

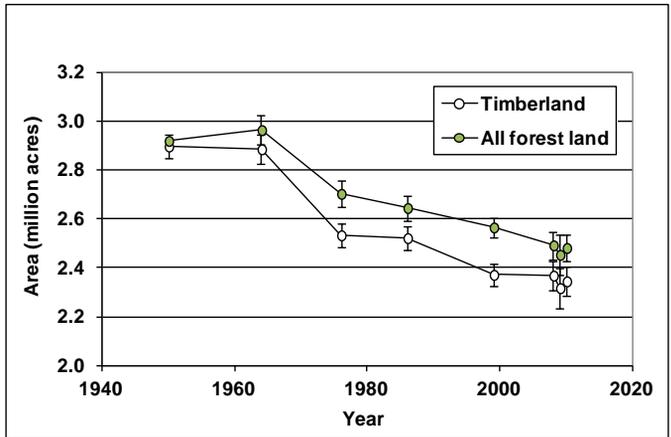
# Maryland's Forest Resources, 2010

Research Note NRS-124

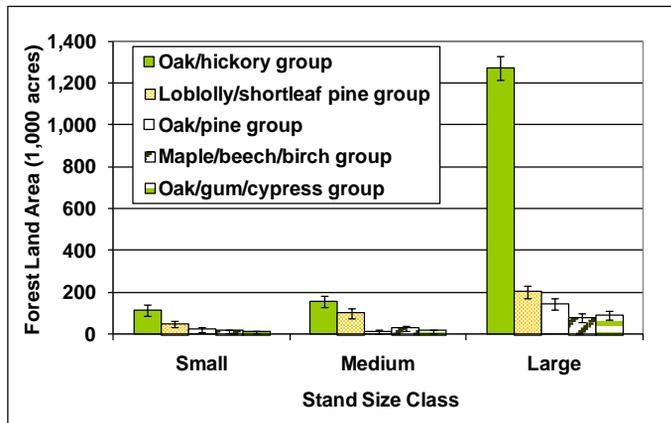
This publication provides an overview of forest resource attributes for Maryland based on an annual inventory program conducted by the Forest Inventory and Analysis (FIA) program at the Northern Research Station of the U.S. Forest Service. These estimates, along with web-posted core tables, will be updated annually. For more information please refer to page 4 of this report.

**Table 1. – Annual estimates, uncertainty, and change.**

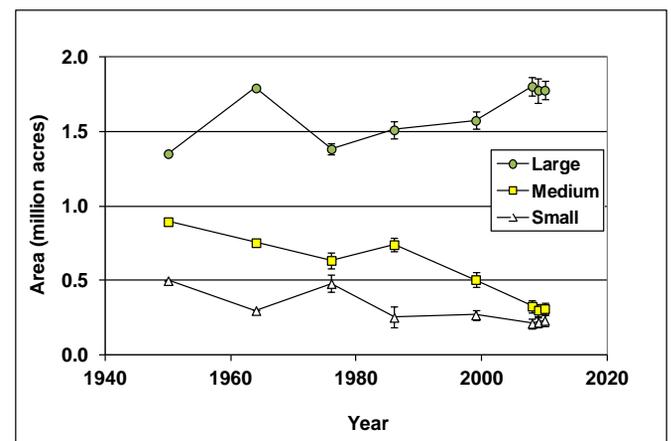
	2010 estimate	Sampling error (%)	Change since 2008 (%)
<b>Forest Land Estimates</b>			
Area (1,000 acres)	2,482	2.2	-0.4
Number of live trees 1-inch diameter or larger (million trees)	1,463	4.9	-1.3
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	180,585	3.0	2.4
Net volume in live trees (1,000,000 ft <sup>3</sup> )	6,617	3.2	2.3
Annual net growth of live trees (1,000 ft <sup>3</sup> /year)	164,640	11.9	NA
Annual mortality of all live trees (1,000 ft <sup>3</sup> /year)	67,413	14.1	NA
Annual harvest removals of all live trees (1,000 ft <sup>3</sup> /year)	55,160	31.5	NA
Annual other removals of all live trees (1,000 ft <sup>3</sup> /year)	9,483	54.4	NA
<b>Timberland Estimates</b>			
Area (1,000 acres)	2,345	2.5	-1.0
Number of live trees 1-inch diameter or larger (million trees)	1,413	5.1	-1.5
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	170,061	3.2	1.5
Net volume in live trees (1,000,000 ft <sup>3</sup> )	6,225	3.4	1.1
Net volume of growing-stock trees (1,000,000 ft <sup>3</sup> )	5,868	3.6	-1.0
Annual net growth of growing-stock trees (1,000 ft <sup>3</sup> /year)	145,515	14.0	NA
Annual mortality of growing-stock trees (1,000 ft <sup>3</sup> /year)	53,428	15.1	NA
Annual harvest removals of growing-stock trees (1,000 ft <sup>3</sup> /year)	49,102	31.4	NA
Annual other removals of growing-stock trees (1,000 ft <sup>3</sup> /year)	7,741	56.9	NA



