



South Carolina, 2010

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FOREST INVENTORY & ANALYSIS FACTSHEET



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

Forested Area

As of 2010, South Carolina's forest land and timberland area totaled nearly 13.1 and 13.0 million acres, respectively (table 1). Forests now occupy 68 percent of the State's land area.

Table 1—Area by land class and inventory year, South Carolina

Land class	1986	1993	2001	2006	2010
	<i>million acres</i>				
Forest land					
Timberland	12.2	12.5	12.7	12.8	13.0
Other/reserved	0.1	0.2	0.1	0.1	0.1
Total forest land	12.3	12.6	12.8	12.9	13.1
Nonforest land	7.1	6.6	6.5	6.4	6.2
Total land area	19.3	19.3	19.3	19.3	19.3
Percent forested	63	66	66	67	68

Introduction

The Forest Inventory and Analysis (FIA) Program implemented a nationally consistent annual inventory system in 1998. Under the new design, one-fifth of all inventory plots in South Carolina are visited each year. The southern FIA unit, working cooperatively with South Carolina Forestry Commission crews, established the State's initial annual inventory plots during the 2001 survey. A complete remeasurement of the annual plots was accomplished over the next 5 years. Results from that 2006 inventory were published in the State's first 5-year report (RB-SRS-158). A new cycle of annual remeasurement began immediately following the 2006 inventory and will be completed by the end of 2011. This factsheet presents forest resource estimates for South Carolina based on annual data collected up through 2010.

As part of FIA's effort to provide consistent data over time, data compiled for the 2001 and 2006 annual inventories were reprocessed using current methodology. The revised resource estimates for 2001 and 2006 were used in this summary to make comparisons and denote change between surveys.

Forest Ownership

As of 2010, private owners hold a combined 88 percent of the State's timberland area with private individuals controlling most (58 percent) of those acres (fig. 1). Forest industry holdings continue to decline and now amount to just 760,000 acres, or 6 percent. Only 12 percent of the State's timberland is managed by public agencies, split between national forests (5 percent) and other public owners (7 percent).

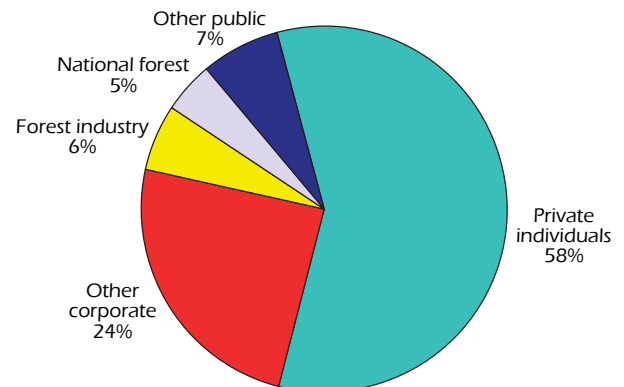


Figure 1—Percent ownership of timberland, South Carolina, 2010.

Forest-Type Composition and Stand Origin

Combined, hardwood forest types dominate South Carolina's forests accounting for 6.9 million acres (53 percent) of the timberland area. Oak-hickory stands occupy over two-fifths (2.9 million acres) of the hardwood timberland area (fig. 2).

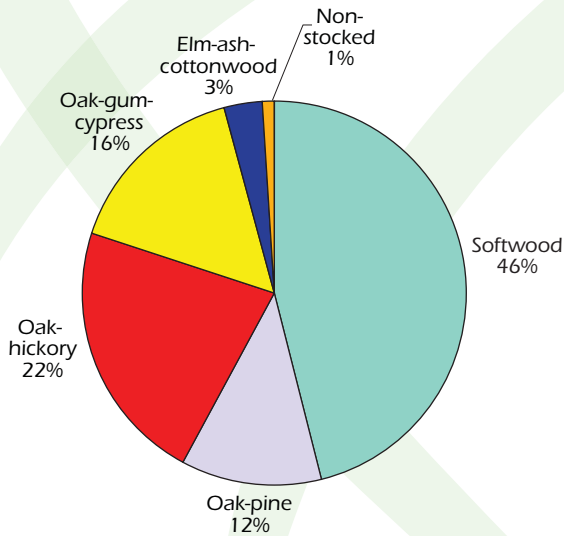


Figure 2—Area of timberland by forest-type group, South Carolina, 2010.

