

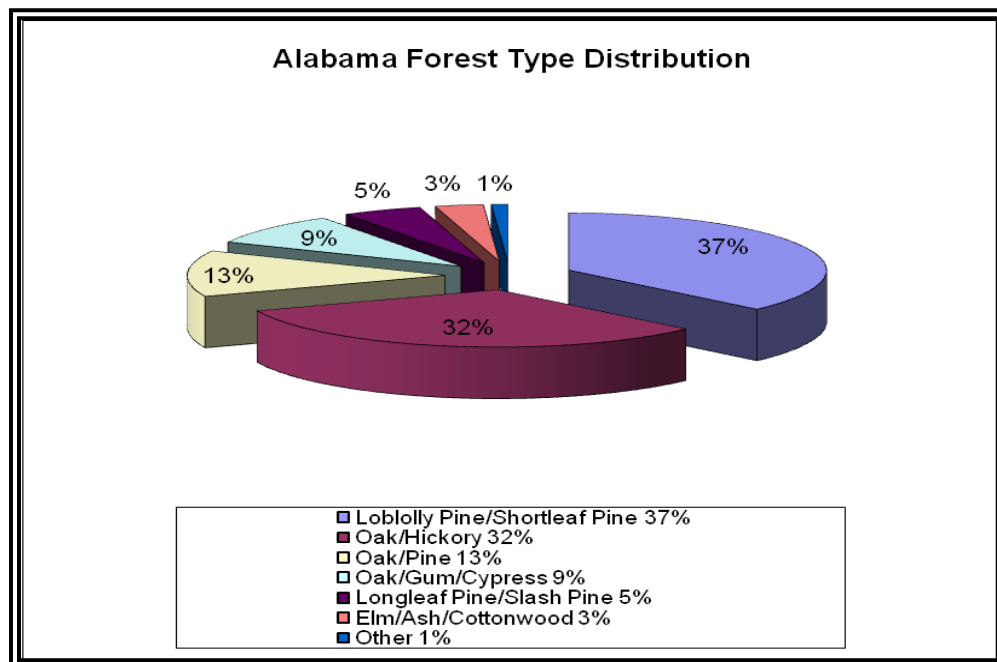
# Alabama

## *Forest Health Highlights 2013*

### **The Resource**

Because of its diverse landscape and magnificent forests, the state has been given the catch name, “Alabama the Beautiful”. With a total land mass of 33,548,706 acres in the state, approximately 68% or 22,902,596 acres comprise of these magnificent forests. Existing in the high elevations of the Appalachian Mountain plateau, in the unique soils of the Black Belt region, and in the sandy areas of the coastal plain, these forests thrive in practically every known ecological environment in the state. Robust hardwood species of the north are flourishing on mountain slopes and next to streams while many of the tall southern pines of the south are growing on well-managed plantations.

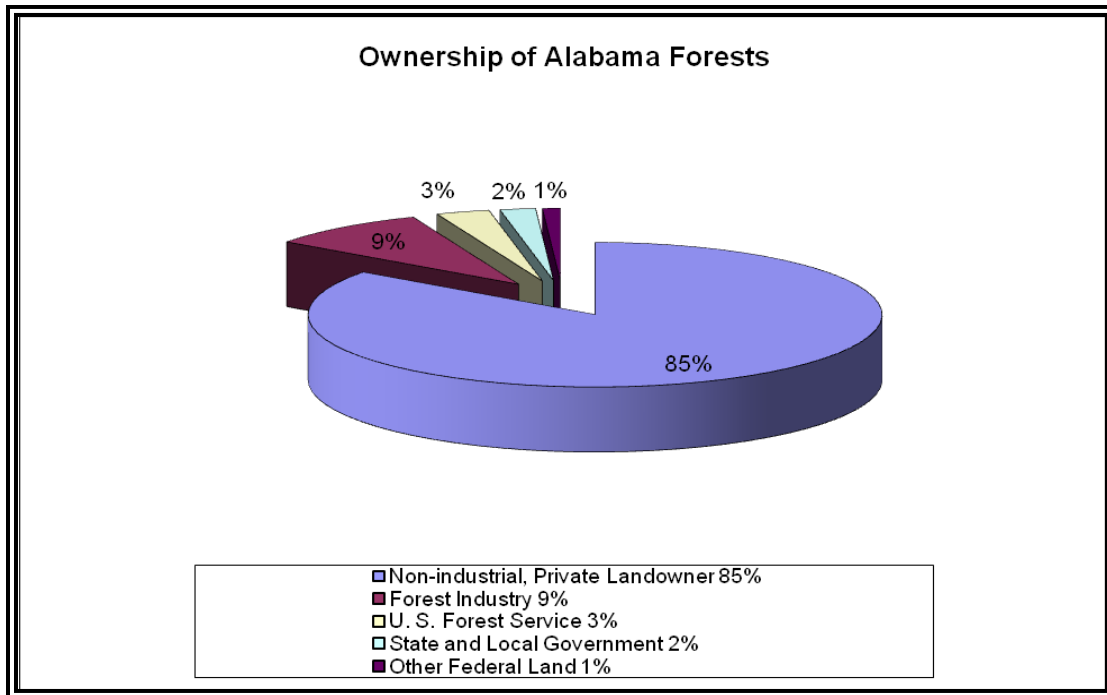
The diversity of the landscape is mainly created by the different types of forest ecosystems in Alabama, all very important to the state’s livelihood. With over 200 different trees species, both native and non-native, the main forest categories in the state consist of just a small percentage of this total. With no measurable change since last year, the graph below illustrates the major forest types in the state.



