

# Maryland's Forest Resources, 2008

Research Note NRS-69

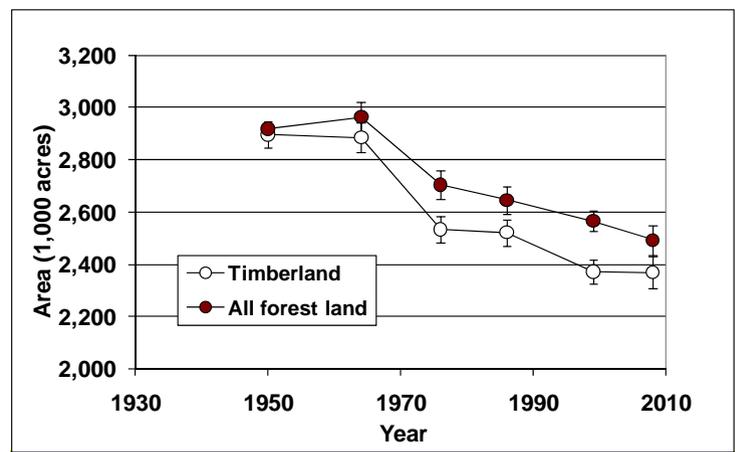
This publication provides an overview of forest resource attributes for Maryland based on an annual inventory (2004-2008) conducted by the Forest Inventory and Analysis (FIA) program at the Northern Research Station of the U.S. Forest Service. These estimates, along with web-posted core tables, will be updated annually. For more information please refer to the last page of this report.

**Table 1. – Annual estimates and uncertainty, 2004-2008.**

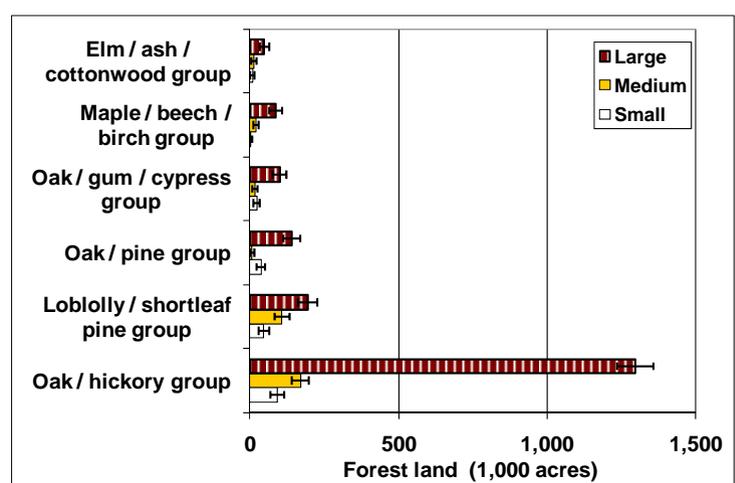
	Estimate	Sampling error (%)
<b>Forest Land Estimates</b>		
Area (1,000 acres)	2,493	2.3
Number of live trees 1-inch diameter or larger (million trees)	1,481	5.2
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)*	176,350	3.1
Net volume in live trees (1,000,000 ft <sup>3</sup> )	6,469	3.3
Annual net growth of live trees (1,000 ft <sup>3</sup> /year)	178,744	6.1
Annual mortality of live trees (1,000 ft <sup>3</sup> /year)	58,253	9.8
Annual removals of live trees (1,000 ft <sup>3</sup> /year)	69,719	17.9
<b>Timberland Estimates</b>		
Area (1,000 acres)	2,369	2.6
Number of live trees 1-inch diameter or larger (million trees)	1,435	5.4
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	167,605	3.4
Net volume in live trees (1,000,000 ft <sup>3</sup> )	6,154	3.6
Net volume of growing-stock trees (1,000,000 ft <sup>3</sup> )	5,926	3.7
Annual net growth of growing-stock trees (1,000 ft <sup>3</sup> /year)	175,803	7.3
Annual mortality of growing-stock trees (1,000 ft <sup>3</sup> /year)	43,734	10.8
Annual removals of growing-stock trees (1,000 ft <sup>3</sup> /year)	67,011	17.8

\*Carbon values can be estimated by halving the dry biomass estimate.

