

Forests for **GEORGIA** *for Forests*

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These institutions are equal opportunity providers.

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An aerial photograph showing a winding river cutting through a vast, dense forest of lush green trees. The river is dark and reflects the surrounding foliage. The forest is thick and covers the entire landscape, with the river meandering through it from the top right towards the bottom left.

Two out of every three raindrops that fall in Georgia

land on the lush canopy of trees that blanket the state. Under that canopy, we breathe in the great outdoors while hiking, fishing, birdwatching and more. Beyond their beauty, those trees are hard at work for Georgia. They give us clean water, clean air and a prosperous economy. Working together, we all can ensure that they - and we - continue to thrive.



Executive Summary

Georgia is an ideal place to live and work - offering a quality of life that is unmatched. We are business friendly, benefit from a temperate climate and boast world class recreational and cultural experiences. Key to this way of life is the state's robust forest industry, which supports our economy, natural resources and recreational opportunities.

In addition to filtering our water and cleaning our air, Georgia's 24 million acres of forests support 148,414 jobs and provide \$36.3 billion in economic value. Both the vast acres of forest that span rural Georgia and trees that shade our suburban parks and line our city streets require careful management and investment.

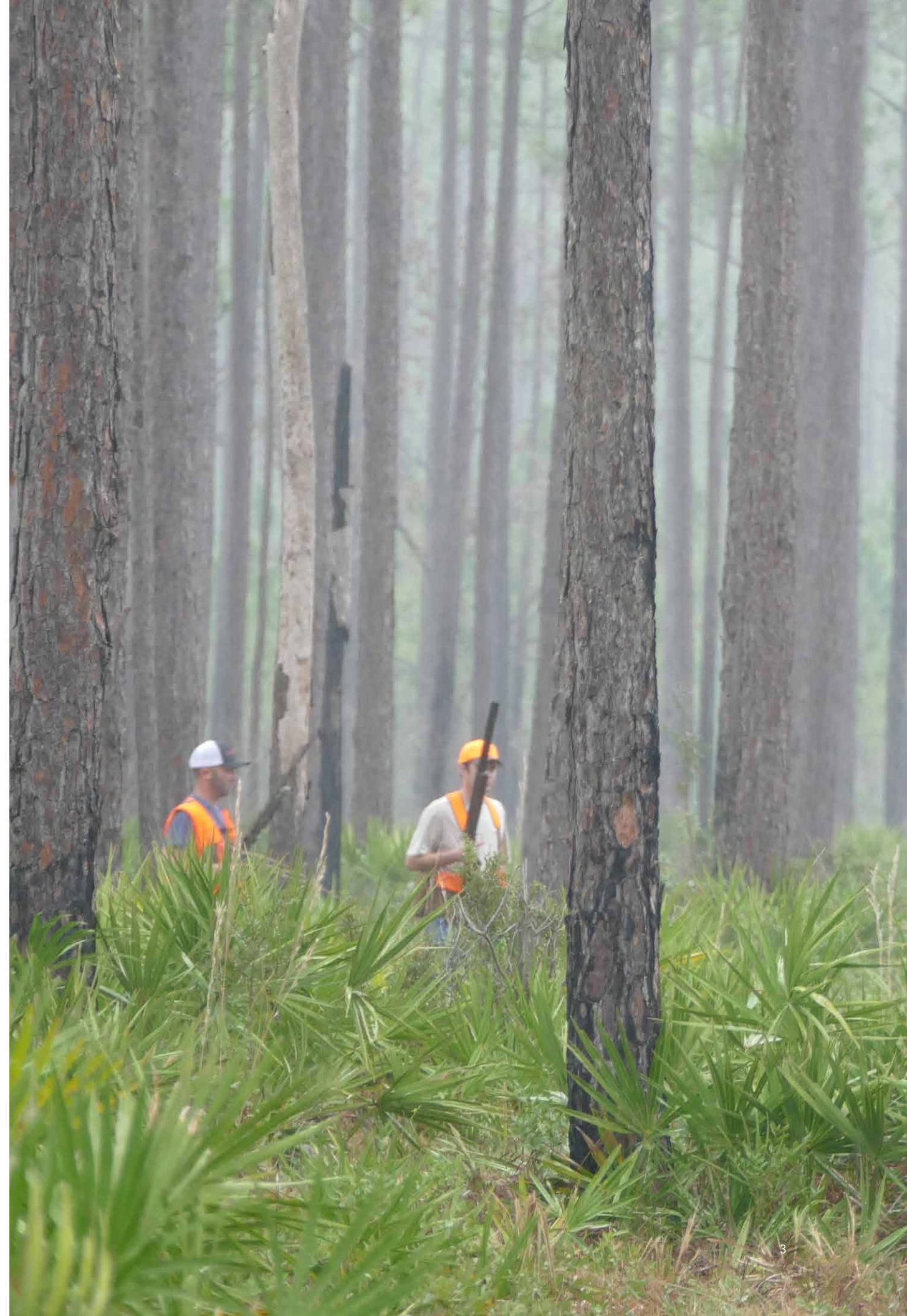
Georgia has more acres of privately owned timberland than any other state in the nation, but many Georgians don't see working forests in their daily lives. So, the environmental and economic importance to our state may not be obvious. Working forests are like tree farms. These trees are planted for harvest

