



# Arkansas, 2011

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## FOREST INVENTORY & ANALYSIS FACTSHEET



This annual factsheet is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Arkansas. Estimates presented here are for the measurement year 2011 with resource changes compared against the 2010 survey year. Information for the factsheet is updated every year by means of the Forest Inventory and Analysis (FIA) annualized sample design. Arkansas has about 5,700 sample plots across the State, and each year 20 percent of these plots (one panel) are visited and measured by field crews, the data compiled, and new estimates produced. It is important that users keep in mind that each year of new estimates, and the subsequent resource changes, are strongly influenced by the newest 20 percent of the sample; the older data comprise the remaining 80 percent of the sample. This small sample may result in some rather sharp spikes in estimates when comparing successive survey years, but in most instances the annualized design should give a reasonable indication of directional trends in the resource (such as increasing, decreasing, or no change). After 5 years of measurements, the full sample complement (a cycle) is complete and a new survey cycle begins. Because the 20 percent panel sample size is rather small, the strongest and most reliable trend information (especially that concerning magnitude of change) comes from comparing two full cycles of data.

Arkansas' factsheet is based on data processed and posted on the FIA database (FIADB) on April 12, 2012 (2011 data) and April 12, 2012 (updated 2010 data) at <http://fia.fs.fed.us/tools-data/>. Definitions can be found in the FIADB users manual at <http://fia.fs.fed.us/tools-data/docs/default.asp>. Additional information concerning definitions and descriptive statistics can be found in the report Arkansas' Forests, 2005 (RB-SRS-166) at <http://www.srs.fs.usda.gov/pubs/34894>.

The summary includes estimates of forest land area (table 1), ownership (table 2), forest-type groups (table 3), volume (tables 4 and 5), biomass (tables 6 and 7), pine plantation area

(table 8), and species volumes (tables 9 and 10) along with maps of Arkansas' survey units (fig. 1) and percent forest by county (fig. 2). The estimates are presented by survey units so that users can assess resource attributes and change in the region of Arkansas in which they have the most interest.

Between 2007 and 2011 there were 3,335,200 acres of cutting on forest land in Arkansas. Most of this activity was in the southern portion of the State (fig. 3). By definition, the cutting activity had to be over an area  $\geq 1$  acre and be of a silvicultural nature to be included in the map. About 18 percent of Arkansas' forest land experienced some degree of cutting in this latest 5-year period.

**Table 2—Area of forest land by ownership class and change, Arkansas**

| Ownership class       | 2010     | 2011     | Change |
|-----------------------|----------|----------|--------|
| <i>thousand acres</i> |          |          |        |
| National forest       | 2,513.8  | 2,486.2  | -27.6  |
| Other public          | 1,154.9  | 1,157.2  | 2.3    |
| Forest industry       | 3,738.7  | 3,467.9  | -270.8 |
| NIPF                  | 11,312.5 | 11,643.6 | 331.1  |
| All classes           | 18,720.0 | 18,754.9 | 34.9   |

NIPF = nonindustrial private forest.

**Table 1—Area of forest land by survey unit and change, Arkansas**

| Survey unit           | 2010     | 2011     | Change |
|-----------------------|----------|----------|--------|
| <i>thousand acres</i> |          |          |        |
| North Delta           | 1,389.1  | 1,408.4  | 19.3   |
| South Delta           | 768.0    | 777.1    | 9.1    |
| Southwest             | 6,811.2  | 6,819.9  | 8.7    |
| Ouachita              | 3,373.9  | 3,367.4  | -6.5   |
| Ozark                 | 6,377.8  | 6,382.2  | 4.4    |
| All units             | 18,720.0 | 18,754.9 | 34.9   |

