



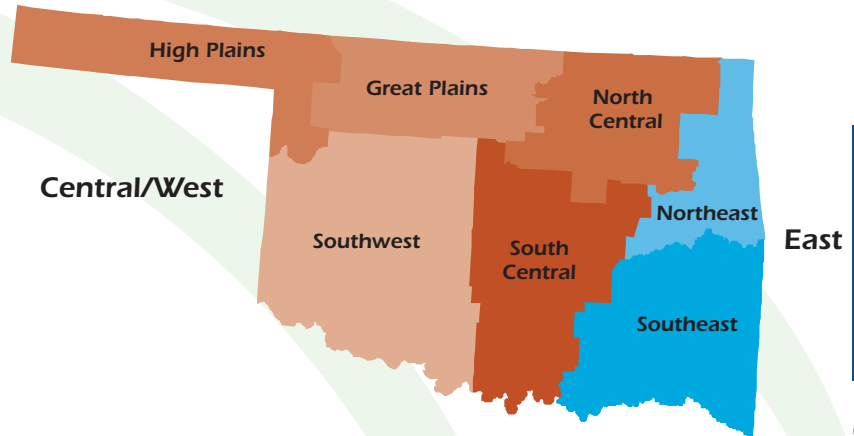
Oklahoma, 2011

Jason A. Cooper

FOREST INVENTORY & ANALYSIS FACTSHEET

Introduction

This science update summarizes the findings of the statewide annual inventory of the forest resource attributes in Oklahoma conducted by the Southern Forest Inventory and Analysis (FIA) program in cooperation with the Oklahoma Forestry Services. The 77 counties of Oklahoma are consolidated into seven FIA survey units—southeast (unit 1), northeast (unit 2), north central (unit 3), south central (unit 4), southwest central (unit 5), high plains (unit 6), and great plains (unit 7). East Oklahoma is made up of units 1 and 2, while central and west Oklahoma consist of units 3 thru 7 (fig. 1). This overview represents data from the 2011 annual inventory plots for east Oklahoma since 2008 including initial establishment of plots in central and west Oklahoma.

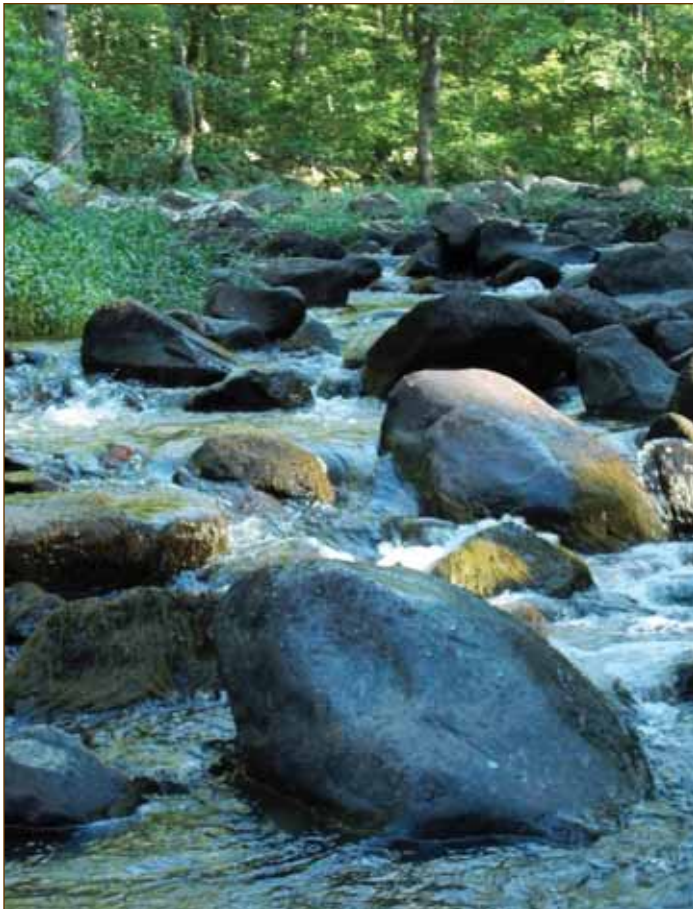


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Figure 1—Survey units of east and central/west Oklahoma.