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



**Figure 2. – Area of forest land by stand size class for top six forest-type groups, 2006-2010.**



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

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

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

Rank	Species	Volume of live trees on forest land (million ft <sup>3</sup> )	Sampling error (%)	Change since 2008 (%)	Volume of sawtimber trees on timberland (million bdf)	Sampling error (%)	Change since 2008 (%)
1	Yellow-poplar	1,249	10.3	3.4	6,000	11.6	3.4
2	Red maple	728	8.0	-1.7	2,100	11.2	-3.1
3	Loblolly pine	628	11.2	4.5	2,094	13.1	10.7
4	White oak	533	10.0	8.3	2,119	11.6	12.2
5	Sweetgum	475	11.1	.0	1,481	13.6	3.1
6	Chestnut oak	264	15.5	-7.2	791	18.6	-7.5
7	Northern red oak	238	14.1	0.3	836	18.4	-3.3
8	Black cherry	235	16.5	3.9	572	22.8	2.4
9	Black oak	216	13.7	4.6	935	15.1	10.0
10	American beech	182	15.5	-2.7	621	21.9	5.6
	Other softwoods	284	18.1	-6.4	821	18.9	-6.9
	Other hardwoods	1,585	5.9	5.1	4,899	7.5	1.6
	<b>All species</b>	<b>6,617</b>	<b>3.2</b>	<b>2.3</b>	<b>23,270</b>	<b>4.4</b>	<b>2.9</b>