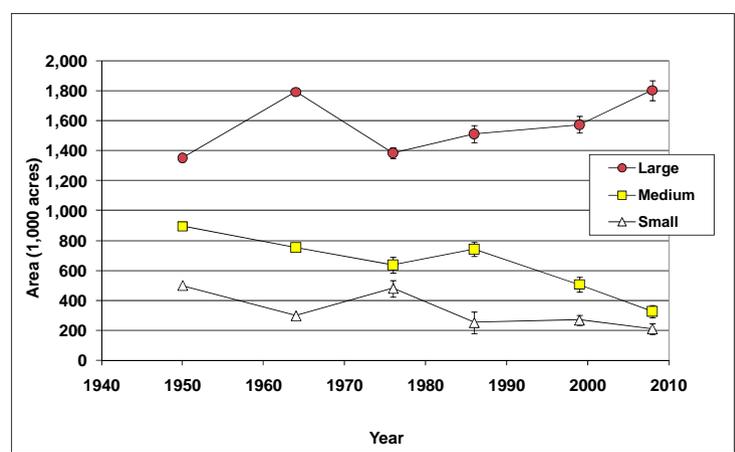
Note: When available, sampling errors/bars provided in figures and tables represent 68 percent confidence intervals.



**Figure 1. – Area of timberland and forest land by year. Percent forest land for the 1964, 1976, 1986, 1999, and 2008 inventories are 47, 42, 42, 41, and 40 percent respectively.**



**Figure 2. – Area of forest land by forest type group and stand size, Maryland, 2004-2008. (Small diameter = 1 - 4.9 in. d.b.h.; medium diameter = 5 - 9 in. d.b.h. for softwood, 5 - 11 in. d.b.h. for hardwood; and large diameter = tree larger than medium)**



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



Table 2. – Top 10 tree species by statewide volume estimates, Maryland, 2004-2008.

Rank	Species	Volume of live trees on forest land (1,000,000 ft <sup>3</sup> )	Sampling error (%)	Volume of sawtimber trees on timberland (1,000,000 bdft)	Sampling error (%)
1	Yellow-poplar **	1,208	10.6	5,805	11.9
2	Red maple	741	8.1	2,167	11.4
3	Loblolly pine	601	11.2	1,891	12.7
4	White oak	492	10.1	1,888	11.8
5	Sweetgum	475	11.6	1,437	14.5
6	Chestnut oak	285	14.3	855	17.1
7	Northern red oak	237	16.0	865	21.0
8	Black cherry	226	16.2	558	20.9
9	Black oak	207	13.9	850	15.2
10	Scarlet oak	187	14.6	720	17.2
	Other softwoods	304	17.3	882	17.4
	Other hardwoods	1,508	6.0	4,690	7.9
	<b>All species</b>	<b>6,469</b>	<b>3.3</b>	<b>22,609</b>	<b>4.6</b>

\*\* Yellow-poplar ranks 7<sup>th</sup> among species in total number of live trees in Maryland and is generally associated with the oak/hickory forest type group.