Watershed, LeFlore County, Oklahoma. (photo courtesy of Matt Ford, Oklahoma Forestry Services)



Forest Land Area

Total forest area amounted to 12.7 million acres and covered 28 percent of the surveyed land area (table 1). Sixty-one percent, or 7.7 million acres of the forest area was considered available for timber production and known as timberland. The remaining forest area was either reserved forest land where timber removals are prohibited by law or unproductive forest land (produces <20 cubic feet per acre per year).

Table 1—Area by land status and region, Oklahoma 2011

| Land class | Oklahoma | East | Central/West |
|-------------------|----------|----------------------|--------------|
| | | Oklahoma | Oklahoma |
| | | <i>million acres</i> | |
| Timberland | 7.65 | 5.06 | 2.59 |
| Other/reserved | 4.99 | 0.74 | 4.25 |
| Total forest land | 12.65 | 5.80 | 6.84 |
| Nonforest land | 32.09 | 4.76 | 27.33 |
| Total land area | 44.73 | 10.56 | 34.17 |
| Percent forested | 28 | 55 | 20 |

Numbers in rows and columns may not sum to totals due to rounding.
0.0 = no sample for the cell or a value of >0.0 but <0.05.



Inventory Volume

Results from the 2011 inventory show all-live volume on forest land at 9.6 billion cubic feet (table 2). Seventy-eight percent of this volume occurred on timberland and was concentrated mainly in east Oklahoma. The remaining 22 percent, or 2.1 billion cubic feet, was reserved or unproductive forest land.

Table 2—Volume by land status and region, Oklahoma 2011

| Land class | Oklahoma | East | Central/West |
|---------------------------|----------|----------|--------------|
| | | Oklahoma | Oklahoma |
| <i>billion cubic feet</i> | | | |
| Timberland | 7.49 | 5.17 | 2.32 |
| Other forest land | 1.98 | 0.33 | 1.65 |
| Reserved forest land | 0.11 | 0.10 | 0.00 |
| All forest land | 9.58 | 5.61 | 3.97 |

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East Oklahoma

Forested Area

Total forest area amounted to 5.8 million acres in 2011 and occupied 55 percent of the land area in east Oklahoma (table 3). Nearly 5.1 million acres, or 87 percent of the forest land was considered timberland. The remaining area, 5.5 million acres, was classified as reserved forest land, other forest land, and nonforest land. The area of forest land in east Oklahoma has remained relatively stable.

Table 3—Area by land status and survey, east Oklahoma 2011

| Land class | 2008 | 2010 | 2011 |
|-------------------|----------------------|-------|-------|
| | <i>million acres</i> | | |
| Timberland | 5.10 | 5.08 | 5.06 |
| Other/reserved | 0.64 | 0.68 | 0.74 |
| Total forest land | 5.74 | 5.77 | 5.80 |
| Nonforest land | 4.82 | 4.79 | 4.76 |
| Total land area | 10.56 | 10.56 | 10.56 |
| Percent forested | 54 | 55 | 55 |

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East Oklahoma landslide. (photo courtesy of Dieter Rudolph, Oklahoma Forestry Services)



Forest Ownership

East Oklahoma ownership has remained relatively unchanged since the 1993 survey. Private landowners controlled the majority (86 percent) of east Oklahoma's 5.1 million acres of timberland in 2011 (fig. 2). National forests and other Federal agencies combined own the second largest portion (11 percent) of land, about 538,400 acres, while only 3 percent of east Oklahoma's timberland was owned by State and local government.

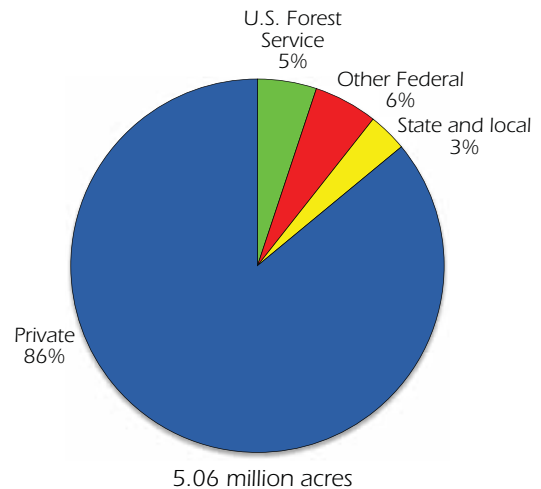


Figure 2—Timberland by ownership class, east Oklahoma, 2011.

