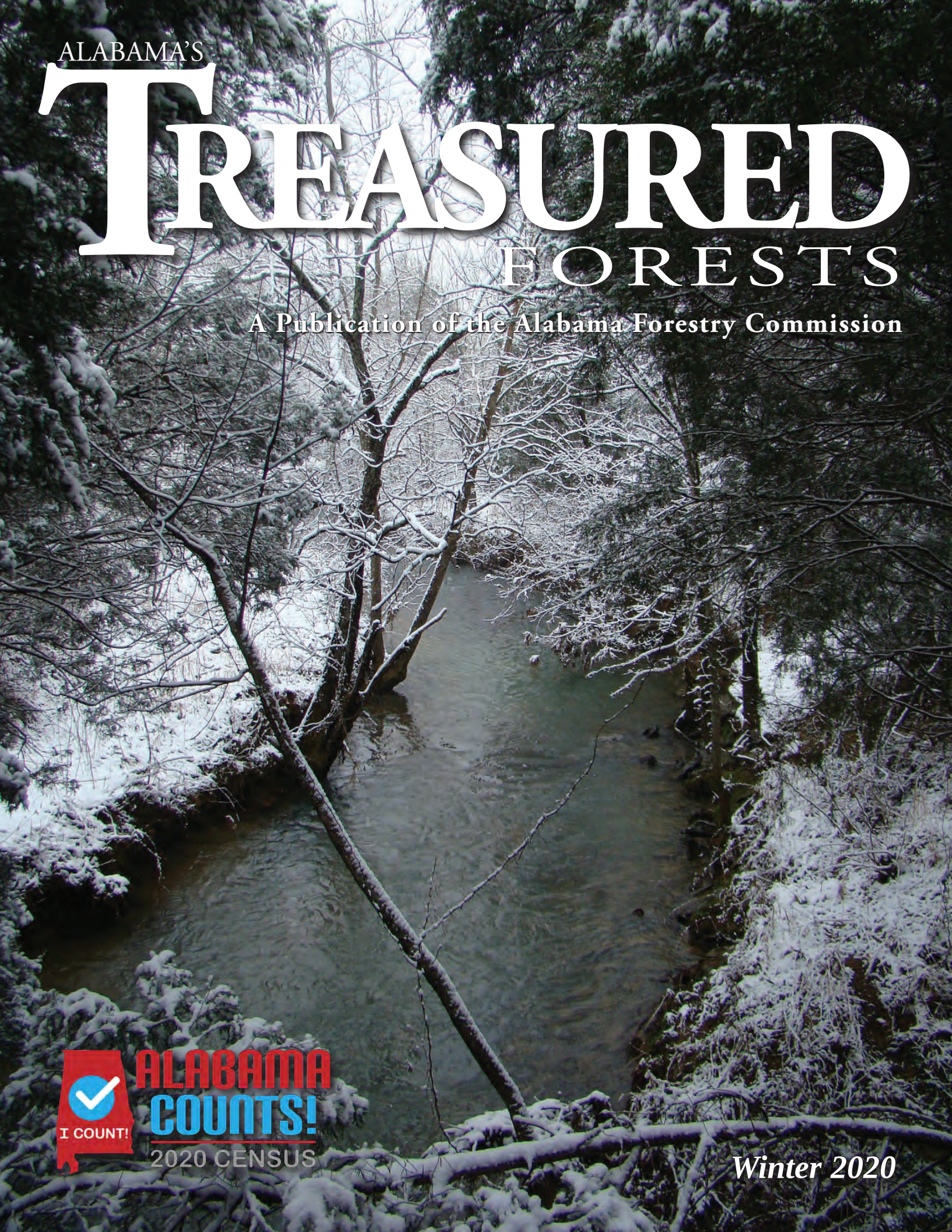
ALABAMA'S
TREASURED
FORESTS
A Publication of the Alabama Forestry Commission
I COUNT!
ALABAMA COUNTS!
2020 CENSUS
Winter 2020

Message from the *STATE FORESTER*

Rick Oates, State Forester

Writing this on a cold but clear day, I am starting to think ahead…to the spring and the things we will be facing this year. As with many things, life at the Alabama Forestry Commission is cyclical. We generally know what to expect with each season…what we don't know is the intensity levels at which those things will happen.

Just as we did following the drought and extended wildfire season of 2016, I suspect we will see effects of the fall drought carry into the spring. This means you, as a forest landowner, need to be vigilant. As winter turns to spring, check on your property a few times. Some trees will die immediately following an extended drought, especially seedlings and saplings. We are seeing that happen now. I am hearing reports from across the state of dying pine trees. An email I received recently from a friend regarding the situation said, "This condition in west Alabama is bad and has affected hundreds of landowners. If you ride down any county road or state highway in Marengo or north Clarke counties, you will see evidence of this problem. Many landowners are being forced to clear-cut their plantations prior to their management goal timeline."

Even more concerning is the warning that AFC Forest Health Coordinator Dana Stone gave us in 2017. "The most damaging results may take longer to emerge. Drought-stressed trees can be weakened, causing them to be more susceptible to insects and diseases. These symptoms of long-term injury will appear later, likely this spring, especially in our state's pine forests." To combat this, the AFC will begin to assess the situation earlier than usual this year. As we conduct our aerial surveys, we will report any spots of dead trees to landowners as soon as possible. If you receive a letter from us notifying you of likely beetle spots on your property, please take action immediately.

Although it won't directly impact this situation in the short term, another 'Spring Thing' you can do to help prevent problems in the future is to conduct a prescribed burn. It's a good idea to schedule your property on a regular burning interval. We've preached how important this is for years. It will make your trees healthier, and healthier trees will be less stressed by inevitable drought and less susceptible to insects and diseases. So, consider having a professional conduct a prescribed burn on your stand. Our website lists many vendors who perform this work. You can also contact your local AFC office to be added to their list to burn your property this year.

Also, just as we have a fall fire season, we also have a spring fire season in Alabama. We know, come March, we will start to have more wildfires in Alabama. There's no way at this time to predict what the next fire season will bring, but we can make sure some things are done to reduce this potential threat. Prescribed burning, clearing old fire lanes, plowing new fire lanes, and an occasional patrol around the property to look for fire hazards can be time well invested to prevent a much bigger problem later.

Whatever the spring of 2020 brings, take some time now to plan the things you need to do in order to make it safe and productive! We can't prepare for everything, but there are things you can do now to make life easier and more predictable in the future. Why not be proactive?

Rick Oates

The Alabama Forestry Commission supports the Alabama Natural Resources Council's TREASURE Forest program. *Alabama's TREASURED Forests* magazine, published by the Alabama Forestry Commission, is intended to further encourage participation in and acceptance of this program by landowners in the state, offering valuable insight on forest management according to TREASURE Forest principles. TREASURE is an acronym that stands for **T**imber, **R**ecreation, **E**nvironment, and **A**esthetics for a **S**ustained **U**sable **RE**source.

ALABAMA'S
TREASURED FORESTS
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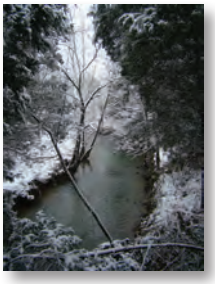

On the Cover:
A crisp wintry morning on Big Will's Creek, north of Fort Payne, in DeKalb County.
Photo by Dan Green

This publication is provided at no charge to the forest landowners of Alabama, with a circulation of approximately 14,000. Published three times each year, the magazine is filled with forestry information and technical assistance designed to assist landowners in making informed decisions about the management practices they apply to their land. Articles and photographs are contributed by AFC employees and other forestry or natural resources professionals.

Alabama's TREASURED Forests magazine is also available on-line! **www.forestry.alabama.gov**

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Penny Creek Farm

A Family Home 'Rich' in History

By Laura Jean McCurdy, Alabama Forestry Commission

It is our responsibility to preserve the wildlife, forests, soil and to teach our younger generations about sustaining the environment. Jerry Paul Owen, born and raised in Cleburne County, is the epitome of what it means to take care of nature, educate youth, and demonstrate pure dedication and passion in every task. He transformed a 170-acre overgrown wilderness into a sanctuary for animals, an educational site for school field trips, a church bible study destination, and a home for his family.

Owen's remarkable journey with Penny Creek Farm began on his birthday, September 8, 2000, when he and his wife, Libby, signed the papers to become owners. The first thing Owen did was contact a forester to cut and sell his timber, full of poplar trees and green briar, which opened parts of the property that could only be seen on foot. He then built a road to the first small stream, working his way down to a larger creek that connected to another stream.

However, this creek was not an ordinary flowing body of water. It was 'rich' with history . . . and pennies. As the story goes, one cool November morning in 1972, a truck crashed into the creek loaded with more than $50,000 worth of newly-minted pennies in cloth bags, scattering the coins. Naturally, people started calling it Penny Creek. Most of the money was recovered except for about $5,000, and some of the pennies are still being discovered to this day. Owen found 12 of the original pennies deep in the mud and preserved them.

Jerry Paul Owen and his grandson, Alex, relax next to Penny Creek.

Penny Creek was not the only famous creek on his property. A smaller stream called Cold Spring Branch plays an integral part in the history of the property. Known for being 7 degrees colder than Penny Creek year-round, travelers around the late 1800s and early 1900s would gather drinking water in barrels there for their journey ahead.

The two waterways connect, creating the perfect spot to picnic, observe wildlife, and enjoy family time. Owen, his parents, and Libby spent many Sunday afternoons watching daughter Felicia and young grandson Alex play in the creeks. This became the focal point of the property.

"I wanted to take the histories of both Penny Creek and Cold Spring Branch and start our own history here," said Owen.

Owen assembled every structure by hand using his own timber, with the exception of his main house. He started by building a shooting house across Penny Creek. He was not fond of his feet getting cold and wet every time he went hunting, so he came up with this idea of constructing a swinging bridge across the creek. When he explained the idea and process to his father, he looked at Owen like he was crazy!

With the help of an excavator Owen began digging deep. He then installed anchor points, poured concrete, swung cables across with planks attached, and completed a 50-foot bridge. About three years later, a huge flood knocked down a tree, sweeping the bridge half a mile down the creek. He reconstructed a new bridge – above flood level – that still stands today.

One day, Owen decided he wanted to build a cabin nearby. His father responded with, "I would tell you that you're crazy and can't do it, but after that bridge, I believe you can do anything." Selecting several large pine trees, he began cutting them into timber. The beautiful cabin created by Owen's own hands sits suspended on stilts above Cold Spring Branch, with water trickling under the floor of the bedroom.

Although Owen had previous knowledge of land management from working a 75-acre farm with his father and uncles, he soon realized he needed professional guidance. The Alabama Forestry Commission lead Owen down the right path for forest management. In late 2001, the AFC installed fire breaks around the property lines. Two years later, they began site preparation for planting 20 acres of loblolly pines, which are now ready for their first thinning.

Owen's timber is rather diverse, dedicating 35 percent of the property solely to planted loblolly pines for timber, and 15 to 20 percent for a mixture of pines and hardwoods. Wanting more than strictly pines on his land, he took advantage of one of the Forestry Commission's annual Arbor Day tree distributions. Originally acquiring red oaks, white oaks, and sawtooth oaks, he then ventured to Shumard oaks and even planted a persimmon orchard.

