

Image credit: Paul Wray, Penn State University, Bugwood.org

New Jersey's Forest Resources, 2009

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

Table 1 – Annual estimates and uncertainty, New Jersey, 2009

	2009 estimate	Sampling error (%)
Forest Land Estimates		
Area (1,000 acres)	1,985	2.6
Number of live trees 1-inch diameter or larger (1,000,000 trees)	961	5.3
Biomass of live trees 1-inch diameter or larger (1,000 tons)	109,471	3.6
Net volume in live trees (1,000,000 ft ³)	3,938	3.8
Annual net growth of live trees (1,000 ft ³ /year)	93,331	14.4
Annual mortality of live trees (1,000 ft ³ /year)	28,589	20.3
Annual harvest removals of live trees (1,000 ft ³ /year)	24,274	61.9
Annual other removals of live trees (1,000 ft ³ /year)	421	102.3
Timberland Estimates		
Area (1,000 acres)	1,848	3.0
Number of live trees 1-inch diameter or larger (1,000,000 trees)	891	5.7
Biomass of live trees 1-inch diameter or larger (1,000 tons)	102,114	4.0
Net volume in live trees (1,000,000 ft ³)	3,674	4.1
Net volume of growing-stock trees (1,000,000 ft ³)	3,486	4.3
Annual net growth of growing-stock trees (1,000 ft ³ /year)	97,141	12.6
Annual mortality of growing-stock trees (1,000 ft ³ /year)	20,582	22.4
Annual harvest removals of growing-stock trees (1,000 ft ³ /year)	21,293	61.1
Annual other removals of growing-stock trees (1,000 ft ³ /year)	5,373	108.1

Note: Sampling errors shown in the tables and figures in this report represent 68% confidence intervals for the estimated values. Volumes are for 5-inch and larger diameter trees.

Research Note NRS-95

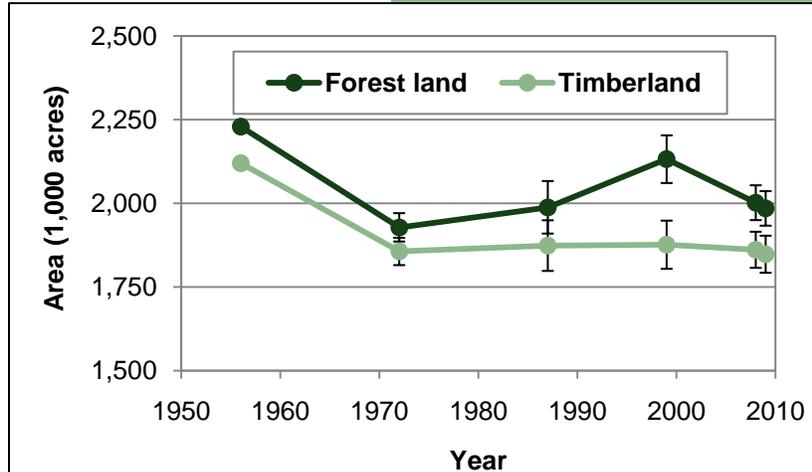


Figure 1 – Area of timberland and forest land by year, New Jersey, 1956–2009.

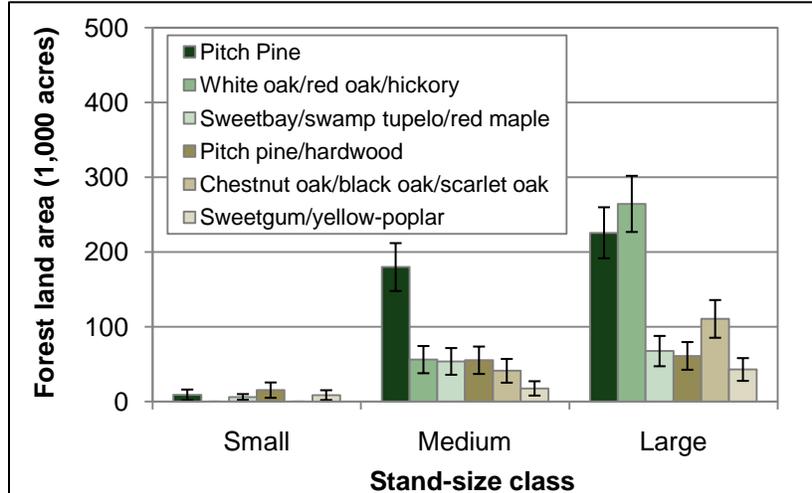


Figure 2 – Area of forest land by top six forest types and stand-size class, New Jersey, 2009.

