USDA Forest Service, US Department of Agriculture
Northern Research Station

Maryland's Forest Resources, 2012

Research Note NRS-191

This publication provides an overview of forest resource attributes for Maryland 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

	2012 estimate	Sampling error (%)	Change since 2008 (%)
Forest Land Estimates			
Area (1,000 acres)	2,446	2.4	-1.9
Number of live trees 1-inch diameter or larger (million trees)	1,406	5.1	-5.1
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	180,697	3.1	2.5
Net volume in live trees (1,000,000 ft^3)	6,646	3.3	2.7
Annual net growth of live trees (1,000 ft^3/year)	152,993	8.8	NA
Annual mortality of all live trees (1,000 ft^3/year)	71,858	10.1	NA
Annual harvest removals of all live trees (1,000 ft^3/year)	67,256	25.5	NA
Annual other removals of all live trees (1,000 ft^3/year)	12,725	40.1	NA
Timberland Estimates			
Area (1,000 acres)	2,312	2.6	-2.5
Number of live trees 1-inch diameter or larger (million trees)	1,358	5.3	-5.4
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	169,600	3.4	1.1
Net volume in live trees (1,000,000 ft^3)	6,231	3.6	1.2
Net volume of growing-stock trees (1,000,000 ft^3)	5,815	3.7	-1.9
Annual net growth of growing-stock trees (1,000 ft^3/year)	139,324	9.4	NA
Annual mortality of growing-stock trees (1,000 ft^3/year)	50,317	11.3	NA
Annual harvest removals of growing-stock trees (1,000 ft^3/year)	59,084	25.4	NA
Annual other removals of growing-stock trees (1,000 ft^3/year)	15,233	36.7	NA

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

Stand size: **Small**—dominated by trees less than 5.0 inches d.b.h, **Medium**—5.0 to 8.9 inches d.b.h. for softwoods and 5.0 to 10.9 inches d.b.h. for hardwoods, **Large**— ≥9.0 inches d.b.h. for softwoods and ≥11.0 inches d.b.h. for hardwoods.

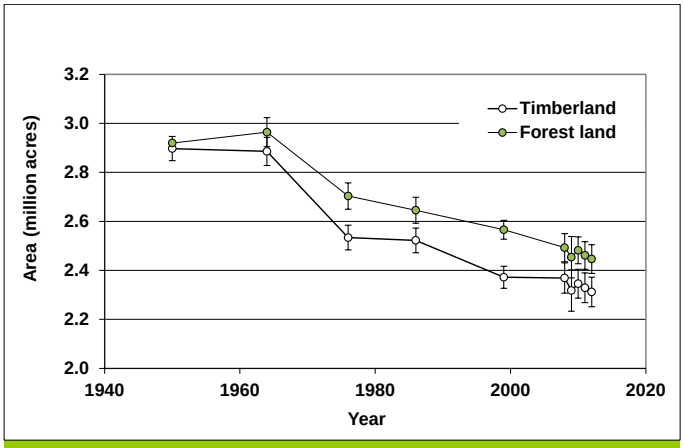


Figure 1. – Area of timberland and forest land by year.

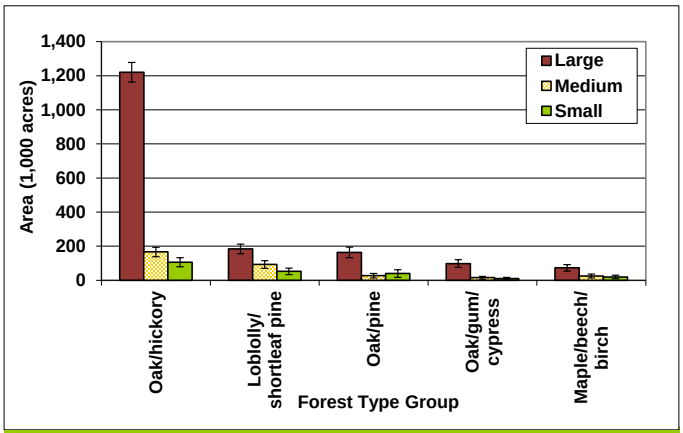


Figure 2. – Area of forest land by stand size class for top six forest-type groups, 2008-2012.