**Table 3—Area of forest land by forest-type group and change, Arkansas**

| Forest-type group       | 2010     | 2011     | Change |
|-------------------------|----------|----------|--------|
| <i>thousand acres</i>   |          |          |        |
| Loblolly-shortleaf pine | 5,494.4  | 5,563.5  | 69.1   |
| Eastern redcedar        | 300.3    | 302.6    | 2.3    |
| Oak-pine                | 2,100.8  | 2,020.8  | -80.0  |
| Oak-hickory             | 7,710.5  | 7,759.5  | 49.0   |
| Bottomland hardwoods    | 2,943.2  | 2,930.5  | -12.7  |
| Miscellaneous types     | 42.2     | 32.9     | -9.3   |
| Nontyped                | 128.8    | 145.1    | 16.3   |
| All groups              | 18,720.1 | 18,754.9 | 34.8   |



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**Table 4—Volume of softwoods on forest land by survey unit and change, Arkansas**

| Survey unit               | 2010     | 2011     | Change |
|---------------------------|----------|----------|--------|
| <i>million cubic feet</i> |          |          |        |
| North Delta               | 451.6    | 519.1    | 67.5   |
| South Delta               | 160.6    | 163.3    | 2.7    |
| Southwest                 | 5,953.2  | 6,178.2  | 225.0  |
| Ouachita                  | 2,856.8  | 2,944.2  | 87.4   |
| Ozark                     | 1,795.9  | 1,825.5  | 29.6   |
| All units                 | 11,218.1 | 11,630.3 | 412.2  |

**Table 5—Volume of hardwoods on forest land by survey unit and change, Arkansas**

| Survey unit               | 2010     | 2011     | Change |
|---------------------------|----------|----------|--------|
| <i>million cubic feet</i> |          |          |        |
| North Delta               | 2,259.0  | 2,322.8  | 63.8   |
| South Delta               | 1,319.6  | 1,346.5  | 26.9   |
| Southwest                 | 4,664.1  | 4,732.1  | 68.0   |
| Ouachita                  | 2,295.8  | 2,344.4  | 48.6   |
| Ozark                     | 7,467.9  | 7,492.5  | 24.6   |
| All units                 | 18,006.3 | 18,238.3 | 232.0  |

**Table 6—Biomass dry weight of softwoods on forest land by survey unit and change, Arkansas**

| Survey unit           | 2010      | 2011      | Change   |
|-----------------------|-----------|-----------|----------|
| <i>million pounds</i> |           |           |          |
| North Delta           | 18,377.2  | 21,066.6  | 2,689.4  |
| South Delta           | 6,383.5   | 6,496.7   | 113.2    |
| Southwest             | 253,220.6 | 262,354.8 | 9,134.2  |
| Ouachita              | 119,157.5 | 122,856.6 | 3,699.1  |
| Ozark                 | 77,237.2  | 77,899.6  | 662.4    |
| All units             | 474,376.0 | 490,674.4 | 16,298.4 |

**Table 7—Biomass dry weight of hardwoods on forest land by survey unit and change, Arkansas**

| Survey unit           | 2010        | 2011        | Change   |
|-----------------------|-------------|-------------|----------|
| <i>million pounds</i> |             |             |          |
| North Delta           | 118,073.8   | 121,207.2   | 3,133.4  |
| South Delta           | 71,268.0    | 72,387.7    | 1,119.7  |
| Southwest             | 279,579.6   | 282,724.9   | 3,145.3  |
| Ouachita              | 144,657.6   | 146,712.9   | 2,055.3  |
| Ozark                 | 448,412.0   | 449,739.8   | 1,327.8  |
| All units             | 1,061,990.9 | 1,072,772.5 | 10,781.6 |

**Table 8—Area of forest land in plantations by survey unit and change, Arkansas**

| Survey unit           | 2010    | 2011    | Change |
|-----------------------|---------|---------|--------|
| <i>thousand acres</i> |         |         |        |
| North Delta           | 217.5   | 216.5   | -1.0   |
| South Delta           | 40.9    | 41.4    | 0.5    |
| Southwest             | 2,163.7 | 2,189.4 | 25.7   |
| Ouachita              | 595.5   | 606.8   | 11.3   |
| Ozark                 | 244.2   | 237.1   | -7.1   |
| All units             | 3,261.9 | 3,291.4 | 29.5   |