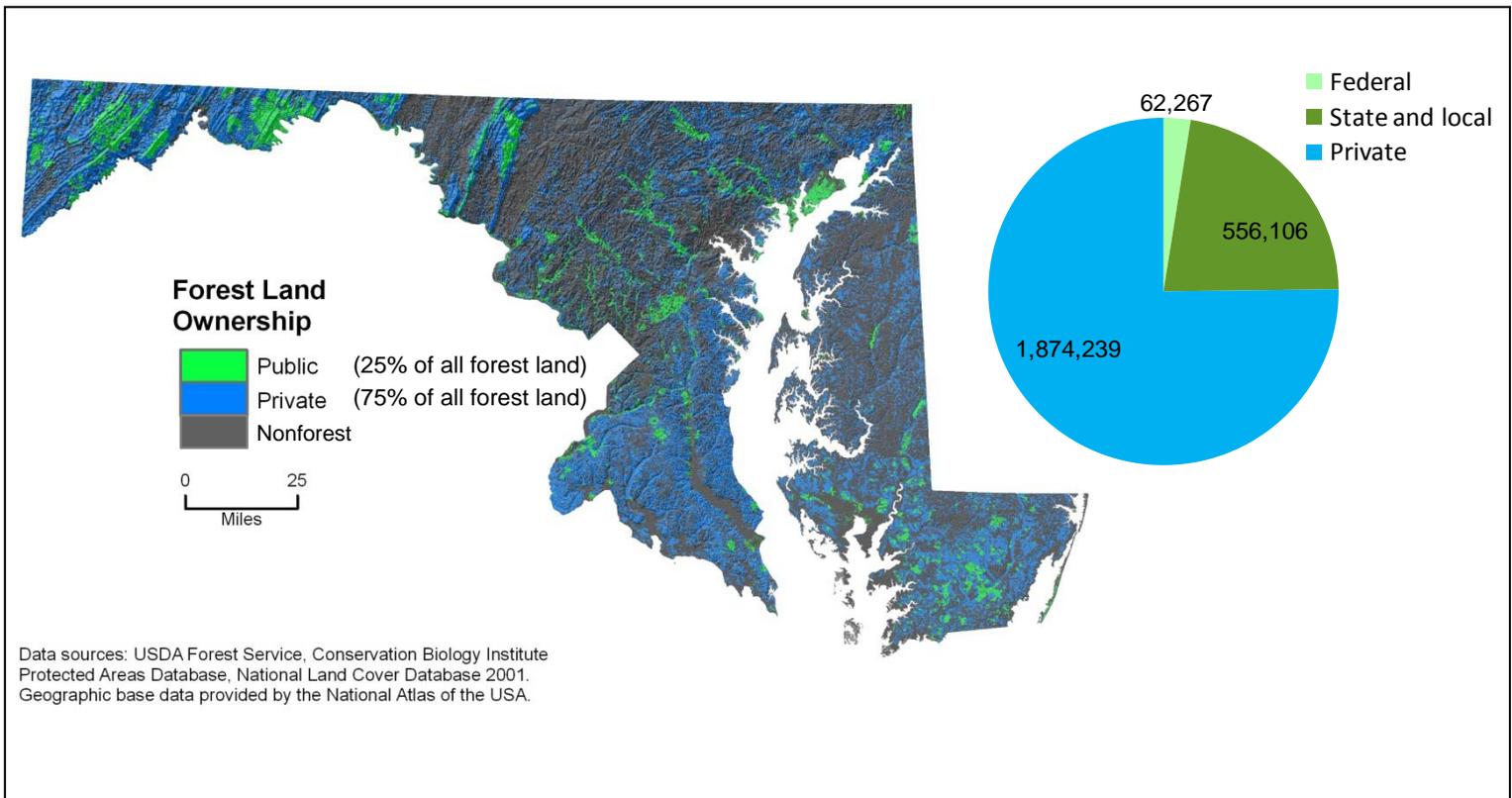
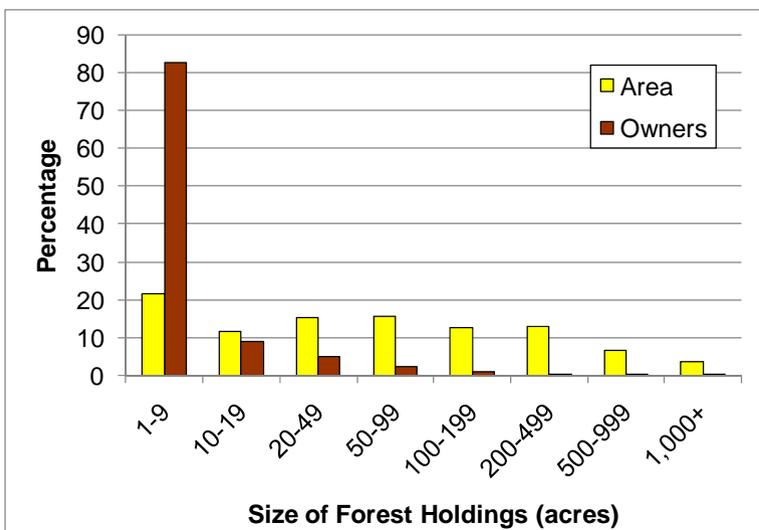


Figure 4. – Distribution of ownerships and area of forest land (acres) by ownership group.

## Family Forest Owners of Maryland and Delaware\*

Most of Maryland and Delaware's forests are privately owned and of this private forest land, most is owned by families and individuals. There are an estimated 184 thousand family forest owners in Maryland and Delaware who own a total of 1.7 million acres of forest land or 60 percent of the region's total forested area. Along with an inventory of the biophysical characteristics of the forest, the U.S. Forest Service conducts the National Woodland Owner Survey (NWOS) to characterize the people who own these resources. The NWOS collects data on forest holding characteristics, ownership histories, ownership objectives, forest uses, forest management practices, preferred methods for receiving information, concerns, future intentions, and demographics. Below are some of the key findings for this region. For additional information about family forest owners, see Butler (2008) or visit [www.fia.fs.fed.us/nwos](http://www.fia.fs.fed.us/nwos).



