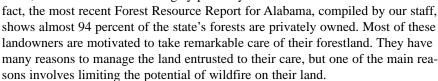


Message from the STATE FORESTER

s we watch the catastrophic wildfires on the West Coast, it is heartbreaking to see the total devastation; the loss of lives and property is tragic. I pray that we never face that kind of destruction in Alabama's forests . . . that is one reason I am proud of our efforts to protect the forests in this state from wildfires and other disasters.

Numerous fatalities have occurred, several million acres of land have burned, and countless people have been evacuated due to the recent fires from California to Washington. We must ask, what's the difference in Alabama's forests and those found on the West Coast? What factors create the 'mega-fires' we see out there? Why don't they happen here?

The answer is obvious; two things — land ownership patterns and active forest management. As you all know, Alabama's forests are largely privately owned. In



The best tool we have is active forest management which includes prescribed burning. Many groups in the state are working to promote prescribed fire in our forests: the Alabama Prescribed Fire Council, the Alabama Forestry Foundation, the Alabama TREASURE Forest Association, and of course, the Alabama Forestry Commission. The work they perform collectively amounts to almost one million acres of controlled burns each year in Alabama. That's a great start, but it's estimated that almost four million acres need to be burned annually in the state. So, we have a long way to go.

Last March, Governor Ivey acknowledged the value of this tool when she issued a proclamation recognizing the right of forest landowners to conduct prescribed burns on their land and the importance of fire to protect our forests and the habitats they provide. See the proclamation below.



As we enter what we know as the 'Fall fire season' in Alabama, I ask you to take extra precautions to prevent a wildfire. There are a couple of valuable articles in this magazine about practical things you can do as a homeowner or community member to limit the wildfire risk to your home. If you live in a rural area, please take a good look around your home and neighborhood in light of the advice in these articles.

Check the space around your home and make sure it is 'defensible.' This will give your house a much better chance of being protected, even if our firefighters can't get to a wildfire right away. We do our best to protect lives and property from wildfires, but if you take a little extra time and effort, your home will stand a much better chance of not becoming a tragic statistic.

Take care and stay safe this Fall!



Rick Oates.

State Forester

Governor Kay Ivey

ALABAMA FORESTRY COMMISSION
Robert N. Turner, Chairman
Joseph Twardy, Vice Chair
Katrenia Kier
Chris Langley
Jane T. Russell
Robert P. Sharp
Dr. Bill Sudduth

State Forester Rick Oates

Assistant State Forester William H. Brantley, Jr.

PROTECTION DIVISION DIRECTOR
John Goff

	REGIONAL FORESTERS
Northwest	Terry Ezzell
Northeast	Jason Dockery
Southeast	Andy Guy
Southwest	Benji Elmore

EDITOR Elishia Ballentine

LAYOUT & DESIGN Cole Sikes

EDITORIAL BOARD
Joel Bartlett
William H. Brantley Jr.
Billy Carlisle
Benji Elmore
Terry Ezzell
John Goff
William Green
Matthew McCollough
Juan Merriweather
Rick Oates
Coleen Vansant



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 Timber, Recreation, Environment, and Aesthetics for a Sustained Usable REsource.



A Publication of the Alabama Forestry Commission

- 2 Message from the State Forester
- 7 New TREASURE Forest Certifications
- 8 Battling Feral Swine by Leif Stephens
- **15** Hemlock Woolly Adelgid (HWA) Confirmed in Alabama by Dale Dickens, Dana Stone, and Katie Wiswall
- 23 Don't Tread on Me by Ray Metzler
- **24** Partners in Conservation by Karl Byrd
- 29 Make Your Home FIRESAFE by Creating 'Defensible Space' Around It by Coleen Vansant
- **32** FIREWISE USA: Residents Reducing Wildfire Risks by Coleen Vansant



On the Cover:
Autumn in Desoto State
Park in DeKalb County.
Photo by Ben Darby

Since 1982, this premiere publication of the Alabama Forestry Commission has been provided at no charge to the forest landowners of Alabama. Current circulation is approximately 14,000. Published quarterly, 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











table of **CONTENTS**

Vol. XXXIX, No. 4 Fall 2020



4

Happy Acres Farm: Where Family Traditions Continue by Benji Elmore



4 11

Alabama's Best Management Practices (BMPs) and their Positive Influence on Wildlife Habitat by Carey Potter



▲16

One Man's Trash . . . Another Man's TREASURE by Cole Sikes



■ 19

Forest Products: MADE IN ALABAMA by Gary Faulkner & Dan Chappell



◄26

Davis Arboretum: A Forest on The Plains by Cole Sikes

Alabama's TREASURED Forests (ISSN 0894-9654) is published by the Alabama Forestry Commission, 513 Madison Avenue, Montgomery, Alabama. Telephone (334) 315-8019.

For address changes/new subscriptions, email: tfmag@forestry.alabama.gov

Bulk rate postage paid at Montgomery, Alabama.

POSTMASTER: Send address changes to: *Alabama's TREASURED Forests*,
P.O. Box 302550, Montgomery, AL 36130-2550.

The publication of a story or article in this magazine does not constitute the Alabama Forestry Commission's endorsement of that particular practice, product, or company, but is an effort to provide forest landowners of Alabama with information and technical assistance to make informed decisions about the management practices they apply to their land.

The Alabama Forestry Commission is an equal opportunity employer and provider.

© 2020 Alabama Forestry Commission



By Benji Elmore, Southwest Regional Forester, Alabama Forestry Commission

Editor's Note: The Lee family's "Happy Acres Farm" was first featured in the Spring 1993 issue of *Alabama's TREASURED Forests* magazine. Benji Elmore is a cousin to the Lee family and has spent years on the farm enjoying their fellowship and hunting.

estled in the west-central Alabama countryside of Pickens County is a community known as Union Chapel. It's about halfway between Aliceville and Carrollton. Most everyone in the community is related. The Lee and Carson families settled in this area over a century ago, thus the beginnings of the George Lofton Lee farm and home place, built in 1922. For the past 69 years, the annual Lee/Carson Family Reunion has taken place at the Union Chapel Community Center, drawing approximately 100 relatives from as far away as California at times.

Horace Lee grew up on the family farm but moved to Mobile to take a job. That's where he met his future wife, Faye. During World War II, he was drafted into the US Army, marrying Faye only 13 days before reporting for duty. While serving in Germany, Horace was wounded in combat. Awarded the Purple Heart, he was sent home to recover and was reunited with his bride. He later enrolled in Alabama Polytechnic Institute (now Auburn University), earning a mechanical engineering degree in 1951.

The couple eventually settled back on the homestead where he had grown up, and he served as the Pickens County engineer. In 1955, Horace and Faye built a new home on the property for their family of four children, only a few hundred yards from the house in which he was raised. On their farm, they raised cattle, horses, chickens, food, hay, and, of course, trees. Horace began

serious development of his forestland when he received a written forest management plan from the Alabama Forestry Commission in 1964. He became very active in managing the timber resource, as well as maximizing the multiple-use concept. Wildlife was a secondary management objective. As a result of his good stewardship, the Lees' "Happy Acres Farm" was certified as a TREASURE Forest in 1980. They were then honored by winning the Helene Mosley Memorial TREASURE Forest Award in 1981.

During the 1960s and on through the 1980s, the Lees kept approximately 200 beef cattle at times on the 317-acre farm. Along with taking care of that many cattle, the family kept up a continuous prescribed burning rotation in the pine stands. Permanent firebreaks and frequent burns kept fire intensities to desired levels, minimizing escape risks. Any harvesting needed was promptly addressed on schedule and stands were monitored for insect and disease outbreaks. Beautiful hardwood stands were excluded from fire and carefully maintained, with a substantial fox squirrel population calling the area home. In fact, the forest and fields of the farm provided excellent habitat for several species of wildlife.

Meanwhile, all four children – Nelda, Lyndall, Horace Jr., and Roger – earned degrees from Auburn University and have been successful in their careers. However, they've never forgotten their roots. Instilled in the Lee children was a strong faith in God, as well as an appreciation for the land that supported them.

Unfortunately, Horace Sr. and Faye passed away in 2004 and 2007, but the family traditions live on. Although scattered from St. Louis to Atlanta to Wetumpka, the siblings still return home each June to attend the Lee/Carson Reunion (postponed this year due to the pandemic). During Auburn home football games,

you're likely to find them 'on the Plains' cheering for their alma mater. Some of the grandchildren have followed their parents' lead by attending Auburn. They also lovingly care for the land that their parents passed down to them by regularly returning home throughout the year to complete various projects on the property.

The original home place built in 1922 by George Lofton Lee was restored by the Lees in the early 1990s, and it continues to demonstrate pride in the family heritage. That home had replaced a log cabin which had previously served as the Dillburg Post Office in the early 1900s but was destroyed by fire. A quarter mile deeper into the woods is yet another family home site. All that remains today is an active well which sits under a few majestic oaks overlooking one of the hay pastures. The family cleaned up the site, building a roof over the casing and adding a picnic table. You won't find better tasting water anywhere!

The Lee siblings and their children remain active in managing and nurturing the family farm, although the main crops now are trees and hay. The Lees' Happy Acres Farm has been re-inspected and recertified as a TREASURE Forest several times over the past few decades. The property continues to be managed for multiple uses including income from timber; enhancing wildlife habitat to benefit deer, turkey, and quail; but most of all for preserving the family heritage. The ancestral home place is still a gathering point for the entire family on holidays and throughout the year when work is needed on the property.

Accomplishments noted through the years include a prescribed burning program in pine stands, bush hogging and maintaining access roads, performing salvage cuts due to bark beetle infestations, building a pond, performing a regeneration cut to remove over-mature timber, site preparation and planting pine seedlings, as well as cleaning up storm damage. Currently, it was necessary to temporarily suspend the burn program while the young stand of pines matured. A local farmer utilizes the pastures for hay. Two other cousins who live nearby, Mike Noland and Glen Johnson, enjoy hunting the land and annually plant food plots for deer and turkey. Although the pond doesn't hold water continuously, the low area provides lush vegetation for wildlife.