**Table 9—Softwood volume on forest land by species and 5-inch diameter classes, Arkansas, 2011**

| Species                   | Total    | Diameter class (inches) |           |           |           |           |       |
|---------------------------|----------|-------------------------|-----------|-----------|-----------|-----------|-------|
|                           |          | 5.0–9.9                 | 10.0–14.9 | 15.0–19.9 | 20.0–24.9 | 25.0–29.9 | 30.0+ |
| <i>million cubic feet</i> |          |                         |           |           |           |           |       |
| Loblolly pine             | 6,812.6  | 2,043.0                 | 2,476.2   | 1,405.8   | 678.3     | 185.0     | 24.3  |
| Shortleaf pine            | 3,693.5  | 766.1                   | 1,614.8   | 1,067.4   | 225.9     | 19.3      | —     |
| Baldcypress               | 583.3    | 25.2                    | 71.5      | 90.4      | 110.5     | 92.6      | 193.1 |
| Eastern redcedar          | 513.1    | 323.3                   | 164.5     | 22.6      | 2.7       | —         | —     |
| Ashe juniper              | 27.8     | 9.2                     | 13.1      | 5.5       | —         | —         | —     |
| Total                     | 11,630.3 | 3,166.8                 | 4,340.2   | 2,591.7   | 1,017.4   | 296.9     | 217.3 |

— = no sample for the cell.

**Table 10—Volume of 10 most dominant hardwoods on forest land by species and 5-inch diameter classes, Arkansas, 2011**

| Species          | Total           | Diameter class (inches) |                |                |                |              |              |
|------------------|-----------------|-------------------------|----------------|----------------|----------------|--------------|--------------|
|                  |                 | 5.0–9.9                 | 10.0–14.9      | 15.0–19.9      | 20.0–24.9      | 25.0–29.9    | 30.0+        |
| White oak        | 2,802.5         | 642.3                   | 1,055.9        | 723.9          | 270.5          | 72.6         | 37.2         |
| Sweetgum         | 2,080.9         | 567.7                   | 716.0          | 464.3          | 192.0          | 94.1         | 46.9         |
| Post oak         | 1,544.2         | 440.8                   | 616.2          | 324.7          | 118.4          | 22.8         | 21.3         |
| Northern red oak | 987.4           | 166.2                   | 385.7          | 278.1          | 131.2          | 18.8         | 7.4          |
| Black oak        | 897.3           | 152.9                   | 328.3          | 245.4          | 113.9          | 43.5         | 13.3         |
| Southern red oak | 854.8           | 121.8                   | 267.7          | 248.8          | 137.2          | 51.1         | 28.3         |
| Water oak        | 673.4           | 105.5                   | 185.6          | 174.3          | 116.0          | 58.7         | 33.4         |
| Black hickory    | 670.6           | 325.3                   | 257.1          | 75.0           | 9.0            | 4.2          | —            |
| Cherrybark oak   | 667.1           | 58.8                    | 112.7          | 191.2          | 132.4          | 76.7         | 95.2         |
| Willow oak       | 616.9           | 61.1                    | 118.8          | 174.0          | 163.9          | 57.3         | 41.8         |
| Other hardwoods  | 6,443.2         | 1,802.5                 | 1,852.6        | 1,273.3        | 885.0          | 353.1        | 276.5        |
| <b>Total</b>     | <b>18,238.3</b> | <b>4,444.9</b>          | <b>5,896.6</b> | <b>4,173.0</b> | <b>2,269.5</b> | <b>852.9</b> | <b>601.3</b> |

— = no sample for the cell.