An active hunter, Owen understands the importance of continually managing food plots year-round to produce healthy wildlife populations. Originally the plots were a source of food for deer, but later, turkeys started showing up as well. Round-up ready soybeans are grown for the warm season, with the occasional corn rotation. He also maintains many acres of clover fields year-round. "Everybody needs to plant clover for wildlife because turkeys flock to it," Owen commented. In the fall, he plants black oats, red clover, and cold grazer rye he purchases from Arkansas.

After Owen took his grandson, Alex, on his first hunting trip at the farm, he realized that others beyond his family should also experience God's creation. Since then he has enjoyed taking children hunting and teaching them about what the great outdoors has to offer.

Penny Creek hosts a large number of people each year. Photographers from other states come to photograph the land during autumn, teens stand on the swinging bridge for their prom pictures, summer school programs hunt for pennies, and children from Classroom in the Forest appreciate being outdoors. The city of Heflin started an after-school program of 35 students that meet at the farm every other week. Many churches also utilize the property as a focal point for a fish fry or bible study. "My philosophy has always been that my name may be on the deed to this property, but God owns it and has put me here to be a good steward of the land," said Owen.

AFC Work Unit Manager Paul Williams (center) and Cleburne County Forestry Specialist James Barker (right) admiring Owen's impressive soybean field.

One particular annual event hits home for Owen. Every Friday before Father's Day, men in the nearby nursing home visit Penny Creek with their sons and grandsons to go fishing. Afterwards they sit under the pavilion to eat lunch and enjoy each other's company. Owen recalls once when a gentleman

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"My name may be on the deed to this property, but God owns it, and He has put me here to be a good steward of the land"

– Jerry Paul Owen

Penny Creek Farm

A Family Home 'Rich' in History

(Continued from page 5)

looked at him and said, "I never thought I would get to go fishing again." Owen said a rush of pride comes over you when seeing that you have made somebody's day.

"I encourage anyone who has land and timber to get involved with the Alabama TREASURE Forest Association," said Owen. "Even more, I encourage everybody to seek assistance from their local Alabama Forestry Commission office." His other piece of advice to any landowner would be to share their land with others. He explains that he does not ever want Penny Creek Farm to turn into a concrete jungle, and educating youth is the way to prevent that. "One child out of 30 that visits may one day want to buy land of their own to preserve and share," he added.

Why put the effort into the events, trees, food plots, and buildings? Owen says everything is for his children, grandchildren, and every other child that has visited. The rest of the family shares his dedication, beliefs, and values. They look forward to creating their own history on the farm also. "Over the years, seeing what he does, has made me proud to be his grandson," Alex said. "I hope I can continue his vision for Penny Creek."

2019 Regional Forestry Field Days Recap

By Cole Sikes, Alabama Forestry Commission

The 2019 Alabama Natural Resources Council (ANRC) Regional Forestry Field Day season proved to be one of variety, inclusiveness, and progress. The ANRC is comprised of leaders of state and federal government agencies as well as private organizations with an interest in forest resources. The Council collaboratively develops programs and activities that motivate Alabama landowners, leaders, and citizens to be wise stewards of our forests and related sustainable natural resources through the coordinated services and programs available from participating organizations. Successfully serving forest landowners throughout the state since 1971, the Council has always valued educational events such as these forestry field days. This trio of events in the fall of 2019 aimed to make new impacts and cater exactly what subjects landowners wanted to learn more about.

The three events were spread throughout the state in Pickens, Chilton, and Pike counties. Topics of discussion were diverse and ranged from water quality and aquaculture, to recreation and longleaf pine straw production. At each event landowners had the opportunity to see firsthand how they can improve and add to their land, making it a more sustainable and enjoyable piece of Alabama.

The first landowner tour took place in Pike county on October 17 at TREASURE Forest landowner Gene Renfroe's property near Troy. Here, the audience of landowners listened to specialists speak about multi-use recreational pond management, green tree reservoirs, and lessons on bald cypress trees via swamp boardwalk. This boardwalk through the swamp is one of the highlights of Renfroe's property, and he wanted to share this experience with his fellow Alabama landowners.

The ANRC then moved northwest to Chilton County for its second forestry field day on October 22. This tour was unique because of its involvement with the 2019 Alabama Landowners Conference. Every October, landowners and members of the ANRC spend three days at the conference attending educational sessions on various land management topics while also enjoying camaraderie among peers and professionals. In the past, a landowner tour was one of the provided educational sessions. The ANRC wanted to revive this key feature that the conference has not included in a while, so they looked to Chilton County for an opportunity. The attendees of the conference loaded on buses on the second day and headed for their first stop, Sherer Tree Farm. Owner of Sherer Straw Supply, David Sherer, has been running his pine straw business with his father for many years. At the farm just outside of Prattville, they hosted more than 50 landowners and taught them about how they can utilize their pine trees to bale straw using unique equipment. Specialized machinery for collecting and baling fallen straw were demonstrated, inspiring attendees to perform the same practices.

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Top Left: *Jay Haffner and crew demonstrating recreational fishing tools.*
Bottom Left: *Landowners crossing Mr. Renfroe's cypress swamp boardwalk.*
Center: *Andy Baril showing the key identifiers of cogongrass.*
Right: *The Sherer's unique straw baling attachment performs efficiently.*

2019 ANRC Forestry Field Days Recap

(Continued from page 7)

The Chilton County tour concluded with a visit to the Central Alabama Waterfowl Preserve. Jeff Giles and Mike Atcheson have been hosting waterfowl hunters and recreational enthusiasts here for more than a decade. Landowners with an interest in using their property for recreation thoroughly enjoyed hearing about what it takes to run a family operation. This enterprise provided a new take on how to utilize private property while making countless memories.

The 2019 Regional Forestry Field Days concluded on November 7 with a northwestern visit to Pickens County on the property of 2018 Helene Mosley Memorial TREASURE Forest Award recipient Robert Amason, Jr. The agenda for the final event included educational segments on lake management by Jay Haffner of Locklear Sport Fish, invasive species by Andy Baril of Alabama Cooperative Extension System, chronic wasting disease by Chris Cook of the Alabama Department of Conservation and Natural Resources, and forest management by Tim Browning of the Alabama Forestry Commission and Larry Gibson of Gibson Forest Management. Each of these stops along the tour were crafted by input from landowners.

The ANRC prides itself in being able to provide educational opportunities such as landowner tours to all Alabamians. There is truly nothing that can compare to learning in a real nature setting. This environment provides so much more than what can be given on a piece of paper. So I encourage you to get out, contact your local member of the ANRC, keep your eyes peeled on the ANRC Facebook page for upcoming events, and don't miss out on these unique and prosperous outdoor opportunities.

The shelves of Central Alabama Waterfowl Preserve are filled with memories of all who have made the trip to the Chilton County attraction.

ALABAMA LANDOWNERS CONFERENCE 2019 Recap

Natural resources education and awards were at the forefront of the second annual Alabama Landowners Conference October 22-24 in Prattville. More than 200 forest landowners and professionals attended the event, hosted by the Alabama TREASURE Forest Association (ATFA), Alabama Natural Resources Council (ANRC), and Alabama Tree Farm Committee. At right, attendees networked with exhibitors at the trade show.

Helene Mosley Memorial TREASURE Forest Award
Jerry Paul Owen, Cleburne County
with AFC Stewardship Coordinator Darci Debrunner

Helene Mosley Memorial TREASURE Forest Award
Johnny Mack & Martha Morrow, Franklin County
with AFC Stewardship Coordinator Darci Debrunner

W. Kelley Mosley Environmental Award
Stan & Suzanne Wood, Cullman County
with Dr. Mark Smith, AUSFWS

Alabama Outstanding Tree Farmer
Allene & 'Foots' Parnell, Chilton County
with Lamar Dewberry, ATFA

Photos courtesy of Alabama Famers Federation

During the conference, State Rep. Danny Crawford, R-Athens, received the Bill Moody Award for his commitment to multiple-use forest management and helping others understand the benefits forests provide. The Bill Moody Award is ATFA's highest honor, named after former State Forester Bill Moody, who founded the TREASURE Forest certification and died earlier this year. "Knowing Bill Moody and some of the winners since the award started, I have joined a class of people who are passionate about natural resources in Alabama," Crawford said. "I appreciate and am humbled by the selection." The Limestone County TREASURE Forest owner and ATFA board member also chairs the House Agriculture & Forestry Committee. Crawford is pictured with his wife, Mary Kay.

Mobile County educator Joy Herring was honored with the Gary Fortenberry Partnership Award, which recognizes professionals who promote TREASURE Forest at the county level. Herring is the science lab coordinator at McDavid-Jones Elementary School in Citronelle and has led students through Classroom in the Forest for over 20 years. During the last two decades, she and community volunteers turned a former gully bordering the school into a certified TREASURE Forest with 11 learning stations used by the school's 1,000 students. Herring is pictured with husband, Robert.

Photos courtesy of the Alabama Farmers Federation

Tree Farm Inspector of the Year Award
Chris Wright, AFC Forestry Management Specialist
with Lamar Dewberry, Brigetta Giles, & Nick Granger

Alabama Tree Farm Doug Link Leadership Award
Nick Granger, AFC Work Unit Manager
with Lamar Dewberry, ATFA

Outstanding Forestry Planning Committees

Autauga County

Fayette County

Bullock County

What is a STAR I.D. – and Do I Need One?

Republished with permission of the Alabama Law Enforcement Agency

Chances are, you have seen national news stories during the past few weeks concerning something called a REAL ID. Some of you, however, may have no idea what it is and why it's important to learn more, particularly as the federal deadline of October 1, 2020, draws near.

Congress passed the REAL ID Act of 2005 in response to the September 11, 2001, attacks and the ongoing threat of additional terrorist activity, and various immigration issues pertaining to terrorism. The legislation modified U.S. federal law on security, authentication, and issuance procedure standards for state driver licenses and identification cards. When the Department of Homeland Security rolled out its REAL ID plan, Alabama was one of the first states to join the effort and to develop its own version of the REAL ID.In Alabama, it's simply known as STAR ID – Secure, Trusted And Reliable Identification. (If your Alabama driver license or non-driver ID has a gold star in the top corner, you are set! If not, read on.)

What is now the Alabama Law Enforcement Agency introduced its STAR ID program in the fall of 2011 as a step beyond a standard driver license. By 2013, the state was fully compliant with the federal law. Although it is not mandatory in our state, beginning in October the STAR ID will be required of anyone 18 and older to board commercial domestic flights and to enter certain military bases and regulated federal facilities.

If you have a valid, unexpired U.S. passport, you are welcome to use it for domestic flights and to enter federal facilities, but it may be more convenient to obtain a STAR ID than lug around your passport. Come October, those who do not possess a STAR ID or passport could be turned away at TSA unless they have another TSA-accepted form of identification for domestic air travel. (For a full list of acceptable identification, visit https://www.tsa.gov/travel/security-screening/identification)

First issuances of the STAR ID is only available at ALEA-operated driver license examining offices. License commissioners and probate offices will continue to offer renewals/duplicates for licenses, IDs, and STAR IDs. To save time, appointments may be scheduled at some of the larger offices across the state at https://www.schedulealdl.com/SelfScheduler/Default.aspx. State employees who work in the Capitol complex in Montgomery are welcome to visit ALEA's Driver License Reinstatement Office at 301 S. Ripley St., which recently added a STAR ID issuance station. It is open Monday through Friday and offers first-come, first-served assistance. Saturday service also is available at 11 of ALEA's offices. Visit https://www.alea.gov/dps/driver-license/star-id for a list of accepted documents, as well as other details.