Plans for future forest management include thinning the young pine plantation, restarting the burn program, performing another regeneration cut on an unproductive area, and replanting in longleaf pine.

Another nearby homestead that needs mentioning is the Olin and Berry Lee family, one half mile to the south. They are yet another branch of the Lee family tree, descendants of Lacy Lee, brother to George Lofton Lee. They've been a close family

(Continued on page 6)



HAPPY ACRES FARM

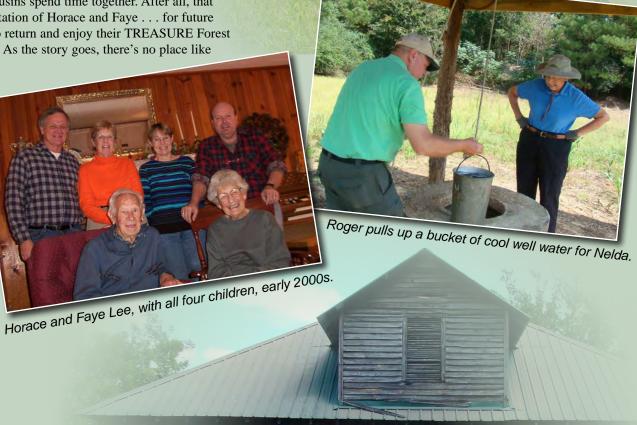
Where Family Traditions Continue

(Continued from page 5)

through the years as well, and their four children – Floyd, Connie, Glenn, and Ricky – also come home to Union Chapel to help their parents with the farm. Glenn lives next to his parents and assists them on their property.

I have been blessed tremendously by all these families in this community as I've grown up with my Lee cousins. Countless days were spent enjoying each other's company, hunting, and, of course, great food! In addition to the people mentioned thus far, there are still more cousins living nearby 'through the woods,' all of them collectively making Union Chapel a truly remarkable community.

All three of these family traditions – caring for the family farm, the Lee/Carson Reunion, and Auburn football – continue to bring the family closer as the Lee children, grandchildren, great grandchildren, and cousins spend time together. After all, that was always the expectation of Horace and Faye . . . for future generations of Lees to return and enjoy their TREASURE Forest at Happy Acres Farm. As the story goes, there's no place like home.



Nelda and Roger on the front steps of the George Lofton Lee homestead, built in 1922, restored by the family in 1995.



New TREASURE Forest Certifications

Landowner	County	Acres
Allen Brooks	Tuscaloosa	200
Richards Dean	Coosa	105
Spencer Hardy	Coosa	60
McMillan Brothers, LLC	Mobile	1125.7
Quail Creek Golf Resort	Morgan	645
Rodney Sizemore	Lamar	50
Scott Tyra	Marion	40
Myron Williams	Henry	123
	Total	2,348.7

reated in 1974 by members of the Alabama Natural Resources Council, TREASURE Forest designation is earned by private forest landowners who affirm the principles of multiple-use forest management. It is this forest landowner recognition program that inspired the national Forest Stewardship Program which began in 1991. TREASURE is an acronym for Timber, Recreation, Environment, and Aesthetics for a Sustained Usable REsource.

Congratulations to these landowners who recently earned their TREASURE Forest certifications! Alabama currently has 1,837 landowners with a total of 1,726,642 certified acres being managed under the AFC's TREASURE Forest Program.





Battling Feral Swine

By Leif Stephens, Assistant State Director, USDA Animal & Plant Health Inspection Service (APHIS)/Wildlife Services

or some people, the thought of hidden treasures and untouched landscapes awakens both the motivation to explore and the determination for prosperity. Embracing such aspirations often leads to defining moments etched in history such as the Klondike gold rush or the Oklahoma land rush. Exploration can lead to landscape evolution; such was the case with the Spanish conquistadors and their search for gold. A vital component of any adventure is sustenance, and domesticated swine often provided such nourishment. Swine are considered a highly adaptable species and, if not contained, can potentially thrive on foreign lands. This adaptability, coupled with high fecundity rates, often transforms this species into an invasive pest. Original establishment of swine populations (once domestic, now feral) occurred during the 16th century. Since being introduced, feral swine populations have expanded and created an everlasting impact on our native environment.

At first glance, encountering feral swine may attract personal interest and prospective hunting opportunities, while below the surface, this non-native species adds competition for native wildlife and destruction to our lands. Unfortunately, the feral swine problem in Alabama, as well as across much of the country, is here to stay for the foreseeable future. No single antidote or control technique will end this infestation affecting our farmlands, private properties, natural resources, and valuable ecosystems. There are multiple control methods available, each another tool in the toolbox, and a multi-faceted approach should be taken when combating feral swine issues.

Selecting viable removal techniques in a feral swine control program is dependent on many factors including property size, habitat, time availability, cooperative efforts on adjacent lands, feral swine densities, and budget constraints. Determining the scope of these factors is important and often dictates which removal techniques to utilize when managing this non-native species. Feral swine removal techniques include day/night removal (abiding by state laws), recreational hunting (canine and opportunistic), trapping, and aerial removal operations in certain areas. Additionally, current feral swine control research focuses on toxicants and fertility control which may lead to future feral swine management tools.

Landscape

Feral swine are adaptable critters that can seemingly survive on most landscapes, but they do prefer habitats with key traits: water and cover. Areas that contain water or have connectivity to a perennial water source are desirable components for feral swine. Additionally, low cover (overgrown clear-cuts, thick understories, etc.) provides a source of security and shade during the summer months and is often highly desirable by this species.

The amount of acreage needed for conducting control measures and eliminating damage often correlates to surrounding suitable habitat. For example, a hardwood bottomland swamp that lies adjacent to a river and/or vast expanses of coastal marsh may require larger acreage to implement adequate control efforts. Whereas, areas that contain very little cover (mature timber absent of understory) and relatively no connectivity to surrounding permanent water bodies (lakes, streams, rivers, etc.) may require less acreage.

The biggest contention for any landowner is determining if feral swine are considered friend or foe by adjacent landowners. Establishment of common goals between neighboring lands often creates a more desirable outcome for control efforts and incorporates management efforts on a landscape level. In reality, landowners have different and sometimes conflicting ambitions which lead to feral swine management conducted on smaller acreage. In these scenarios, control efforts often seem endless as surrounding properties provide prime feral swine real estate. In most cases, feral swine on adjacent properties quickly occupy the vacated acreage, leaving landowners with a year-round control battle with less than desirable results.

Control Options

• Trapping

Trapping is one of the most effective and efficient methods used to reduce feral swine numbers. When utilized correctly, traps can potentially catch large groups of feral swine, commonly referred to as 'sounders.'



Feral hogs in a fence entrapment.

There are various configurations to suit the needs and budget of almost anyone wishing to minimize the impacts of feral swine. Higher-priced equipment/trap components can consist of cellular devices, high-tech cameras, solar panels, etc. Such components can send real-time video footage, text/email pictures, and/or remotely trigger traps which allows the control operator the luxury to choose exactly when to close the trap.

Other options include installing a permanent-style trap which typically utilizes three 16-foot by 5-foot livestock panels supported by t-posts outfitted with a guillotine/drop style door. A similar design used to make traps more durable and mobile-friendly includes a prefabricated 8-foot frame that incorporates livestock paneling. These sections can be pinned together allowing the trap size and shape to be changed for topography constraints and sounder size. The tripping mechanism for both style traps typically involves a root stick or trip line.

Trap site selection is an important step for increasing capture opportunities. Multiple traps may be required for adequate control in areas with high feral swine densities. Establishing traps in areas that feral swine use for cover and security often increases trap concealment and subsequent success. Once feral swine numbers are reduced, establishing permanent-style traps in areas that might represent future access points/travel corridors from adjacent lands is recommended.

Many factors could impact trap success including constant harassment (shooting, canine use, ineffective trapping strategies, etc.) and food availability. Harassment often yields weary swine that become problematic for capture. The seasonality of food abundance (mast crops, agricultural plantings, etc.) often yields full bellies on a preferred food source during certain times of the year. In both instances, trapping methods and techniques should evolve to accommodate site-specific challenges. Simply changing the style of trap utilized, trap placement, type of bait, trap blending, etc. could resolve specific challenges. Unfortunately, there is no perfect bait or trap that would work in all scenarios encountered. Having an open mind and the ability to change techniques will increase trap success and decrease frustration.

• Firearms

Specifically targeting feral swine with firearms can provide temporary relief and is often considered as a reactive approach Removing feral swine with this option, when only a couple are deemed a threat, may provide sufficient control to alleviate associated damages. To increase success and time efficiency, establishing bait sites to encourage routine feeding times is suggested. For a long-term proactive approach, trapping is required to effectively and efficiently control damage.

Aerial Support

Under the right conditions (cold temperatures, winter leaf-off, habitat, etc.), utilizing aerial removal activities can be an effective approach in covering large acreages in a short timeframe. Additionally, this technique can be utilized to euthanize trap-shy swine or solitary boars with a large home range. Aerial support should be considered as an additive management tool for feral swine control. Other removal tools (trapping, firearms, etc.) are needed to make an overall impact of feral swine associated damages.



