



# Kentucky Forest Inventory and Analysis Update



Kentucky's forests cover an estimated 12.4 million acres, or 48 percent, of the state. Ninety-seven percent of these forest acres are considered available for timber production. The remaining 3 percent is considered unproductive forestland and reserved forestland on which timber removals are prohibited by law. Unproductive forestland is defined as being incapable of producing 20 cubic feet of wood volume per acre annually due to natural conditions (e.g., steepness, poor drainage, rockiness, etc.). A reserved forest is a public forest that cannot be utilized for timber production through statute or administrative regulation (e.g., national parks).

## Where are Kentucky's Forests?

The Cumberland Plateau and the Appalachian Mountains in the eastern portion of the state are the most heavily forested, with several eastern counties covered with more than 80 percent of forests— see Figure 1. The central and western portions of the state, although less densely forested, still account for 50 percent of the total forested area.

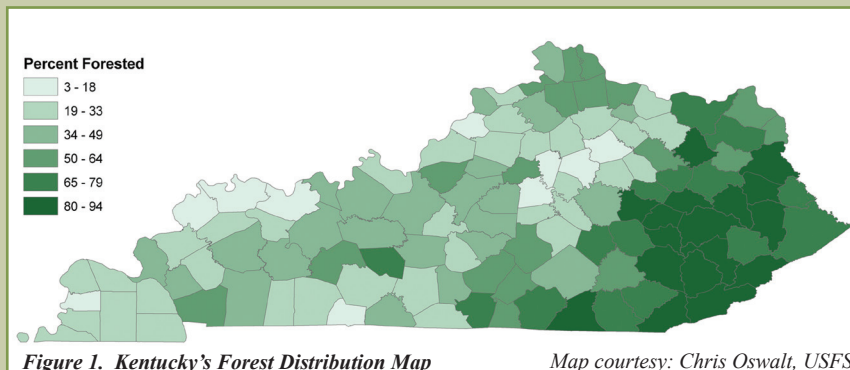


Figure 1. Kentucky's Forest Distribution Map

Map courtesy: Chris Oswalt, USFS

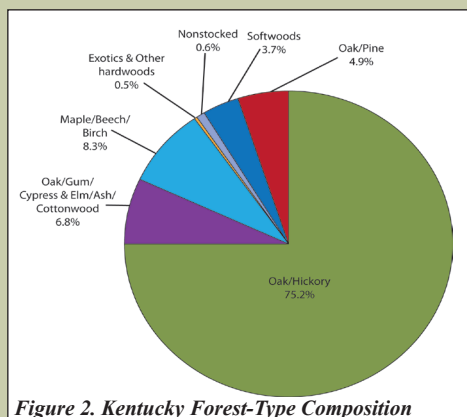


Figure 2. Kentucky Forest-Type Composition

## What's Growing in Kentucky's Forests?

Oak-hickory is the predominant forest type in the state, covering nearly 9.1 million acres (75 percent of Kentucky's forests - see Figure 2). Pine-dominated forest types have declined, while hardwood forest groups have expanded. Unfortunately, red maple is now the most numerous tree species found in Kentucky's forests, with an estimated population of 830 million live trees. Red maple is now more numerous than all oak species (with a population estimated at 687 million trees) combined.

## How Many Trees Are Growing — Are Being Harvested or Are Dying?

The amount of growing-stock volume averages 655.5 million cubic feet annually. Timber removals (harvested trees) average 298.7 million cubic feet (less than 2 percent of the current growing-stock volume) and tree death (mortality) averaged 164.8 million cubic feet.

The growth-to-removal ratio for Kentucky is 2.2 to 1. This ratio means that for every one tree harvested or dead through natural causes, 2.2 trees are replacing it.

## Who Owns Kentucky's Forests?

Private individuals own the majority of Kentucky's forests, at 88.5 percent. The U.S. Forest Service manages 6.4 percent, and other federal, state and local ownership manage the remaining 5.1 percent.

## How Many and What Size Are Kentucky's Trees?

The sawtimber-size stands (trees larger than 9 inches in diameter – softwoods or 11 inches in diameter – hardwoods) make up more than 8 million acres (66 percent of Kentucky's forests). Pole-size stands (trees that are 5.0-8.9 inches in diameter – softwoods or 5.0-10.9 inches in diameter – hardwoods) make up more than 2 million acres (22 percent of the Kentucky's forests), and the sapling/seedling-size stands (smaller than 5.0 inches in diameter for both softwoods and hardwoods) make up more than 1 million acres (12 percent of Kentucky's forests).

The growing-stock volume (the amount of growth measured in cubic feet that actively-growing trees are accumulating each year) increased from 18.2 billion cubic feet in 2004 to 19.5 billion cubic feet in 2008. The largest jump in the number of trees occurred in the sawtimber-size trees, which increased from 14 billion cubic feet to 15.2 billion cubic feet (makes up 77 percent of the growing stock volume) - see Figure 3.