Prior to visiting one of ALEA's offices, collect the following documents:

- State certified birth certificate or unexpired U.S. passport
- Social Security card or a document with your name and full Social Security number
- Two documents verifying address of principal residence (voter registration card, vehicle registration, utility bills no older than 90 days, latest tax return, or any state or federal document with address displayed)

Scene from a 100+ acre wildfire along Interstate 85 in Macon County on October 4-5, 2019. Photo by Michael King

return to Cinder

a summary of the 2019 fall wildfire season

By Cole Sikes, Alabama Forestry Commission

As the season turned from summer to fall in 2019, the state of Alabama entered what was an unanticipated and prolonged drought. The dry conditions progressively intensified after receiving the last significant amount of statewide rainfall on August 29. High temperatures and low relative humidity caused fuels on the forest floor to be deprived of moisture, making them especially susceptible to any ember escaping from a burn pile, bonfire, prescribed burn, or any other type of site preparation burn.

This threat became a reality as Alabama Forestry Commission (AFC) crews had their hands full responding to numerous wildfires. More than 6,000 acres of land was scorched statewide just in the month of September. A few of the largest included a 391-acre fire in DeKalb County, a 470-acre fire in Talladega County, and a 589-acre fire in Covington County. Some crews were overwhelmed by the sheer amount of wildfire outbreaks in their regions. To mitigate the occurrence of the blazes, a Fire Danger Advisory was issued by the AFC on September 16 for all 67 counties in Alabama. Only a week later, the advisory was upgraded to a statewide Fire Alert on September 25 because of sustained drought conditions. This alert granted State Forester Rick Oates the discretion to restrict burn permits in areas of the state where dry conditions were most severe. However, the good news was that we did not reach the severity of issuing a 'no burn' restriction. That type of ban on outdoor burning can only be administered after a Drought Emergency is declared by the governor, at the recommendation of the state forester.

As September transitioned to October, there was still no relief from Mother Nature. An additional 248 wildfires had burned more than 2,200 acres before the first sufficient rainfall arrived in nearly two months. On October 22, Oates lifted the Fire Alert for all 67 counties in the state, and the Alabama Forestry Commission resumed issuing burn permits for outdoor burning as needed. By mid-October, AFC wildland firefighters had responded to a total of 719 wildfires covering more than 8,300 acres of land statewide. These statistics included ten large wildfires more than 100 acres in size.

This was the worst wildfire season since the fall of 2016, which was considered a severe wildfire anomaly. For comparison, during the 2016 wildfire season, a total of 2,198 wildfires burned approximately 29,533 acres statewide.

As always, the AFC's wildland firefighters were appreciative of the assistance from all volunteer firefighters who also answered the call across the state. "Local volunteer fire departments are great partners to the Alabama Forestry Commission during times of high fire occurrence, so we want to thank all the VFDs that have worked alongside our agency's wildland firefighters over the fire season," said John Goff, AFC Forest Protection Division Director.

Although wildfire seasons are dangerous and potentially disastrous, they serve as public reminders to always practice responsible forest management and wildfire prevention.

AFC crews battle a 470-acre wildfire in Talladega County in September 2019.

AFC's Partnership with Volunteer Fire Departments

By By Greg Wood, Volunteer Fire Assistance Coordinator, Alabama Forestry Commission

The Alabama Forestry Commission continues to be committed to providing all possible assistance to volunteer fire departments (VFDs) to better provide fire protection for citizens throughout the state. A strong partnership between VFDs and AFC personnel is key to our fire suppression efforts. This assistance includes pursuing funding opportunities available to VFDs, as well as providing training and equipment to these departments.

The 13-member Rural Community Fire Protection (RCFP) Steering Committee typically meets three times each year. This steering committee is comprised of ten volunteer firefighters appointed by the State Forester from ten districts across the state, one member of the Alabama Association of Volunteer Fire Departments (AAVFD), one member of the Alabama Firefighters Association, and one member of the Alabama Association of Fire Chiefs. The purpose of this committee is to make recommendations to the State Forester regarding how to improve the rural community fire program and solve immediate problems including parts exchange, training, and financial assistance through federal grants.

In 2019, the Commission assisted the state's volunteer fire departments by continuing several beneficial programs:

Administered nearly $1.1 in grant money, appropriated by the Alabama Legislature. The checks were issued in July and August 2019 to 976 qualifying volunteer fire departments, in the amount of $1,111 per department.

- Administered $92,117 in wildland fire suppression equipment reimbursement grant funds to 26 VFDs throughout Alabama.
- Educational opportunities provided to VFDs throughout Alabama included conducting ten 40-hour Wildland Firefighter Certification Training sessions to 157 volunteer firefighters, and one chainsaw safety class to ten volunteer firefighters.
- Provided and maintained county-wide communication systems for volunteer fire departments in 38 of Alabama's 67 counties.
- Maintained a list of volunteer fire department members who are eligible for 'Firefighter' license plates for their personal vehicles and made this list available to all vehicle-licensing agencies throughout Alabama as mandated by state law.
- To strengthen relationships, AFC personnel continue to be closely associated with and supportive of VFDs throughout Alabama at the local level. Some examples of these relationships include Commission associates being active members of volunteer fire departments, as well as serving as officers in both VFDs and local or statewide volunteer fire associations. Agency employees also serve as a point of contact for sharing information between the Commission and local volunteer fire service, as well as being actively involved in joint efforts with volunteer fire departments to conduct wildfire prevention and suppression programs.

Federal Excess Personal Property (FEPP) Program

By David Davis, FEPP Manager, Alabama Forestry Commission

The Alabama Forestry Commission (AFC) obtains property from various military installations through the Firefighter Property Program (FPP), one of the Department of Defense's special programs. This property is then transferred to volunteer fire departments (VFDs) within the state and AFC county offices to be used for fire suppression. For a VFD to obtain FFP equipment, they must work with AFC county personnel and the Rural Community Fire Protection coordinator to establish priority. Once property becomes available, the fire department must sign an agreement stating the equipment will be maintained and used for fire suppression. After one year of service, the ownership of the property is passed onto the volunteer fire department.

Over a five-year period, 2014-2018, the AFC acquired equipment totaling more than $32.6 million. During this time, a total of 274 transports/tankers, brush trucks and pumper engines were screened, acquired, and transferred to either AFC county offices or VFDs. Additionally, 13 dozers, three mobile command posts, 30 all-terrain and utility vehicles, and approximately 200 other pieces of equipment were acquired and put into service with AFC. The Firefighter Property Program is important because it helps to offset firefighting suppression equipment costs for both the agency and the state's volunteer fire departments.

Before

After

Members of Hanceville, Garden City, and Johnson's Crossing fire departments after they extinguish a fire last November at the 410-million-square-foot Louisiana Pacific plant in Hanceville, Alabama. *Photo courtesy of Kenneth Nail*

Alabama's Rural Communities Experiencing Critical Shortage in Volunteer Firefighters

Part one of a series

By Coleen Vansant, Public Information Manager, Alabama Forestry Commission

They respond to structure fires and wildfires, cut us out of mangled vehicles, and respond when we are experiencing medical issues at home or work. They clear trees from roads after storms and hurricanes, and they are the ones that conduct search and rescue efforts to save our lives or retrieve our loved ones from various disasters.

Rural cities, towns, and communities in Alabama are dependent on the many services provided by the 991 volunteer fire departments across the state. Services that we expect to be provided, but oftentimes take for granted. For many in Alabama, those services are in jeopardy, as they are for millions of Americans across the nation.

Nationally, 70 percent of communities are served by a volunteer fire service. In Alabama, this number increases to approximately 85 percent, or roughly 4,155,000 of the state's 4,888,000 million residents receive their fire, critical and disaster response, and Emergency Medical Services (EMS) from a volunteer fire department.

According to a 2019 National Fire Protection Association (NFPA) report released in the spring of last year, in 2017 there were 682,600 firefighters (volunteer and paid combined) serving across the nation. This is down significantly from 814,850 reported in 2015, and 729,000 in 2016. Of the 132,250 decline, approximately 83,550 (63 percent) were volunteers representing towns and communities with populations of under 2,500 residents. The 2016-2017 numbers represent the lowest decline since the NFPA began keeping records in 1983. This decline in a critical and lifesaving resource directly impacts the rural heartbeat of America where funding, manpower, and resources are limited.

Alabama's Small Towns and Rural Communities are Suffering

To give an Alabama perspective to the problem, I visited with Hanceville Mayor Kenneth Nail regarding the issues a small city faced with the firefighter shortage. Located in southeast Cullman County, Hanceville fits the NFPA report data nicely. It has a population of around 3,000 and is served by a volunteer fire department. Although Hanceville has four full-time paid firefighters (including the chief and assistant chief) they fluctuate between 10-15 volunteers to complete their staff.

Although Hanceville is a small town in the number of people, its actual fire coverage area encompasses around 36 square miles

of rural Cullman County. The volunteer fire department is also the primary response unit in the protection of the large Louisiana Pacific (LP) oriented strand board (OSB) plant at Hanceville, as well as Alabama's third largest junior college, Wallace State Community College, which has several multiple-story buildings, including one with 12 stories.

"Last year we responded to 1,301 calls with one paid man per 24-hour shift," Nail explained. He added that sometimes, especially during the daytime when fewer volunteers are available to respond, "everybody" fights fire, including policemen, the public works department, and the mayor. (Mayor Nail was a member of the Hanceville Fire Department for over 20 years as a firefighter and EMT, following in the footsteps of his father who served 44 years with the department.)

Having enough trained firefighters to do the job is one of the major problems facing rural fire service. Nail noted that in November of last year, there was a major fire at the 410-million-square-foot Louisiana Pacific plant. Although LP has an inhouse fire brigade, the fire was too big for them to handle, so the Hanceville, Garden City, and Johnson's Crossing fire departments had to be dispatched. Even though the fire occurred on a Saturday afternoon, only around 20 firefighters total were available to respond from the three departments.

"This is a critical problem, not only for the City of Hanceville and all fire departments in Cullman County, but it's also a problem across the State of Alabama and the entire nation," Nail stressed.

Nail has led the rallying cry for volunteer fire departments for the past few years. On the evening of October 29 of last year, the City of Hanceville hosted a meeting to discuss the issues with District 11 State Representative Randall Shedd and District 4 Senator Garlan Gudger. Invited to the meeting were fire chiefs from the Cullman County Association of Volunteer Fire Departments and a representative from the Alabama Forestry Commission. Several fire chiefs from the DeKalb County Association of Volunteer Fire Departments also attended.

According to Rep. Shedd, who in previous years served as the Chairman of the Cullman County Commission, "The public needs to understand just how serious this problem is."

Shedd, long-time advocate for Alabama's rural fire service, added that the shortage of firefighters has a direct impact on every rural Alabamian. "There are two major impacts this shortage has on Alabama citizens. One is a department's response time in arriving to emergency situations," he explained. "The second is, if we start losing departments, it's going to have a direct and severe impact on the insurance premiums of rural home and business owners."

