



Mississippi, 2011

Sonja N. Oswalt

FOREST INVENTORY & ANALYSIS FACTSHEET

This science update provides an overview of forest resources in Mississippi based on an inventory conducted by the U.S. Department of Agriculture Forest Service, Forest Inventory and Analysis (FIA) program at the Southern Research Station in cooperation with the Mississippi Forestry Commission. Data estimates are based on field data collected using the FIA annualized sample design and are updated yearly. The estimates presented in this update are for the measurement year 2011 with comparisons made to data reported in 2010. The sample plot population in Mississippi consists of 3,667 plots, collected across a period of 7 years (about 524 plots, or about 14 percent of the data per year). The estimates in 2011 consist of 3 years (about 42 percent) of data collected using the annualized sampling and estimation procedures, and 58 percent of data collected during the periodic sample conducted in 2006. Growth, removals, and mortality estimates are based solely on 3 years of data (42 percent of the total sample), or about 1,572 plots, and should be viewed with some caution.

Overview

Mississippi is home to 19.5 ± 0.2 million acres of forest land. Forested area has not changed since 2010 (table 1). The number of live trees on Mississippi's forest land remains steady at 13.8 ± 0.4 billion trees, and net volume and aboveground biomass also experienced no appreciable change. Average annual net growth may be increasing, continuing the trend from 2006, though the estimate for 2011 was still within the 95-percent confidence interval of 2010, limiting the conclusions that may be drawn regarding the upward trend. Average annual removals and mortality experienced little to no change (table 1). Growth, removals, and mortality results should be seen as "preliminary" because of the small sample on which the numbers are based.

Table 1—Mississippi forest statistics, change between 2010 and 2011^a

Forest statistics	2011 Estimate	Sampling error percent	2010 Estimate	Sampling error percent	Change since 2010
Forest land					
Area (thousand acres)	19,541.3	0.63	19,572.4	0.63	-0.2
Number of live trees ≥ 1 -inch diameter (million trees)	13,758.7	1.45	13,838.8	1.46	-0.6
Net volume in live trees ≥ 5 inches diameter (ft ³)	30,923.2	1.44	30,338.5	1.44	+1.9
Net volume of growing-stock trees (ft ³)	27,104.8	1.53	26,635.6	1.53	+1.8
All-live tree and sapling aboveground biomass (thousand oven-dry tons)	784,980.4	1.31	772,647.3	1.31	+1.6
Annual net growth of live trees ≥ 5 inches (ft ³ /year)	1,894.3	3.59	1,811.3	4.94	+4.6
Annual removals of live trees ≥ 5 inches (ft ³ /year)	998.4	8.71	991.7	11.50	+0.7
Annual mortality of live trees ≥ 5 inches (ft ³ /year)	402.5	6.94	403.6	9.12	-0.3
Timberland					
Area (thousand acres)	19,494.3	0.64	19,519.5	0.63	-0.1
Number of live trees ≥ 1 -inch diameter (million trees)	13,742.5	1.45	13,822.6	1.47	-0.6
Net volume in live trees ≥ 5 inches diameter (ft ³)	30,831.4	1.44	30,246.8	1.45	+1.9
Net volume of growing-stock trees (ft ³)	27,021.9	1.53	26,552.6	1.54	+1.8
All-live tree and sapling aboveground biomass (thousand oven-dry tons)	782,801.4	1.31	770,470.9	1.31	+1.6
Annual net growth of live trees ≥ 5 inches (ft ³ /year)	1,899.5	3.58	1,819.4	4.92	+4.4
Annual removals of live trees ≥ 5 inches (ft ³ /year)	998.4	8.71	991.7	11.50	+0.7
Annual mortality of live trees ≥ 5 inches (ft ³ /year)	401.2	6.96	401.7	9.15	-0.1

^a Fifty-eight percent of the data used for the 2011 estimate were collected in 2006. Forty-two percent were collected from 2009 to 2011. Growth, removals, and mortality estimates for 2010 are comprised of only two panels collected from 2009 to 2010, or 30 percent of a full sample. Growth, removals, and mortality for 2011 are comprised of three panels or 42 percent collected from 2009 to 2011.