**Figure 5. – Area and number of family forests in Maryland and Delaware by size of forest landholdings (2006).**

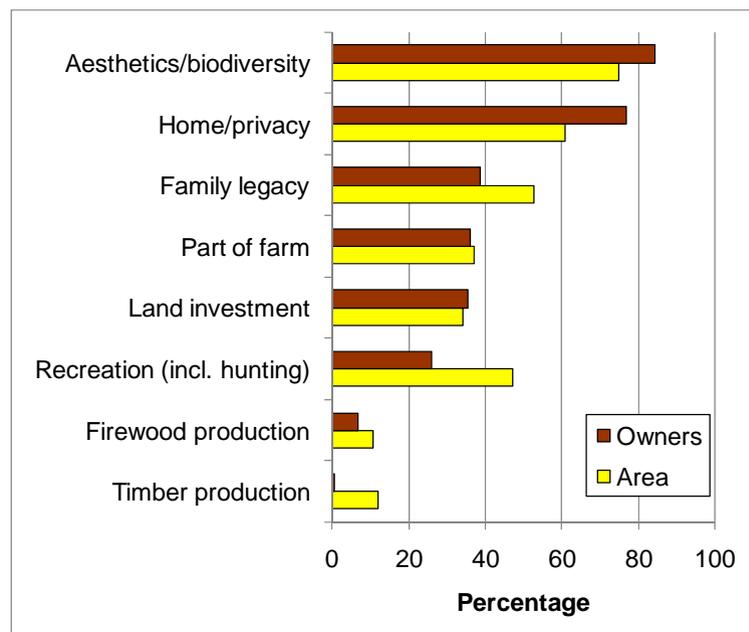
### Demographics

- Age
  - 8% are <45 years old
  - 48% are between 45 and 64
  - 44% are 65 or older
- Education
  - 26% have a college degree
- Annual Household Income
  - 51% under \$50,000
  - 27% \$50,000 to \$99,999
  - 22% \$100,000 or more

\* Data are combined for Maryland and Delaware due to the relatively small, state-wide sample sizes.

### Ownership

- New Owners
  - 34% have purchased their forest land within last 10 years
- Absentee Owners
  - 10% do not live on or near (within 1 mile) their land
- Farmers
  - 9% have a farm associated with their forest land



**Figure 6. – Area and number of family forests in Maryland and Delaware by reason for owning forest land (2006). Numbers include landowners who ranked each objective as very important (1) or important (2) on a seven-point Likert scale.**

### Citation for this Publication

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### FIA Program Information

Bechtold, W.A.; Patterson, P.L. 2005. The enhanced Forest Inventory and Analysis program: national sampling design and estimation procedures. Gen. Tech. Rep. SRS-80. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 85 p.

Smith, W.B. 2002. Forest Inventory and Analysis: a national inventory and monitoring program. Environmental Pollution. 116: 233-242.

USDA Forest Service. 2005. Forest inventory and analysis national core field guide, Vol. 1, field data collection procedures for phase 2 plots, Ver. 3.0. Available at <http://www.fia.fs.fed.us/library/field-guides-methods-proc/> (verified Aug. 1, 2008).

### Special Issue Citation

Butler, Brett J. 2008. Family forest owners of the United States, 2006, Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 72 p.

### Additional Maryland Inventory Information

Brooks, R.T.; DiGiovanni, D.M. 1989. Forest wildlife habitat statistics for Maryland and Delaware-1986. Res. Bull. NE-110. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 171 p.

Ferguson, R.H. 1967. The timber resources of Maryland. Resour. Bull. NE-7. Upper Darby, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 93 p.

Frieswyk, T.S. 2001. Forest statistics for Maryland: 1986 and 1999. Resour. Bull. NE-154. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 164 p.

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Frieswyk, T.S.; DiGiovanni, D.M. 1990. Biomass statistics for Maryland-1986. Resour. Bull. NE-113. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 138 p.

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Northeastern Forest Experiment Station. 1955. The timber resource in Maryland. Upper Darby, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 41 p.

Powell, D.S.; Kingsley, N.P. 1980. The forest resources of Maryland. Resour. Bull. NE-61. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 103 p.

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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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