He said that the Alabama Legislature is aware of the ongoing and growing problem facing Alabama's rural fire service. "There has been a lot of discussion about the problem, and we are looking for answers and trying to find ways to give much needed assistance to our volunteer departments," Shedd assured.

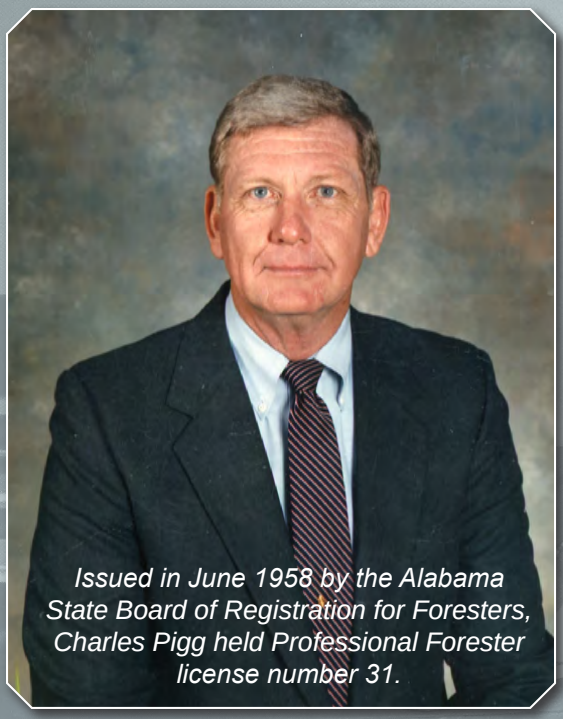
With an ever increasing population putting more and more demands on the rural fire service of our nation and our state, it is imperative that actions be taken now to ensure that this critical and lifesaving resource in rural areas are maintained and nurtured to protect the lives and property of rural America.

See the Spring issue of *Alabama's TREASURED Forests* magazine for more on the rural volunteer firefighter crisis in our state.

Number of Firefighters in the U.S. by Year

Year	Total	Career	Volunteer
1983*	1,111,200	226,000	884,600
1990	1,025,650	253,000	772,650
2000	1,064,150	286,000	777,350
2010	1,103,300	335,150	768,150
2015	1,149,300	345,600	814,850
2016	1,090,100	361,100	729,000
2017	1,056,200	373,600	682,600

***Note:** this is the first year for which firefighter numbers are available from the NFPA.*
***Source:** NFPA Survey of Fire Departments for U.S. Fire Experience*



Issued in June 1958 by the Alabama State Board of Registration for Foresters, Charles Pigg held Professional Forester license number 31.

Col. Charles Arnold Pigg

1932-2019

By Coleen Vansant, Public Information Manager, Alabama Forestry Commission

His career with the Alabama Forestry Commission (AFC) spanned 37 years. In that time Charles Pigg made a tremendous impact on forestry in Alabama, the Alabama Forestry Commission as an agency, and the lives of those who were fortunate enough to have worked for him.

In 1956, Mr. Pigg came to work with the Division of Forestry, which at that time was under the Alabama Department of Conservation. While there he served as Management Forester, Assistant District Forester, Assistant Management Chief, Training Officer, and Chief of Fire Control. In 1969, the Division of Forestry was separated from the Department of Conservation, and a new state agency was created: the Alabama Forestry Commission. In 1971, he became Assistant State Forester, the position in which he served until his retirement in 1993.

"When the AFC was formed out of the Department of Conservation, there were two folks [Moody & Pigg] that made the new Commission work. Charlie was the backbone of the organization. Without his strength and leadership, the AFC would have failed. WE were a World Class state forestry organization, known nationwide as a leader in state forestry. Charlie was mentor, leader, boss, disciplinarian." – Jim Hyland, AFC retired

Mr. Pigg received his degree in forestry from Auburn University. He served in the United States Army from 1954 to 1956. On discharge from active duty, he joined the Tennessee National Guard before transferring to the Alabama National Guard. During his service with the guard, he was associated with Alabama Military Academy (AMA) as Administrative Officer, Training Officer, Instructor, and Commandant. He retired from the Alabama National Guard in 1979 as a Colonel.

It's not difficult to understand how his association with the Alabama Military Academy bled over into the Alabama Forestry Commission. Although the concept of the Alabama Forestry Academy was the brainchild of former State Forester the late C. W. "Bill" Moody, Mr. Pigg was responsible for the structure and organization of the forestry version.

Mr. Pigg's military background, combined with that of the AFC Training Officer at the time, Doug Smith, resulted in the Alabama Forestry Academy being developed with a military flavor.

"Training was important to Mr. Moody. He initiated the concept and told Mr. Pigg to implement it . . . the method, style, and philosophy of the training came from Mr. Pigg . . . all strings behind the curtain were pulled by Mr. Pigg. I think in the balance that his leadership in this area helped lead the AFC to be the best state forestry organization in the nation. He held us to high standards and most of us responded." – Doug Smith, AFC retired

Pride in our appearance was one of the biggest things. Shoes were to be polished; shirts had to be ironed and all flaps buttoned; nametags had to be straight; hair neat and combed; and trucks, transports, and dozers washed. The appearance standards didn't end with the academy, you carried them with you when

you left and began work with the Commission in the counties, districts, and state office. According to one retired employee, "To this day, I check my shirt pockets to make sure they are buttoned."

"He was tough, but he was fair! He had the ability to supervise toughly, yet you felt he was a friend you could talk to. I always felt like he had my back! He will be missed but has left a legacy with the AFC." – Bart Williams, AFC retired

Very seldom do two people of the AFC family, who had the honor of working for him (either retired or still active), get together that they don't have a Charlie Pigg story. One of the things he was noted for was his disappearance during meetings. Anytime there was a meeting, Mr. Pigg would disappear for a while. If you looked out the window, you would see him walking between all of the vehicles in the parking lot, making mental notes and writing down tag numbers of the ones that were not clean enough for his standards, or who had left fire tools in the bed of the truck with sharp-side pointing up.

Then there is the #2 yellow pencil story out of the old Forestdale office. Although it was around 40 years ago (at least one person that witnessed it is still working for the AFC,) it still gets laughs today. Upon one of Mr. Pigg's visits to what was at that time the District 2 headquarters, he observed one of the foresters with a #2 yellow pencil sticking out of his shirt pocket. Not at all impressed, Mr. Pigg asked him if the Alabama Forestry Commission didn't pay him enough to afford a nice pen and pencil set. That forester (or anyone else) was never seen again with a #2 yellow pencil in his shirt pocket.

Surprise visits to field offices were one of his things. He would show up out of the blue to a county or district office. Usually someone would see his car drive up and yell, "IT'S MR. PIGG!" There would be a flurry of paper shuffling, cramming things in a closet, and wiping the surface of your desk with your hand or shirt sleeve, and everyone hoped that he didn't walk into their office first. He held us to the same standards in the appearance of our offices and workspaces that he did to our physical and vehicle appearance. One former employee described Mr. Pigg in this way: "He could chew your butt out and make you feel good about it. Not too many supervisors can pull that off."

"He was always fair, but you never doubted for a moment that his disapproval or wrath was something you did not want to face. I was fortunate to have his support on several issues, and that was almost like having an army on my side. I respected him as much as anyone in the AFC!" – Anita Benton, AFC retired

Aside from the 'tough love' Mr. Pigg gave employees through the academy and holding them to the highest standards in appearance and professionalism, he blazed the trail in many other areas of forestry and fire protection. He was an advocate of multiple-use and environmentally sound forestry practices. Providing a positive role model for many young foresters, he was a staunch advocate for professionalism in forestry.

Following disastrous wildfire losses in 1963, he was persistent in helping to secure a state Emergency Wildfire and Forest Pest Protection Fund. At the time, in a paper to the Alabama Academy of Sciences he wrote, "A cushion of emergency funds to obtain temporarily needed manpower and equipment is a must…" A version of that fund still exists today.

Mr. Pigg also initiated Alabama's Rural Community Fire Protection Program in the mid 1960s, writing the first agreements that allowed communities to acquire federal excess equipment for conversion to fire suppression units through the Division of Forestry and later the Alabama Forestry Commission. The availability of this equipment resulted in many communities organizing volunteer fire departments.

Because of Mr. Pigg's knowledge of aircraft through the military (he was both a fixed-wing and helicopter pilot), he became an advocate for the use of aircraft in carrying out the work of the AFC. Instrumental in obtaining federal excess aircraft, he himself flew many hours in evaluating the aircraft and determining how they could be used by the Commission. Through his military experience, he helped obtain two 2,000-gallon aerial water buckets which were utilized in wildfire suppression, in cooperation with the National Guard and their heavy-lift helicopters.

"My greatest moment working with the Alabama Forestry Commission occurred at my Alabama Forestry Academy graduation ceremony in October of 1988. As I walked across the stage to receive my award for the class Academic Scholar, he shook my hand, gave me a big grin and said, "I am so proud of you!" Nothing in almost 34 years of service has come close to that moment." – Coleen Vansant, AFC

In 1994, a year after his retirement, Mr. Pigg was inducted into the Alabama Foresters Hall of Fame. Retired State Forester C. W. Moody read his induction testimony. An excerpt of that testimony follows: "So long as the forests of Alabama remain and continue to contribute to the environmental and economic well-being of our State, let this honor bestowed on Charles A. Pigg today, including this testimony, serve as a reminder of his many contributions to our great State, so that all citizens may remember, and be properly grateful, that he chose to become a Professional Forester and to serve his career with the State's Forestry Agency in service to the people of Alabama."

Assistant State Forester Charles Pigg receives his service pin from State Forester Bill Moody.

Some Things Never Change... or do they?

By Brad Lang, Work Unit Manager, Alabama Forestry Commission

As I flip through the latest Forestry Suppliers sales catalog, I always notice one thing: forestry tools haven't changed. For the most part, a compass is a compass, cruising vests are cruising vests, and prisms and d-tapes are still the same. When I was in forestry school, I always envisioned a day in 20 years that I would put on goggles and look at a tree, and the goggles would tell me if it was an 'in' or 'out' tree. Then I would look up the tree, and the goggles would give me the height of the tree. Well, its 20 years later and simply put – it's still the same 'beat the bushes' profession. So, I thought I would spend some of your time talking about some old things and some new things you need to know about the world of forestry.

The Old

Some things never change . . . an old saying that we have all used. Usually the phrase refers to someone, perhaps a political figure, or maybe our favorite sports team. In this article, we're applying the term to responsible forestry practices. As a landowner and timber manager, there are a few basics you need to cover when it comes to managing your land. While these ideas may seem elementary, there may be a few people who do not know about them.

Always get your property surveyed and have your landlines marked. This is the first practice you will find in the Stewardship plan provided by the Alabama Forestry Commission. Yes, a survey costs money, but try to get it done as soon as possible. When it comes to protecting your boundaries, this is the only way. Maybe following a thinning or regeneration harvest, spend that time to establish permanent lines.