Forested Area

Mississippi is divided into five survey units (fig. 1). The total of forested land in all of the survey units is 19.5 ± 0.2 million acres and accounts for 65 percent of the land area in the State. Timberland area hovered between 16.2 and 17.0 million acres from the mid-1930s to the late-1980s (fig. 2). From 1994 to 2006 timberland area increased from 18.6 to 19.6 million acres. Timberland area has remained stable from 2006 to 2011, fluctuating between 19.6 and 19.5 million acres. The slight fluctuation is within the error for the estimate, indicating little to no change. Timberland area has remained stable within the survey units as well (fig. 3).



Figure 2—Change in timberland area over time, Mississippi.

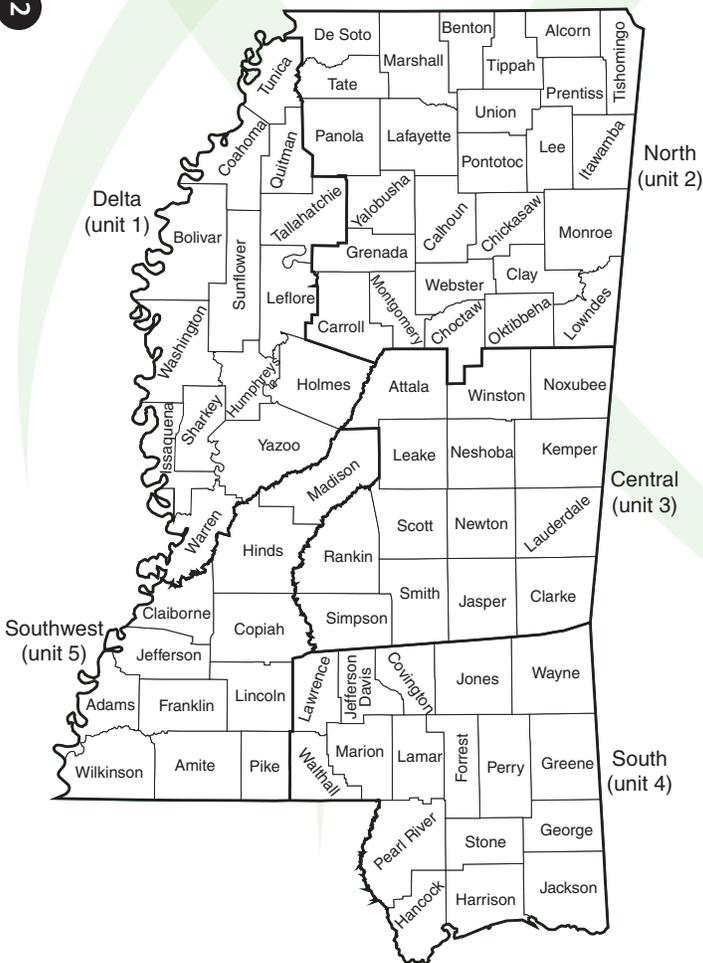


Figure 1—Mississippi counties and Forest Inventory and Analysis units.

