

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

# New Jersey's Forest Resources, 2008

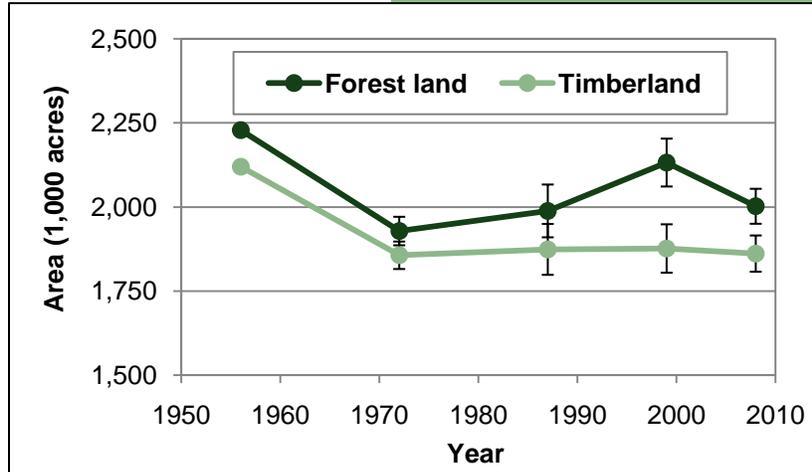
This publication provides an overview of forest resource attributes for New Jersey based on an annual inventory conducted by the Forest Inventory and Analysis (FIA) Program of the U.S. Forest Service, Northern Research Station. These estimates, along with web-posted core tables, will be updated annually.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

**Table 1 – Annual estimates and uncertainty, New Jersey, 2008**

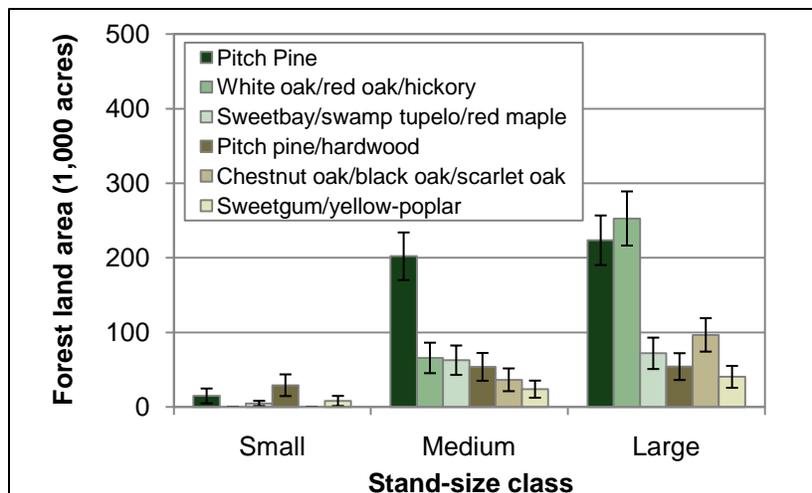
	2008 estimate	Sampling error (%)
<b>Forest Land Estimates</b>		
Area (1,000 acres)	2,002	2.6
Number of live trees 1-inch diameter or larger (1,000,000 trees)	989	5.2
Biomass of live trees 1-inch diameter or larger (1,000 tons)	109,047	3.5
Net volume in live trees (1,000,000 ft <sup>3</sup> )	3,919	3.8
Annual net growth of live trees (1,000 ft <sup>3</sup> /year)	N/A	N/A
Annual mortality of live trees (1,000 ft <sup>3</sup> /year)	N/A	N/A
Annual harvest removals of live trees (1,000 ft <sup>3</sup> /year)	N/A	N/A
Annual other removals of live trees (1,000 ft <sup>3</sup> /year)	N/A	N/A
<b>Timberland Estimates</b>		
Area (1,000 acres)	1,861	2.9
Number of live trees 1-inch diameter or larger (1,000,000 trees)	917	5.6
Biomass of live trees 1-inch diameter or larger (1,000 tons)	101,483	3.8
Net volume in live trees (1,000,000 ft <sup>3</sup> )	3,648	4.1
Net volume of growing-stock trees (1,000,000 ft <sup>3</sup> )	3,474	4.2
Annual net growth of growing-stock trees (1,000 ft <sup>3</sup> /year)	94,617	9.5
Annual mortality of growing-stock trees (1,000 ft <sup>3</sup> /year)	23,357	17.9
Annual harvest removals of growing-stock trees (1,000 ft <sup>3</sup> /year)	20,589	34.45
Annual other removals of growing-stock trees (1,000 ft <sup>3</sup> /year)	8,253	42.40

Note: Estimates of growth, removals and mortality are currently unavailable. 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.

