Yellow-poplar	1,182.4	13.8	5,756.5	14.5
2	Red maple	721.5	10.7	2,276.7	13.0
3	Loblolly pine	577.6	18.0	2,169.3	20.6
4	White oak	452.7	14.6	1,709.4	16.3
5	Sweetgum	443.7	16.3	1,405.8	19.7
6	Northern red oak	227.3	24.0	989.7	27.3
7	Chestnut oak	203.9	21.6	624.2	24.2
8	Black oak	197.1	21.7	776.5	23.2
9	Scarlet oak	196.5	19.3	802.6	21.7
10	American beech	196.0	20.2	627.2	23.5
	Other softwood species	236.6	23.4	833.5	26.1
	Other hardwood species	1,252.3	8.1	3,734.3	10.6
	All species	5,887.5	5.1	21,705.8	6.2

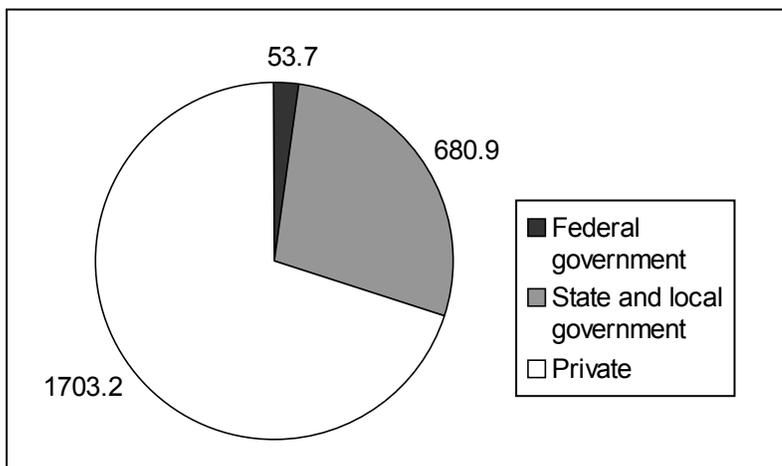


Figure 3. - Forest land area (1,000 acres) by ownership group.

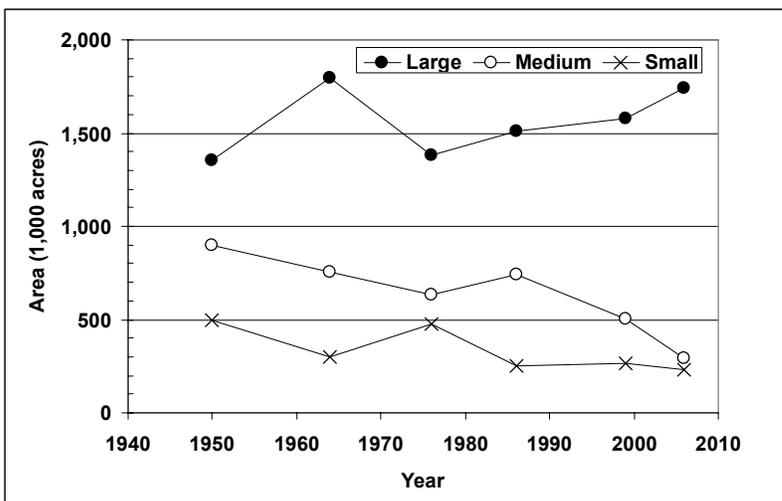


Figure 4. - Area of timberland by stand size class and year.



Maryland Issue Update – Loss of Early Successional Forests and Oak Regeneration

Early successional habitat is a critical component of Maryland's forests. Not only does a healthy, sustainable forest depend upon an adequate quantity of young trees, but many species of wildlife use this habitat type, including several species that are considered to be in need of conservation. These include bird species such as the northern bobwhite, field sparrow, prairie warbler, and American woodcock. FIA records data on all diameter classes, including seedlings and saplings, to ensure that its assessment is comprehensive.

Figure 4 illustrates a trend that is occurring in many areas across the Northeastern United States: the area of mature forests has been increasing and that of early successional (small stand size class) forests has been decreasing. This finding appears to be supported by comparing the current, 2006, diameter class distribution estimates to the data from 1999 (Fig. 5). The number of trees in small diameter classes appears to be decreasing and the number of large diameter trees shows slight increases. Maturing of existing early successional habitat, decreasing amounts of agricultural land reverting to forest, and lack of stand-replacing disturbances are reasons for this pattern.

Many tree species need a degree of overstory disturbance for successful regeneration. The regeneration of oak species is of particular concern because of the additional threat that deer browse pose to young trees. The diameter class distribution of oak species (Fig. 6) indicates that the distribution of 4 to 10 inch trees is flat. This differs dramatically from the size class distribution of all tree species, which shows the expected exponential increase in number of trees with decreasing diameter class. The data suggest that oak regeneration may be an issue in Maryland and that the current oak resource may not be sustainable.

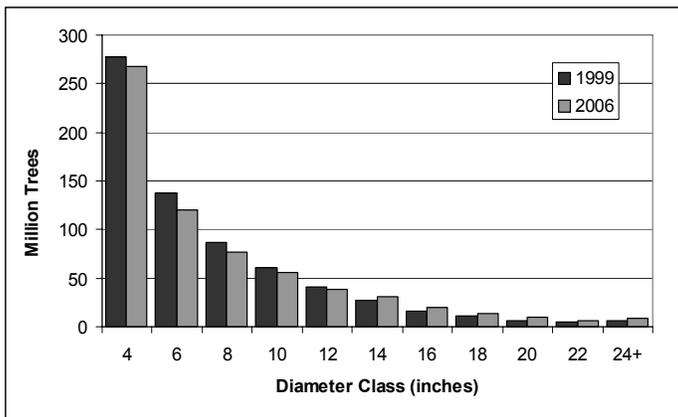


Figure 5. - Total number of trees on forest land by diameter class.

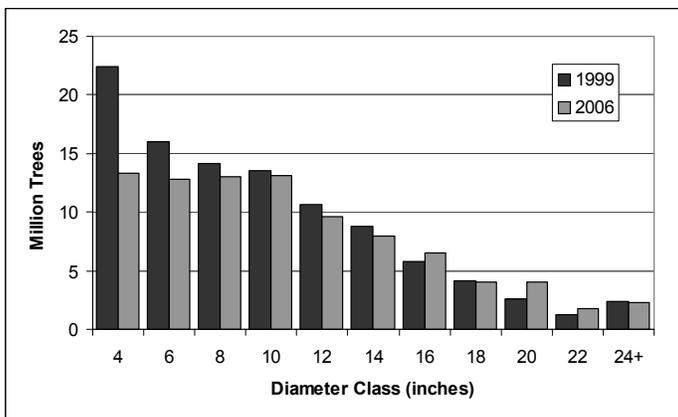


Figure 6. - Number oak trees on forest land by diameter class.



Citation for this Publication

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FIA Program Information

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Additional Maryland Inventory Information

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