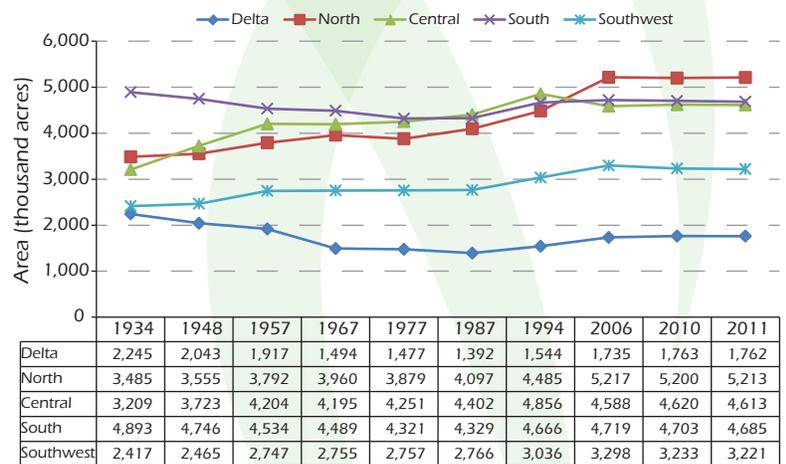
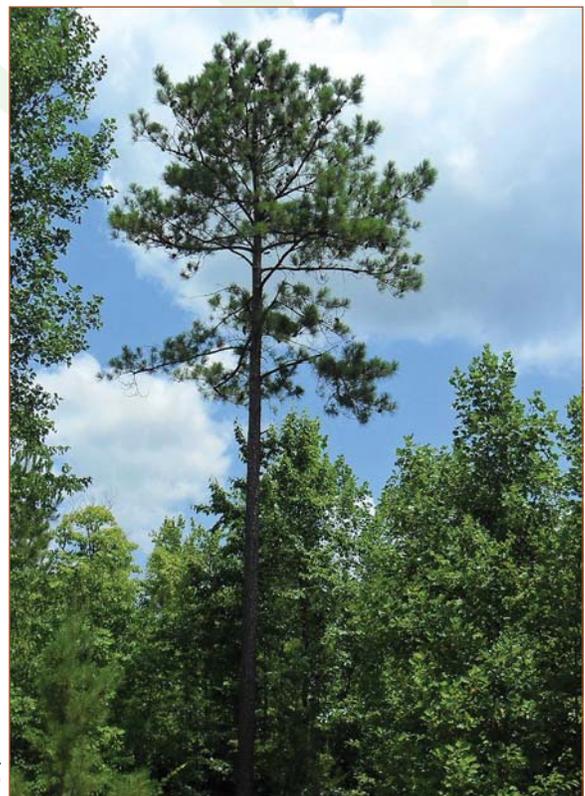


Figure 3—Timberland area change by year and Forest Inventory and Analysis survey unit, Mississippi.



Loblolly pine (*pinus taeda*).
(photo by David Stephens, Bugwood.org)

Planted versus Natural Forests

Naturally regenerated stands comprise more than two times as much forest area as artificially regenerated stands in Mississippi. Loblolly-shortleaf pine accounts for 80 percent of all planted area, and softwoods, in general, account for 84 percent of artificially regenerated forests (fig. 4). In all, about 30 percent of Mississippi's forest land shows evidence of artificial regeneration.

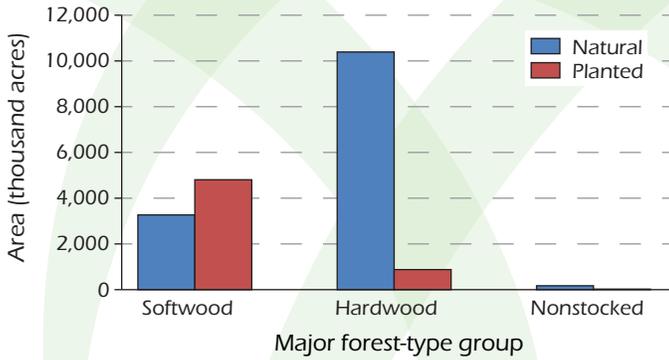


Figure 4—Forest land area by major forest-type group and stand origin, Mississippi, 2011.

Forest Composition

The loblolly-shortleaf pine forest-type group occupies the largest proportion of forest land in Mississippi at 7.2 million acres. The next most common forest-type groups are oak-hickory at 5.3 million acres, oak-gum-cypress at 2.5 million acres, and oak-pine at 2.2 million acres (fig. 5).

Large-diameter stands comprise 9.4 million acres of forest land in Mississippi, while medium- and small-diameter stands comprise about 5.0 million acres each (fig. 6). No significant change has occurred in the distribution of stand-size classes since 2006.



