



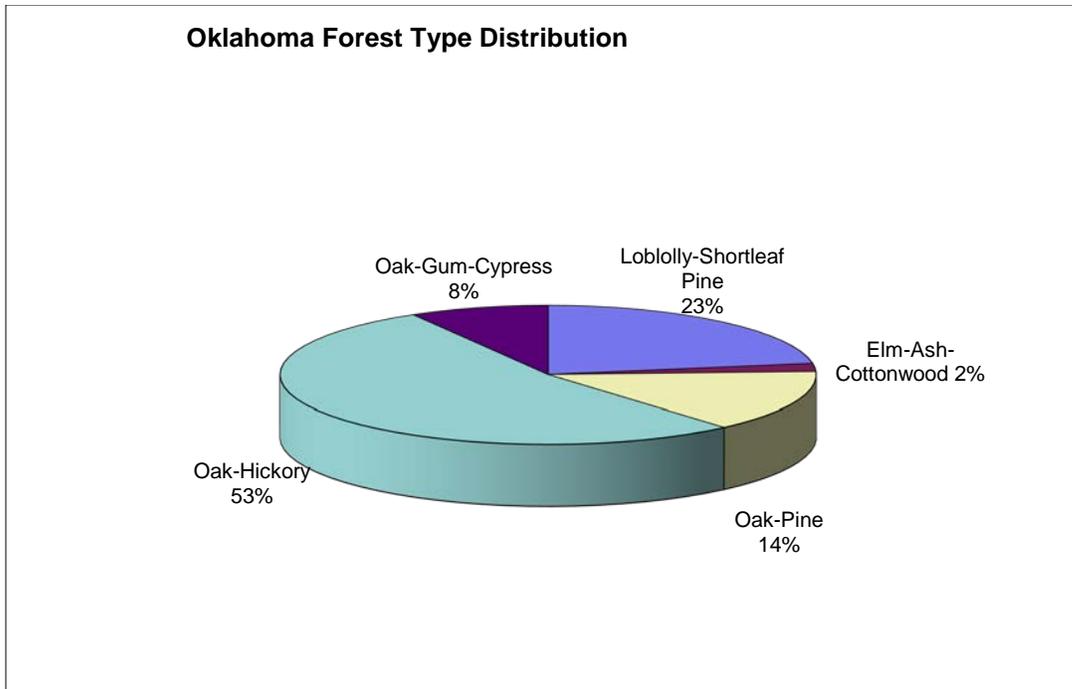
# Oklahoma

## Forest Health Highlights 2017

### **The Resource**

Oklahoma's forests covers over 12 million acres, about 28% of the state's land area. Some 6.9 million acres of the states forested land is in nonindustrial private ownership, while 707,867 acres are in National Forests. Oklahoma's forests are prized for their scenic beauty, supporting tourism and outdoor recreation and providing wildlife habitat throughout the state. Major forest types in the state include oak-hickory, loblolly and shortleaf pine, mixed oak-pine, and oak-gum-cypress.





Forest health monitoring (FHM) activities are cooperative efforts between the USDA Forest Service and the Oklahoma Department of Agriculture Forestry Services. The FHM program in Oklahoma includes regular aerial and ground surveys to detect forest damage.

## Special Issues

Key issues which state and federal programs are addressing cooperatively include:

- ✚ Sustainable management of private forest lands
- ✚ Protection and development of urban and community forest resources
- ✚ Increasing participation by underserved citizens in forestry programs
- ✚ Update of Oklahoma's Gypsy Moth and Emerald Ash Borer Action Plans
- ✚ Education efforts on present and potential pests
- ✚ Utilizing the US Forest Service Forest Health Disturbance Mapper Program

## Forest Influences

### Southern pine beetle Aerial Detection:

Oklahoma Forestry Services flew for aerial detection over 800,000 acres in McCurtain, LeFlore, and Pushmataha counties. The purpose of the flight was to monitor the health of the forests as well as look for early indications of any major health problems. Early detection of southern pine beetle is the primary purpose of these flights, but other aspects are monitored as well such as other bark beetles, flooding induced mortality, and discoloration of hardwood species.

***Ips* engraver beetle:**

The 2017 aerial flights showed some areas of pine mortality, but none that appeared to be associated with southern pine beetle. The locations will be ground checked but from the plane appeared to be a result of *Ips* beetles. In 2015-2016 there was a major *Ips* outbreak across southeastern Oklahoma to a scale that was approaching that typical of southern pine beetle. The 2017 flights suggest that outbreak is completed and the levels of bark beetle mortality are back to the level of scattered individuals or small groups.



*Edge of a 3 acre area of Ips caused mortality from 2016*

**Gypsy moth:**

USDA Animal and Plant Health Inspection Service (APHIS) had no positive samples collected in this year's survey.

**Emerald ash borer:**

The first positive identification of emerald ash borer occurred in October, 2016. The individual was found in a trap in Grove Oklahoma. There have been no more positive ID's to date. Oklahoma Forestry Services worked with multiple other agencies to

introduce and Emerald Ash Borer Action Plan which has been distributed. City centers and towns have adopted this action plan and adapted it to suit their individual circumstances, oftentimes with the help of Oklahoma Forestry Services. As a result of increased outreach, both by OFS as well as news outlets, private landowners have become more aware of their trees and forests and requested technical assistance in relation to their ash trees.