Alabama is considered one of the most forested states in the nation. Flourishing in local parks, national forests, urban communities, and rural environments, these forests provide the state with outdoor recreation, wildlife habitat, scenic views, and tourism opportunities. There are other contributions the forests provide for Alabama as well. The

state depends immensely on the forest for its economy. With its millions of forested acres, Alabama has the third largest commercial timberland in the country. On average, the state grows 43.2 million tons of softwood and 22.3 million tons of hardwood a year. In fact, the timber industry is the second largest manufacturing industry in the state, producing several billion dollars worth of products a year.

The ownership of the state's forestland, however, is quite interesting. With the number of public forested areas to enjoy, the majority of this land type is owned by non-industrial private landowners. Forestry industry, a major component of Alabama's economy, only owns a small percentage of property in the state. Moreover, forest industry in the last few years continues to decrease the amount of land ownership by slowly divesting its property. Federal lands that are not readily available for public use have the least amount of ownership in the state. Based on the chart below, land ownership by forest industry has decreased by 2%, increasing the ownership acres of non-industrial private landowners



With a marginal increase in total forestland from the previous year, Alabama illustrates its effectiveness in growing and expanding the state's forests. Most of these forest ecosystems are sustainable because of work implemented in public education and land management. Promoting the concept of becoming good stewards of the land is also an important factor in perpetuating the existence of this natural resource.

## Forest Influences and Programs

*Southern Pine Bark Beetles (Southern Pine Beetle, *Dendroctonus frontalis*; Pine Engraver Beetle, *Ips* spp.; and Black Turpentine Beetle, *Dendroctonus terebrans*):*

According to the 2013 spring southern pine beetle (SPB) pheromone survey, Alabama has approached its 8<sup>th</sup> consecutive year of having a low SPB population. Based on the traps deployed in the counties, the SPB population would be consistently low with little to no change in the total number of infestations. The traps established on National Forests, however, had a slightly different result. On the Bankhead, Oakmulgee, and Shoal Creek Ranger Districts, the number of southern pine beetles caught was quite high, a relative increase from previous years. This increase was so significant that the potential SPB infestation for these specific areas in Alabama may reach to moderate levels.

Scheduled SPB detection flights were conducted for June/July and August/September. For these flights, every county was scheduled for aerial surveying. Despite the predicted increase in the number of infestations on federal lands, the total number of detected spots was consistent with the previous years. Out of the 18 spots and 790 infested trees detected statewide during the June/July flight period, there were 2 caused by the Ips engraver beetle, infesting 600 trees. Only 1 of the detected SPB spot during the June/July flight period was located on a National Forest. Out of the 91 spots and 13,830 infested trees detected statewide during the August/September flight period, 26 of them were caused by the Ips engraver beetle, infesting 11,925 trees. Only 2 of the total number of detected SPB spots during the August/September flight period were located on a National Forest. Overall, no significant number of infestations from Ips engraver beetle or black turpentine beetle was reported.