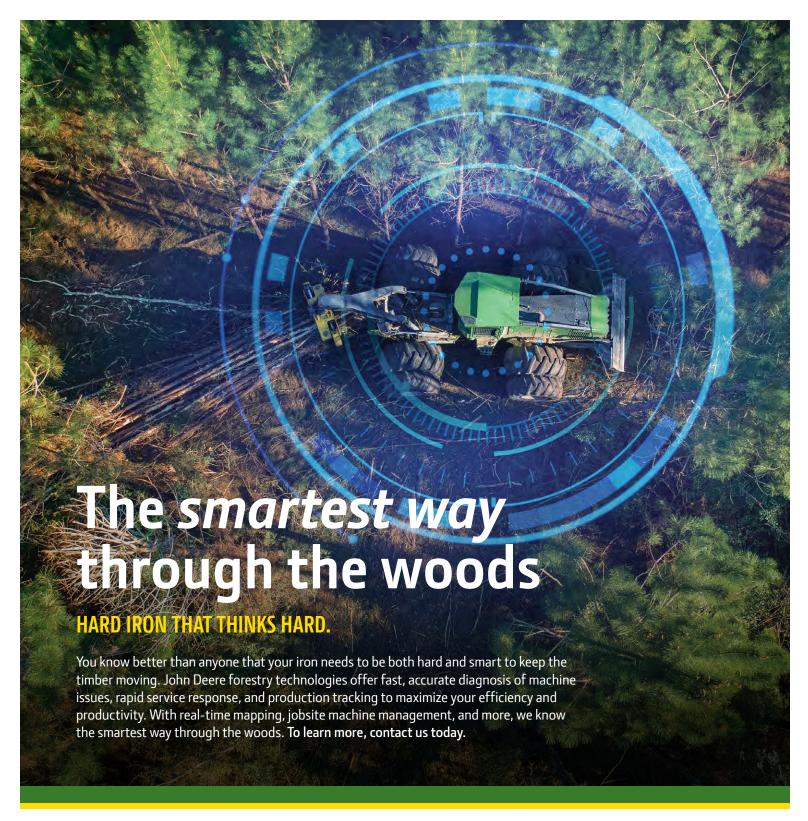
An aerial euthanization effort against feral swine.

• Toxicants

Currently, USDA APHIS Wildlife Services National Wildlife Research Center (NRWC) scientists have been evaluating the use of sodium nitrite bait as a potential feral swine toxicant. Sodium nitrite is a preservative commonly used in meat products. This preservative is lethal to feral swine when large doses are ingested in a short timeframe. Research is ongoing and is currently evaluating toxicant delivery and potential effects to non-targets. Future research is expected to continue during 2021.

Feral swine continue to thrive in certain areas and expand to new lands when native resources have been exploited. Integrating multiple removal techniques and sharing common goals with adjacent landowners are often the first steps in a successful feral swine management program. For more information regarding feral swine management, available control options, cost-share programs, etc. please contact USDA Animal & Plant Health Inspection Service (APHIS) Wildlife Services at (866) 487-3297.

Photo by USDA Wildlife Services







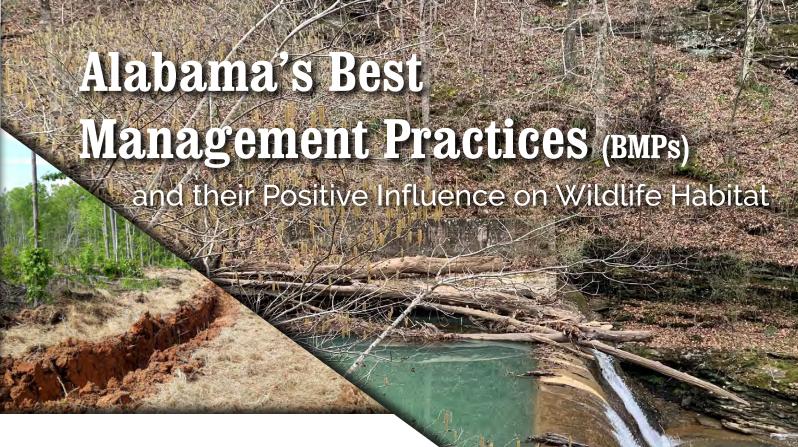
6801 McFarland Blvd West Northport, AL 35476 205/339-0300

2149 Pelham Parkway Pelham, AL 35124 205/988-4474

66 Industrial Park Dr. Monroeville, AL 36460 251/575-7111 4308 Water Trail Graysville, AL 35073 205/988-4472

2255 Hwy 21 South Oxford, AL 35203 256/831-0921 25135 One Aviation Way SW Madison, AL 35756 256/233-1914

3540 Wetumpka Hwy Montgomery, AL 36110 334/277-7260



By Carey Potter, AFC BMP Coordinator, Certified Wildlife Biologist, Registered Forester

y love for hunting and the outdoors dates way back to when I was six years old and my dad took me squirrel hunting for the first time. I remember overlooking a big hardwood creek bottom and was amazed at the diversity of wildlife that called this area home.

Forty-two years later, I am still amazed at the deer, turkeys, squirrels, and many other wildlife species that thrive in these riparian habitats. These days, this type of habitat is commonly referred to as a streamside management zone. As the BMP Coordinator for the Alabama Forestry Commission, I provide technical assistance to landowners, loggers, wood suppliers, foresters, and the overall forestry community to make sure that good stewardship principles are followed and used to promote sustainable forestry. Alabama's Best Management Practices (BMPs) exist not only to protect the water quality of the state but also to enhance the wildlife habitat for many game and nongame species.

As a wildlife biologist and registered forester, it should come as no surprise that I would naturally be a big advocate of hunting and fishing. In this article, I am going to discuss the different ways that BMPs influence wildlife habitat. These are streamside management zones (SMZs), loading decks, roads, and reforestation. These four areas are not only crucial for BMP implementation but can be used to improve wildlife habitat.

Streamside Management Zones (SMZs)

According to Alabama's Best Management Practices for Forestry handbook, "A streamside management zone (SMZ) is a

strip of land immediately adjacent to a water of the state where soils, organic matter, and vegetation are managed to protect the physical, chemical, and biological integrity of surface water adjacent to and downstream from forestry operations."

There are three different stream types which are perennial, intermittent, and ephemeral. **Perennial** streams are your bigger streams and creeks that have running water most of the year and are characterized by a solid blue line on U.S. Geological Survey (USGS) quad and topography maps. Perennial stream SMZ buffers should be a minimum of 35 feet from each stream bank and extending perpendicularly to the edge of the buffer. This buffer area can be better explained as the trees that are left between the stream banks and the regenerative cut area. Timber can be harvested within a perennial SMZ buffer, but you must leave 50 percent crown closure with the residual trees left in the buffer.

Intermittent streams will usually have a defined bed and bank and usually flow only part of the year. These streams are charged.

and usually flow only part of the year. These streams are characterized by a dashed blue line on a topographic (topo) map, but they may or may not show up on topo maps. A partial cut or regenerative harvest will be allowed adjacent to intermittent streams if water quality is protected. **Ephemeral** streams are the third type of stream and usually the hardest type to identify. These are usually distinguished as shallow ditches or depressions that are best located by studying topo maps and observing the

(Continued on page 12)

Alabama's Best Management Practices (BMPs)

and their Positive Influence on Wildlife Habitat

(Continued from page 11)

changes in topo lines. Timber can be harvested in these ephemeral areas if vegetative cover is left, and slash/debris is not left in the channels of these ephemeral streams.

Now that we have identified these three types of streams, let's talk about how these streams and SMZs can affect wildlife habitat. If you are a deer hunter, SMZs are great places to hunt. Why? SMZs provide forage in the form of hard mast from oaks, escape cover, and a water source. The SMZs are usually adjacent to pine plantations which are perfect bedding spots. These SMZ buffers also act as a travel corridor or 'pinch point' for wild game movement. If you are managing your property for deer, turkey, and small game, it is best to leave wider SMZs with more oak trees to provide more food during the fall and winter. If you have steep terrain adjacent to streams, it's better to leave wider SMZs (greater than 75 feet) to prevent any problems with erosion.

SMZs also provide great habitat for non-game species as well. Birds, reptiles, amphibians, and aquatic species are attracted to these areas for their habitat diversity. If you are a hunter or wildlife enthusiast, plan your timber harvest activities on your property by leaving generous SMZ buffers around your streams. This will be a great benefit to the wildlife habitat in future years.

Loading (Logging) Decks

Loading decks are the areas close to the timbered areas where loggers set up their equipment in order to load trucks with wood going to the different mills. Usually adjacent to interior roads on the property, these loading decks are used for both final harvest and thinning operations. Depending on the size of the property, there may be several loading decks utilized during the timber harvest. A good rule of thumb for loggers is to limit the number of loading decks to one per forty acres. Each loading deck is usually around one acre in size. These areas can be extremely beneficial for wildlife once the logging activities are finished. However, don't make the mistake of allowing the logging crew to leave after they are finished without removing all trees and logging debris from these loading decks. Most of the time, the logging crew will have a dozer onsite and can push this material out of the clearing.

These loading deck areas are perfect for wildlife openings. Once the stumps are removed and the soil is prepared, you can introduce many different plant or grass varieties that are beneficial for wildlife forage. These areas can be great for summer plantings such as clovers, legumes, or crop species and then planted in the fall with grass and clover for deer and turkey. These loading decks are awesome bugging areas and strut zones for turkeys.

Planning is always crucial for locating these loading or logging decks prior to harvesting your timber. If you have a location where one or more roads converge, this is typically a good site for a loading deck. Why, you ask? This location is ideal because you can view a larger area when you are hunting and utilize more space. With that being said, we will talk about road management and how this benefits wildlife habitat.

Road Maintenance and Management

As a good friend and colleague once told me, roads are the backbone of your property. Without properly maintained roads, it

is difficult to access all the different areas of your property. Common sense, right? Now that we know how important a good road system can be, let's expand on that a little. First, roads should be properly constructed so that water does not collect during rain events. This means installing the proper water diversion devices such as water bars/turnouts, broad-based dips, and road sloping. The topography of your property will determine the proper drainage technique to keep water off your roads.

The road surface is also another variable to consider. There are two main

A well-made Streamside

schools of thought when it comes to road surfaces. You can add gravel or rock to protect the road surface, or just plant it with grass seed or clover. Since we are discussing wildlife management in this article, I will talk more in detail about planting your roads.

The number one mistake I see most often with wildlife and property management is planting pine/hardwood seedlings too close to main roads after completing a timber harvest. Just as with streams, there should be a buffer between the road and where a pine plantation or hardwood stand is planted. This practice not only allows plenty of room to work the roads as needed, but also provides another area to plant for wildlife.

A good road buffer also protects you and your vehicle from getting whacked by overhanging limbs in the road. Keep this idea in mind if you get tired of trimming roads each year with a pole saw! I would suggest planting these buffers along roads with a perennial clover. This type of clover will re-seed itself each year with proper maintenance. Perennial clovers also provide a year-round food supply for many wildlife species. Roadside buffers are also good bugging and strut zones for wild turkeys. You can tell that I like to hunt turkey, right?