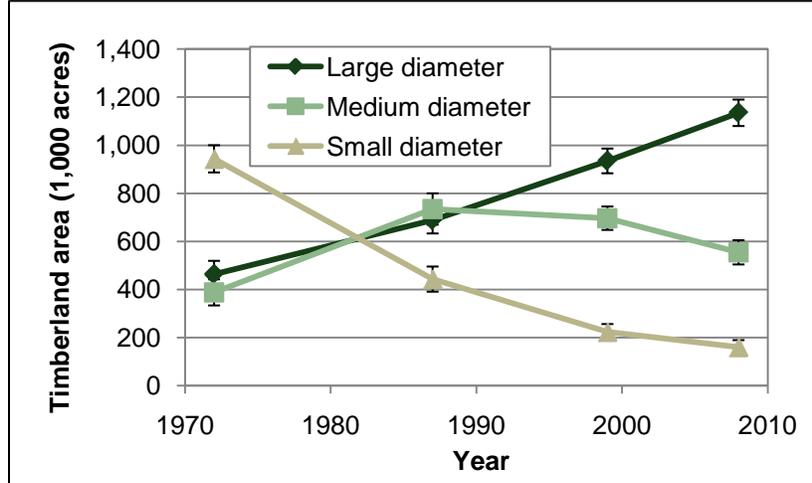
## Research Note NRS-77



**Figure 1 – Area of timberland and forest land by year, New Jersey, 1956–2008.**



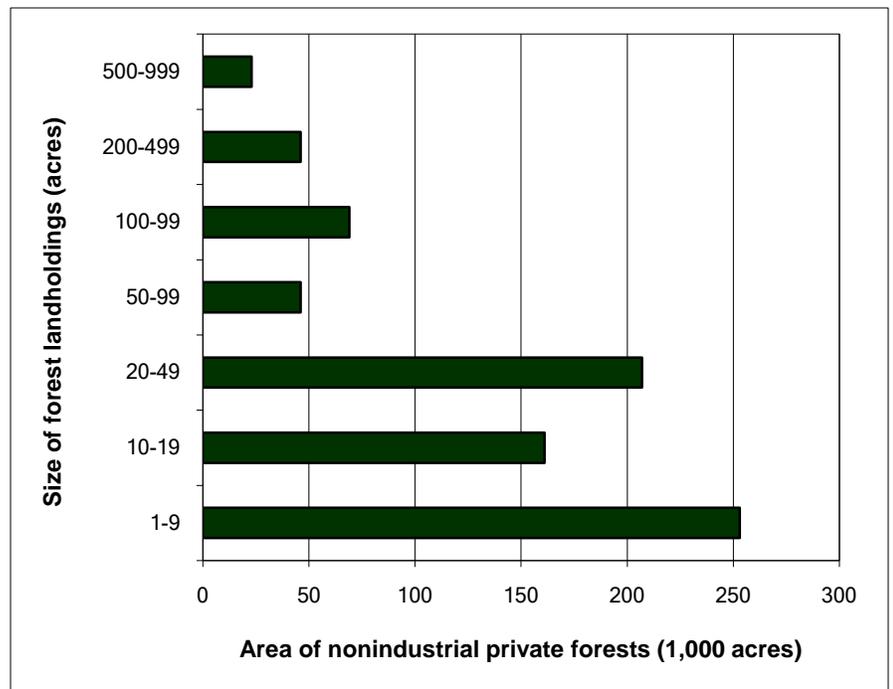
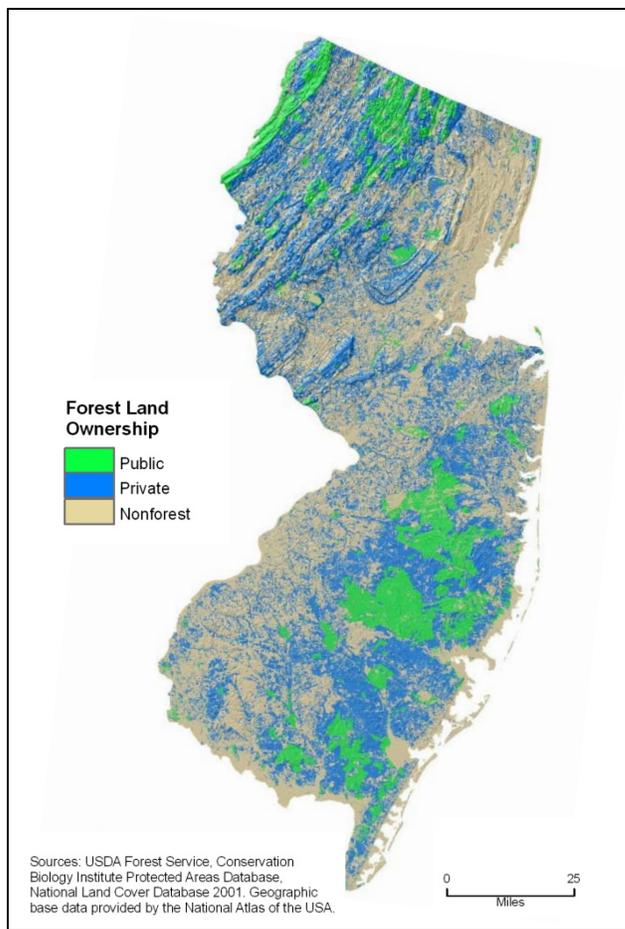
**Figure 2 – Area of forest land by top six forest types and stand-size class, New Jersey, 2008.**