Loblolly pine cones (*pinus taeda*). (photo by Erich G. Vallery, U.S. Forest Service, Bugwood.org)

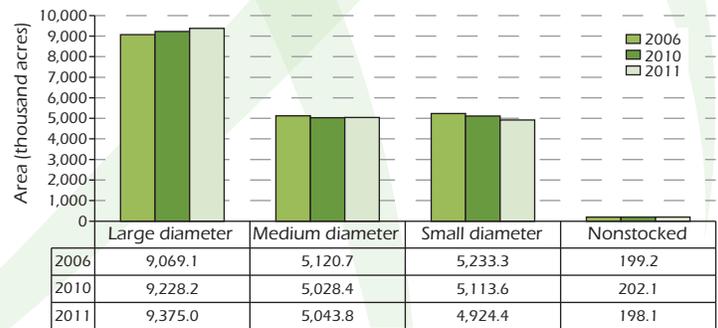


Figure 6—Area of forest land by stand-size class, Mississippi, 2006, 2010, 2011.

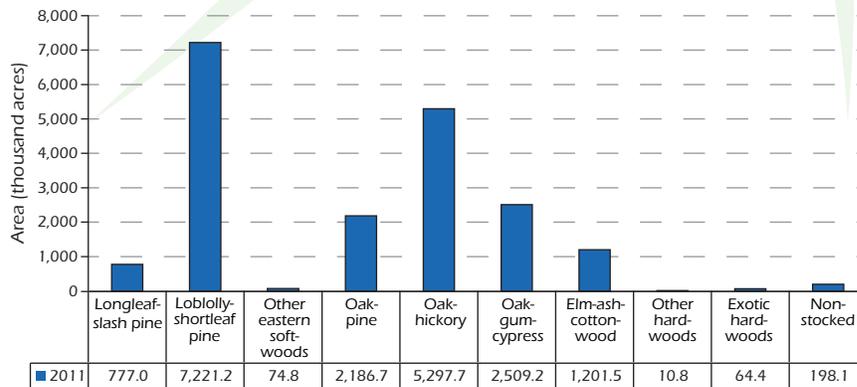


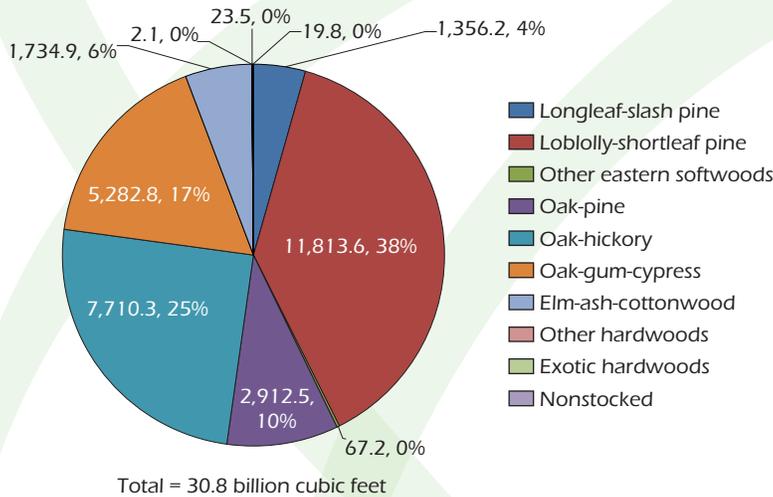
Figure 5—Area of forest land by forest-type group, Mississippi, 2011.

Tree Volume

The loblolly-shortleaf pine forest-type group accounted for 38 percent of live-tree volume in Mississippi in 2011, with a total of 11.8 billion cubic feet volume (fig. 7). Oak-hickory and oak-gum-cypress contribute 25 and 17 percent of the live-tree volume in the State, with 7.7 and 5.3 billion cubic feet.

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Figure 7—Net volume (million cubic feet, percent) of live trees on forest land by forest-type group, Mississippi, 2011.

Shortleaf pine (*pinus echinata*).
(photo Chris Evans, Bugwood.org)

Contact Information

Sonja Oswalt, Forester
 Forest Inventory and Analysis
 Southern Research Station, USDA Forest Service
 4700 Old Kingston Pike
 Knoxville, TN 37919
 Phone: 865-862-2058 / Fax: 865-862-0262
 Email: soswalt@fs.fed.us
 Southern FIA: <http://srsfia2.fs.fed.us>
 National FIA: <http://fia.fs.fed.us>



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