Reforestation

The last topic that we will cover concerning BMPs and wildlife management is reforestation, the term used for simply replanting trees after a stand has been harvested. Whether discussing hardwood or pine species, there are two types of refores-



Management Zone (SMZ)

tation: natural and artificial. Natural reforestation occurs when you let Mother Nature take her course and trees naturally reseed from the previous stand or from coppice regeneration (tree growth from a hardwood stump). Artificial reforestation is planting trees that have been grown in a tree nursery.

For the sake of not arguing with my colleagues, I will not pick a favorite type of reforestation. I will simply provide you with the advantages and disadvantages of both. Natural reforestation is, of course, the easiest and least expensive

way to reforest your property. The tree and plant species that were there previously will be the ones that come back. Natural reforestation usually provides a diversity of tree and plant species that are beneficial to wildlife. As a forestry professor once told me, natural reforestation produces a 'salad bar' of plant species for deer. Wildlife will benefit from the browse that the plants and trees provide, as well as the cover that these stands produce. Once the trees reach canopy closure, the food availability will be diminished.

One of the draw backs to natural reforestation is the possibility of invasive species taking over different areas within the stand of trees that are beneficial to wildlife. Invasive species such as tallow or popcorn trees, kudzu, Chinese privet, and cogongrass serve little or no value to wildlife and can displace desired plant and tree species within the naturally reforested stand.

Artificial reforestation involves planting the trees yourself. There are two types of seedlings: bare root and containerized. These seedlings can be planted by hand, or with a tree planter pulled by a tractor or dozer. The seedlings are planted in rows following the contour of the ground and appropriately spaced between each individual seedling. Someone may ask, "What is the spacing on the trees?" This question refers to the distance between individual trees and the distance between rows. An eight by ten spacing (8x10) would mean that it is eight feet between

trees and ten feet between rows. From a wildlife management standpoint, the wider the spacing, the better it is for the wildlife habitat.

Artificial reforestation is the more costly of the two methods. Planting costs can run upwards of \$300 or more per acre to plant, depending upon the method of site preparation that is chosen. Site preparation can be chemically or mechanically done to prepare the seed bed for the trees that are planted.

As mentioned earlier, I am not going to argue which method is the best. Given the location, soil type, and topography, one form of reforestation may be better than the other. I will say that it is easier to manipulate the forest stand when using artificial reforestation. Once the trees are around 15 years old, you can thin the stand to open the understory to encourage growth of plant species that are beneficial to wildlife. Once thinned, you provide much more available food and cover for wildlife species. Natural reforested stands can be thinned as well, but this process usually takes a longer time period.

With each form of reforestation, the best time for wildlife utilization is usually between three to five years and after the stands have been thinned. Prescribed burning can also be an extremely effective and economical tool when managing these thinned stands because it promotes the growth of plant species that were not visible until after the burn. There are numerous variables to consider when reforesting your property, so use the method that best suits your needs.

(Continued on page 14)



A successful reforestation effort next to a wildlife opening.

Alabama's Best Management Practices (BMPs)

and their Positive Influence on Wildlife Habitat

(Continued from page 13)

Final Thoughts on BMPs and their Influence on Wildlife Management

I have tried to cover most of the main points when it comes to using forestry Best Management Practices to positively influence your wildlife and wildlife habitat. I could probably write a book on these topics because there are so many other variables and management techniques that can be used. The MOST important thing to consider is proper planning when managing your property. This means mapping out all your roads, SMZs, stream crossings, wildlife openings, forest stand types, and property boundaries. I cannot stress this enough. Benjamin Franklin once said, "If you fail to plan, you are planning to fail." This could not be truer when it comes to planning for the management of your property.

Take the time and develop a management plan for your property. The Alabama Forestry Commission provides this service in the form of a Stewardship plan. Make sure you use the services of a registered forester to help you devise this plan. I promise that you will be much happier in the long run.



AFC BMP Coordinator Carey Potter and his son, Trey, share a father-son moment after a successful turkey hunt.

GIVING IT YOUR ALL TODAY. DOING IT ALL AGAIN TOMORROW

SOME DON'T GET IT, BUT WE DO.

Natural resources sometimes need human resources. That's why since 1916, Alabama Ag Credit has helped timberland owners purchase timber tracts, replant after a harvest, manage their agribusiness, and refinance property. With the financial support for everything from timber processing equipment to general business operations, we can offer you customized long-term or short-term credit options. Call us today about our competitive rates and how our relationship lending can help your timber land business grow.



AlabamaAgCredit.com Call 800.579.5471





n June 2020, a concerned landowner in Dekalb County contacted the Alabama Cooperative Extension System about a white substance on the base of the needles of their eastern hemlocks. After testing by both the Alabama Cooperative Extension System and Auburn's School of Forestry & Wildlife Sciences, the pest was confirmed to be the hemlock woolly adelgid [Adelges tsugae (Annand)].

An exotic insect native to East Asia and western North America, this invasive pest was first found in the eastern United States as early as the 1920s on hemlock trees in Virginia. Since its introduction, the hemlock woolly adelgid has spread to 20 additional eastern states – north to Maine, west to Michigan, and south to Georgia. In fact, the hemlock woolly adelgid has been in northwest Georgia near the Alabama border for many years. It took a while for the pest to arrive in Alabama because during most of its life cycle it cannot move far without assistance. The 'instar' (first life phase) can crawl to adjoining trees, but it takes wind, wildlife, or humans to move the pest further than that. Lacking natural resistance to this adelgid, eastern (*Tsuga canadensis*) and Carolina (*Tsuga caroliniana*) hemlocks can die within 2-10 years of attack. Length of time to mortality is primarily a factor of geography. In colder climates, death takes longer.

The hemlock woolly adelgid is a small soft-bodied, purplish-black, aphid-like insect. Juvenile hemlock woolly adelgids called 'crawlers' move slowly over the tree looking for suitable sites to feed. They eventually situate themselves at the base of needles. They pierce the twig with their long straw-like mouthparts and begin feeding on the hemlock's stored starches. During this stage, hemlock woolly adelgids become relatively immobile. While feeding, hemlock woolly adelgids produce a protective white 'woolly' mass that resembles small pieces of cotton. Over time, infested hemlocks will exhibit gray needles, needle loss, dead branches, and canopy thinning.

According to Elizabeth McCarty at the University of Georgia and information from the USDA Forest Service, this insect's very complex life cycle makes control difficult. Here is a synopsis of what they have found:

- Biological control using predatory lady beetles is best used over a large area for an extended time.
- Contact insecticides such as horticultural oils, organophosphates, carbamates, pyrethroids, and avermectins can provide fast mortality of the insect, but the application must be done twice a year during the crawler stage.
- Systemic insecticides via soil drenches or basal sprays are the
 most common method used for controlling the hemlock woolly
 adelgid. Soil drenches with imidacloprid or dinotefuran are the
 preferred treatment but are expensive and time-consuming.
 Basal spray application of systemic insecticides is also approved
 but may not be as effective.

The USDA Forest Service is monitoring the spread of the hemlock woolly adelgid. The Alabama Forestry Commission, the Alabama Cooperative Extension System, and the Alabama Department of Agriculture & Industries are working together to document, mitigate, and inform the public about this pest.

If you see signs of hemlock trees infested with this pest, please contact Dana Stone at dana.stone@forestry.alabama.gov or call (205) 385-2387.

Hemlock Woolly Adelgid (HWA) Confirmed in Alabama

By Dale Dickens, AFC Urban Forestry Coordinator, Dana Stone, AFC Forest Health Specialist, and Katie Wiswall, AFC Urban Forester



org/wiki/Hemlock_woolly_adelgid.

Forestry – Forest Health. SREF-FH-012. May 2019.

Hemlock Woolly Adelgid. Website: https://en.wikipedia.



By Cole Sikes, Multimedia Specialist, Alabama Forestry Commission

hat do you get when you put together a bad hay baler, a creative mind, and a passion for community? That's okay, I will wait . . . There is an old saying that claims, "one man's trash is another man's treasure." It's an example of many phrases whose origin has gotten lost in translation but never died, especially among us Southern folk. It is often used to describe creativity or express the worth of objects that have found new meaning. This expression may come to your mind when passing the property of the Bird family in Greene County where they have created an iconic landmark out of the land itself in west Alabama.

Jim Bird was born in Homewood near the sprawling city of Birmingham. As a youngster, he spent his summers with an aunt in Demopolis, frequenting the family property across the river in Greene County. He often helped on the farm. While a student at Auburn University, Jim met his future wife, Elizabeth. After marrying in 1950, the couple moved to the farm in Forkland where they made their home and raised their own family. Greene County is located in the heart of Alabama's 'Black Belt,' a region of rich topsoil perfect for agriculture. One of the

unique characteristics of the county is

the fact that its borders are almost entirely defined by rivers (Tombigbee and Black Warrior), adding to its agricultural potential.

While baling hay one afternoon in the '80s on their approxi-

mately 1,400-acre property, Jim Bird noticed that his equipment was malfunctioning. The hay bales were not spitting out of the machine in uniform shape, causing Jim to scratch his head with wonder about what was going wrong. However, instead of getting flustered, he studied the variation in forms the hay bales took when rolling out of the machine. His creative mind immediately went racing. Just like a child looking up at the clouds in the sky, he imagined objects that the piles of hay resembled. For a laugh or two, he used his tractor to move the hay bales together in the shape of a caterpillar. Jim was pleased with the way the segmented insect turned out, so he decided to take more bales and arrange them in the shape of a spider. This agricultural arachnid definitely caught the eyes of travelers rolling down Highway 43. The Greene County community began to wonder who was responsible for these pieces of 'art' that sat near the road, and Jim's new hobby was born.

To help create the hay art, he started collecting what some folks would call junk – pieces of old scrap metal, obsolete farm equipment, rusty grain bins, bathtubs, worn tires, old golf carts, and even a beached sailboat.