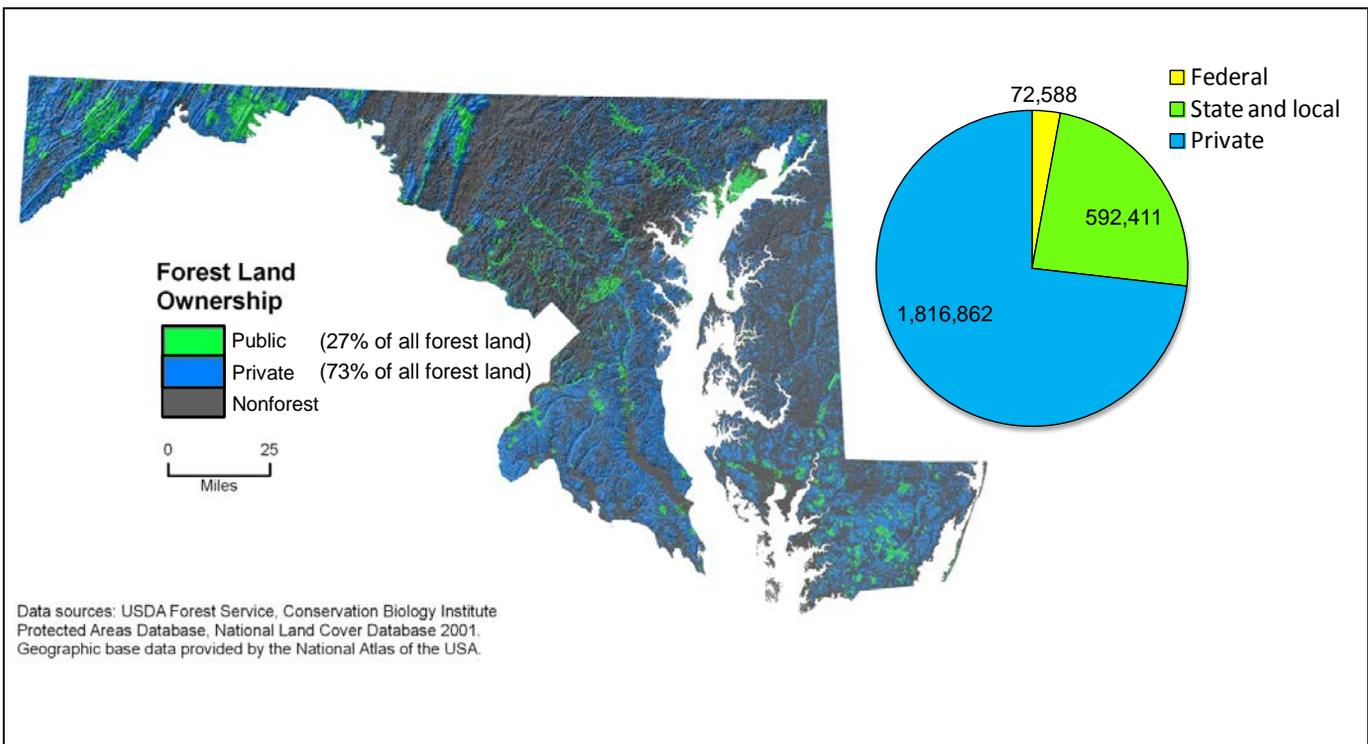


Figure 4. – Distribution of ownerships and area of forest land (acres) by ownership group, Maryland, 2010.

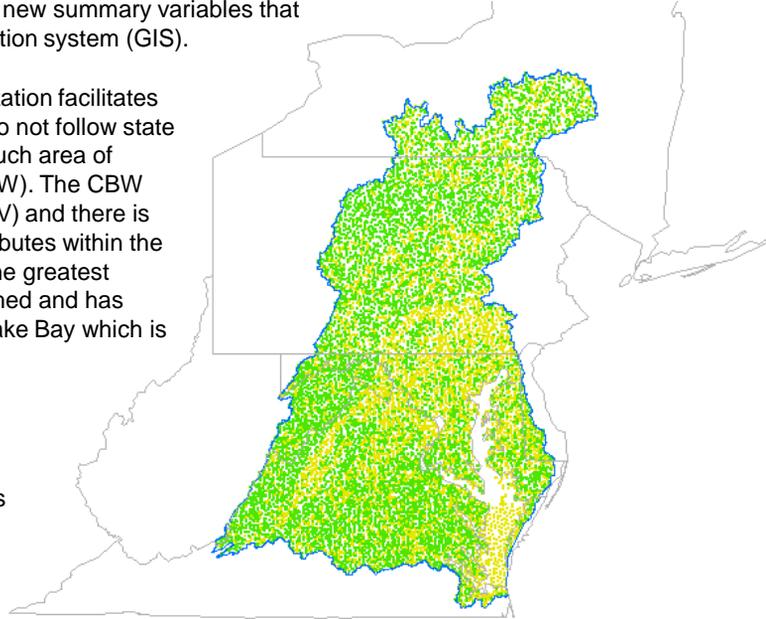
# Analysis of Forest Land in the Chesapeake Bay Watershed

It is possible to conduct customized analyses of FIA data using tools available on the FIA DataMart website (<http://apps.fs.fed.us/fiadb-downloads/datamart.html>). Following the procedures outlined by Miles (2009), FIA data can be loaded into an Access database program called EVALIDatorPC, a user friendly table-making program. This program contains a suite of pre-determined variables by which data can be summarized, and it can also be customized to include new summary variables that are attributed to the FIA plots using a geographic information system (GIS).