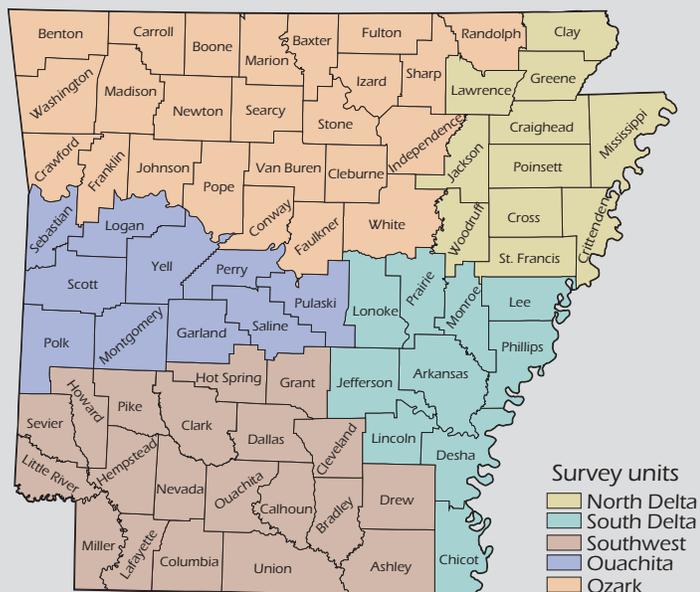


Figure 1—Forest survey units in Arkansas, 2011.

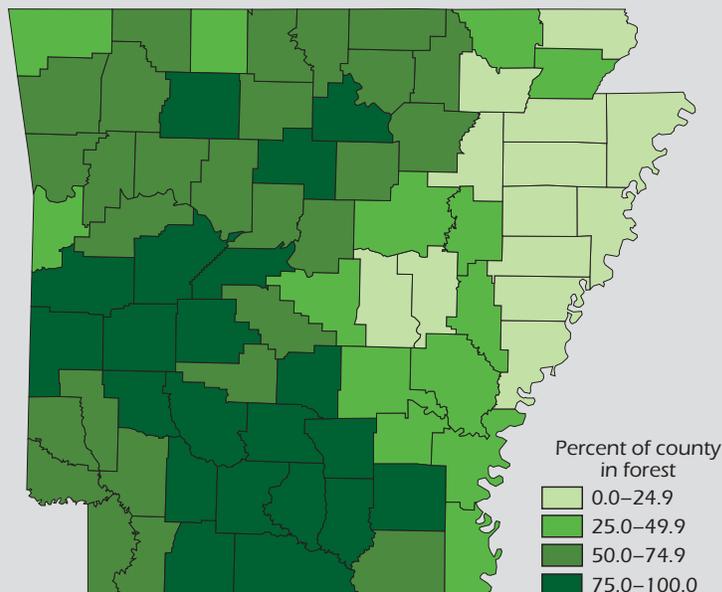


Figure 2—Percent of county area in forest land, Arkansas, 2011.

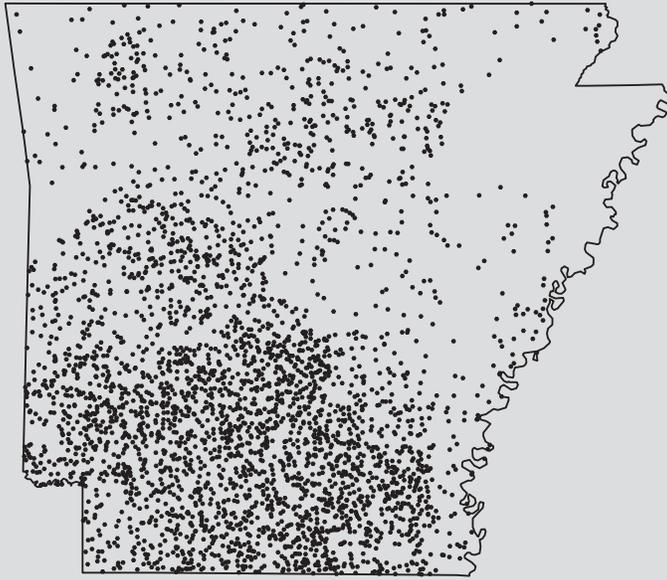


Figure 3—Dot density map of cutting activity on forest land, Arkansas, 2007–11. Each dot represents 1,000 acres of cutting. The dots are accurate to the county level but not within respective counties. The county lines were deleted so that the cutting patterns are more readily illustrated.

### How to Cite This Publication

Rosson, James F., Jr. 2012. Arkansas, 2011 forest inventory and analysis factsheet. e-Science Update SRS–055. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 4 p.



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Big Bluff, on the Buffalo River downstream from the Steel Creek access, in Newton County. (photo by James M. Guldin)

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