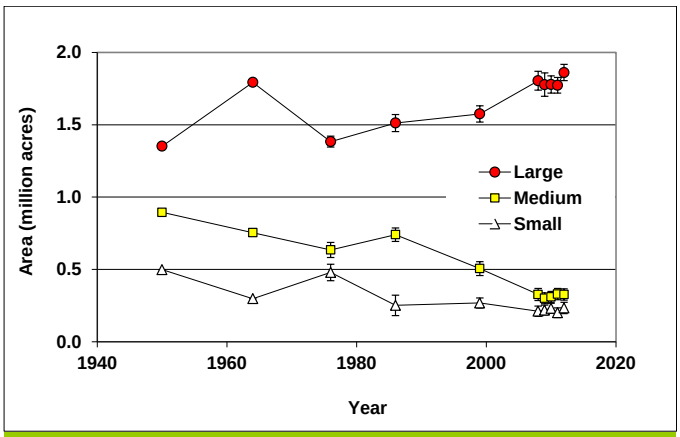
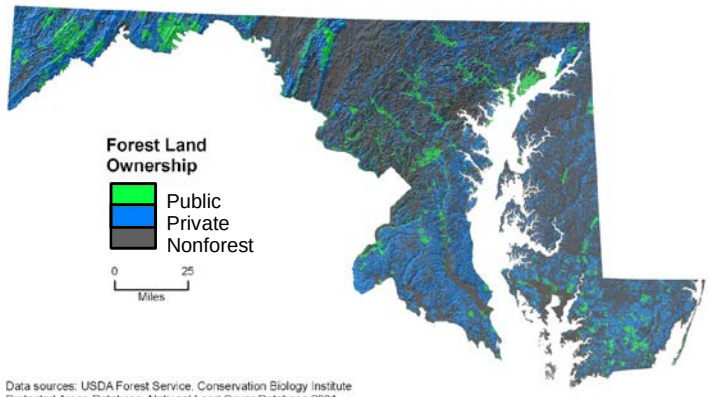


Figure 3. – Area of timberland by stand size class and year.

Table 2. – Top 10 tree species by statewide volume estimates, 2008-2012

Rank	Species	Volume of live trees on forest land (million ft^3)	Sampling error (%)	Change since 2008 (%)	Volume of sawtimber trees on timberland (million bdft)	Sampling error (%)	Change since 2008 (%)
1	Yellow-poplar	1,298	10.6	7.5	6,328	11.8	9.0
2	Red maple	731	8.2	-1.4	2,068	11.2	-4.6
3	Loblolly pine	676	11.5	12.5	2,201	12.9	16.4
4	White oak	526	10.7	6.9	2,105	12.7	11.5
5	Sweetgum	459	11.6	-3.4	1,458	14.0	0.7
6	Chestnut oak	261	16.4	-8.4	803	19.3	-6.1
7	Northern red oak	242	14.3	1.9	865	18.5	0.0
8	Black cherry	229	17.1	1.6	551	24.5	-1.2
9	Black oak	200	14.1	-3.4	834	15.5	-1.9
10	American beech	180	16.7	-3.7	621	23.4	5.5
	Other softwoods	257	18.9	-15.2	762	19.9	-13.6
	Other hardwoods	1,588	6.1	5.3	4,886	7.6	1.3
	All species	**6,646**	**3.3**	**2.7**	**23,481**	**4.5**	**3.8**



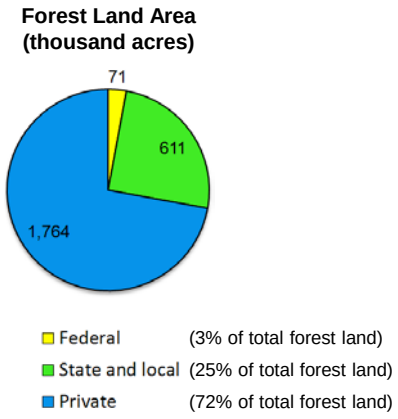


Figure 4. – Distribution of ownerships and area of forest land (thousand acres) by ownership group, Maryland, 2012.

Emerald Ash Borer in Maryland

The emerald ash borer (EAB), (*Agrilus planipennis,* Fairmaire), is a metallic green colored wood boring beetle originally from Asia that was first detected in the United States in 2002 near Detroit, Michigan (Fig. 5). Since then, this invasive insect has spread to at least 15 other states including several counties in Maryland and is responsible for the death of millions of ash trees across the United States. Infected trees usually die within 3 to 5 years as the flow of water and nutrients within the tree is cut off by boring EAB larvae that feed on the inner bark.