Forest-Type Composition

Hardwood timber types comprised the majority of timberland area in east Oklahoma, accounting for 78 percent or 3.9 million acres, while softwood forest types occupied nearly 22 percent or 1.1 million acres of east Oklahoma's timberland area (fig. 3). Oak-hickory was the most abundant forest-type group with 2.9 million acres, and comprised the majority (73 percent) of all hardwood forest types. Loblolly-shortleaf pine was the predominant softwood forest-type group with 1.1 million acres.

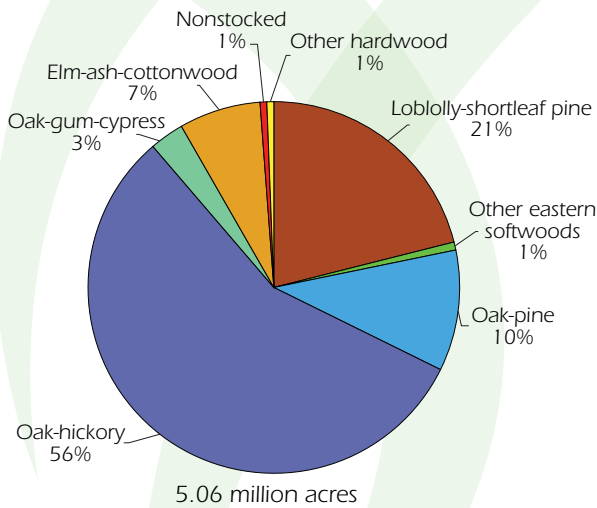


Figure 3—Timberland by major forest-type group, east Oklahoma, 2011.

All-live volume of softwoods has increased in the majority of all diameter classes except the 7.0- to 12.9-inch diameter classes since 2008 (fig. 5). Volume by 2-inch diameter class shows the majority (82 percent) is centered within the 7.0- to 16.9-inch diameter classes. All-live volume of hardwoods by diameter classes has remained fairly stable since 2008 (fig. 6).

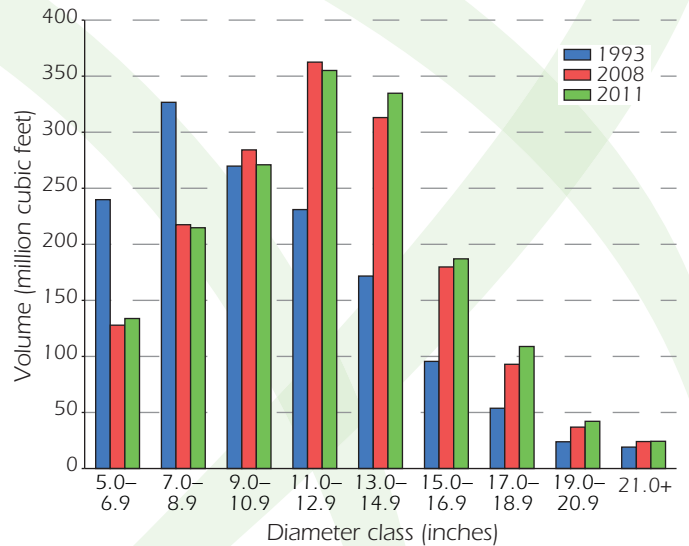


Figure 5—Softwood volume on timberland by 2-inch diameter class and survey year, east Oklahoma.

Inventory Volume

Total all-live volume on timberland was 5.1 billion cubic feet, which has remained relatively stable since 2008 (fig. 4). All-live volume in hardwood species amounted to 3.8 billion cubic feet, while softwood species totaled 1.3 billion cubic feet. The oak-hickory group accounted for 2.5 billion cubic feet (66 percent) of the all-live hardwood volume.

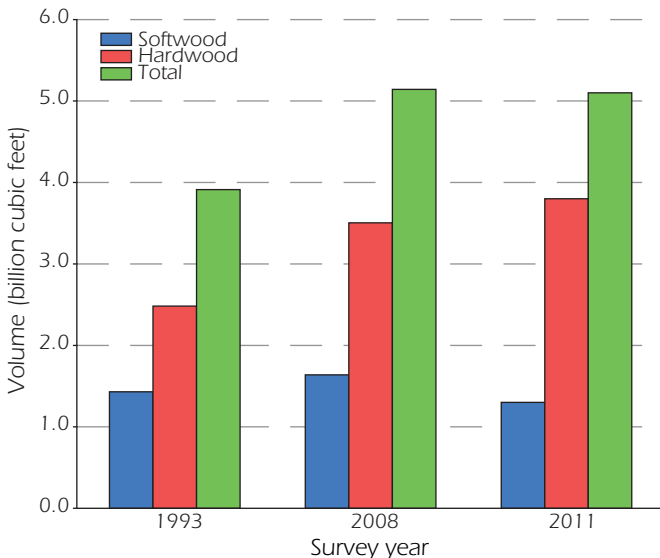


Figure 4—Volume of live trees on timberland by survey year, east Oklahoma.

