

ALABAMA

Forest Health Highlights 2022

The Resource

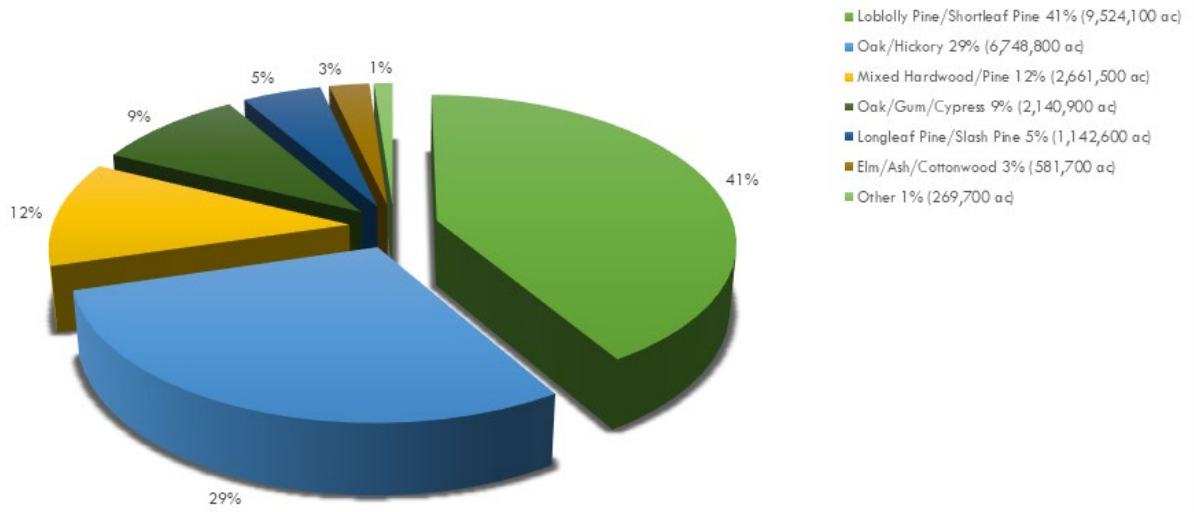
It has now been over a year since I joined the Alabama Forestry Commission (AFC) in August of 2021. During that time, I have gained valuable experience and had the privilege to work alongside with several AFC personnel from across the state. On top of that I have had the chance to travel out of state to meet with my counterparts from other southeastern states as well as US Forest Service personnel who work in areas pertaining to forest health. With one year under my belt, I had the chance to take on the challenges pertaining to all subjects related to forest health such as weather, insects, and diseases. These areas greatly impact our state's forests and must be able to develop a plan to manage them effectively. Thankfully the AFC has partners that assist us with developing these management methods such as the federal government, universities such as Auburn University, and citizens of Alabama who recognize the importance of their involvement.

In 2022 the state of Alabama experienced a variety of weather events that influenced decisions pertaining to forest management. For most of 2022 Alabama received an adequate amount of rain. However, beginning in early fall the occurrence of rain events across the state began to become few and far in between. With the lack of rainfall forest fires became more prevalent across the state. During the last week of September Hurricane Ian was on a path towards the state of Florida. The presence of Hurricane Ian lowered the relative humidity percentage across the state and increased wind speeds for most of the state. With these two factors along with the lack of rain set the stage for the chance of wildfires to break out. During that week I had the chance to help control a few wildfires in different areas of the state and got to see our field personnel in action. Thankfully Alabama has experienced more rain events since then and hope that it will lead to less wildfire occurrences.

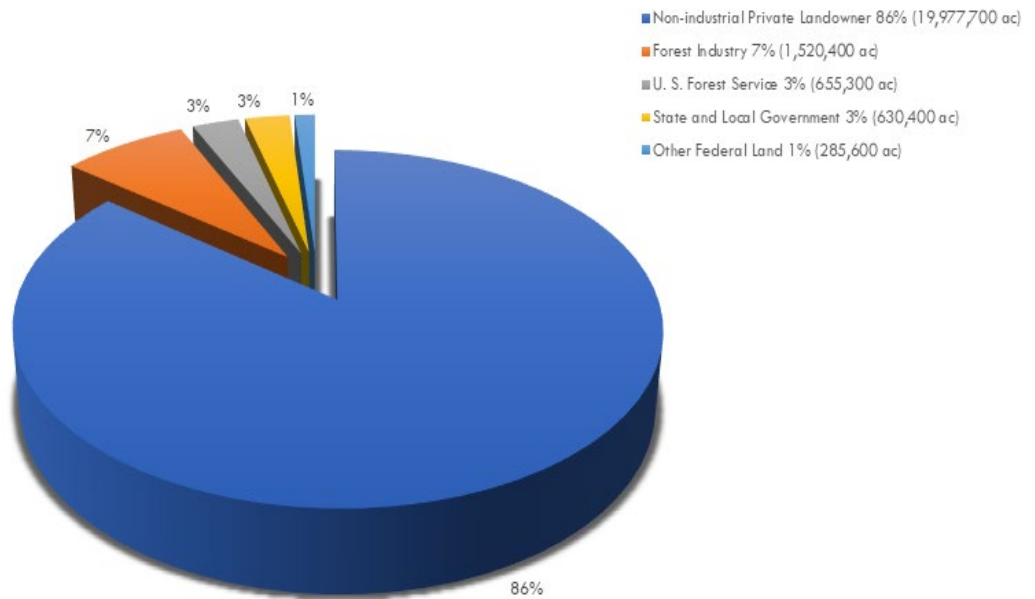
The Alabama Forestry Commission continues to make great strides in forestry. One change noticed this year is a decrease in forested acres compared to last **year's** numbers. This decrease can be associated with the development of new housing near major cities such as Huntsville and Birmingham. According to the agency's Forest Inventory and Analysis report the percentage of what each forest type makes up in the state has remained the same, except for the elm, ash, and cottonwood category that increased by 1%.