**Partnering with State Parks:**

Oklahoma Forestry Services has partnered with Lake Murray State Park to create a demonstration area for Cross Timbers management with the primary objective of Forest Health. A majority of the Cross Timbers Ecosystem have gone unmanaged for multiple reasons including the lack of financial incentives, slow growth rates, and limited general knowledge of Cross Timbers management and its benefits. The park wishes to increase the overall health of the forests, which have gone unmanaged since the parks establishment in 1937. The primary concerns are related to overstocked forests, encroachment of eastern redcedar winged elm, and greenbrier into the understory preventing the natural oak regeneration, and disease such as *Hypoxylon*. By managing the state park and using it as a demonstration area OFS has the opportunity to reach a wider scale of the public to promote and display active management practices, the benefits, and processes involved.



*Cross Timbers along a hiking trail at Lake Murray State Park*

**Tree mortality from prolonged drought:**

This continues to be a major influence affecting Oklahoma’s forest health. Oklahoma’s forests have shown signs of decline over the past couple of years as a result of the prolonged drought that occurred throughout 2011 and 2012. The species that are most affected are oaks, especially black oak and blackjack oak. Following the drought conditions *Hypoxylon* canker has set in thus exacerbating the problem.

### **Non-Native insects of concern**

- ✚ Emerald Ash Borer
- ✚ Thousand Canker Disease (Walnut twig Beetle)
- ✚ Gypsy Moth
- ✚ Asian Long-Horn Beetle
- ✚ Asian Gypsy Moth
- ✚ Mexican soapberry borer

### **Increased education on forest health:**

Oklahoma Forestry Services has put an increased emphasis on forest health education. OFS has used the initial detection of emerald ash borer and the increased public awareness to discuss the transportation of many of the forest pests listed above. Other causes of decline, such as drought induced mortality and overstocked forests have also been a focus when working with landowners, especially when in the Cross Timbers Forests of central Oklahoma.

### **Southern Pine Beetle Prevention Program**

This year nine contracts were completed under the Southern Pine Beetle Prevention Program and two more thinning practices were started to be completed in the early months of federal fiscal year 2018. These nine completed contracts covered 516 acres in Southeast Oklahoma. There are three active contracts treating 222.5 additional acres. A total of \$25,800 of grant funds has been awarded and \$11,125 are currently obligated for the following year's program.

<http://www.forestry.ok.gov/Websites/forestry/Images/SPB%20Cost-Share%20Application.pdf>

Based upon our review of cost-share rates paid to landowners participating in the Southern Pine Beetle prevention program, amended our program and use the following rates for new applications as of October 1, 2013:

- First Commercial Thinning (CTH) – Flat rate of \$50 per acre (current rate is \$40)
- Pre-Commercial Thinning (PCT) – 50% of actual cost up to \$75 per acre (current rate is up to \$60)
- Consulting fees for planning/harvest assistance – 50% of actual cost up to \$10 per acre (no change)

### **Forest Stewardship Program**

There were 55 Stewardship Plans and 19 Management Plans written covering 18,664 acres, all of which included a section on Forest Health. Forest Health was discussed more in depth with the landowners while the plans were being written.

### **Oklahoma Pest Action Council**

The Council is comprised of plant health specialist from Universities, Federal and State partners. It was primarily formed to produce a collaborative Emerald Ash Borer Preparedness Plan for Oklahoma.

### Oklahoma's Forest Statistics

- Of the 50 states, Oklahoma ranks 20<sup>th</sup> in size, with an area of 43,954,560 acres, over 800,000 acres of which are covered by water and approximately 12,000,000 acres are covered by forests.

#### *Eastern Oklahoma, Area of Timberland (productive forest land) by Ownership Group*

Forest-type	Area of timberland by forest-type and ownership group, East Oklahoma, 2008					
	All ownerships	U.S. Forest		State and local government	Forest industry	Nonindustrial private
		Service	Other federal			
	<i>thousand acres</i>					
Softwood types (Pines and other softwoods)	1096.8	159.2	51.1	28.9	350.6	507.0
Hardwood types (oak, elm, ash, hickory, etc.)	3971.0	98.3	244.0	135.2	214.8	3278.6
Nonstocked	35.3	0.0	1.4	0.0	2.9	31.0
All groups	5103.1	257.5	296.5	164.1	568.3	3816.6

#### *Oklahoma Forest and Paper Industry Employment and Annual Payroll Income*

Oklahoma Wood-Related Sectors		
Sectors	Employment	Annual Payroll Income
Forestry & Logging	895	\$31,562,000
Wood Products	4,075	\$176,234,000
Pulp & Paper	2,943	\$205,063,000
Furniture	2,788	\$100,377,000
<b>Total</b>	<b>10,701</b>	<b>\$513,236,000</b>

#### *Economic Impacts of Oklahoma's privately-Owned Forests*

<b>Forestry-Related Industries</b>	<b>All Forests</b>	<b>Privately-owned Forests</b>
Employment	7,982	7,902
Payrolls	\$300,343,142	\$297,339,710
Annual Sales	\$2,758,886,681	\$2,731,297,815
Contribution to the State GDP	\$1,068,876,000	\$1,058,187,240

*Source: Forest2Market, National Alliance of Forest Owners, 2009*