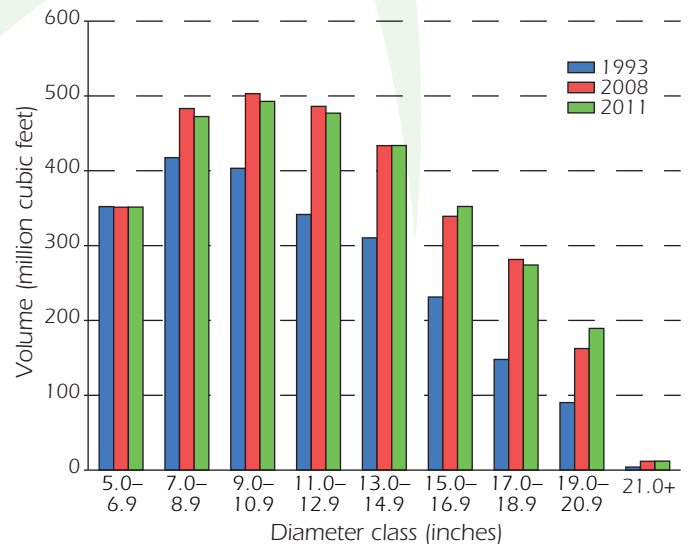


Figure 6—Hardwood volume on timberland by 2-inch diameter class and survey year, east Oklahoma.

OKLAHOMA, 2011

Annual Growth, Removals, and Mortality

Total net annual growth for all-live trees on timberland was 167.5 million cubic feet per year between 2008 and 2011 (fig. 7). Total annual removals for all-live trees on timberland were 136.4 million cubic feet per year for the same time period, while mortality averaged 73.3 million cubic feet per year. Net growth for all-live softwood species on timberland averaged 81.2 million cubic feet per year, and annual softwood removals averaged 76.1 million cubic feet per year. Net annual growth for hardwood species averaged 86.3 million cubic feet per year. Average annual removals of hardwood species averaged 60.3 million cubic feet per year.

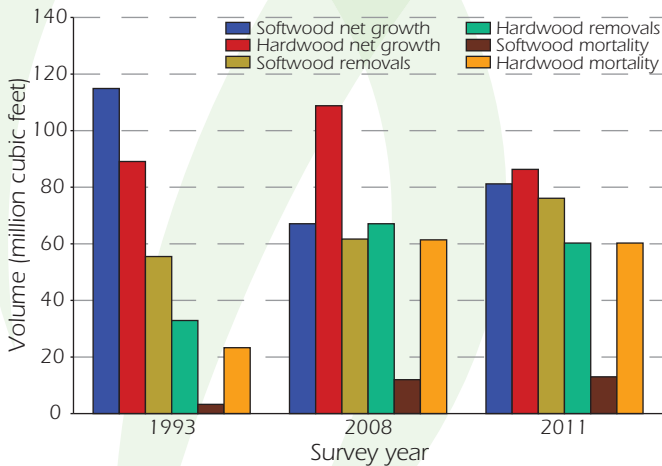


Figure 7—All-live net growth, removals, and mortality by survey year, east Oklahoma.

Central and West Oklahoma

Forested Area

Total forest area in central and west Oklahoma amounted to 20 percent of the land area or 6.8 million acres in 2011 (table 1). Thirty-eight percent, or 2.6 million acres, of the forest area was considered available for timber production and known as timberland. The remaining 4.3 million acres was either reserved forest land where timber removals are prohibited by law or unproductive forest land (produces <20 cubic feet per acre per year). Eighty percent, or 27.3 million acres, of the total land area for central and west Oklahoma was classified as nonforest land.

Forest Ownership

Private landowners controlled the majority (93 percent) of central and west Oklahoma's 6.8 million acres of forest land (fig. 8). Only 8 percent of central and west Oklahoma's forest land was publicly owned and included national forest lands, other Federal land, State, and local lands. Of the publicly owned lands, the national forest lands represented <1 percent of ownership for central and west Oklahoma.