More than 30 years later, the Birds' outdoor museum of hay art has grown 15 times bigger since the bad hay baler spit out that first 'odd-ball' bale. At any given time of the year, the Birds display between 20-30 pieces of art, although they might lose one or two pieces due to storms and other natural occurrences. This artwork includes childhood icons Snoopy and Big Bird; animals such as alligators and pigs; vehicles in the form of monster trucks and tanks; real-life characters such as presidential candi-

dates; and an impressive 32-foot-tall Tin Man. Without a doubt, you won't miss that one as you drive past the farm. "The alligator is probably my favorite one," Jim revealed.

Jim (right) and Archie Bird at their pavilion overlooking the river.

At 93 years young, Jim has now delegated not only the timber production and cattle farming but also most of the handy work to his son, Archie. "We want to keep it going in the future," said Archie. "We want everyone to be able to stop and take a look at the art we've been working on lately."

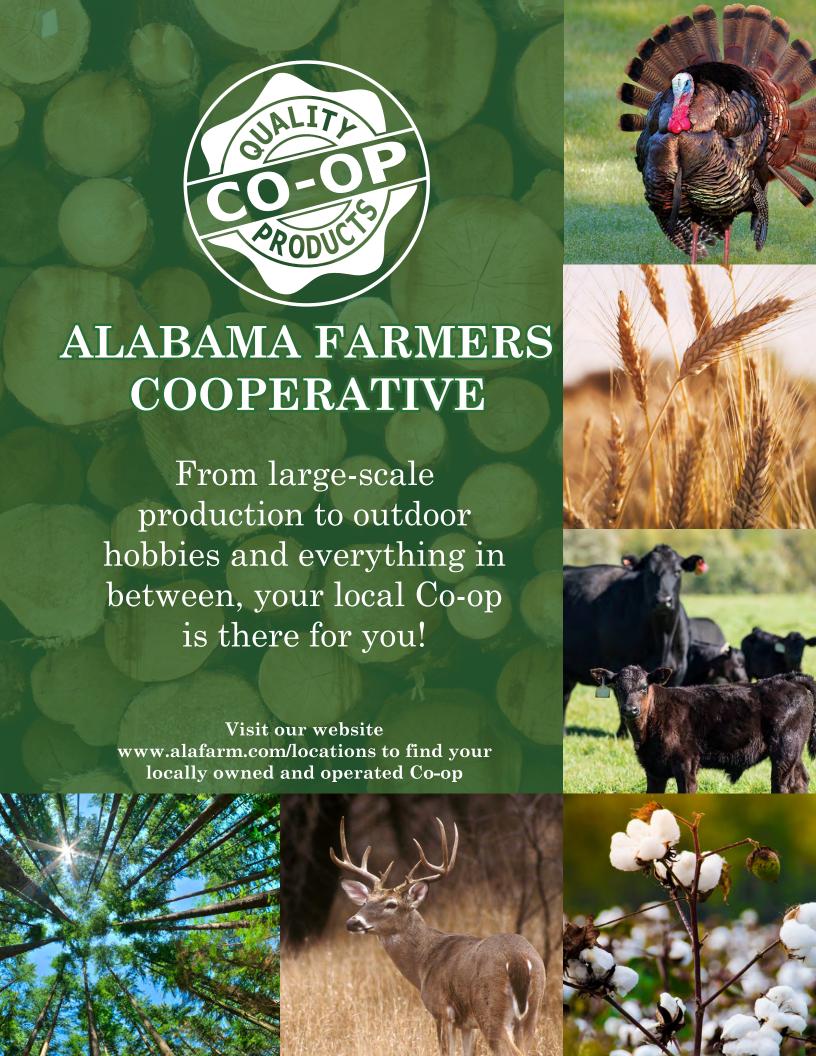
"This farm is truly a landmark," said Alabama Forestry Commission Greene County Forest Ranger Heath Dorman. "Everyone knows where the Birds' place is located. It's a Greene County staple." Dorman has assisted the Birds over the years by helping incorporate forest management plans for the timber on the property. Their collaboration has created a genuine interpersonal relationship among Jim, Archie, and Heath.

Archie also has special aspirations for their hay art to expand into an annual festival. Known as 'Hay Day,' this celebration of hay art is scheduled for the first Saturday after Mother's Day each year. The festival includes a tour of the hay art, an opportunity to decorate and paint the bales, as well as live musical performances at the Birds' beautiful pavilion located on a bluff overlooking the scenic 'Dead River,' a tributary of the Tombigbee.

It seems that the communities within Greene County and surrounding areas want to get involved with this hay event as well. Buckets of paint for the bales have been donated by local paint supply stores, used props such as old airplanes from local airports were given to the Birds to spice up their displays, and suggestions for future art additions are taken from citizens. The first ever Hay Day was supposed to take place in 2020, but it had to be postponed because of the COVID-19 pandemic. The Birds recommend that anyone who wishes to get information on what's going on around the property should check their Facebook page, Hay Art in Forkland.

If you haven't been able to answer the question at the beginning of the article, let me help you. When you combine a bad hay baler, a creative mind, and a passion for community, you get a special piece of God's earth that is used for the very purpose He put us here: to bring people together in harmony and glorify His creation. The Bird family property has such an unmistakable character to it that it must be shared with more people. Although this article does not do justice to this special farm, hopefully it will inspire other landowners to create and innovate on their own properties as the Bird family has done in Greene County.







and Dan Chappell, Forest Inventory Analyst and Marketing, Alabama Forestry Commission

Definitions of wood:

- A porous and fibrous structural tissue found in the stems and roots of trees and other woody plants. It is an organic material

 a natural composite of cellulose fibers that are strong in tension and embedded in a matrix of lignin that resists compression (Wikipedia).
- The hard, fibrous substance consisting basically of xylem that makes up the greater part of the stems, branches, and roots of trees or shrubs beneath the bark and is found to a limited extent in herbaceous plants. (*Merriam-Webster*).
- A hard substance that forms the branches and trunks of trees and can be used as a building material, for making things, or as a fuel (*Cambridge*).

o matter the definition, wood is and has been a renewable and sustainable resource growing in Alabama for millennia. It is one of our state's precious natural treasures. Forest resources have formed our landscape and established some of the most diverse flora and fauna found in the world. It has provided the basis of survival, sustenance, and comfort for human inhabitants existing with the state's boundaries for recorded history. Within the publication, *Plant Life of Alabama* by Charles Mohr, published in 1901, approximately 150 trees were considered of commercial importance. Not surprisingly, many wood species are providing us the same benefits today, but in a further value-added product.

Wood has been good for Alabama and is prized today as an essential product for its many uses. More importantly, wood product operations have become a prize – a gift that provides markets for timber, livelihoods from jobs, and economic contributions to communities. Economic development organizations compete for their site location, value their rural development, and celebrate their operations.

Why Wood?

Wood as a material has been a staple of mankind's existence. Without wood, we would be lacking a heat source, shelter, weapons, and a cornucopia of products that have enhanced the quality of life for human survival. What are the characteristics of wood that make it so desirable? The **WoodWorks** (Wood Products Council) provides the following attributes for today's utilization: cost savings, code acceptance, versatility, fire protection, seismic performance, wind resistance, durability, and sustainable design. **WoodWorks** provides education and free project support to architects, engineers, and other design/construction professionals across the U.S. (https://www.woodworks.org/why-wood/). Wood is good.



Made in Alabama

As a raw material in Alabama, wood has evolved to be a cornerstone of manufacturing, particularly in rural counties of the state. From energy, building materials, chemicals, and paper, to furniture, cabinets, and many other manufactured items – wood products made in Alabama have developed national and international markets for their use.

Many years ago, the Alabama Department of Commerce established the MADE IN ALABAMA 'brand' to identify Alabama-made products that are distributed nationally and internationally. It is also a marketing identification tool for economic

(Continued on page 20)



Gov. Kay Ivey announces Enviva's plans for a \$175 million wood pellet plant in Sumter County.

Forest Products: MADE IN ALABAMA

(Continued from page 19)

development and recruitment. Wood-based products are imbedded in this marketing campaign.

Wood Product Manufacturing

As with neighboring Southern states, the diversity of our forests provide the opportunity for a multitude of products. To narrow down the major manufacturing sectors, the following is a sample list of those that have a manufacturing footprint in Alabama as defined by the North American Industry Classification System (NAICS):

- · Wood Product Manufacturing
- Paper Manufacturing
- Printing and Related Support Activities
- Furniture and Related Product Manufacturing
- · Others

Within these aforementioned major NAICS sections, there are operations that further define the manufacturing types with which we are more familiar in our communities. Many of these include:

- Commercial Printing
- Converting Paper Product Manufacturing
- Cut Stock, Resawing Lumber, and Planing
- Engineered Wood Member

- Furniture & Related Product Manufacturing
- · Manufactured Home Manufacturing
- Millwork
- Miscellaneous Wood Products
- Motor Home Manufacturing
- Other Manufacturing
- Paper
- Pole & Piling
- Pulp, Paper, and Paperboards
- Reconstituted Wood Products
- Sawmills
- Truss Manufacturing



Fall 2020



- · Wood Container and Pallet Manufacturing
- · Wood Preservation
- Others

However, there are numerous interesting wood products made in Alabama with which many citizens may not as familiar. A small sampling of this variety is identified in the collage above.

Innovative Wood Products for the Future

As Alabama and the South encompass an abundance of sustainable forest resources, there are many innovative wood products that are being developed and identified to utilize our timber in the future. As printed directly from an article by USDA Cooperative Extension, August 16, 2019, by Wood Products, many of these products include the following:

• Cross-Laminated Timber (CLT) – CLT is a laminated panel made with solid wood boards that are glued together, alternating the direction of their fibers. Its strength and stability enables the possibility to use wood as an environmentally-friendly alternative to concrete and steel construction systems.

- **Biomaterials** Biobased adhesives to bond together wood composites are being developed, as well as wood plastic composites (WPCs) that combine plastic and cellulose fibers. Also wood fibers are being used to strengthen structural materials.
- Nanomaterials To enhance the strength and durability of diverse products, carbon nanotubes are being developed, as well as cellulose nanofibers.
- Bioenergy Wood can be used as a source of bioenergy, thus increasing energy independence and improving the environment. Also biofuels can be obtained from forest biomass, which can help replace a significant part of petroleum-based fuels.
- Wood modification Thermal modification, acetylation, and fufurylation processes can be used to modify wood and improve its durability.