Softwood forest types make up 46 percent of the State's timberlands. Loblolly-shortleaf pine remains the most abundant forest-type group, occupying almost 5.4 million acres of the State's 6.0 million acres of softwood timberland.

Natural stands comprise the majority (9.6 million acres) of South Carolina's timberland area (fig. 3). Most of the natural timberland area is in hardwoods (6.6 million acres).

South Carolina's softwood timberland area continues to be divided equally between natural pine stands (2.9 million acres) and artificially regenerated acres (3.1 million acres). Planted stands have outnumbered natural stands since 2001. However, a possible downward trend in tree planting may be emerging as fewer acres of loblolly-shortleaf pine are being artificially regenerated.

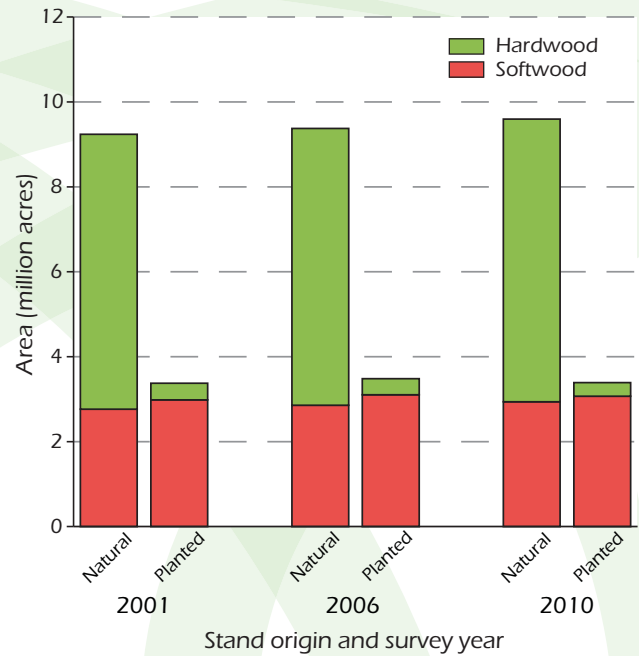


Figure 3—Timberland area by major forest-type group, stand origin, and survey year, South Carolina.

Tree Volume

All-live volume on timberland continues to reach new peaks, rising to 23.5 billion cubic feet as of 2010. The current volume is divided equally between softwood (11.8 million cubic feet) and hardwood (11.7 million cubic feet) species. The loblolly-shortleaf pine species group accounts for 84 percent (9.9 billion cubic feet) of the all-live softwood volume.

Softwood all-live volume continues to increase in the larger diameter classes, but is static or declining in the 6- and 8-inch classes, respectively (fig. 4). Softwood volume in sawtimber-size trees (≥ 10 -inch class) increased 14 percent or 1.1 billion cubic feet since 2006. The increased softwood volume in the larger classes is primarily a result of lower harvest rates, leaving more trees to grow into the sawtimber size class.

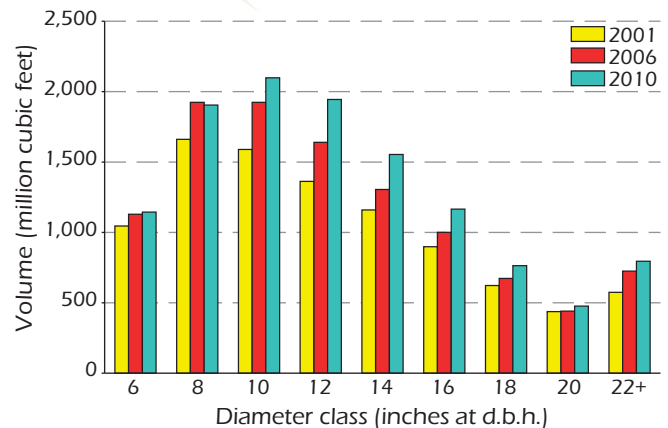


Figure 4—Live softwood volume on timberland by diameter class and year, South Carolina.

Hardwood all-live volume estimates show a similar pattern in diameter distribution with increases in all classes since 2006 (fig. 5).