Create a management plan. The Alabama Forestry Commission offers programs to landowners that promote forest stewardship through the TREASURE Forest and national Stewardship programs. We will develop a basic 10-year plan to carry you in the right direction to accomplish your forest management goals. In addition to a establishing a foundation, this plan will give you more knowledge about your property. Once this step is completed, we will assist you in hiring a consultant to write a long-term management plan which is more extensive, giving you current and projected future volumes and values of your timber. Consultants do charge for this service, but it's worth every penny.

Install firebreaks. Always a staple. Have firebreaks installed around your property boundaries not only to protect your stand in case a fire breaks out on neighboring property, but also to protect your neighbors in case you allow a fire to escape. Firebreaks can certainly give you a fighting chance against wildfire rather than not having any protection. Installation of firebreaks can be accomplished in two ways: 1) a bulldozer using a blade or the traditional fire plow, if equipped, or 2) a dozer using a heavy-duty wildland fire disk attachment. Firebreak installation is one of the professionally contracted services offered by the AFC. If firebreaks are already installed, maintain them with a farm disk and herbicide treatment.

The New

So, what has changed? Or maybe evolved? Twenty years after walking out the doors of Mississippi State University, a few 21st century tools have emerged to help foresters and landowners. The biggest evolution has been in the field of Geographic Information Systems (GIS). This is basically a fancy term for 'mapping.' You can now go online and download Google Earth Pro for free, giving you the basic ability to create a map with delineations and determine acres or area. Computer-based platforms such as ArcGIS and Caliper market software products named ArcMap and Maptitude, which provide abilities far beyond what a forester would need. ArcMap is the leader in this arena of GIS programs, offering a ton of features to help you

manage property, either on a small or large scale. These programs can be linked to smartphones as well.

Did I Just Say Smartphones?

Yes, I did. The world has evolved tremendously since smartphones have been in use. Smartphones have come a long way as well. Your smartphone or tablet can be used as a handheld device to help you manage your stand in the field, and also access forestry information. Here are samples of some apps:

- ***Service Forester's Toolkit (Free)*** – A quick reference for basic forest and land measurements, tree measurements, volume tables, site index charts, and more.
- ***TreeBook (Free)*** – Guide to 100 common trees in North America providing ways to identify a tree with images and other methods.
- ***Plot Hound*** – Easy-to-use timber-cruising app.
- ***Leafsnap (Free)*** – Take a picture of a leaf and this app will start you in the right direction to identify a tree.
- ***OnX Hunt ($)*** – Provides aerial mapping with land ownerships and information provided by tax records.
- ***Planimeter ($)*** – Measures land distances and areas using the phone's location or manually drawing.
- ***Google Earth (Free)*** – Aerial map viewing and basic drawing tools.
- ***Coordinates (Free)*** - This app allows you to determine the latitude and longitude of your location and will convert it to all the formats offered today. The most common forestry format is decimal degrees (DD.DD). Most navigation and surveying data are formatted in degrees minutes seconds (DMS) or degrees minutes (DDMM).
- ***Soil Type (Free)*** – Will help you identify soil.

These are just a few tools from a quick search. I have used these apps but am not endorsing them. There are several more that can be helpful, ranging from no charge to several dollars. Several free apps offer what is called 'in-app' purchases to tailor what you need to accomplish.

Drones

Unmanned aerial systems – commonly referred to as 'drones' – are the latest technological innovation to change our world. Now you can get real-time, crisp aerial imagery of your property.

AFC Work Unit Manager Brad Lang prepares drone for flight.

This new feature is great for property documentation and stand planning. The perspective you can obtain from an aerial view with today's professional drones is amazing. Drone imagery can be processed and made into a large map, along with a digital file to upload on a GIS platform or free software such as Google Earth. This service is offered by the AFC and other private entities. Drones are affordable these days, but you must be careful and make sure to follow the rules. All drones are governed by the Federal Aviation Administration (FAA) and pilots must receive Part 107 Certification to conduct certain flights.

GPS

Global Positioning Systems (GPS) have become extremely accurate. A good GPS enabled with Wide Area Augmentation System (WAAS) capabilities can be as accurate as three feet. Using these devices, you can map stands, property, and navigational waypoints. So much of today's land guidance is now using latitude and longitude rather than the old 'Section, Township, and Range' legal description. For example, to obtain a burn permit from the AFC you must now provide a Lat/Long of the stand.

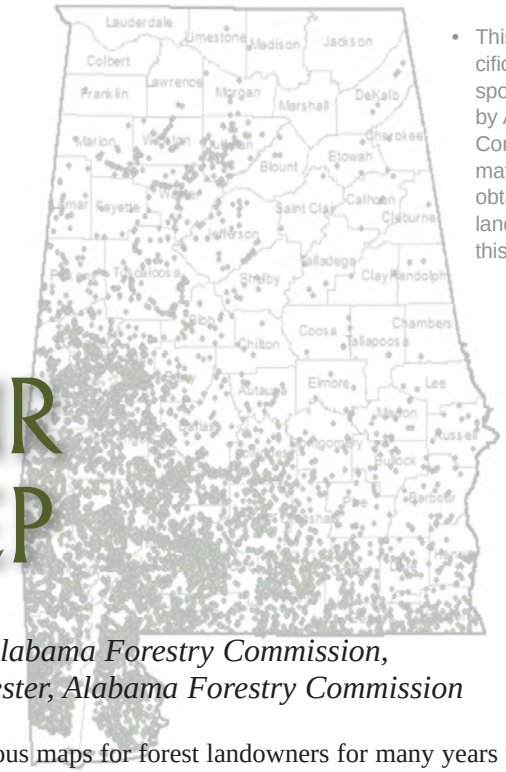
The World Wide Web

The internet has opened the door to a wealth of information at your fingertips, whether in your own home or on the go with your smartphone/tablet. Websites now provide ways to help you manage your property. Here are a couple sites to visit:

- ***www.Forestry.Alabama.Gov*** – The AFC website will assist you with all kinds of forestry information. There are fact sheets on every forestry practice and program to help educate you on forest and wildfire management. Here, you can also find local vendors (service providers) to accomplish work.
- ***Web Soil Survey*** – A USDA website now provides a computer program to search an area of interest (AOI) and give you the specific information about soils. No more having to look in the old black and white Soil Survey books at your local AFC/NRCS office. All management activities on a stand should begin with this knowledge in hand. Surveys will tell you site index, trees to plant, erodibility, and soil characteristics.
- ***MyLandPlan.org*** – Offered by the American Forest Foundation, this site provides a checklist and template for you to draw up your very own management plan. Something is better than nothing. After signing up, you can make a map, set goals, keep a journal, and network with other landowners.
- ***Other agency resources*** – Alabama Department of Conservation & Natural Resources, USDA Natural Resources Conservation Service, and Bugwood.com, are among just a few of the several sites to help you gather information.

Although not much has changed in the forestry world, there have been new innovations. Don't be discouraged or intimidated by today's technology. There is a wealth of tools and people out there to assist you with ideas and help you get started in the right direction. So, some things never change, but some things have improved the way we do things.

Bringing Maps to Your Doorstep



- This map identifies the specific location of cogongrass spots in the state recorded by Alabama Forestry Commission staff. This information is very useful in obtaining funding to assist landowners in controlling this invasive plant.

By Abi Dhakal, GIS Specialist, Alabama Forestry Commission,
& Bruce Springer, Assistant State Forester, Alabama Forestry Commission

The Alabama Forestry Commission has been producing various maps for forest landowners for many years using a Geographic Information System (GIS) software program, purchased in 2004. As a desktop GIS mapping system, this program has served its purpose very well, producing tens of thousands of stand maps for Stand Management Recommendations (SMRs) and Forest Stewardship Plans, which the agency provides to landowners. It has also been used for producing many other specialized maps, such as southern pine beetle (SPB) aerial detection spot maps and forest industry maps.

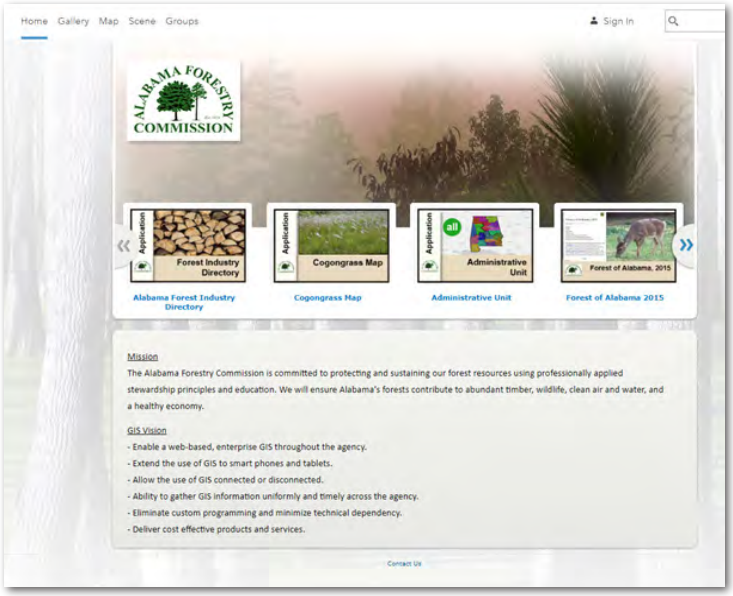
However, over the last few years, the agency has been transitioning to a new ArcGIS mapping system because the software manufacturer has greatly expanded their software applications to an online GIS presence. We are excited about this new capability which allows the agency to share maps with others, including the general public. Now we can provide valuable data, which we hope you will find informative and beneficial in the management of your forests.

The ArcGIS mapping platform will assist decision makers, land managers, and stakeholders in meeting strategic management goals successfully by providing near real-time geographic information regarding Alabama's forest resources. This data should prove particularly useful when trying to maximize economic output from timber production, despite the growing environmental and economic pressures on natural resources.

To reach the new public access site, using your web browser, type in the following URL address:

gis.forestry.alabama.gov/portal/home

The following screen should appear for you to select a map to open. You do not have to 'sign in' to open these maps.



Once you open a map, there are several icon widgets available to you. The (+) and (-) icons Zoom in and out.

The Home icon returns the map to its default extent/original scale and position.

The My Location icon displays your location on the map.

The Legend Widget displays a legend for the visible layers in the map. By clicking this you can determine what information is being displayed on the screen and what it represents.

The Layer List Widget displays a list of operational layers in the map. You can turn layers on and off by simply checking or unchecking the box next to the layer name.

Online Map Icon Directory

The forest industry directory map is primarily used by buyers in the wood product marketplace and by forest managers wishing to sell timber products. Composed of both primary and secondary manufacturers, this directory benefits stakeholders by providing the ability to query various kinds of information. Therefore, the value of the directory is derived from connecting wood-based clients with the industry sector.

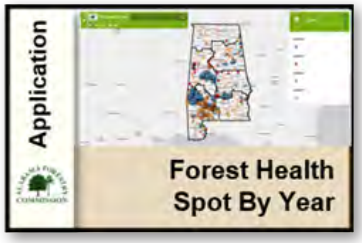
This is a map of new and expanding forest industry announcements that have occurred within our state. The data for this application is generated from the Alabama Department of Commerce Annual New and Expanding Industry Reports. The outcome of successful economic development strategies in rural Alabama, these announcements illustrate the growth and pattern of forest-based industries in Alabama.