and replanted like other crops. Along the way, those trees produce clean air and clean water, capture carbon and provide jobs—lots and lots of jobs.

Most of the trees covering our state are, in fact, planted, harvested and replanted on farms owned by private landowners. So, like any other crop, it is important for the people who plant those trees to have markets to sell them when they are harvested. From paper and houses to furniture, many of the products you use come from trees.

The whole cycle—from planting and harvesting through use and replanting—is remarkable. It is also fragile. As our state urbanizes and suburbanizes, there is more pressure to develop land. We have a vested interest in ensuring that public policy and healthy markets support the growth and regrowth of trees across Georgia's countryside, suburban landscapes and in our cities.

Georgia has more private acres of forest than any other state. The state's forested acreage has remained about **24 million acres** since the 1950's.





Forests for Georgia's Economy

Georgia's population is increasing at record rates. Within 25 years, the number of people calling our state "home" is expected to jump from 10 million to almost 15 million. As we monitor the impacts of that growth, it is prudent to pay special attention to its effect on vital natural resources, including the state's water, air and wildlife. The one critical link that impacts the health of each of these resources is Georgia's 24.6 million acres of forest land. —Georgia's Sustainable

Forests: A Resource for All Generations

ECONOMIC IMPACT

As the top forestry state in the nation, Georgia's trees are an economic powerhouse. The industry generated more than \$36 billion and supported more than 148,000 jobs throughout the economy in 2018. That's more than both the film and automotive industries in the state.

Georgia is home to the world's largest wood rosin plant, the world's largest wood pellet plant, the world's largest crude tall oil bio-refinery and North America's largest recycled paper mill.

Working forests impact communities across the state, with 83 of Georgia's 159 counties boasting at least one primary wood-using mill. Nearly 200 mills across the state produce primary wood products such as lumber, veneer, poles and posts along with wood pulp and wood pellets, which are used to produce energy. More than 1,000 secondary mills further process the primary products into furniture, paper products, cabinetry and more.

According to a recent Georgia Tech study, industry job growth has been increasing for the past seven years - directly supporting 55,089 forestry jobs with compensation totaling 4.0 billion. Pulp and paper products are the largest segment of the industry, with 61 percent of revenue and 36 percent of jobs in 2018.

The industry also provided a significant contribution to the state tax base, with \$977 million in gross tax revenue. Georgia's urban and community forestry companies generated an additional \$4 billion of economic activity in 2017.

Strong markets for forest products are crucial to the future of traditional pulp and paper, lumber and pole supplies.



FORESTS IMPACT ON GEORGIA'S ECONOMY:

55,089
FOREST JOBS
DIRECTLY
SUPPORTED

**\$4.0
billion**
IN COMPENSATION

**\$36.3
billion**
GENERATED



RECREATION

Deeply inhale the crisp air. Hear the gurgle of a stream or the chirp of the brown thrasher, Georgia’s state bird. Head out for a strenuous five-mile hike on a wooded path. Forests provide the ultimate green space for thousands of

Georgians and out-of-state visitors who enjoy our forests every year.

The world-renowned Appalachian Trail, or AT, begins at Georgia’s Springer Mountain. Dozens of lakes across Georgia provide expansive beauty and respite along with

swimming and boating. Georgia offers anglers a wide variety of opportunities, from trout streams to bass fishing. From city parks to mountain trails, