

Alabama



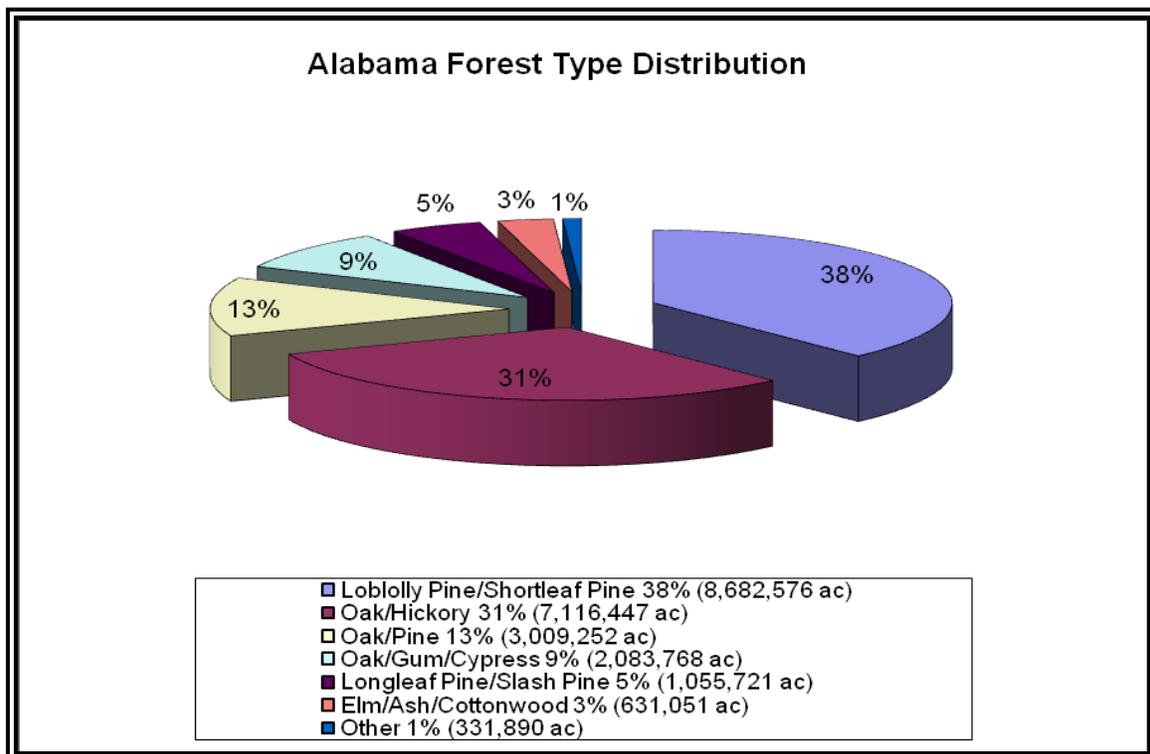
Forest Health Highlights 2014

The Resource

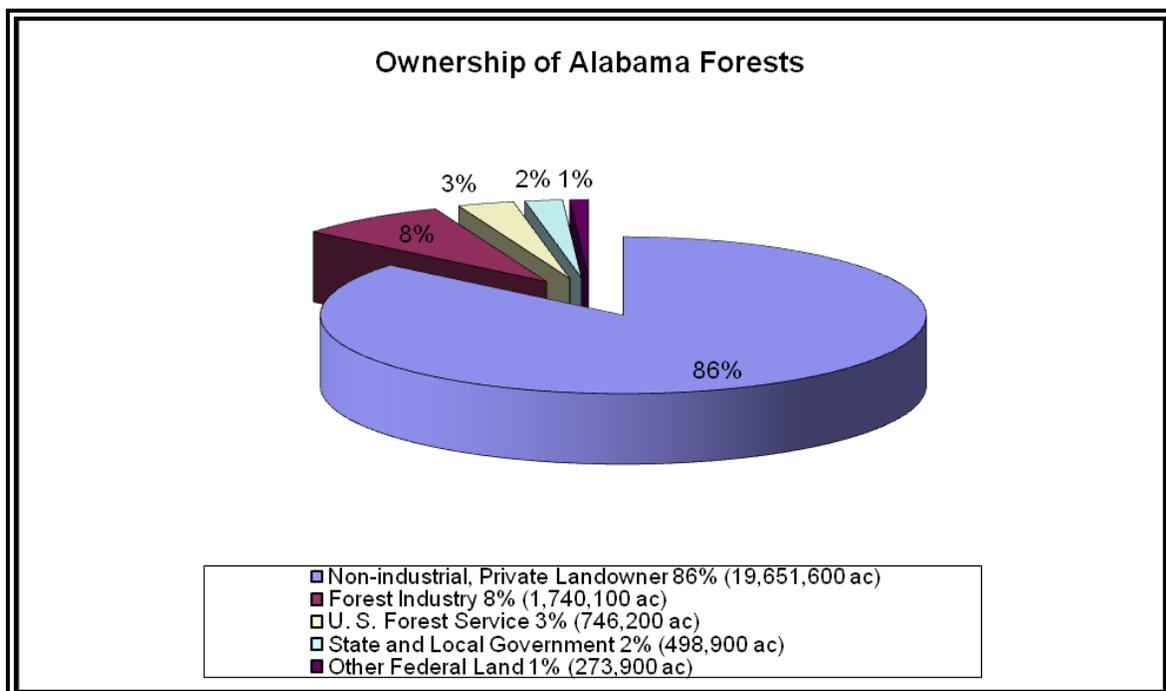
Because of its diverse landscape and magnificent forests, the state has been given the catch name, “Alabama the Beautiful”. With a total land mass of 33,548,706 acres in the state, approximately 68% or 22,910,703 acres comprise of these magnificent forests. Existing in the high elevations of the Appalachian 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.

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.

In the forest type category of Loblolly Pine/Shortleaf Pine, there was a slight increase from last year. As a result, the forest type category of Oak/Hickory slightly decreased by 1%. The other forest type categories had no measureable change from last 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. Land ownership by forest industry has decreased by 1% since last year, increasing the ownership acres of non-industrial private landowners.



During the last few years, there has been a consistent marginal increase in total forestland in Alabama. This outcome illustrates how Alabama is effectively growing and expanding its 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 Beetle, *Dendroctonus frontalis* and Pine Engraver Beetle, *Ips spp.*:

The results from the southern pine beetle (SPB) pheromone survey suggested that Alabama would experience a slight decline in the number of infestations. The actual outcome was somewhat different from the predicted one. This year, there was a small increase in the total number of beetle spots detected by aerial survey. One formal SPB aerial detection flight was scheduled for every county in the state. The flights were conducted during the summer months when southern pine bark beetles are apparently most active. As a result, SPB aerial surveys were conducted from June through October, detecting 168 beetle infestations that were infesting 18,785 trees. Some of these infestations, however, were caused by the pine engraver beetle. From this total, there were actually 123 SPB infestations infesting 5,575 trees.

At the beginning of the year, the temperature was cool and the amount of precipitation was adequate. Actually, the climate during the first 6 months in Alabama was slightly cooler than normal with above average precipitation. The mild weather pattern influenced the health and vigor of residual trees. There were no significant cases of pines succumbing to a pine engraver beetle attack. As the summer progressed, however, the situation changed. By August, several counties were starting to experience weeks without any precipitation. By September, there were reports from a few counties of pine engraver beetle infestations. Even though there were not numerous pine engraver beetle infestations statewide, many that were detected were severe cases. From the total amount of spots detected during the SPB aerial surveys, 45 pine engraver beetle infestations were identified infesting 13,210 trees.

Laurel Wilt Disease, *Raffaelea lauricola* – Redbay Ambrosia Beetle, *Xyleborus glabratus*:

Visual surveys were conducted in September, 2014 in selected Alabama counties for laurel wilt disease. Areas in Choctaw, Sumter, Hale, and Perry Counties were thoroughly surveyed because of their close proximity to Marengo County. Houston and parts of Geneva Counties were also surveyed because of the neighboring Florida counties with laurel wilt disease. Wilting sassafras trees were noticed in Sumter and Hale Counties. Stem samples were collected from these declining trees and sent to the laboratory for examination. The laboratory results confirmed that laurel wilt disease now exists in Sumter and Hale Counties. Laurel wilt disease, the interaction between the redbay ambrosia beetle (*Xyleborus glabratus*) and a fungus (*Raffaelea lauricola*), has now spread to two additional counties in the state.