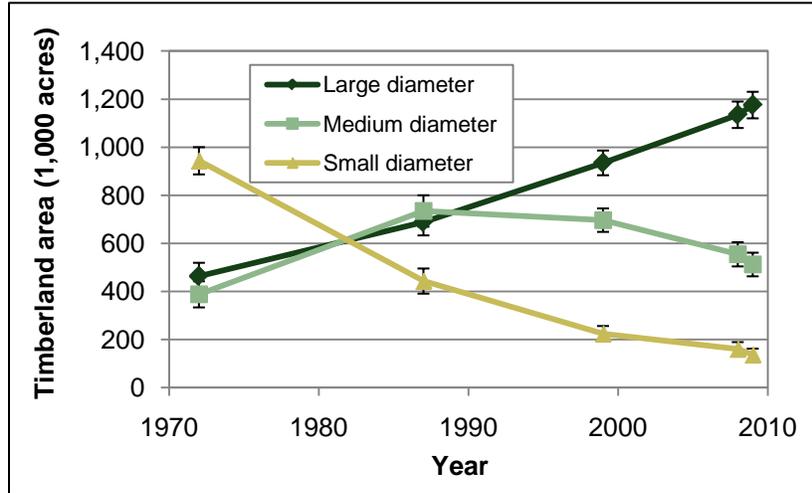


Figure 3 – Area of timberland by stand-size class and year, New Jersey, 1972–2009.

Image credit: Paul Wray, Pennsylvania State University, Bugwood.org

Table 2 – Top 10 tree species by statewide volume estimates, New Jersey, 2009

Rank	Species	Volume of live trees on forest land (1,000,000 ft³)	Sampling error (%)	Volume of sawtimber trees on timberland (1,000,000 bdf)	Sampling error (%)
1	Pitch pine	603	9.4	1,477	10.9
2	Red maple	497	11.2	1,059	15.8
3	White oak	274	11.9	749	19.4
4	Yellow-poplar	245	21.1	1,267	23.2
5	Northern red oak	240	15.4	983	17.8
6	White ash	216	15.6	774	19.6
7	Chestnut oak	184	15.4	571	18.6
8	Sweetgum	183	25.6	573	26.0
9	Black oak	182	15.4	585	21.4
10	Atlantic white-cedar	180	34.6	468	36.8
	Other softwoods	177	20.8	439	26.9
	Other hardwoods	953	7.1	2,598	10.5
	All Species	3,937	3.8	11,548	5.6