(Sources: U.S. Forest Service, Cooperative Extension System, https://wood-products.extension.org/innovation-in-the-forest-products-industry/)

(Continued on page 22)

Forest Products: MADE IN ALABAMA

(Continued from page 21)

Forest Product Research in Alabama

The state also participates in the future of forest products. The Forest Products Development Center (FPDC) is located within the School of Forestry & Wildlife Sciences School at Auburn University. Their

Forest Products Development Center School of Forestry & Wildlife Sciences



mission is to discover, innovate, and publicize new information for industry, government, society, and students in the area of biomaterials and packaging. FPDC achieves this research and educational mission by working across campus with the College of Engineering, College of Architecture, College of Agriculture, College of Business, and their own School of Forestry & Wildlife Sciences. The FPDC has many public and private partners. (Source: http://wp.auburn.edu/forestproducts/?page_id=36).

In Summary

Alabama is home to an abundance of wood resources. She continues to grow positive forest inventories for a sustainable future. Throughout its history, the state has utilized her fiber opportunities for producing basic to value-added products over time. The variety of Alabama's wood resources provide an array of products that are utilized by local, state, national, and international markets. From energy, building materials, pulp & paper, and interior furnishings, to the other unique consumer products which are MADE IN ALABAMA, our state is a significant contributor within the U.S. forest industry. The future of wood utilization is bright for the state's diversified wood resources. Wood continues to be good for Alabama – always has been and always will be.





Let's talk



662-234-5015 | FIRSTSOUTHLAND.COM

Let's finance yours.

If land ownership or refinancing your land is what's next in your story, let First South guide you through financing the next chapter.

DON'T TREAD ON ME

By Ray Metzler, Wildlife Biologist/
Threatened & Endangered Species Specialist,
Alabama Forestry Commission

here are more than 3,000 species of snakes on the planet and they're found everywhere except in Antarctica, Iceland, Ireland, Greenland, and New Zealand. Alabama is home to about 50 species of snakes, most of which are non-venomous. However, six venomous species do occur in the state: copperheads, cottonmouths, timber rattlesnakes, pigmy rattlesnakes, eastern diamondback rattlesnakes, and eastern coral snakes. All snakes are cold blooded – meaning they rely on heat from the environment to regulate their body temperature instead of metabolic heat.

Opinions regarding the usefulness of snakes vary widely, depending on who you ask. Some folks believe all snakes serve no purpose whatsoever except to scare the dickens out of them. All snakes have their place in nature and are generally efficient predators of everything from insects to eggs, amphibians, small mammals, and even other snakes. Minimizing habitat for their prey species around your residence is the best way to keep snakes away. Keeping your yard well-manicured and removing rocks, wood piles, and other debris are simple techniques to minimize snakes and their prey from inhabiting your immediate environment.

In Alabama, many snakes are active during daylight hours in warm temperatures but become more nocturnal as the summer and early fall temperatures routinely reach into the 90s. Unlike most snakes that breed in the spring, Alabama's three species of rattlesnakes become more active in the late summer and fall months as males begin searching for females to breed.

Hunters and other nature-based recreationalists should use caution, but not be fearful, when enjoying Alabama's great outdoors. Generally speaking, snakes will either lie still and allow you to walk past them, move away as you approach, or let you know they are there by signaling their presence. Most snakes, venomous or non-venomous, will not bite unless you step on them or attempt to pick them up. Snake-proof boots or chaps are an excellent investment for those individuals that work or recreate in areas with high densities of venomous snakes.



During my career as a wildlife biologist and as a lifelong user of our great outdoors, I have had many encounters with snakes. I typically am not bothered by the presence of a snake unless it startles me at a close range. One such instance occurred in December 2019 at Little River State Forest in Monroe County while conducting a gopher tortoise survey. Along with two other survey participants, I was standing at the mouth of a tortoise burrow late in the afternoon when an eastern diamondback rattlesnake crawled into the burrow about 6 inches in front of my feet. Needless to say, I got a little excited and stepped back rather quickly. We scoped the burrow to get a close look at the rattle-

snake as well as the tortoise that was in the burrow. The snake had apparently been sunning itself on the cool day just outside of the burrow when we approached. It lay still until it got a little uncomfortable and decided to enter the burrow. I now look closely around the perimeter of a tortoise burrow prior to approaching to ensure no rattlesnakes or other venomous snakes are present.



WATCH YOUR STEP! During a stroll through the woods of Coosa County, the Goff girls stumbled upon a reclusive rattler.



By Karl Byrd, Northwest Regional Fire Specialist, Alabama Forestry Commission

ate one evening, I got a call. A lady on the other end of the line was asking if I would come and fix her floor. They had taken a floor furnace out of their house and needed the hardwood floor repaired and finished in a way that it wouldn't look repaired. We talked about the floor repair and what it would take to fix it. As we neared an agreement, she interjected that I would need to start the following morning. I replied that working a full-time job and being on call with the Forestry Commission would not allow that timeline, and that I could only work extra jobs that didn't interfere with my primary job. She said that would never do and that she didn't realize I had another job. Wondering how she got my number, I then asked who had recommended me. She stated that she was given my number from a friend, who said I was going to finish his floors in the new cabin he was having built.

The following evening on my way home from work, I stopped by my father-in-law's worksite where he was building a cabin just south of Hamilton. The cabin was framed up and coming along nicely. While talking with the contractor, Curtis Sutton, I told him about the phone call I had received requesting that I repair the lady's floor. That's when I was introduced to Mr. William G. Lindley for the first time.

William G. "Bill" Lindley had indeed recommended me to work for the lady while I was waiting to work on the floors of his cabin, even though we had never met. Of course, Mr. Sutton had recommended me to Mr. Lindley. Over the course of the next two years I worked on many projects for Mr. Lindley: finishing staircases, finishing doors, and trimming out the cabin. He

acquired a bowling lane and we converted it into countertops for some refurbished cabinets converted to custom cabinets at the cabin. The flooring was made from pine boards, taken from bleachers he purchased after they were removed from service at a high school in northwest Alabama. These boards were tongue and grooved at a company in Decatur to be installed and finished on location.

Keeping me busy with these odd jobs, Mr. Lindley and I became close friends. Over time his friends became my friends, and my friends became his friends. We shared many meals and many conversations. He shared his thoughts as a sportsman and outdoorsman, often relating hunting and fishing stories and his love for the land. He talked about pheasant hunts, dove hunts, deer hunting, and especially his love for the eastern wild turkey. Often Mr. Lindley showed up with a harvest in the back of his truck, eager to share the story and show off the trophy. So, I wasn't surprised when he showed up one day with a turkey in the back of his truck. Upon observing the bird, I realized it was a special one. Ranking second in the state of Alabama, it weighed 24.75 pounds with an 11½-inch beard and sporting 1¾-inch spurs.

Mr. Lindley also enjoyed giving back through organizations that supported his views. One such organization was the National Wild Turkey Federation (NWTF). Founded in 1973, the NWTF is an organization that is helping to improve wildlife habitat by standing behind science-based conservation and ensuring that the legacy of hunting is continued by supporting hunters' rights. Howard Dolhem, NWTF coordinator for the North Region of

(Opposite): AFC Fire Specialist Karl Byrd, TREASURE Forest landowner Bill Lindley, and Curtis Sutton pose in front of a disk plow that was a product of the AFC-NWTF partnership.

Alabama, commented that Mr. Lindley was actively involved with several chapters. In addition to supporting the Birmingham chapter along with his daughter and son-in-law, Mr. and Mrs. Ben Jackson, he later helped get Decatur's chapter started and also assisted with the La-Marion Chapter. Mr. Lindley acted as a mentor, leading many people to participate and join the federation, myself included.

In the same way Mr. Lindley shared ideas with me, I shared information with him from my occupation with the Alabama Forestry Commission (AFC), often inviting him to participate in programs the agency provided for the public such as landowner meetings, educational seminars, and conservation programs. As Mr. Lindley added additional properties to his ownership, he took advantage of services offered by the AFC. Over time he employed the agency to establish food plots on his property, establish firebreaks and access roads, and perform controlled burns for wildlife habitat enhancement. After implementing many of the ideas in a management plan created by the AFC, in 2008 the Lindley's property Hawks Bluff Hideaway was recognized as a TREASURE Forest.

In 2020, a new service was provided at the Lindley property by the AFC. Firebreaks were disked with a new FESCO wildland disk harrow. Food plots were also prepared for annual plantings.

Two years ago, at a Southeastern prescribed burn conference in Tallahassee, Florida, ideas for increasing acreage of prescribed burning were shared among several government agencies, organizations, vendors, and landowners. One of these ideas was increasing accessibility to burning by disking firebreaks annually, as opposed to constructing new firebreaks prior to a burn. Most areas that were burned in the past allowed the firebreaks to revert to natural vegetation. This made reinstalling new firebreaks necessary prior to burning again. Due to the increased time of installing firebreaks in reverted areas, installation costs the landowner more which discouraged rotational burning. Using a wildland disk to maintain firebreaks on an annual basis would lessen the cost of reinstalling firebreaks in natural vegetation.

Locally we discussed the advantages of having a wildland disk in our toolkit for the landowners using the services of the Forestry Commission. This would help increase prescribed burning acreage and help individuals improve wildlife habitat. AFC Forestry Specialist and Marion County NWTF President Joel Bartlett proposed that we discuss a partnership between the AFC and the NWTF to purchase a new wildland disk, as the NWTF offers grants for programs that assist landowners in areas such as habitat improvement. AFC Protection Division Director John Goff supported the idea by submitting a grant application for two wildland disk harrows. In his proposal, Goff stated, "Disking will be a cheaper option for firebreak maintenance for our landowners, causing less erosion issues, as well as promoting more prescribed burning and more forb production. All of these benefits support the NWTF's mission of the conservation of the wild turkey and the preservation of our hunting heritage."

One is a FESCO drawbar type disk harrow and the other is a FESCO lift type disk harrow. The lift style disk harrow was stationed in the Colbert, Franklin, Marion, and Winston counties work unit. The unit has increased annual maintenance of fire-

breaks for landowners and hunting clubs in northwest Alabama as well as established many acres of annual food plots. Long-term contracts have been put in place by some landowners to prepare winter foodplots. The other drawbar style disk harrow was placed in the Lee, Macon, Bullock, and Russell counties work unit.