Emerald Ash Borer, *Agrilus planipennis* and Thousand Cankers Disease, *Geosmithia morbida*:

A report was sent to the Alabama Forestry Commission in May, 2014 that possibly infected ash and black walnut wood were being transported across the state line from the Chattanooga, TN area into Alabama. The Alabama Forestry Commission immediately informed the Alabama Department of Agriculture and Industries about this potential threat to the state. The Alabama Department of Agriculture and Industries completed a visual survey of forested areas for several counties in Northeast Alabama. Starting from the Georgia state line, the Department of Agriculture surveyed along Interstate 59. Parts of DeKalb, Jackson, Cherokee, Marshall, and Etowah Counties were also surveyed. The Department of Agriculture deployed 431 emerald ash borer traps and 335 wood borer traps mainly in these surveyed counties. While implementing the survey, the agency noticed some declining ash trees. Several stem and larvae samples were taken from these declining trees and sent to the laboratory for identification. The laboratory results were negative for the emerald ash borer. No declining black walnut trees were found in the surveyed area. The walnut twig beetle that vectors the fungus, *Geosmithia morbida* causing thousand cankers disease was not detected in the state. As of this date, no emerald ash borer (*Agrilus planipennis*) or walnut twig beetle (*Pityophthorus juglandis*) were found in any of the traps deployed in Alabama.

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”. This year, the “Don’t Move Firewood” message and educational materials were distributed at several community events. At the Alabama State Fair in several counties, the “Don’t Move Firewood” educational materials were distributed to the attendees. From the previous year’s contract, the message was also announced at the University of Alabama and the Auburn University coaches’ talk shows in October and November of 2013. Overall, several thousand people received the “Don’t Move Firewood” message.

Loblolly Pine Sawfly, *Neodiprion taedae linearis*:

In May, 2014 there were several reports from Northwest Alabama of “worms” feeding on pine needles killing these apparently healthy trees. Most of them were mature loblolly pines growing in well-managed stands. The pest was later confirmed to be the loblolly pine sawfly (*Neodiprion taedae linearis*). This was the second consecutive year that the Alabama Forestry Commission received a formal report about the loblolly pine sawfly damaging trees in Northwest Alabama. For some pine stands in this area, this was the third consecutive year of an infestation from this defoliator. In 2014, however, the range of the damage was greater than last year and more significant. Surprisingly by late June, these affected pines recovered from the attack and were growing new foliage. The pine stands in Marion and Franklin Counties that were infested last year were not recovering as fast as the new spots found in 2014. This year, infestations were reported in Colbert, Marion, Franklin, Lamar and Fayette Counties.

Sudden Oak Death Disease, *Phytophthora ramorum*:

The sudden oak death spring survey was conducted from March to April, 2014 at seven different nursery sites in Alabama using the “Bottle of Bait” sampling method. The results from the spring survey indicated that two of the five nursery sites that previously tested positive for the pathogen, *Phytophthora ramorum*, tested positive again this year. Unfortunately, there was one new nursery site that also tested positive for the pathogen. In October, 2014, the sudden oak death fall survey began, testing the same seven nursery sites for the harmful pathogen.

Dying Red Oaks, *Quercus spp.*:

A problem of dying red oaks was reported from Geneva County in July, 2014. The county office personnel along with several landowners confirmed that there were dying and declining red oaks sporadically around Geneva, AL. With symptoms of foliar discoloration throughout the crown, these affected red oaks were thought to have either oak wilt or oak decline. After Specialists in plant pathology reviewed images of the affected oaks, the pest is not likely to be oak wilt, sudden oak death disease, or the general oak decline. The conclusion was that one or several abiotic conditions created a harmful situation most likely in the soil that negatively affected red oaks. A few of these declining red oaks in Geneva, AL have since succumbed to this unknown pest.

Cogongrass, *Imperata cylindrica*:

To continue the efforts in controlling cogongrass infestations in the state, the Alabama Forestry Commission (AFC) conducted work in educating the public about cogongrass, detecting cogongrass spots, entering cogongrass information into the AFC database, and writing cogongrass management and control recommendations. A portion of the Cogongrass Redesign Grant funds was allocated to 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. A total of 11 County Road Departments applied and were accepted into the Cogongrass Cost-Share Program. Several have completed a significant amount of work identifying and spraying cogongrass infestations along rights-of-way. By the end of fiscal year 2014 (September 30, 2014), approximately \$47,100 total was reimbursed to participating County Road Departments for completing work under this cost-share program. To initiate the process of identifying and spraying cogongrass infestations on AFC-managed state lands, several AFC county offices purchased spraying equipment this year. Some AFC county personnel have already started spraying cogongrass infestations on state lands.