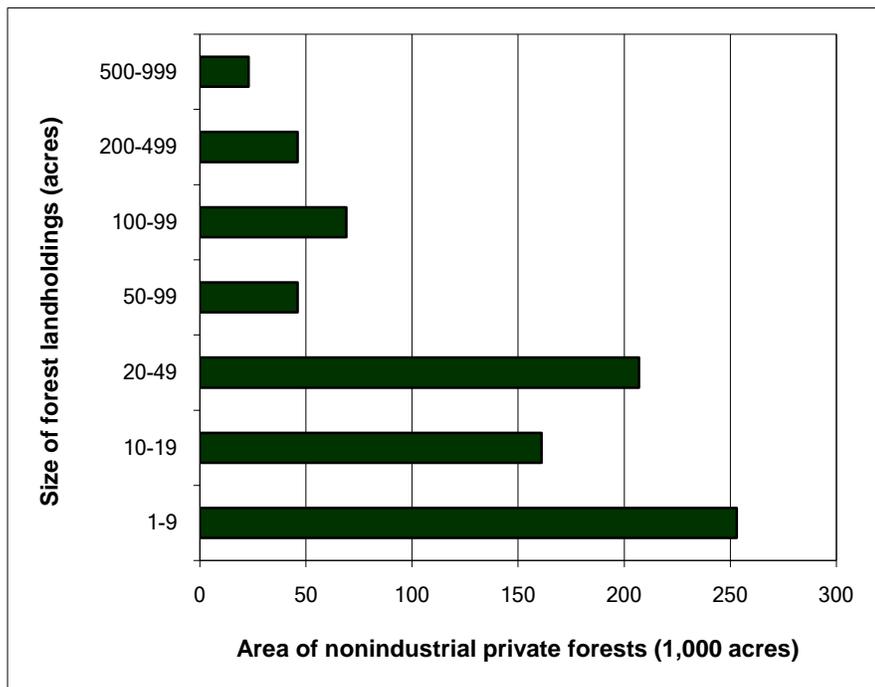
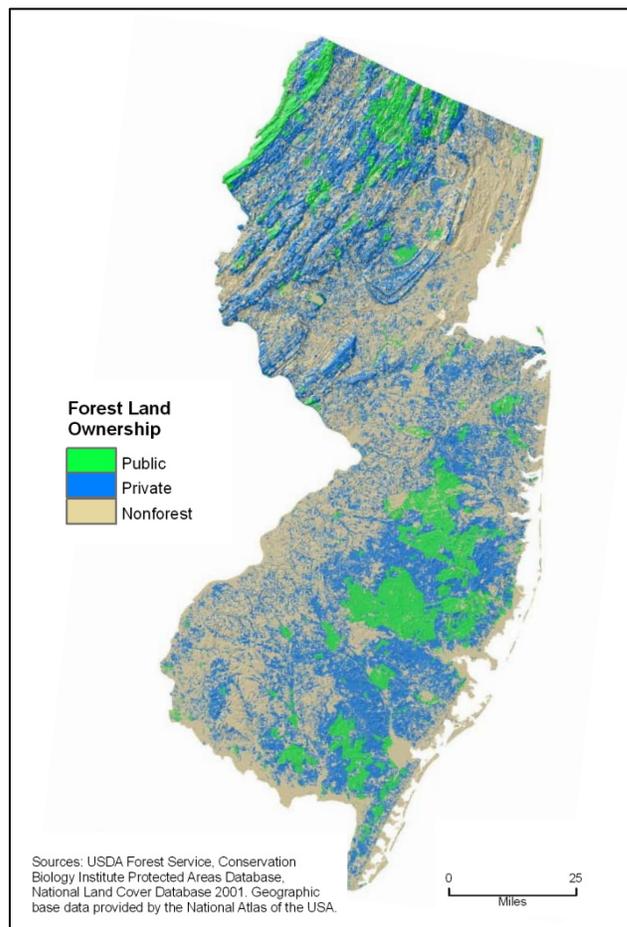


Figure 4 – Distribution of forest land by major owner group (map) and size of nonindustrial private forest landholdings (graph), New Jersey, 2006.

Image credit: Paul Wray, Ohio State University, Bugwood.org

New Jersey Issue Update – The threat of emerald ash borer

The emerald ash borer (EAB) is an exotic bark-boring beetle that was discovered near Detroit, Michigan, in 2002. Since that time, EAB has killed tens of millions of ash trees in over a dozen states. All major species of ash are at risk. Tree size and vigor are a factor at low insect density, though they appear to have minimal influence over host selection when insect density is high (Cappaert et al. 2005, Poland and McCullough 2006).

While EAB has not currently been identified in New Jersey, infestations were discovered in neighboring Pennsylvania in 2007 and New York in 2009.

EAB represents a major threat to New Jersey's ash resource. New Jersey's forest land contains an estimated 21 million ash (greater than 1 inch in diameter) that account for 232 million ft³ of live-tree volume. Ash can be found throughout much of the state, however, ash density is concentrated in northern tier (Fig. 5). Ash trees are also widely planted in many urban areas.

Human transportation of infested ash material increases the risk of EAB introduction and makes EAB a potential threat to statewide ash resources. The introduction of EAB to New Jersey could cause considerable economic losses in the timber, nursery, and wood products industries, and high costs for tree removal and costs. Additionally, the loss of ash in forested ecosystems will impact species composition and alter community dynamics.