**Figure 3 – Area of timberland by stand-size class and year, New Jersey, 1972–2008.**

**Table 2 – Top 10 tree species by statewide volume estimates, New Jersey, 2008**

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	612	8.3	1,440	9.8
2	Red maple	518	11.1	1,111	15.8
3	White oak	261	11.7	698	19.2
4	Northern red oak	258	13.9	1,056	15.9
5	Yellow-poplar	246	20.3	1,235	22.3
6	White ash	214	14.3	727	18.9
7	Sweetgum	200	23.1	638	24.8
8	Chestnut oak	177	15.9	565	19.3
9	Atlantic white-cedar	162	36.1	415	38.9
10	Black oak	161	16.6	531	22.8
	Other softwoods	171	20.5	424	26.7
	Other hardwoods	934	6.8	2,457	10.4
	<b>All Species</b>	<b>3,919</b>	<b>3.8</b>	<b>11,302</b>	<b>5.5</b>



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

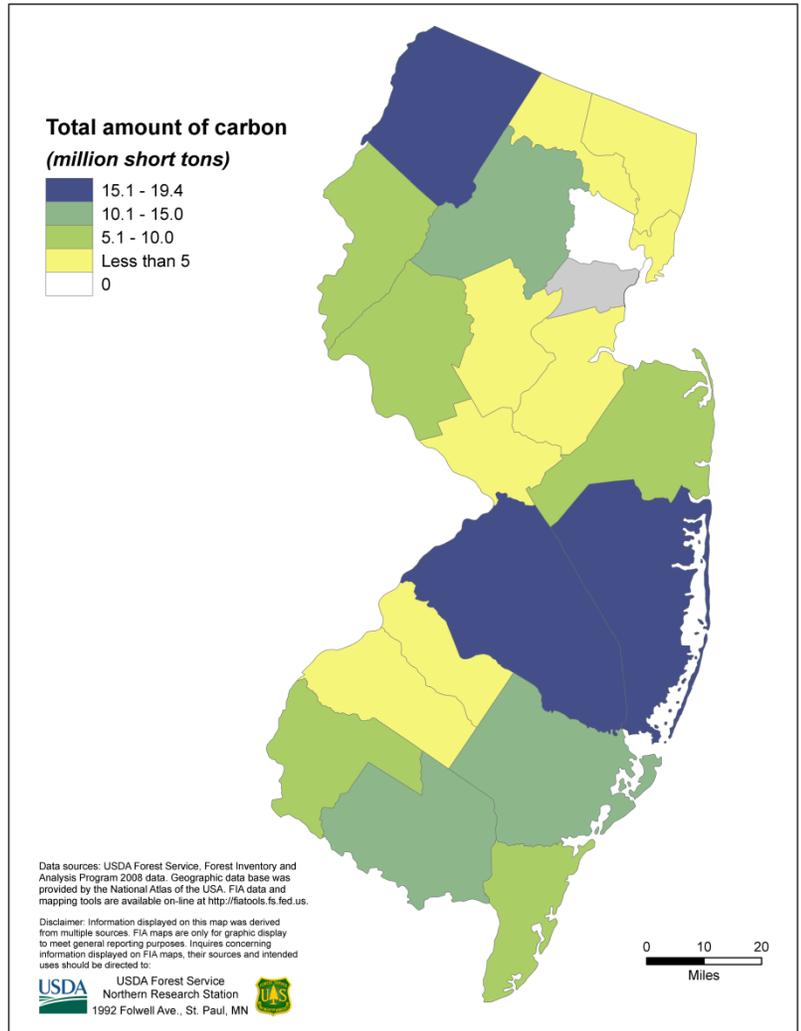
The Forest Inventory and Analysis Database (FIADB) was recently upgraded to include estimates of forest carbon. These estimates can be calculated in EVALIDator and FIDO, and data tables can be downloaded from the FIA Datamart (<http://fiatools.fs.fed.us>).