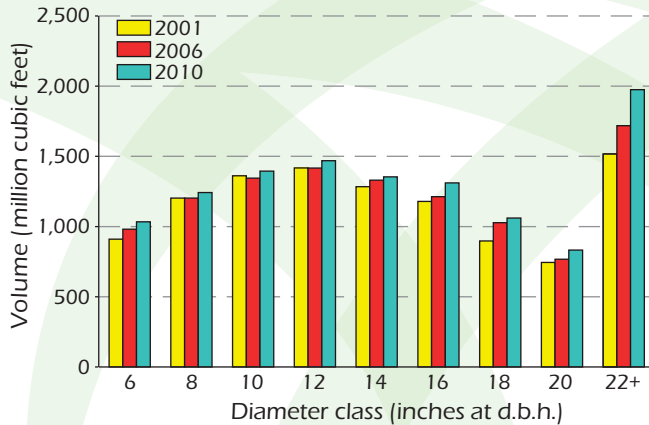


Figure 5—Live hardwood volume on timberland by diameter class and year, South Carolina.

Average Annual Net Growth and Removals

Net annual growth (1.3 billion cubic feet) and annual removals (830 million cubic feet) of all-live trees on timberland have increased for both softwoods and hardwoods since 2006 (fig. 6). Net growth for softwoods averaged 886.0 million cubic feet per year between 2006 and 2010; the highest rate of annual softwood growth yet recorded. Annual softwood removals averaged 607.7 million cubic feet over that same period.

Net annual growth for hardwoods averaged 408.3 million cubic feet per year, an 8 percent increase in the rate of hardwood net annual growth since 2006. Average annual removals of hardwood species increased 7 percent since 2006, to 222.6 million cubic feet per year as of 2010.

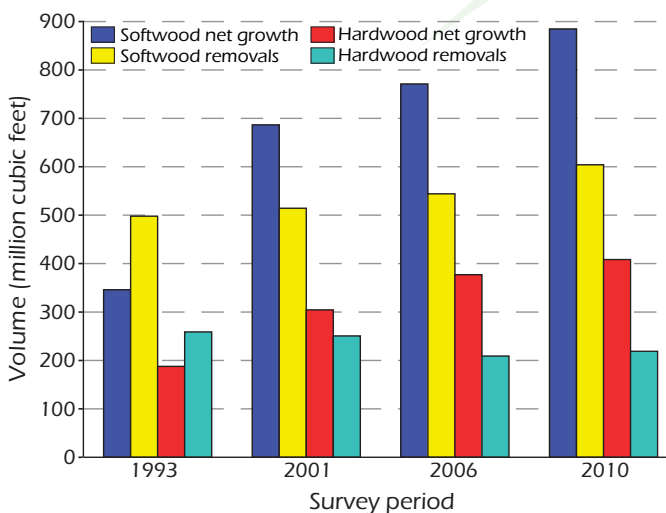


Figure 6—All-live volume of growth and removals by survey period, South Carolina.

Emerging Forest Resource Issue: A Decline in Planting of Loblolly-Shortleaf Pine

Planted pine stands, particularly planted stands of loblolly and shortleaf pine species, are critical sources of raw material supplying the South's timber industry. In South Carolina, planted loblolly-shortleaf pine stands contribute heavily to the estimates of volume, net annual growth, and annual removals. Currently, tree planting is down throughout the South. As a result, latest FIA data show a decline in the acres of young stands of planted loblolly-shortleaf pine.

Increased tree planting as a result of the Conservation Reserve Program (CRP) peaked in the late 1980s. In South Carolina, the distribution of planted loblolly-shortleaf pines by age class shows the affect of the CRP efforts.

For the three FIA surveys covering the period from 1978 to 1993 (fig. 7), the low point in acreage of youngest stands (0–5 years) of planted loblolly-shortleaf pine occurred in 1978 (155,000 acres). By 1986, the increased planting generated by the CRP incentives resulted in an increase in acreage of young (0–5 years) planted stands to nearly 488,000 acres. This increased acreage marked the beginning of the “wall-of-wood” volume currently seen in South Carolina and other Southern States. By 1993, the original CRP plantings, along with additional planting due to post-Hurricane Hugo recovery efforts, resulted in some 670,000 acres of planted loblolly-shortleaf pine in the 6–10 year age class. Volume in these stands amounted to >92 million cubic feet in 1993.