This 'dashboard' provides a real-time summary of current wildfires and burned acres in the state. It also shows total fire count for the fiscal year, and the total and average acres impacted. Furthermore, it illustrates the different causes of the fires as well as the various entities reporting them. For the purpose of resource allocation and forest fire management, identifying fire occurrences by county is crucial to the decision makers at the Alabama Forestry Commission.

This on-line mapping application was created by the Southern Group of State Foresters to help reduce the risk of wildfires across the southern states. It primarily provides geographic wildfire risk information to create public awareness and aid communities in identifying areas most prone to wildfires. It also arms local, state, and federal planners with tools to support wildfire prevention and mitigation efforts.

Public Land Survey System (PLSS) is a method of subdividing land in the United States, which forms the basis for most land transfers and ownership today. A typical 6-mile-square township is subdivided into 36 one-mile-square sections, and these sections can be further divided into quarter sections and quarter-quarter sections. This map application references township, range, and section in identifying areas of interest.

Cogongrass, an invasive species, is growing and spreading rapidly in the Southeast United States, and Alabama is no exception. Mapping and taking measures to control and eradicate cogongrass infestation is critical to restoring Alabama's land. This map application displays the occurrence of the pest plant as recorded by the Alabama Forestry Commission, enabling invasive species program managers to effectively use local, state, and federal aid to coordinate strategies for successful cogongrass management.



Sound forest health is of immense concern to the Alabama Forestry Commission. While most of the forests in Alabama are healthy and productive, there are years and seasons when infestations from forest pests become a major concern. By fiscal year, this map displays forest spots infested by bugs such as southern pine beetle, IPS beetle, laurel wilt disease, and sawfly. The AFC implements aerial reconnaissance flights to identify troubled spots, then alerts landowners of the problems and provides prescriptions for control and eradication.

Coastal Alabama Watershed Enhancement Project:

Promoting Healthy Family Forests and Green Infrastructure through Landowner Assistance and Education

By William H. Brantley, Jr., Forest Management Director, Alabama Forestry Commission

On November 6, Governor Ivey announced funding for projects supported by funds from the Gulf of Mexico Energy Security Act of 2006 (GOMESA). The GOMESA provides for the four Gulf oil and gas-producing states and their eligible coastal political subdivisions to share 37.5 percent of qualified revenues from Outer Continental Shelf oil and gas leases issued since December 20, 2006. The Alabama Forestry Commission (AFC) applied for and received GOMESA funding from the Alabama Department of Conservation and Natural Resources for a project focusing on maintaining and improving forested watersheds and associated water quality in coastal Alabama.

The AFC serves the state by protecting and sustaining forest resources using professionally applied stewardship principles and education. We also ensure Alabama's forests contribute to abundant timber and wildlife, clean air and water, and a healthy economy. The two coastal counties – Mobile and Baldwin – are comprised of more than 1.8 million acres of land. Of that acreage, more than 1.2 million is forested and much of that – approximately 75 percent – is held in private ownership. Maintaining the forested components of coastal watersheds is important to the overall health of the watershed and to the health of the waters that flow through them into the Gulf of Mexico. The logic model for this program rests on the fact that a healthy Gulf of Mexico stems from healthy estuaries, and healthy estuaries depend on healthy watersheds. Healthy watersheds are dependent on healthy forests, which are dependent on engaged landowners. As such, providing coastal landowners with knowledge, tools, and services to maintain and improve their forests helps protect the watersheds in the two coastal counties.

With the funding received through the GOMESA, we will be able to enhance our agency's efforts and services to forest landowners and coastal communities in Mobile and Baldwin counties. This project will be accomplished through a variety of efforts that support water quality improvements through forested watershed protection. Specifically, this new coastal program will undertake three primary activities: Forest Landowner Support, Landowner Education, and Technical Assistance to Local Communities. Though not entirely comprehensive of all the activities associated with this project, these three program areas are discussed in more detail below.

Forest Landowner Support

Forest Landowner Support will be provided through agency programs that promote sustainable healthy working forests that protect water quality in coastal watersheds. The AFC will accomplish this goal through a variety of services and activities for private landowners including:

- ***Preparing Forest Stewardship Plans*** that provide a roadmap for landowners to more effectively engage in managing their forests. Proper forest stewardship results in healthier, more productive forests and helps the landowner meet their desired objectives.
- ***Assisting Landowners in Achieving Forest Certification*** by recognizing landowners for their land stewardship efforts through various agency and third-party programs including Stewardship Forest, Tree Farm, and TREASURE Forest. These programs serve to recognize the positive, accom-

plishment driven forest stewardship activities undertaken by landowners to improve their forests. Not only do these programs provide the landowner a sense of satisfaction and pride in their hard work, they also serve as a positive example for other landowners to emulate. Additionally, a certified forest is a recognition of a well-managed forest that yields multiple-use landowner benefits including timber, wildlife habitat, clean air, clean water, and recreation. The public also benefits from many of the services that flow from these well-managed forests.

- ***Compliance with Alabama's Best Management Practices for Forestry*** are voluntary guidelines intended to help Alabama's forestry community maintain and protect the water quality of the state during silvicultural operations. The AFC administers this program in a three-pronged approach by: resolving BMP complaints, providing logger education to ensure BMP compliance during silvicultural operations, and monitoring of logging operations. Because of these efforts, Alabama generally enjoys a high rate of compliance with forestry BMPs. In FY 2019, the overall BMP compliance rate across the state was 98.2 percent.
- ***Identifying and Controlling Nonnative Invasive Species*** is a direct landowner service that the AFC will provide as a management tool to improve forest conditions and habitats on private forest land. It will be available as a cost-share program with landowner sign-ups occurring in 2020.

Forest Landowner Education

Forest Landowner Education is a primary mission of the AFC and an important tool to engage and energize forest landowners in implementing forest stewardship activities on their land. Through this program, the AFC will provide agency access and information to landowners in a variety of ways including:

- ***Targeted Meetings*** will serve to introduce the landowner to AFC programs and services, educate forest landowners on stewardship practices, and provide new connections between landowners and the AFC in order to improve coastal forests. The primary goal coming from these meetings will be to encourage landowners to utilize professional forestry assistance in managing their land.
- ***Landowner Tours*** generally consist of various land management educational stations on a local forest landowner's property – usually one that is certified as a TREASURE Forest. Stations typically include information on forest management practices, wildlife enhancement practices, and other interesting opportunities to utilize land such as pond management and development of pollinator habitat. These tours are very effective at highlighting successful forest management practices that other invited landowner participants can utilize on their own properties. Many of these tours are hosted in partnership with local forestry planning committees or county chapters of the Alabama TREASURE Forest Association.

Mobile Bay Watershed, by Mobile Bay National Estuary Program

Technical Assistance

Technical Assistance to Local Communities encouraging the use of trees in the city landscape will be provided by the AFC in several ways including:

- ***Education for Municipal Leaders*** consists of presentations on the benefits of trees to the city landscape and their important role as green infrastructure in managing stormwater peak flows, reducing flooding impacts, and improving water quality.
- ***Technical Assistance to Municipalities*** encompasses development of public tree management plans and full participation in Arbor Day Foundation's Tree City USA recognition programs. In addition, the AFC will encourage citizens to participate in Wildland Urban Interface (WUI) programs which will help minimize the risk of wildfire where forest lands are converted to urban uses.

The Alabama Forestry Commission is currently making efforts to staff positions that will contribute significantly to this new program and are also purchasing equipment to aid in landowner support activities. The agency is also preparing for landowner meetings in 2020 to formally kick this program off in coastal Alabama. We anticipate much success with this program and look forward to highlighting the contributions of forests to water quality and the overall health of coastal watersheds. For more information about this program or questions regarding this program please contact the Forest Management Division at (334)240-9334.

CHINESE TALLOWTREE: a persistent pest

By Benji Elmore, Southwest Regional Forester, Alabama Forestry Commission, with contributions from John Gunn, Private Landowner/Forester, Sumter Timber Co.

To many unsuspecting people, Chinese tallowtree (*Triadica sebifera*) may be desirable as an ornamental in their yards, much the same as a dogwood or red maple. However, in reality it is fast becoming one of the worst enemies of our native hardwood forests since its first introduction in the 1900s. Its characteristics make it one of the most aggressive invasive species in the southeastern United States. Also known as popcorn tree, it is a native to Asia. It is a deciduous tree that can reach 60 feet, has broadly ovate leaves, brilliant red fall foliage, with 3-lobed green to black seeds that split in the fall resembling popcorn (figure 1). It is a preferred tree by bee-keepers due to the high quality of honey produced from bees gathering pollen from flowering tallowtrees between April and June.

I spent some time with registered forester John Gunn on his property which lies in the floodplain of the Tombigbee River in Clarke County. He has expressed much concern and frustration on his embattled plight as he refuses to allow his property to become a monoculture of tallowtrees. It has literally become a daily battle during late summer as he sprays herbicides to keep his prized native species from being invaded and overcome.

So what makes tallowtree such an awful species and should we be concerned? As with most non-native species that are listed as invasive, they adapt well to ecosystems found in the U.S., and they initially grow and reproduce aggressively, usually faster than native species, with little to no predators. The wood is not suitable for lumber. Seed can be spread by birds or by floodwaters and can remain viable for years. Every time the river rises above its banks, it deposits another supply of seeds throughout the landscape. Tallowtrees that are three years of age produce seed, unlike most native hardwood species that bear seed around 15 years of age. Since it grows and reproduces so aggressively, it will overtake and suppress young native oak seedlings and other desirable species if left unchecked. For these reasons, a clearcut within the floodplain of the river system could possibly result in a monoculture of tallowtrees (figure 2)!

If we in the forestry community continue to ignore this encroaching intruder lurking in our woodlands, then our children and grandchildren may no longer be able to enjoy the same native species occupying the present landscape.

Landowners with property located in river floodplains usually harvest hardwood timber at some point, either by thinning an existing stand or clearcutting. When sunlight hits the ground, a multitude of seeds germinate, native and non-native. If there are any parent tallowtrees in the area, they will drop seed which are free to germinate. Also, since tallowtree seeds float, tallowtrees located upriver generate seeds which are carried downstream and are deposited throughout the floodplain as floodwaters recede.

(Opposite) Figure 1: Tallowtree seed

(Right) Figure 2: Tallowtree monoculture

Those seeds will also germinate. After a harvesting operation, as native hardwood species begin their life alongside tallowtree seedlings, it is imperative that the natives grow faster than the competing tallowtrees. If not, they're doomed. Also, don't forget that when the 'intruders' reach three years of age, they begin dropping seeds, thus compounding the problem. More tallowtree seedlings are then free to grow.

John's objectives are to control the intruders by herbicide application, thus giving native oaks a chance at survival. For a foliar application (figure 3), he applies a mixture of 2% glyphosate and 0.75% triclopyr by volume, or 3 oz. glyphosate and 1 oz. triclopyr per gallon of water. Be sure to add surfactant and wet all the leaves. If all leaves are not sprayed, regrowth can occur. This must be applied as a directed spray, between July 15 and dormancy, on the target trees less than 6 feet in height, taking care to avoid any spray drift on non-target species.

Another method on larger trees that are several inches in diameter is a basal bark treatment, or even a hack and squirt method. For that application, John uses 20% triclopyr by volume in oil. He also uses this mixture for cut stump treatment, but he says to be sure to apply within 15 minutes of severing the stem. Always be sure to follow label directions. (A link to more herbicide information is provided at the end of this article.)