In addition, the type of forest land ownership has remained almost the same except for two areas. One of the big changes to note is the private landowner percentage increased from 79% in 2021 to 86% in 2022. In addition, the forestry industry landownership decreased from 14% in 2021 to 7% in 2022.

Alabama Forest Type Distribution: 23,069,400 acres total



Alabama Forest Ownership Distribution



The Influences

Pine Engraver Beetle, *Ips spp.*:

Alabama was very fortunate this year to have a minimal number of pine engraver beetle infestations. In all only two engraver beetle spots were detected when the aerial surveys were conducted. One spot was detected in Pike County and the other in Marengo County. The Alabama Forestry Commission (AFC) began flying for beetle spots on July 12, 2022 and completed the survey on September 14, 2022. In total AFC pilots surveyed 44 out of 67 counties. Ground surveys were conducted to verify the specific pest causing the pine mortality. The two detected spots were checked by ground method and the causal agent of these infestations was the pine engraver beetle.

A factor that is attributed to the low number of pine engraver spots across the state was the amount of rainfall experienced this summer. Alabama experienced a wet summer which allowed native pines to receive necessary water and not experience any drought related stress. As the summer was ending the AFC began looking ahead to weather patterns coming in the fall. Weather forecasts unfortunately predicted a dry fall for not only Alabama but for most of the southeastern states. Currently the predictions have been accurate regarding the drought. However, there have been a few days of rain here and there with more predicted in the coming weeks. With the state experiencing little rainfall it is expected that the number of pine engraver spots detected through the air will possibly increase for next year.

Southern Pine Beetle, *Dendroctonus frontalis*:

Similar to the pine engraver beetle the number of southern pine beetle (SPB) spots across the state of Alabama were low for 2022. During the aerial surveys only 23 spots were detected for the whole state. The low number of SPB spots is also attributed to the amount of rainfall experienced during the summer of 2022. Most of the spots detected (17 spots) were located in the southwestern region of the state with over half of them being recorded in Clarke County. The northwestern region of the state had the second highest number of SPB spots with four. The southeastern region of the state only had two spots and the northeastern region did not have spots detected. The low number of SPB spots is greatly welcomed but expect the number of spots to increase due to the state currently experiencing little rain. Along with the low number of SPB spots only two were detected in national forests.

The Alabama Forestry Commission conducted the southern pine beetle spring pheromone survey this year using frontalin, Sirex lure, and *endo*-brevicomin. Traps were deployed in four counties – Lowndes, Shelby, Barbour, and Tallapoosa. The results from the pheromone survey showed an overall decline in the southern pine beetle population. The results also predicted that Alabama will have a low occurrence of southern pine beetle infestations.

Pine Needle Diseases, *Coleosporium spp.*, *Lophodermium spp.*, *Dothistroma spp.*, and *Lecanosticta spp.*:

Pine needle diseases are a challenge that have proven to be a consistent fight each year. There are many forms of the disease and can thrive in both drought conditions and excessive rainfall. These diseases flourish best in well-managed pine stands and can cause healthy pines to lose their needles and succumb to the infection.

During the spring of 2022 the Alabama Forestry Commission (AFC) began receiving phone calls from landowners and the public regarding pine needles suddenly turning brown. Many of these calls came from counties in the Northwest and Northeast regions of the state. The culprit of the needle discoloration is believed to be the fungal disease known as brown spot needle blight (BSNB). In the last few years, the disease has begun to infect loblolly pines (*Pinus taeda*) in young and mature stands. To date the disease has been confirmed in 36/67 counties in the state of Alabama. One big contributing factor for the disease's spread this year is attributed to weather conditions. For the past few years Alabama has experienced wet/humid summers along with mild winters. Both conditions favor the survival of needle pathogens such as **BSNB**.