*Laurel Wilt Disease, Raffaelea lauricola – Redbay Ambrosia Beetle, Xyleborus glabratus:* Marengo, Mobile and surrounding counties were periodically monitored for the presence and spread of laurel wilt disease. Ground reconnaissance surveys were done in Baldwin and Sumter Counties this past summer with no noticeable wilting laurel tree species identified. Just north of Demopolis, Alabama in Greene County, however, several wilting sassafras trees were reported. As predicted, laurel wilt disease continued to spread in Alabama with a positive find in Greene County. Based on laboratory results, the fungus, *Raffaelea lauricola* that causes laurel wilt disease was the causal agent. To continue with surveying efforts, the Alabama Forestry Commission (AFC) deployed 3 redbay ambrosia beetle traps in Greene and Baldwin Counties during the latter part of the summer. A total of 5 redbay ambrosia beetles were collected from the trap deployed in Greene County. No beetles, however, were collected from the other 2 traps in Baldwin County. Alabama now has 3 confirmed counties, Mobile, Marengo, and Greene with laurel wilt disease.

With the spread of laurel wilt disease in Alabama and the encroachment of other invasive pests, the AFC has continued the campaign of informing citizens to “Don’t Move Firewood”. Partnering with 11 other southeastern states (North Carolina, South Carolina, Georgia, Tennessee, Kentucky, Florida, Arkansas, Mississippi, Louisiana, Oklahoma and Texas), the AFC has continued to spread the word of the connection between the introduction of non-native, invasive pests and the movement of firewood. This year, the “Don’t Move Firewood” message and educational materials were distributed at 28 different locations which included national events, camp grounds, state parks, and government agencies. This message was also announced at the University of Alabama

and the Auburn University coaches' talk shows. Overall, several thousand people received the "Don't Move Firewood" message.

*Emerald Ash Borer, Agrilus planipennis:* Since its confirmation near Knoxville, TN in 2010, the emerald ash borer has spread quickly in the southeast, becoming detected this year for the first time in North Carolina and Georgia. With two neighboring states having confirmed emerald ash borer infestations, Alabama continued the "Early Detection, Rapid Response" system for this exotic invasive pest. This year, the Alabama Department of Agriculture and Industries deployed 370 emerald ash borer traps statewide primarily in areas with ash trees. No emerald ash borers were found in any of the traps and there were no reports of infestations existing in the state.

*Loblolly Pine Sawfly, Neodiprion taedae:* In Alabama, Marion and Franklin Counties reported having large areas of mature, declining loblolly pines with reddish, tufted needles. Most of these symptomatic pines were established in well-managed stands. A closer examination revealed that the forest pest was the loblolly pine sawfly, a native, periodic, defoliating insect. Based on the monitoring flight conducted over the two counties, over 500 acres were affected. Later in the summer, however, these affected pines recovered from the attack, growing new lush, green needles.

*Sudden Oak Death Disease, Phytophthora ramorum:* Auburn University conducted the sudden oak death (SOD) fall and spring surveys for Alabama. Traps for the fall survey were deployed in October, 2012 and traps for the spring survey were deployed in March, 2013 on 4 selected nursery sites in the state. Based on the latest results from the survey, the nursery sites that previously had a positive reading for the pathogen that causes SOD continue to have a positive reading.

*Declining Flowering Dogwoods, Cornus florida:* Another large scale problem reported in Alabama this year was the declining of flowering dogwoods in the southern part of the state. Several foresters claimed that these dogwoods have been declining now for several years. Many have died due to this unknown pest. With symptoms of foliage discoloration and crown dieback, dogwood anthracnose was a reasonable hypothesis despite that this disease rarely occurs in South Alabama. After a closer examination and testing of stem samples, dogwood anthracnose was not the causal agent. There were no unusual fungi detected in the stem samples. The conclusion for the declining dogwoods in South Alabama was caused by an adverse environmental condition. The series of hurricanes over the last several years may have initiated an existing fungus to become infectious, causing harm to flowering dogwoods in the area.

*Cogongrass, Imperata cylindrica:* To continue the efforts in controlling cogongrass infestations in the state, the Alabama Forestry Commission collaborated with South Carolina, Georgia, Florida, and Mississippi on the second Cogongrass Redesign Grant. Like the first grant, Alabama continued work in public education, spot location, infestation assessment, and data entry. A portion of the funding from this grant was also used in a cost-share program for County Road Departments to control infestations along rights-of-way. The cost-share program was designed to reimburse herbicide costs,

equipment use, and accrued hours. This year, the 11 County Road Departments participating in the cogongrass cost-share program identified over 3,000 cogongrass spots along rights-of-way. More than 500 of these spots had been sprayed this year for control.