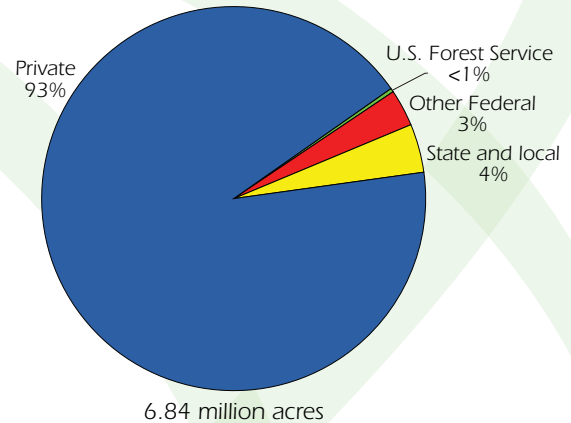


Figure 8—Forest land by ownership class, central and west Oklahoma, 2011.

Forest-Type Composition

Hardwood timber types comprised the majority of forest land area in central and west Oklahoma, accounting for 5.8 million acres (fig. 9). Softwood forest types occupied 680,400 acres of central and west Oklahoma's forest land area. The oak-hickory group was the most abundant forest-type group with 3.6 million acres. The elm-ash-cottonwood forest type accounts for another 18 percent, or 1.2 million acres. Other eastern softwood, comprising mostly of the eastern redcedar forest type, is the predominant softwood forest-type group with 533,400 acres, accounting for 78 percent of the softwood forest-type group.

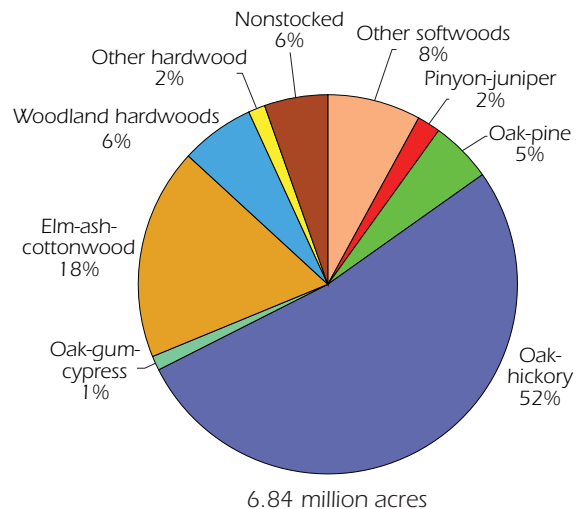


Figure 9—Forest land by major forest-type group, central and west Oklahoma, 2011.

Inventory Volume

The 2011 inventory shows all-live volume on forest land at nearly 4.0 billion cubic feet for central and west Oklahoma. All-live volume of hardwood amounted to 3.6 billion cubic feet, while softwood total 415.6 million cubic feet. Volume by 2-inch diameter class shows the majority of the total volume (75 percent) was within the 5.0- to 16.9-inch diameter classes (fig. 10). Within this range of diameter classes, there is 73 percent of the hardwood volume and 87 percent of the softwood volume.

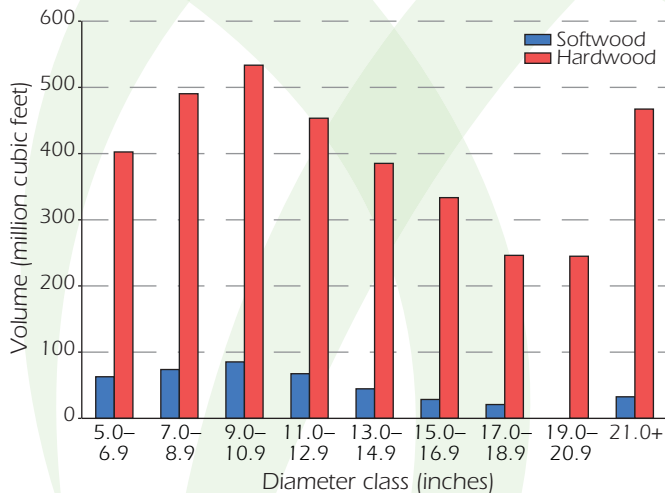


Figure 10—Volume of softwood and hardwood by 2-inch diameter class on forest land, central and west Oklahoma, 2011.

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Canadian River. (photo courtesy of Carri Abner, Oklahoma Forestry Services)

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