Laurel Wilt Disease, Fungus-*Raffaelea lauricola* and Redbay Ambrosia Beetle-*Xyleborus glabratus*:

Three years ago, in 2018 Alabama, Mississippi, Louisiana, Texas, and other southeastern states partook in a project with the U.S. Forest Service with the goal of monitoring the spread of laurel wilt disease (LWD). The state of Alabama contributed by monitoring the counties of Lowndes, Chilton, Talladega, Coosa, Bibb, and Lee. These counties were selected at the time since they were considered to be highly vulnerable to the disease. A map was created using the data submitted by the participating southeastern states showing the counties where LWD was detected. The project ended in 2020.

In 2022, laurel wilt disease was reported in Madison County located in northern Alabama. The AFC was contacted by the Huntsville Botanical Gardens after seeing sassafras (*Sassafras albidum*) present on the property begin to exhibit known symptoms of the disease. Since then, the Huntsville Botanical Gardens have removed and destroyed the infected sassafras and will continue to monitor all susceptible hosts present on the property.

Emerald Ash Borer, *Agrilus planipennis*:

Emerald Ash Borer (EAB) has proven to be one of the top invasive insect challenges that not only Alabama faces, but other southeastern states as well. The insect was first detected in the state back in 2016 in the northeastern county of Calhoun. Three counties Calhoun, Cherokee, and Cleburne have since been labeled as “quarantine counties” through an agreement done by the Alabama Forestry Commission, the Alabama Department of Agriculture and Industries, and the U.S. Department of Agriculture (USDA), - Animal and Plant Health Inspection Services (APHIS). The disease has since spread to Talladega, Etowah, and St. Clair. The three counties are being continually surveyed to track the insect as it appears to be heading to North-Alabama. This raises concern as a lot of the cities in northern Alabama have ash trees along their sidewalks and parks.

The agency plans to continue to track the insect's movement throughout the state. At the same time the agency plans to continue supporting education and outreach programs like the one done in Birmingham in 2020. The event was sponsored by the Nature Conservancy to raise awareness of the danger that the insect poses to ash trees.

Hemlock Woolly Adelgid, *Adelges tsugae*:

The hemlock woolly adelgid (HWA) has remained within Dekalb County since its first detection in the state back in June of 2020. The first appearance of the disease in the state was attributed to Dekalb County bordering the state of Georgia and being in line with the range of native hemlocks along the Appalachian Mountain range. In 2022 HWA is still only reported in Dekalb County which shows that management strategies have been effective in preventing spread to other neighboring counties.

The agency will continue to monitor the presence and spread of HWA in Dekalb County and evaluate reports of possible cases. It is critical to stop the spread of the insect since areas in Alabama such as the Bankhead National Forest are home to one of the last populations of eastern hemlocks (*Tsuga canadensis*) that have not been affected by the insect.

Cogongrass (*Imperata cylindrica*) Mitigation Program

During the 2022 fiscal year the AFC rolled out its new Cogongrass Mitigation Program for landowners who have infestations of the grass on their property. AFC Cogongrass Coordinator Owen Andrews and his crew were able to spray 380 reported spots which estimated to be 2,800 acres. The crew consisted of AFC employees Travis Chesser, Chris Finley, and Zack Alford.

Environmental and Climatic Events

Wildfires

The number of wildfires in the state of Alabama increased compared to 2021. In total there were 1463 recorded wildfires in 2022 that burned 33,406.64 acres in Alabama.

Hurricanes, Tornadoes, and Storms

During 2022 the state of Alabama experienced a low number of tornadoes with none causing any major timber damage. In total Alabama experienced 4 days where tornadoes occurred across the state. The first of these four days was February 3, 2022. The second day was March 30, 2022. The last two occurred on April 5 and 13, 2022. Since these few tornadoes did not cause 100 continuous acres or more in timber damage a formal report was not needed. On top of the low number of tornadoes, the state of Alabama did not have any hurricanes to make landfall.

References

- Alabama Forest Resource Information – Alabama Forestry Commission, Forest Inventory and Analysis (FIA) Data
- Alabama Wildfire Information – Alabama Forestry Commission, Fire Operations Section, Wildfire Total.

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

Alabama Forestry Commission
Forest Health Section
513 Madison Avenue
Montgomery, AL 36104
Cell #: 334-274-5507
austin.reese@forestry.alabama.gov

Alabama Cooperative Extension System
Plant Diagnostic Laboratory
961 South Donahue Drive
Auburn, AL 36849
Office #: 334-844-4336
<http://offices.aces.edu/>

USDA Forest Service
Southern Region, State & Private Forestry
Forest Health Protection
2500 Shreveport Highway
Pineville, LA 71360
Office #: 318-473-7286
<http://www.fs.usda.gov/main/r8/forest-grasslandhealth/>

Alabama Department of Agriculture and
Industries
Plant Protection Division
1445 Federal Drive
Montgomery, AL 36107
Office #: 334-240-7100
<http://www.agi.alabama.gov/>

USDA Forest Service
Southern Research Station
320 Green Street
Athens, GA 30602
Office #: 706-559-4273
<http://www.fs.usda.gov/main/r8/forest-grasslandhealth/>