*Kudzu, Pueraria montana:*

Kudzu, another aggressive non-native plant, was identified as one of Alabama's most abundant invasive weed species. Partnering with Mississippi, the Kudzu Redesign Grant addressed certain action plans and projects to assess and control this exotic vine in highly resourceful and visible areas. Because of the extent of kudzu infestations in Alabama, funding was allocated for control of this exotic vine only at Red Mountain Park and selected state properties. The AFC has identified and documented the location of kudzu infestations on state-managed lands. As a sub-recipient of this grant, Red Mountain Park organized a project to identify, assess, and control kudzu infestations at this historical state park. From the Kudzu Redesign Grant, the AFC awarded over \$25,000 to Red Mountain Park for assistance with its control efforts of kudzu. Wells Fargo/National Fish & Wildlife Foundation also gave Red Mountain Park \$25,000 for its kudzu suppression project. On June 14, 2013, a press event publically announced the award of \$50,000 to Red Mountain Park from Wells Fargo and the AFC for invasive plant species control and native ecosystem restoration. Volunteers from the Wells Fargo "Green Team" were present that day to assist with suppression activities along the main hiking trail. A Natural Resources Specialist was hired by Red Mountain Park to develop and execute a comprehensive, long-term Invasive Species Management Program that will include kudzu suppression and site restoration.

*Weather:* A slight diversion from average, the mild climate this year in Alabama promoted some unusual forest health occurrences. A warmer than normal winter caused a series of tornadoes from December, 2012 to April 2013. Higher levels of precipitation that started around mid-spring resulted in cooler summer temperatures. This cool and wet climate of the season reduced the effects of some forest pests like a severe infestation from native bark beetles.

Increased activity in forest health monitoring occurred in 2013. From winter of 2012 to the spring of 2013, a series of damaging storms and tornadoes moved across the state. The first significant storm pounded across central Alabama on Christmas Eve, December 25, 2012. Isolated damage and a few fallen trees were reported. Approximately one month later on January 30, 2013, another series of tornadoes traveled across central and north Alabama causing recordable damage in Winston County. A total of 95 acres of timberland were destroyed. Tornadoes continued to affect Alabama with another major storm occurring on February 10, 2013, but no measurable damage was reported. The following month was no exception, with another series of tornadoes wreaking havoc on Alabama. On March 18, 2013 tornadoes mostly affecting counties in North Alabama also brought damaging hail. Areas in DeKalb County were quite damaged by this storm having 13 acres of timberland destroyed by passing tornadoes. The final significant storm that moved across Alabama occurred on April 11, 2013. Pickens and Winston Counties reported a combined total of 612 acres of timberland marred by this weather event. During this tornado season, a total of 48,675.09 tons of timber was destroyed at a value of \$1,057,463.73.

The ForWarn monitoring system from the USDA Forest Service detected a “forest disturbance” once again in the Mobile River delta area. Just like the previous year, a monitoring flight was conducted over the river basin. This year, however, AFC employees also completed a ground survey for closer analysis of the problem. From the aerial and ground surveys, no significant forest decline or immediate pest was identified. There were, however, several tree species in the Mobile River delta area with some crown dieback. Based on the analysis, there was a possible cause of the minimal change in forest cover. An abiotic condition was most likely the pest causing the crown dieback. At first, the AFC concluded that a change in the soil’s pH or nutrient level from excessive salt sprays through repeated hurricanes induced the problem. After hearing a presentation from the Alabama Department of Conservation and Natural Resources (ALDCNR), herbicide damage was most likely the causal agent. In October of 2010, the ALDCNR aerially sprayed the Mobile River delta area with Clearcast to control tallowtree. Some trees died and others experienced some decline as a result of this herbicide treatment. Many trees, however, were recovering and growing quite well in the Mobile River delta area.

Due to the normal temperatures and frequent precipitation, Alabama experienced a low number of wildfires this year. Even though the total number of wildfires was slightly higher than last year, this amount is still one of the lowest in Alabama within the last 15 years. This fiscal year, Alabama had 1,682 wildfires statewide, encompassing 30,340 acres. Public education and outreach activities such as Wildfire Awareness Month have also contributed to the reduction of fire occurrences in the state.

## References:

For more information about Alabama’s forest health program, go to the [Alabama Forestry Commission's website](#).

## Forest Health Assistance in Alabama

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