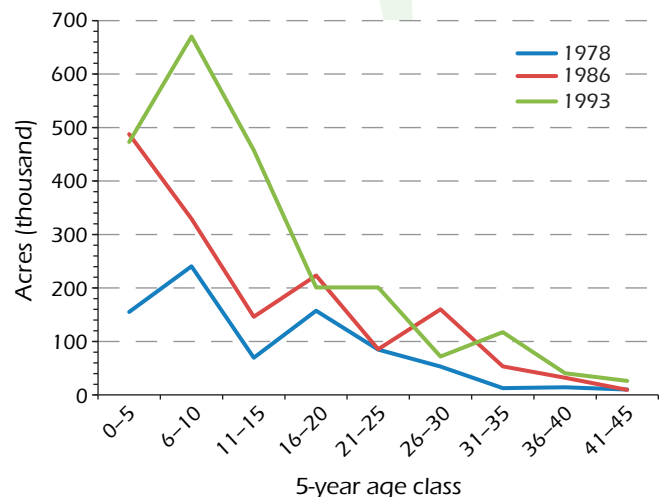


Figure 7—Area of planted loblolly and shortleaf pine on private timberland, by age class and survey years 1978 to 1993, South Carolina.

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FIA's three most recent surveys track the movement of these planted loblolly-shortleaf pine acres as they matured and entered the older age classes. As of 2010, those planted pine stands that formed the peak in acreage seen in 1993 are now 21–25 years of age, and total 620,000 acres (fig. 8). Accompanying the increased acres, the "wall-of-wood" on planted loblolly-shortleaf stands has grown to a surplus of nearly 1.3 billion cubic feet.

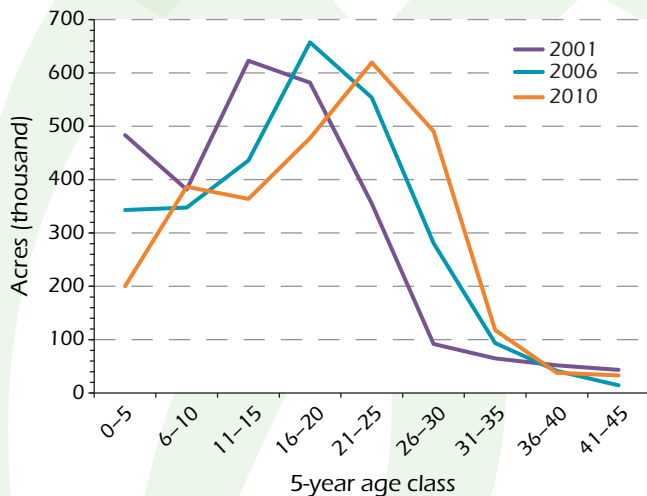


Figure 8—Area of planted loblolly and shortleaf pine on private timberland, by age class and survey years 2001 to 2010, South Carolina.

Should economic conditions trend upward, then increased demand for pine volume can be easily met in the short term. The growing concern, however, is the current lack of young planted pine stands to sustain the supply of pine volume after the surplus is harvested. As of 2010, planted loblolly-shortleaf pine stands in the 0–5 year age class amounted to 200,000 acres—just 45,000 acres more than were reported in this class in 1978.

The current lack of young planted loblolly-shortleaf pine acres is also beginning to show up in volume estimates for the smaller diameter classes. With fewer planted trees available to reach merchantable size, volume has declined in the 6- and 8-inch diameter classes, since 2006 (fig. 9).

The decline in planted loblolly-shortleaf pine acres is an emerging issue in South Carolina. Current resource estimates are beginning to show the impacts from the reduced acreage. Additional annual FIA data will further identify and assess the impacts from the reduction in planted loblolly-shortleaf pine. The issue will also be addressed in detail as part of the 2012 analytical report on South Carolina's forest resources.

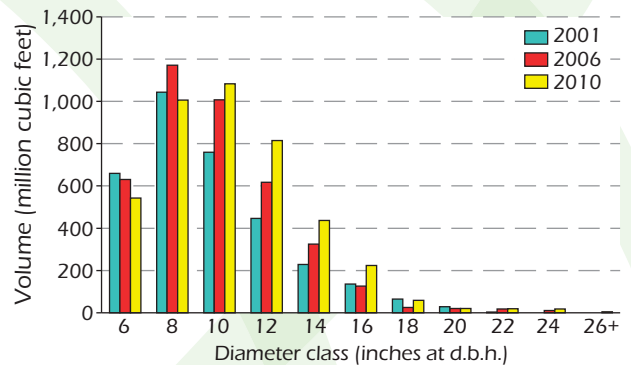


Figure 9—All-live volume of loblolly and shortleaf pine in planted stands on private timberland, by diameter class and survey year, South Carolina.

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Old country home, South Carolina. (photo by Ricky Layson Photography, Bugwood.org)

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