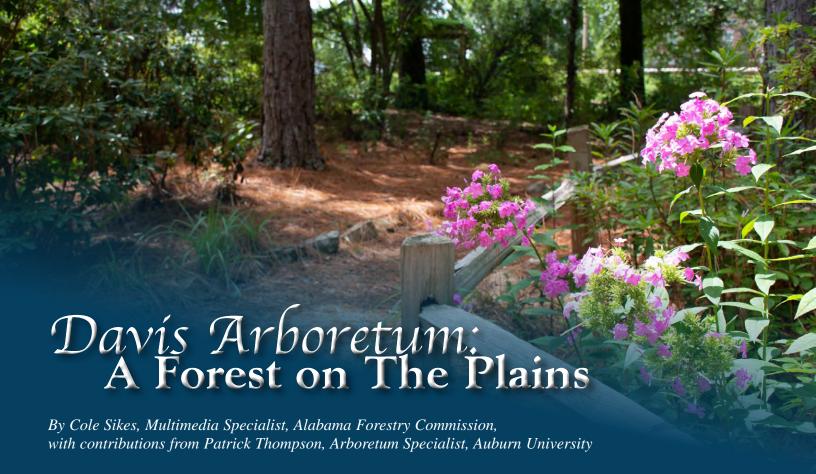
This year the food plots at Lindley's "Six Mile" property were prepared by the disk harrow purchased with the grant provided by the National Wild Turkey Federation, pulled by an Alabama Forestry Commission dozer, and planted by private landowner William G. "Bill" Lindley. At age 92, he is still a partner in conservation. The project has been a success: a partnership starting with people, working with organizations and agencies, implementing ideas, working through conservation, and creating a lasting legacy for future generations.

Dozer and disk harrow service by the AFC is \$200 for the first 1.5 hours (minimum) and \$90 per hour for each additional hour. If you are interested in scheduling disk harrow services, contact:

- Marion County: Joel Bartlett at (205) 707-1001
- Lamar County: Jonathan Norton at (205) 431-8005
- Winston County: Casey Hammack at (205) 272-3013
- Hale & Bibb counties: Cedric Hudson at (334) 410-2253
- Coosa County: Bradley Dunham at (256) 397-4336
- Lee, Macon, & Russell counties: Matt McCollough at (334) 674-1081
- Butler County: Jeremy Lowery at (334) 674-1082



A disking job by a AFC-NWTF wildland disk proved to be a great success for creating wildlife openings on Mr. Lindley's property



University lies a 14-acre plot of land that is filled with forestry. This parcel of Alabama was reserved for the unique function of a living showcase of the state's amazing biodiversity to anyone who desired to take a stroll down its trails and quaint outdoor corridors. From simple saplings to the pinnacle of pines, the Donald E. Davis Arboretum displays a small taste of what is truly Alabama.

Donald E. Davis was a well-known professor at Auburn University where he taught his students the scale and importance of their natural resources. The idea of an arboretum at the university was first proposed by Dr. Davis during a School of Agriculture Teaching Seminar in 1959. A resolution was passed at the meeting asking that a plot of land located immediately south of the school president's home be used as an arboretum for the native trees of Alabama. The plot contained woodland, swamp, and pastureland areas – a perfect place for forestry on The Plains.

After final approval of the arboretum in 1963, the university and Dr. Davis started to get their hands dirty, planning the layout and future additions to the then 7.5-acre parcel. Among the callused hands that contributed was the property's first manager, William J. Reynolds. He worked tirelessly to develop the site. By the end of his tenure it contained 216 different labeled plant species, of which 146 were trees. Six acres of land, originally part of the university's agronomy farm, were added to the parcel along with a new pavilion, just in time for the arboretum's official dedication in 1977.

The popularity of the land grew immensely over the next half decade which called for a rededication ceremony on May 29, 1982, recognizing Dr. Davis for his innumerable contributions to the facility. At that time, the property was officially named the Donald E. Davis Arboretum.

The arboretum trees grew for a couple more decades with a curator overseeing student workers on a 'shoestring budget' through the '80s and '90s, looking very much like a patch of woods in the middle of town, right on College Street. Mr. Reynolds was still a regular visitor over the years, proud to point out various trees he had planted as saplings that now towered overhead.

"He would gladly give a tour taking you from the sand dunes in the south end of the arboretum to the hemlocks in the north, proud of the mission he had embarked on to display Alabama's trees," said current Arboretum Specialist Patrick Thompson. Since his employment with the university in 2001, Patrick has served as a member of the College of Sciences and Mathematics "Arboretum Team" that oversees the curation and preservation of the Davis Arboretum. Patrick is a true 'Auburn Man' with a passion for nature and Auburn University, making him the perfect candidate for such a demanding job. After putting in countless hours spanning nearly two decades of work, Thompson has certainly made his own imprint on the arboretum grounds during his tenure.

Patrick also recalls numerous School of Forestry cohorts that have used the arboretum for an 'outdoor classroom' of their own. "A forestry student's favorite class days are always the ones where they are able to come out to the arboretum and apply what they have learned," said Thompson. Some of the courses exercised in the arboretum are dendrology, forest management strategies, mensuration, forest ecology, and many more. Students also provide paid and volunteer work within the property on a semesterly basis to lend a hand with the upkeep.

Near the beginning of Patrick's employment, a university art museum was proposed to be placed within the arboretum. Unfortunately, this establishment would have displaced post oaks, white oaks, century-old longleaf pines, many loblolly pines more than 100 feet tall, and dozens of other species brought into the collection over previous decades. Included in those trees is the prized "Founders' Oak" at the property's north end. This post oak is known for its age and enormous size while serving as the beating heart of the Davis Arboretum. This particular tree also comes with some very intriguing statistics . . . its growth started in 1850; it was 6 years old when the university was first established as the "East Alabama Male College" in 1856; it was 91 years old when the United States entered World War II; it was more than 100 years old when the arboretum was established; it survived Hurricane Eloise which devastated the grounds in 1975; and it was 150 years old at the beginning of the 21st century. Founders' Oak is also expected to still exist at the start of next century.

Fortunately, the 'Auburn Family' spoke up on behalf of their quiet arboretum, and the museum was wisely placed just up the road where it sits today, also on College Street, pleasantly sited with a pond of its own. This landmark is known today as The Jule Collins Smith Museum of Fine Art.

The time had come for the quiet patch of trees to find its voice and place in the world, before someone suggested another building should be built on top of it. A second full-time position was added to the arboretum staff in 2003, and the institution's abilities doubled. A third full-timer was added just a few years later. The arboretum reached out to its peers in the Association of the Public Gardens of America (APGA) for guidance and support, and they received it. Public gardens were stepping up all over the world to use their unique abilities to accomplish goals being set out in the Global Strategy for Plant Conservation.

As the Arboretum's capacity for care grew, they were able to put more work into expanding the collection to include woody shrubs and wildflowers to continue improving the horticultural displays and representation of the habitats and biodiversity across Alabama. In 2002, a report by Natureserve spotlighted Alabama as the most biodiverse state east of the Mississippi, and the fifth most biodiverse in the nation. The flipside to the state's biodiversity is that Alabama has the highest extinction rate in the continental United States, furthering the importance of conservation efforts such as the Davis Arboretum.

While many public gardens were transforming large, expensive conservatories into engines of conservation for the tropical rainforests of the world, Auburn's arboretum was blessed to have a focused mission in a state with plenty of diversity, as well as opportunities to show off plants that go unnoticed in the kaleidoscope of Alabama's flora.

As most people are aware, oaks and Auburn go hand-in-hand, making this species the garden's first serious collection focus. The APGA sent a mentor to evaluate the collection for certification into their Plant Collections Network (PCN). This collection had mostly singular specimens of 27 of Alabama's 39 oak species. Seven years later, the Arboretum received full accreditation for its oak collection, and was functioning at a world-class level. A plant accessions database was built to allow for an acorn collecting program that was awarded grants, tracking of provenance information, and bringing in the missing 12 species of oaks. The attention to detail meant that the new specimens would maintain value for education, conservation, research, aesthetic value, and as any native tree does, become a functional part of the local ecosystem.



The Founders' Oak is known for being the 'heart' of the Davis Arboretum. It was planted 170 years ago, six years before the establishment of what is now Auburn University.

The arboretum's database now tracks more than 1,000 types of plants and over 3,000 individual specimens in the collection. The database received a huge boost in records when the university teamed up with Auburn's School of Forestry & Wildlife Sciences to map every tree on campus, including more than 900 trees with more than 4 inches diameter at breast height (DBH) in the Arboretum. "This project provided us with more detailed information than we ever could have collected on our own," said Thompson.

As part of this collection building, the arboretum has participated in a series of Tree Gene Conservation Grants funded by the APGA and the USDA Forest Service. These have been instrumental in strengthening the arboretum's oak collection:

- 2015, *Quercus oglethorpensis* surveys and collection with Morton Arboretum
- 2017, Quercus arkansana & Aesculus parvifolia surveys and collections with Missouri Botanical Garden
- 2018, *Quercus georgiana* surveys and collection with The Huntington and Chicago Botanic Garden

(Continued on page 28)

Davis Arboretum

(Continued from page 27)

• 2020, *Quercus boyntonii* surveys and collection with The Huntsville Botanical Garden

The only oak species native to Alabama missing from the arboretum collection is the bottomland post oak, *Quercus similis*.

"In 2008, shortly after building the framework for building the oak collection, we started to receive large donations of deciduous azaleas. These native azaleas have become our core shrub collection, with the Alabama Azalea, Rhododendron alabamense, as the flagship species," Thompson explained. In addition to the wild collected azaleas, the arboretum received hundreds of hybrid azaleas created by a group of dedicated Auburn gardeners and professors. These have been named the Auburn Azalea Series and have become a major fundraiser for the arboretum when sold at plant sales each spring and fall. The deciduous azalea collection was certified by the PCN in 2019.