Among other applications, this type of database customization facilitates the analysis of unique geographic areas of interest that do not follow state and county boundaries. In the mid-Atlantic region, one such area of particular interest is the Chesapeake Bay watershed (CBW). The CBW spans portions of six states (MD, DE, PA, NY, VA and WV) and there is much interest in characterizing and monitoring forest attributes within the watershed. Of all the states in the CBW, Maryland has the greatest percent of its total land area contained within the watershed and has developed programs to restore and protect the Chesapeake Bay which is considered a national treasure.

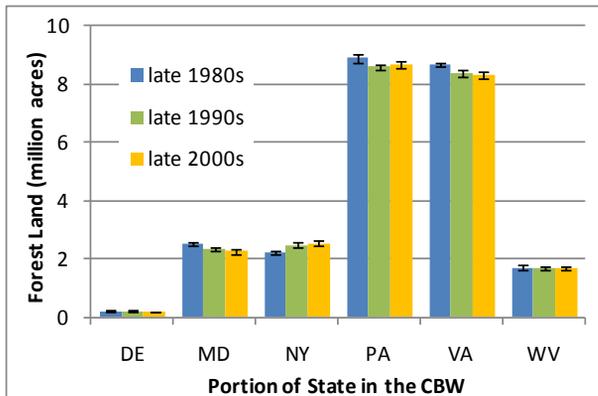
A customized version of the EVALIDatorPC program was created to conduct the analysis of FIA data within the CBW. In the 2005-2009 inventory, there were 6,891 FIA plots within the CBW, and an estimated 23.7 million acres of forest land (Fig. 5). Comparing FIA forest land estimates from the mid 1980s to the mid 1990s suggests that the CBW experienced a 2 percent net loss of forest land. Forest losses in Virginia, Maryland and Pennsylvania were partially offset by gains in New York. Over the last decade, the total forest area has remained stable (Fig. 6).

-  State boundaries
-  Chesapeake Bay watershed
-  Forested FIA plot
-  Nonforest FIA plot

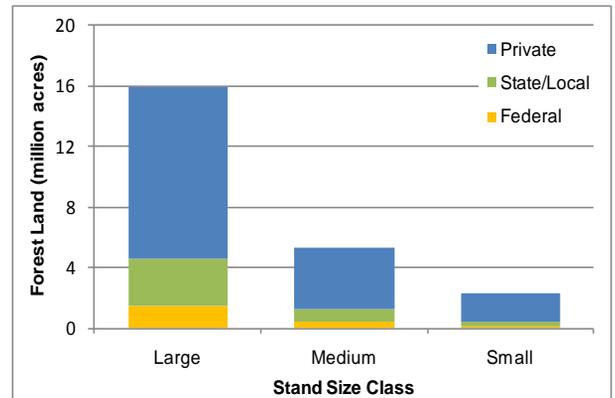


**Figure 5. – Distribution FIA plots with in the Chesapeake Bay watershed, 2009. Plot locations are approximate.**

The dominant forest type within the CBW is the oak/ hickory group. Red maple, black gum, sweet birch and American beech are the most abundant species, and together, account for 30 percent of the 13.7 billion trees present. The majority of forest stands are privately owned and large diameter stands dominate, covering 67 percent of the total forest land area (Fig. 7).



**Figure 6. – Forest area through time, Chesapeake Bay watershed.**



**Figure 7. – Forest area by stand size class and owner type, Chesapeake Bay watershed, 2009.**

### Citation for this Publication

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Estimates, tabular data, and maps from this report may be generated at: [www.fiatools.fs.fed.us](http://www.fiatools.fs.fed.us)

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