Kudzu, *Pueraria montana*:

Kudzu, another aggressive non-native plant, was identified as one of Alabama's most abundant invasive weed species. Because of the extent of kudzu infestations in Alabama, the Kudzu Redesign Grant allocated funding for control of this exotic vine only at Red Mountain Park and selected state properties. The Alabama Forestry Commission (AFC) has identified and documented the location of kudzu infestations on state-managed lands. The AFC has initiated spraying and other control treatments for kudzu by first purchasing spraying equipment. There was one particular site that has received treatment for controlling kudzu. The AFC employees at the Chilton County Office have started spraying kudzu at Thorsby Seed Orchard. There are approximately 60 acres of kudzu existing on the property and about 40 acres of this infestation were sprayed with Milestone. The spray treatment at Thorsby Seed Orchard was conducted in August and September, 2014.

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. Red Mountain Park has also implemented control treatments for kudzu. At the park, a 5.5-acre tract of land was first plowed in the fall of 2013 to cut and expose kudzu roots. A glyphosate herbicide was immediately sprayed to control the Chinese privet and the uprooted kudzu. By February, 2014, this 5.5-acre tract at Red Mountain Park was sowed with rye grass and planted with tree seedlings to restore the site with native vegetation. Kiko goats were used in a 3.25-acre area near a sensitive, historical site for controlling kudzu and other invasive plants. A company from Virginia called "Goat Busters" delivered the 50 goats along with 2 Great Pyrenees dogs on Sunday, August 3, 2014. During the seven days at the park, the goats consumed over 2 acres of vegetation. Overall, approximately 150 acres of sensitive areas and historical sites at the park received treatment either with a glyphosate herbicide or a mechanical operation to control kudzu and other non-native plants. Also, Red Mountain Park has started restoration activities on approximately 50 acres of these treated sites.

Weather:

At the beginning of the year, Alabama was experiencing cool temperatures and above average precipitation. This calm weather pattern continued until mid-July, 2014. By late August, several counties were starting to experience weeks without any precipitation. As October approached, many counties reported drought-related problems like an increase in the number of pine engraver beetle infestations. The southwestern part of the state suffered the most from this change in the climate. More beetle infestations were reported in Southwest Alabama than in any other part of the state.

In Alabama, extreme storms and damaging tornadoes appear to be quite common in the spring, especially during the month of April; and in 2014, the state was not excluded from this apparent trend. The climate this spring was slightly cooler than normal with above average precipitation. When these warmer temperatures and humid air moved beneath the cooler atmosphere thunderstorms, hail, and tornadoes transpired. On Monday

evening, April 28, 2014, storms moved across northern and central Alabama, prompting 23 tornadoes that resulted in property damage and downed trees. These tornadoes ranged from an EF-0 to an EF-3, with most rated as an EF-1 on the Enhanced Fujita scale. By May 9, 2014, pilots with the Alabama Forestry Commission completed survey flights of forested areas that were damaged. Several counties, Etowah, DeKalb, Limestone, Franklin, Marion, Tuscaloosa, Lamar, and Pickens were selectively chosen for aerial assessment due to the amount of destroyed forestland. The results from the survey flights indicated that only a few counties in Alabama received significant amount of damaged timberland for documentation: Limestone – 62 acres, Marion – 10 acres, and Franklin – 5 acres.

Due to the normal temperatures and frequent precipitation, Alabama experienced a low number of wildfires again this year. In fiscal year 2014, Alabama reported 1,485 wildfires burning 26,619 acres. The total number of wildfires and the total amount of acres burned were both less than last year's totals. The average fire size was 18 acres. Wildfires destroyed or damaged 112 structures in Alabama; however 2,627 homes were saved. Public education and outreach activities such as Wildfire Awareness Month have also contributed to the reduction of fire occurrences in the state.

References:

- Alabama Forest Resource Information – Alabama Forestry Commission Forestry Inventory Analysis (FIA) Data
- Alabama Wildfire Information – Alabama Forestry Commission Fire Operations Section
- Alabama Forest Health Information – Alabama Forestry Commission Forest Health Section

For more information about Alabama's forest health program, go to the Alabama Forestry Commission's website: <http://www.forestry.alabama.gov>.

Forest Health Assistance in Alabama

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