Figure 5. – Adult Emerald Ash Borer beetle.
(David Cappaert, Michigan State University, Bugwood.org)

Emerald Ash Borer in Maryland (continued)

Since the initial discovery of EAB in Prince George's County, Maryland, the Maryland Department of Agriculture (MDA) has worked to control the spread of the insect. Despite efforts that include removing tens of thousands of ash trees surrounding infected areas, placing restrictions on the movement of firewood in infected counties, setting up monitoring surveys, and releasing parasitic wasps, EAB has now been detected in nine counties in Maryland (Fig. 6). In an effort to prevent further spread, the MDA has issued a quarantine on all counties west of the Chesapeake Bay in order to prevent the insect's spread eastward (Fig 6). This quarantine prevents the movement of certain ash and hardwood products (including firewood, wood chips, nursery stock, green lumber, etc.) outside of the quarantined area.

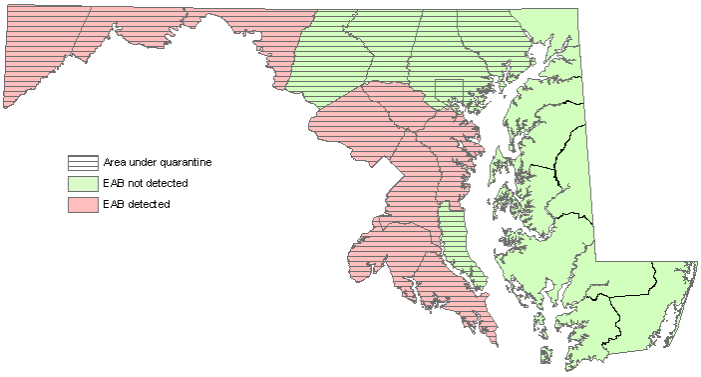


Figure 6. – Presence of EAB and quarantined area by county in Maryland.

According to FIA data, there are over 5 million ash trees greater than 5 inches d.b.h. growing on forest land in Maryland and more than 100 thousand ash trees die each year in the state. Ash species are distributed throughout Maryland with the highest concentrations in the western forests (Fig.7). On average, ash volume is 2 percent of the total volume of trees 5 inches or larger in diameter. Stands dominated by ash trees are rare, but some counties average greater than 6 percent ash by volume (Fig. 8).

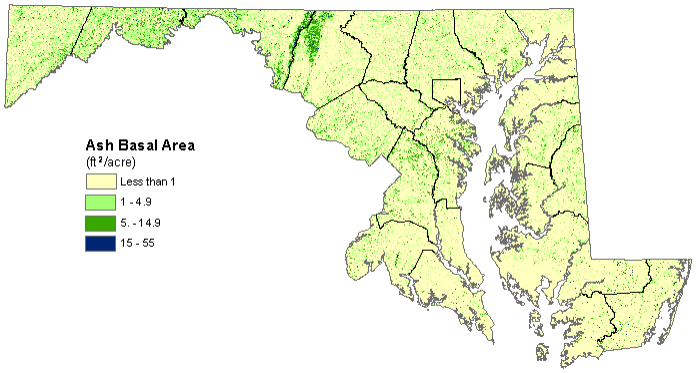


Figure 7. – Distribution of ash trees on forest land in Maryland.

Ash trees are not only an important part of Maryland's natural forest ecosystem, but they are also valuable landscaping trees and have been planted in many urban and suburban environments. Many of these planted trees are not included in the forest land estimates traditionally produced by FIA. However, beginning in 2014, there are plans to initiate an urban forest inventory in Maryland with intensified sampling in Baltimore City, where ash is reported to be the most common tree. The results from the urban forest inventory will help scientists and managers monitor Maryland's threatened ash resource.

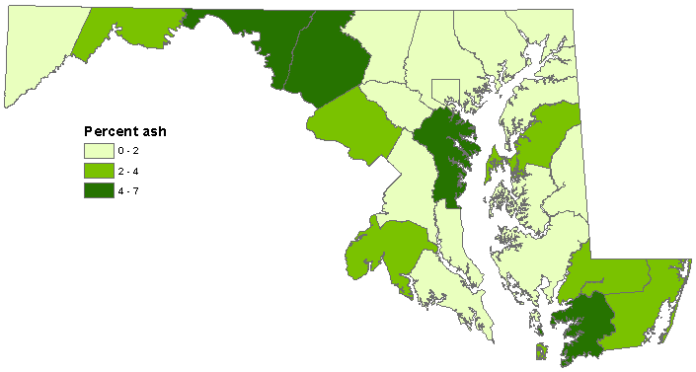


Figure 8. – Ash trees as a percentage of total live volume on forest land by county in Maryland.

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Estimates, tabular data, and maps from this report may be generated at: www.fiatools.fs.fed.us