Tallowtree also grows well in upland settings where several species of pine exist. However, the deep alluvial soils found in river floodplains provide a fertile environment for these intruders to flourish.

Prescribed burning is a tool that is used in the management of pine stands, although burning has not been shown to control populations of tallowtree. Burning can top-kill small saplings but the vigorous root systems will resprout. Thicker bark on older tallowtrees tends to insulate it from the effects of fire.

Another disadvantage of tallowtree infestation is the fact that there is little predation on the foliage at this time. We have seen virtually no browsing on the foliage by insects or wildlife, unlike native plants. However, research is underway that is investigating a beetle species that feeds only on tallowtree. For more information on biological control, go to **https://bugwoodcloud.org/CDN/seeppc/alipc/2019/Biocontrol_Chinese_tallowtree_air_potato-Diaz.pdf**

To view John Gunn's presentation at an Alabama Invasive Plant Council (ALIPC) meeting, visit: **https://bugwoodcloud.org/CDN/seeppc/alipc/2019/Chinese_Tallowtree-A_Landowner's_Perspective-Gunn.pdf**

For more information on Chinese tallowtree, visit Alabama Forestry Commission's website: **www.forestry.alabama.gov/Pages/Informational/Invasive/Tallowtree.aspx**

Figure 3: Landowner John Gunn applying a foliar herbicide application to a population of Chinese tallowtree

Black Bears

an Alabama native making a comeback?

By Hannah Leeper, Senior Author and Dr. Todd D. Steury, Associate Professor, Wildlife Ecology School of Forestry & Wildlife Sciences, Auburn University

Historically, black bears were native throughout the entire state of Alabama. However, like many large mammal species, black bears were nearly extirpated from the state due to over-harvest and the loss of suitable habitat. The only black bears that remained in Alabama consisted of a small population around the Mobile River Basin. This remnant Mobile River Basin population still persists today, though it exhibits some of the lowest genetic diversity of any black bear population in the southeastern U.S. Genetic diversity is important for helping populations overcome disease or changes to the environment. This low genetic diversity is likely due to small population size and isolation from other bear populations in the southeastern U.S.

More recently, a second population of black bears has arrived in Alabama. The North Alabama population of black bears was started by individuals dispersing from the North Georgia black bear population. Several bears traveled across the state line, and now the North Alabama population seems to be self-sustaining. The population is newly recolonized and has likely only existed for a couple of generations.

From 2011 through 2015, researchers from Auburn University conducted a state-wide survey for bears in order to estimate the number of black bears in each population. The researchers constructed several hundred 'hair snares' around the state; small, fence-like rings of barbed-wire a couple of feet in diameter, and a couple of feet above the ground, with a bait inside the ring. When a bear tried to enter the barbed-wire ring to get the bait, some of its hair would get caught on the barbs. Using genetic analysis of the follicles from hair collected in the study, researchers were able to identify individual black bears. Advanced statistical analyses were then used to determine an estimate of the number of black bears in each population. The results indicated that both black bear populations in Alabama are small; the Mobile River Basin population was estimated at only about 86 bears – with maybe as many as 165 bears – and the North Alabama population was estimated at 34 bears.

Since that study, researchers have noticed different patterns between the two populations. The Mobile River Basin population seems to be stagnant; while female bears are having cubs, few of those cubs seem to make it to adulthood. Furthermore, few black bears appear to travel between the Mobile River Basin population and neighboring black bear populations, especially the closest one in the Florida panhandle. Conversely, the North Alabama population appears to be blossoming; apparently bears in that population are having larger litters and cubs from those litters have better survival. Thus, the northern population seems to be increasing in number and spreading geographically. In order to monitor these two populations and understand more about what's driving these differences, Auburn University is currently conducting research that seeks to estimate cub survival and understand juvenile dispersal. Researchers involved with the project believe that differences in cub survival between the two populations are caused by differences in available denning habitat. Due to the absence of a rocky landscape, and few large, hollowed-out

(Opposite) Two bear cubs in a den from the Mobile River Basin population.

Photo by Chris Seals

trees, dens in the Mobile River Basin are likely sub-optimal, with many bears simply denning in thick brush with more exposure to the elements and predators. By comparison, in north Alabama there are rocky crevices, steep slopes with openings, and tree cavities where bears might potentially den. Increased protection from weather and predation in these types of dens might be allowing cubs in north Alabama to have a better chance of survival. Cubs are extremely susceptible to mortality during their first weeks of life.

In order to monitor cub survival and determine the cause of any cub mortality, researchers must first capture an adult female bear in a trap. Trapping efforts for females are conducted during the summer when bears are more active and more likely to enter the trap in pursuit of a bait. Once captured, the bear is anesthetized and fitted with a GPS-enabled collar. The collars remotely transmit GPS locations via satellite, and a cluster of locations will appear around the den site once the weather gets colder and bears stop moving as much. Researchers can then visit the den site, locate any new-born cubs, and fit the cubs with their own tracking collars. The cub collars expand as the cubs grow and eventually fall off at about 9 months of age. The collars are also motion-sensitive, giving off a special signal if the collar doesn't move for a while, so that the researchers can investigate if a cub has died. Knowing the cause of cub mortality is important for understanding what – if anything – can be done to help the Mobile River Basin population grow.

Mama bear and two cubs from the north population inside a hair snare.

Another goal of the current research is to better understand the dispersal of juvenile bears, especially males. When young males are 1.5 to 2.5 years old, their mother encourages them to leave her home range, the consistent area in the environment where she spends most of her time. Young male bears then wander around trying to find an area in which to establish their own home range. To determine where these dispersing young males go, researchers plan to capture young males before they disperse and fit them with their own GPS-enabled collars. Researchers expect to find that young bears dispersing from the North Alabama population will travel in a southwesterly or northeasterly direction, following the main topographic ridgelines that cross Alabama. However, because of the rather aimless tendencies of dispersing young male bears, sightings are occasionally reported throughout the state. Generally, sightings outside of the ranges of the two known black bear populations in the Mobile River Basin and North Alabama are transient males looking for a new home range or a mate.

Because black bear numbers are still relatively low, bears are listed as a Species of Highest Conservation Concern in Alabama, which means it is illegal to shoot a bear in the state. If bear populations continue to grow, the potential for a hunting season might be considered. In the meantime, as bear numbers increase and spread geographically, Alabama residents and visitors need to be "Bear Aware" and learn about what they can do to prevent bears from becoming nuisances. Bears have a very keen sense of smell, so the best way to avoid conflict is to eliminate things bears are attracted to around houses, particularly food. Black bears are "opportunistic omnivores," much like raccoons. Things like trash cans, grills, pet food, bird feeders, deer feeders, and bee hives are easy targets. Once a bear learns of a food source, the bear can remember that food source for years, so it's best to proactively eliminate anything that might attract a bear. Keeping in mind that bears are native to Alabama will encourage humans and bears to live together harmoniously.

An adult black bear eating water parsnip.

Spring of 2020 will be the first chance for researchers to learn about denning behaviors and cub survival in Alabama, including what types of dens are used, and if bears in Alabama even hibernate at all. The research that is currently being conducted is part of a 5-year project with Auburn University and the Alabama Department of Conservation and Natural Resources. Findings from this study will inform researchers and managers about current black bear population trends, and how those trends are expected to change in the future.

Photo by Michelle Bowman, Bugwood.org

PERCHED CULVERTS

A ROADBLOCK ON THE AQUATIC HIGHWAY

By Terry Ezzell, Northwest Regional Forester, Alabama Forestry Commission

Alabama is home to many aquatic animals. Within the state's boundaries you can find more than 400 freshwater fish species, more than 80 species of crayfishes, and a multitude of other invertebrates. The sheer volume of fresh water in the state occupies many areas in different geological settings, making these aquatic animals very diverse. In most all studies, Alabama is the highest-ranking state in the nation for aquatic biodiversity.

To protect these species and keep Alabama waters clean, conscientious land managers employ Best Management Practices (BMPs). Most of these practices are aimed at keeping pollutants, including sediment, out of the water. Several years ago, the term 'perched culverts' started being used to identify the problem of a culvert with a downstream outlet that is higher than the natural streambed. This situation can impede the travel of aquatic organisms upstream. For years a land manager's main concern with using a culvert in a stream crossing was to keep the water flowing freely and minimize erosion at the crossing. Not many realized that having the downstream end of the culvert higher than the streambed could cause harm to the animals occupying that stream. This type situation can not only impede the travel of aquatic animals, but also have a negative effect on spawning and feeding opportunities.

There are many resources available to land managers on proper culvert installation but be wary of some that do not properly address the issue of perched culverts. *Alabama's Best Management Practices for Forestry* (BMP) manual is an excellent resource. This publication is available at all Alabama Forestry Commission offices or electronically on the agency website at www.forestry.alabama.gov/Pages/Management/BMP_Measures.aspx

Over time, erosion can 'scour' the streambed below the downstream end of a culvert and create a washout. This can lead to a perched culvert situation and will require maintenance. Usually placing some fill material of proper size can remedy this issue.

Land managers may want to consider utilizing a bridge for a permanent stream crossing. This can be more expensive, but it eliminates many issues associated with culverts.

Installing a culvert is not something most people do with regularity. Consideration and planning for different issues other than sedimentation in the stream can provide easy passage for all inhabitants.

- **Use a culvert of sufficient size for the drainage area.**
- **One large culvert is better than multiple small ones.**
- **Culverts should extend one foot on each side of the fill area.**
- **Utilize a 2-3% downstream grade.**
- **Place the culvert on the stream bottom; do not dig below natural streambed.**
- **Stabilize the fill area on both the upstream and downstream side of the culvert.**

Trees & Stormwater Mitigation:

An Auburn Case Study

By Dale Dickens, Urban Forestry Coordinator, Alabama Forestry Commission

For regular readers of *Alabama's TREASURED Forests*, it is well known that the trees within our forests in Alabama help keep our streams and drinking water clean. That the trees within our cities and communities are also helping to improve water quality is less well known. They do this by intercepting rainfall, slowing its impact, and then absorbing gallons of water through the soil. The stormwater surge following heavy rain events is reduced, which mitigates the 'flushing' effect that would have resulted in many pollutants entering the state's waterways untreated.

In 2016, USDA Forest Service's Landscape Scale Restoration (LaSR) grant funds were awarded to the Alabama Forestry Commission (AFC) and five other states (Georgia, Florida, North Carolina, South Carolina, and Virginia) to study the role trees play in limiting polluted water from running directly into streams following heavy rains. Auburn, Alabama was selected as one of twelve cities across the southeastern U.S. to participate in the study. This article describes this study completed in 2019, which quantifies and recommends actions to sustain and increase the benefits trees give for stormwater management within the urban and community forests.

The project, entitled Trees to Offset Stormwater, Case Study 11: City of Auburn, Alabama, focused on Auburn's tree canopy and how the trees take up, store, and release water. Trees are considered the best natural way to reduce the polluting effects of heavy rains on our streams and waterways. This study was designed to assist Auburn in evaluating the role that trees play in stormwater management and show how the city can benefit from tree conservation and replanting. It also evaluated ways for the city to improve urban and community forest management as the city grows.