In 2009, staff and faculty from Auburn's Department of Biological Sciences were invited to attend a meeting of the Georgia Plant Conservation Alliance to encourage a similar communication network, facilitating plant conservation in Alabama. The Alabama Plant Conservation Alliance (APCA) was born shortly after. It consists of semi-annual meetings and field trips bringing together the USDA Forest Service, U.S. Fish & Wildlife Service, Alabama Department of Conservation & Natural Resources, universities, gardens, private landowners, and organizations to help each other accomplish efficient plant conservation. This group works with about 20 of Alabama's rarest plants, doing their best to make sure the plants don't become extinct. The flagship species for the APCA is the Alabama canebrake pitcher plant, Sarracenia alabamensis. The Arboretum displays this species as well as all other native pitcher plants in hopes that it will become the next species certified by the PCN.

As the Davis Arboretum approaches its 50th anniversary in 2027, it is remarkable to reminisce on its progression after learning its history. While walking down trails, spotting the local wildlife that call the arboretum home, and admiring the living landmark itself, it is quite easy to forget that you are standing in the middle of the hustle and bustle of a college town.

A concept mentioned earlier is that of the 'Auburn Family.' This family includes, but is not limited to, a variety of elements such as the university's sports fans, athletic teams, faculty, student body, architecture, and iconic locations such as Toomer's Corner. The oak trees at the corner get the most notoriety, but I would argue that the foliage in the arboretum has received equal, if not more, care and attention. Regardless of who takes that crown, forestry is evidently an integral part of Auburn University's family, and the Davis Arboretum is a prime demonstration of what a community's capability and love for its environment can create.

There is no question that if more universities, municipalities, communities, organizations, and agencies across the country would unite in the efforts of conservation education, we could find ourselves in a much greener and healthier world.



Arboretum Specialist Patrick Thompson admires a scenic view of the Davis Arboretum's pond which provides a sanctuary for native aquatic species.



By Coleen Vansant, Public Information Manager, Alabama Forestry Commission

estructive and dangerous wildfires have been one of the major news items in recent months. Millions of acres of land and hundreds of homes have been destroyed in Western and Pacific states due to wildfire. Alabama has seen its share of wildfire activity as well with the 2016 and 2019 fall fire seasons.

Although we can determine that conditions are favorable for wildfires by looking at weather, rainfall, and the amount of available fuel that is present, we cannot predict exactly where a wildfire will occur. Therefore, it's important for homeowners to take responsible and defensive actions on their own to lessen the likelihood that their home is damaged or destroyed by a wildfire. The best way to do this is by creating an area of 'defensible space' around your house.

Defensible space is an area around your home that is landscaped in such a way that prevents fire from reaching your house. Fire uses vegetation as a pathway so by managing the vegetation around your home and property, you can stop or slow the progress of a wildfire before it reaches your home.

You shouldn't bet your house on the availability of a fire truck or a wildfire unit being available to protect your home and property. During times of high wildfire activity, resources are spread thin. A well-managed area of defensible space can give your property a fighting chance against damage or destruction from an approaching wildfire, even in the event fire services are not available. If fire services are present, it gives them a safe space to set up and do their job of defending your house.

Creating defensible space is basically strategic landscaping. It's managing flammable fuels around your house and property, removing highly flammable vegetation, and pruning or removing vegetation in both the horizontal and vertical plane in a way that

robs an approaching fire of available fuel. It doesn't mean bare soil! You can still have an abundance of trees, shrubs, and flowers in a defensible space zone!

When creating a defensible space around your home, think of 'zones.' Zone 1 is the immediate area around your house or other structures for a distance of 30 feet. Zone 2 is the area from 30-100 feet from your house, and Zone 3 is the area beyond 100 feet. All three zones should be increased as the slope of your property increases. In all three of these zones, your goal is to remove available fuel or create breaks in the continuity of fuel in and around your house or other structures.

Below are listed actions you can take in each of the three zones to create an effective defensible space around your house and on your property.

Zone 1 (The 30-foot area immediately around your house: the most important)

- Eliminate all flammable materials inside this circle. This includes firewood stacks, fuel cans, or ignitable items stored under the porch or deck. Firewood should be approximately 30 feet away from the house.
- Rake all leaves, pine straw, pinecones, dead flowers, and dry grasses from underneath decks and porches. Remove dead and dry leaves from your roof and gutters and within five feet from the house.
- Prune branches overhanging your house. Prune branches 10 feet away from your chimney and make sure your chimney

(Continued on page 30)

Make Your Home FIRESAFE

by Creating 'Defensible Space' Around It

(Continued from page 29)

has a spark arrestor. Keep limbs and branches pruned from power lines and decks.

- Do not allow shrubs around your house to touch or grow into the house either vertically or horizontally.
- Remove any vines or buildup of fuels on top of shrubs or in trees around the house. These vertical fuels are called 'ladder fuels' and they can easily catch fire and run into the treetops and onto your house.
- If you have a fuel tank near your house, consider moving it to Zone 2. If that's not possible, put a non-flammable material such as pea gravel or river rock underneath and around it to prevent fire from crawling around and underneath the tank.
- Replace flammable landscaping timbers or cross ties with non-flammable material such as stone or landscaping blocks.
 The same applies to flammable mulch such as pine straw, leaves, and pine bark; replace with pea gravel or river rock. If you feel you must have a natural mulch, stick with pine bark which is denser and holds more moisture.
- Keep grass mowed short and during dry periods, keep it green by watering frequently.
- Don't forget to clear vegetation from around fences, sheds, outdoor furniture, and play areas.
- Remove any highly flammable landscaping shrubs or plants (anything coniferous or waxy leafed) from the immediate area around your house and replace with less flammable species such as azalea, gardenia, boxwood, camelia, lilac, and blueberry.
- During times of high wildfire activity, remove flammable lawn furniture, umbrellas, and toys from around the house within the 30-foot zone.
- Again, this zone is the most important and should be maintained regularly. It will eventually become second nature to think 'firesafe' around your home.



A wildfire came a little too close for comfort to this home in Marengo County.



Zone 2 (The area 30 to 100 foot from your house or other structures: the yard)

- Remove shrubs from underneath trees that can carry fire up into the crowns (ladder fuels).
- Prune lower branches of mature trees to a height of 10 feet.
- Keep grass and vegetation mowed short and water regularly during dry periods.
- Thin trees in this zone to a 10-foot separation between trees, or plant trees in small clumps surrounded by a non-flammable material (river rock or pea gravel).
- Develop these zones around each building on your property, including detached garages, storage buildings, barns, and other structures.
- Remove any brush piles or other piled or stacked flammable objects.

Zone 3 (Beyond 100 feet from your house - not everyone has a zone this far)

 Reduce available fuels by thinning and pruning vegetation horizontally and vertically.

Other Things to Consider

Rising hot air and winds can carry embers and other burning materials up to several miles away. Many times, hot embers from a fire a long distance away fall into dry vegetation on top of or around a house causing homes and other structures to be lost or damaged. This is why it is so important to remove any dried flammable material from on top of and around your house, decks, and porches.

Don't wait until you smell smoke to take defensive action to protect your home from wildfire. By then it will be too late. Now is the time to develop your defensive plan to protect your home and property from being damaged or destroyed by a wildfire. Defensible space zones should be created around each building on your property including detached garages, storage buildings, barns, or other structures.

Consider utilizing 'hardscaping' such as gravel or paver paths through your yard. These paths can act as a break in fuel in the event of a wildfire.

If you would like more information or assistance in identifying areas of concern regarding the fire safety of your home, contact your local Alabama Forestry Commission office.





Alabama's TREASURED Forests 513 Madison Avenue P.O. Box 302550 Montgomery, Alabama 36130-2550

CHANGE SERVICE REQUESTED

PRESORTED STANDARD U.S. POSTAGE PAID MONTGOMERY AL PERMIT NO 275



By Coleen Vansant, Public Information Manager, Alabama Forestry Commission

irewise USA is a program sponsored by the National Fire Protection Association that brings all elements of a community together to develop and implement strategies which will protect that community from the threat and loss from wildfire. This voluntary program provides a framework to help neighbors get organized, find direction, and take action to increase the ignition resistance of their homes and community.

The Firewise USA recognition program enables communities in all parts of the United States to achieve a high level of protection against wildland/urban interface fire. There are currently 1,500 Firewise certified communities across the United States, with one certified community in Alabama: Alapine in Cherokee County.

The program's goal is to encourage and acknowledge actions that minimize home and property loss to wildfire. Firewise USA promotes community-wide participation in the use of technology, policy, and practices that reduce the loss of life and property to wildfire, independent of firefighting efforts. Adequately prepared, a house can withstand a wildland fire without the intervention of the fire service.

The Firewise program teaches communities to prepare for a fire before it occurs. It adapts especially well to small communities, developments, and residential associations of all kinds. Community participants are assisted with creating an action plan that helps them sustain a wildfire mitigation program which is generally both physically doable and cost-effective.

BECOMING A FIREWISE COMMUNITY

Being Firewise begins with the homeowner and community leaders. The Firewise USA standards are designed and main-

tained to give a community maximum flexibility in creating the best plan they can for their individual community. Below are the five requirements to become a recognized Firewise USA community.

- Complete a community assessment and create a plan that identifies agreed-upon achievable solutions to be implemented by the community. Someone with your local Alabama Forestry Commission county office can help you with this.
- Create a local board or committee that maintains the Firewise USA program and tracks its progress or status. This board or committee is comprised of local residents.
- Observe a 'Firewise USA Day' each year that is dedicated to a local Firewise project or fire prevention education.
- Invest a minimum of \$2.00 per capita annually in local Firewise projects. (Work by municipal employees and the use of municipal or other equipment can be included in this total, along with any time contributed by residents and other volunteers. State and federal grants dedicated to that purpose can also apply.)
- Submit an annual report to Firewise USA which documents continuing compliance with the program.

Firewise USA is a helpful tool in bringing a community together to develop and implement strategies to keep them from being the victims of wildfire.

If you are interested in learning more about Firewise USA, contact Coleen Vansant, Alabama Forestry Commission Firewise USA State Coordinator, or any Alabama Forestry Commission county office.