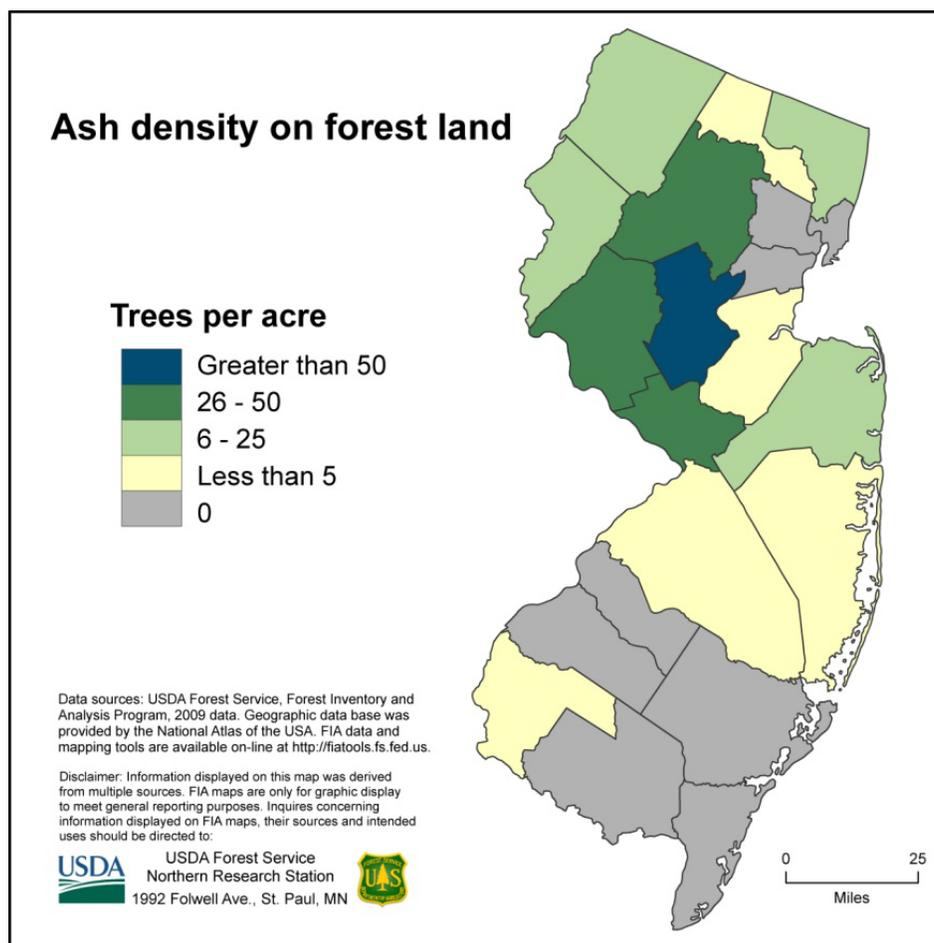


Figure 5.—Distribution of ash trees on forest land, New Jersey, 2009.

Image credit: Paul Wray, Iowa State University, Bugwood.org

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Definitions

Forest land — Land that is at least 10 percent stocked by trees of any size or formerly having had such tree cover and is not currently developed for nonforest uses. The area with trees must be at least 1 acre in size and at least 120 feet wide.

Timberland — Forest land that is producing or is capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands and is not withdrawn from timber utilization by statute or administrative regulation.

Growing-stock volume — The amount of sound wood in live, commercial tree species; trees must be at least 5 inches in d.b.h. or greater and free of defect.

Sawtimber volume — Net volume of the saw log portion of live sawtimber, measured in board feet, from a 1-foot stump to minimum top diameter (9 inches for hardwoods and 7 inches for softwoods).

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Information published in this report and in related tables is based on data collected between 2005 and 2009, stored in the Forest Inventory and Analysis Database (FIADB), and processed using National Information Management System (NIMS) version 4.0, November 2009. Due to periodic changes to FIADB and NIMS, trend analyses should be made using FIA's online estimation tools, not by comparing published reports or tables. FIA estimates, tabular data, and maps may be generated at <http://fiatools.fs.fed.us/>.

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