"During an average high-volume rainfall event in Auburn (a 10-year storm), over 24 hours the city's trees take up an average of 297.5 million gallons of water."
– Trees to Offset Stormwater, Case Study 11: City of Auburn, Alabama

The staff at Green Infrastructure Center (GIC), the technical services contractor for the project, began the project by meeting with a Technical Review Committee comprised of key stakeholders with an interest and expertise in tree canopy and stormwater mitigation. Participants included city departments, Auburn University, and the Alabama Forestry Commission. This meeting was followed by two community engagement sessions where thoughts and concerns of people living in Auburn could be heard and incorporated into the study design. Based on these meetings, and after months of analysis, Auburn received detailed maps of their tree canopy, estimates of the quantified benefits provided by their urban forest for stormwater mitigation and water quality, and potential locations for future tree planting to extend these benefits. In addition, the study team reviewed Auburn's existing ordinances and practices, offering refinements for the city's consideration. The primary products delivered to the City of Auburn as part of the grant project are described in more detail below.

(Continued on page 30)

Trees & Stormwater Mitigation: An Auburn Case Study

(Continued from page 29)

Detailed Tree Coverage Maps

The city's canopy coverage is estimated to be 55.4 percent, which is very good, but the coverage is not uniformly distributed across the city. The collected high-level aerial photography, satellite imagery, and 'Light Detection and Ranging' (LiDAR) data were used to prepare detailed map layers that may be used in the city's Geographic Information System (GIS). From these layers, not only can the city arborist make maps of potential planting spots for individual trees, locate larger spaces for groups of trees, and estimate effects from the loss of existing trees, but can also determine the optimal tree planting locations to maximize stormwater infiltration. The analysis also generated the location and ranking of streets based on the amount of tree cover. Now, constrained planting resources may be committed to streets with the least shade.

GIC members reviewing detailed tree coverage maps.

Stormwater Calculator

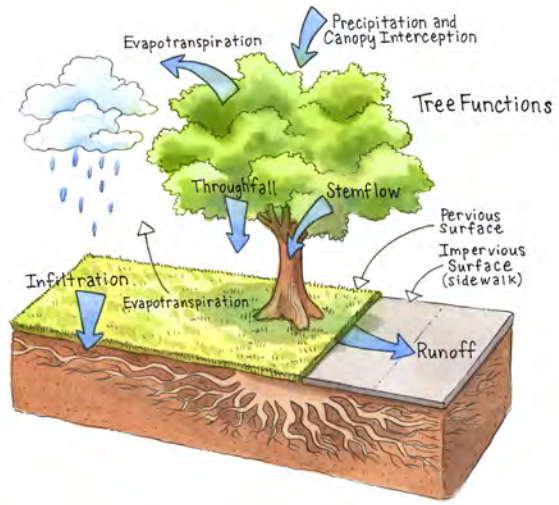
GIC provided Auburn with a spreadsheet tool that calculates runoff from storm events. It is based on commonly used storm runoff equations that may be customized by the city engineer to match soil and other characteristics unique to the city. This allows the city to test increasing or reducing tree canopy to see how various model scenarios affect stormwater runoff estimates. This information allows city managers to explain tree-related decisions to Auburn citizens, using objective measures with a sound scientific basis. In this way, management decisions and development planning can be aimed at sustaining tree canopy coverage, which will help minimize harmful stormwater effects.

Ordinances and Practices Review

"Adapting codes, ordinances, and municipality practices to use trees and other native vegetation for enhanced stormwater management will allow Auburn to treat stormwater more effectively." – Case Study 11: City of Auburn, Alabama

Auburn's city codes and policies were evaluated according to their predicted effects on tree canopy condition and extent. Interviews with city staff were also conducted to determine common practices that might influence water runoff or infiltration rates. All data were then entered and rated in a spreadsheet which indicated the items' tendency to make the city land either more or less likely to slow water movement into streams. From the hundreds of influencing items, a list of 18 recommendations to improve tree canopy care and coverage were listed and delivered to Auburn for their discussion, adoption, or rejection. The first two recommendations were:

1. Inventory all hardwood trees 18" DBH [diameter at breast height] or greater, pines 24" or greater, and understory species 8" or greater;
2. Allow a minimum soil volume for tree plantings (600, 1,000, and 1,500 cubic feet for small, medium, and large trees respectively).



Requiring tree protection mechanisms on both publicly- and privately-owned properties during construction and initiating a tree risk assessment program were also included in the other 16 recommendations.

In conclusion, the City of Auburn now has detailed maps of their tree canopy, a method for quantifying benefits provided by these trees, and potential locations for future tree planting to improve water quality. These resources will prove invaluable as Auburn moves forward with their Green Infrastructure Master Plan.

Case studies for Auburn and the other eleven cities, the stormwater calculator, and information on the ordinance suggestions may be downloaded from GIC's website at: http://www.gicinc.org/trees_stormwater.htm.

Planting and maintaining healthy trees on the lands where we live, work, and play is a proven way to improve our water quality. Plant a tree this winter and be part of the solution.

This study was funded by a competitive grant awarded to the Alabama Forestry Commission, but the ultimate success was the result of hard work by and collaboration with many City of Auburn departments, Auburn University representatives, and other agencies. These included City of Auburn Engineering Services, Engineering Division; Information Technology; Parks and Recreation; Planning; and Water Resource Management, Watershed Division. Other partners were Auburn University's Crop, Soil, and Environmental Sciences Department; the Office of Sustainability; and the School of Forestry & Wildlife Sciences. Special thanks are owed to Mr. Dan Ballard for leading the project through the City of Auburn at a particularly hectic time with multiple master plans in production.

MEMORIAL

John C. Brister, Jr.
1932-2018

John C. Brister, Jr. passed away at his home in Demopolis, Alabama, on November 13, 2018. From an early age, he knew that he wanted to be a forester. After graduating with a degree in forestry from Louisiana State University, he went to work at Gulf States, which was later known as Westervelt. He lived his dream, retiring with a forestry career that spanned more than 35 years. Mr. Brister is survived by his wife of 62 years, two sons, six grandchildren, and seven great-grandchildren.

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Who is the Alabama Natural Resources Council?

Approximately 70 percent of Alabama is covered with forests. In addition to providing clean air, water, and recreational opportunities, Alabama forests provide the raw material for a $20 billion dollar forest products industry. Combined with the $3 billion annual impact of forest-associated outdoor recreation, it's easy to see why forests and wildlife are considered essential components of Alabama's economic and social landscape.

Members of the ANRC **(listed below)** are leaders of state and federal government agencies as well as private organizations with an interest in forest resources. The Council collaboratively develops programs and activities that motivate Alabama landowners, leaders, and citizens to be wise stewards of our forests and related sustainable natural resources through the coordinated services and programs available from participating organizations. The Council has successfully served forest landowners throughout the state since 1971 and currently focuses on several key activities.

To learn about upcoming events in your area, follow the Alabama Natural Resources Council on Facebook!

- Alabama Agricultural Experiment Station, Auburn University
- Alabama Cooperative Extension System
- Alabama Dept. of Conservation and Natural Resources, Wildlife & Freshwater Fisheries Division
- Alabama Department of Education, Agribusiness Education
- Alabama Division, Society of American Foresters
- Alabama Farmers Federation
- Alabama Forest Resources Center
- Alabama Forestry Association
- Alabama Forestry Commission
- Alabama Soil and Water Conservation Committee
- Alabama TREASURE Forest Associatiaon
- Alabama Wildlife Federation
- Association of Consulting Foresters, Inc., Alabama Chapter
- College of Agriculture, Auburn University
- School of Forestry and Wildlife Sciences, Auburn University
- USDA Farm Service Agency
- USDA Forest Service, National Forests in Alabama
- USDA Forest Service, State and Private Forestry
- USDA Natural Resources Conservation Service
- USDA Rural Development

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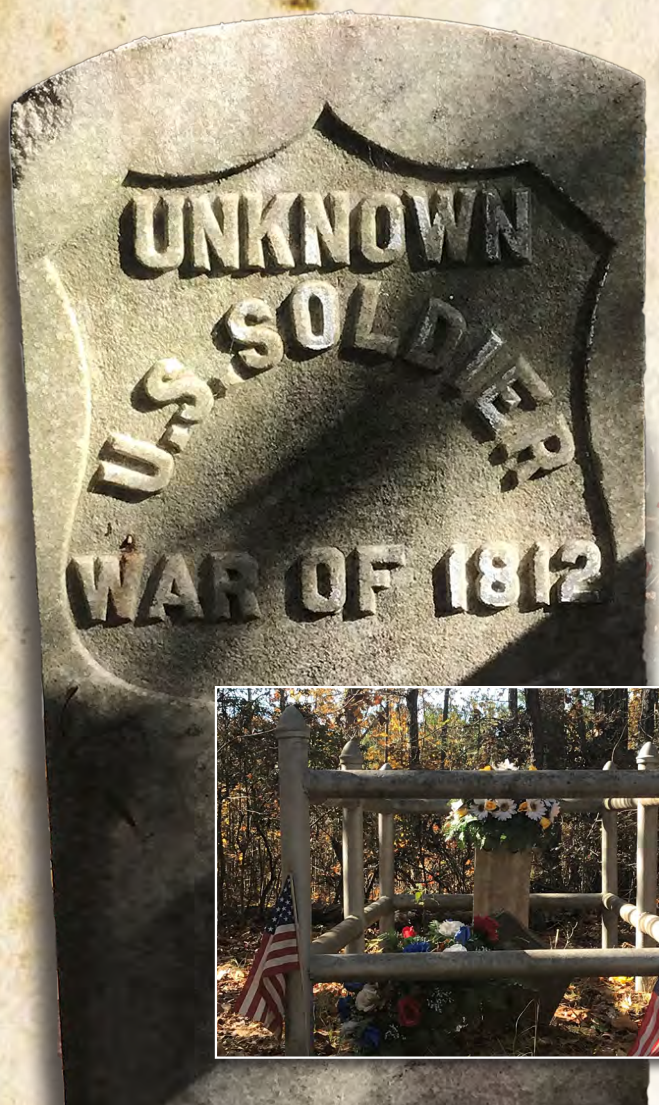

By Joel Bartlett, Marion County Forestry Specialist, Alabama Forestry Commission

On a lonely stretch of gravel road two miles south of Pikeville in Marion County lies the final resting place of one of General Andrew Jackson's soldiers from the War of 1812. Little is known about the identity of the soldier. Many stories have been passed down from generation to generation relating that two soldiers along with two servants are also buried there, but the lone tombstone maker reads UNKNOWN U.S. SOLDIER WAR OF 1812.

As local history goes, General Jackson and his soldiers were commissioned by Congress between 1810 and 1812 to build a road now known as the 'Military Road' from Nashville, Tennessee to New Orleans, Louisiana. General Jackson returned victorious from New Orleans on the Military Road. It is not certain if the death of the soldier occurred on the march down to New Orleans, or on the return march after the defeat of the British.

Improved with federal funds in 1816, the Military Road was a major route for much of the 19th Century because it was the only crossing for 50 miles north or south of present-day Hamilton, Alabama. You can visit this grave located at Lat 34.01949, Long -87.96380 or Unknown Soldier Road, Hamilton, Alabama 35570.