Forest carbon is stored in a variety of forms or stocks: live trees and saplings (above- and belowground), standing dead trees, understory vegetation (above- and belowground), down dead trees, litter, and soil (to 1 meter).

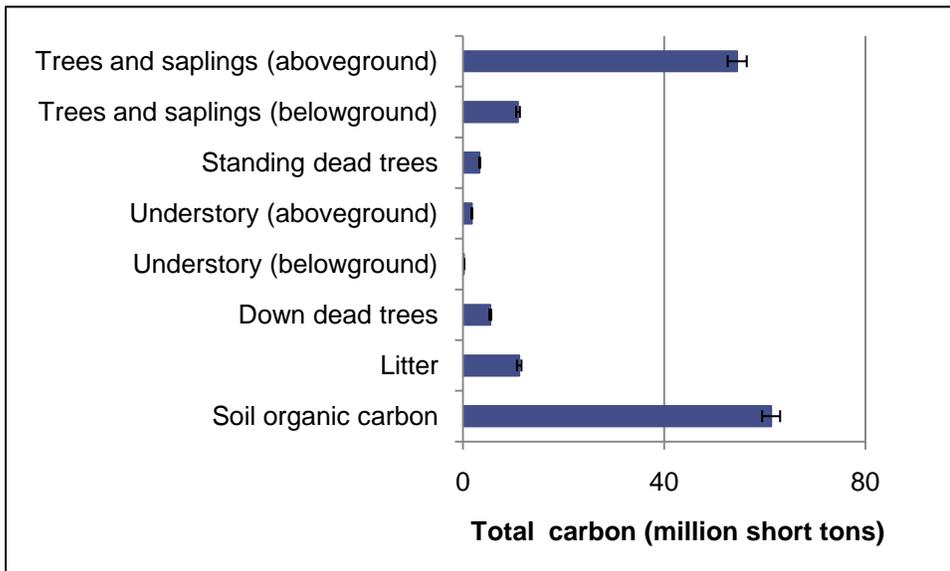
In 2008, New Jersey's total stock of forest carbon was an estimated 148.7 million short tons (equivalent to 134.8 million metric tons).

Not surprisingly, the distribution of carbon storage is concentrated in the northwestern corner of the State and in the south/south-central region (Fig. 5). The majority of New Jersey's forest land is contained in these regions, which are home to the Delaware Water Gap NRA, High Point State Park, the Pinelands, and acres of private forest.

Carbon stored in soil organic matter and the aboveground portion of trees and saplings accounted for the largest proportions of total forest carbon stock in the State (Fig. 6).



**Figure 5.—Total amount of carbon stored on forest land by county, New Jersey, 2008.**



**Figure 6.—Amount of carbon stored on forest land by stock, New Jersey, 2008. Note: 1 short ton = 2000 pounds.**

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## FIA Program and New Jersey Inventory Information

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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 2004 and 2008, 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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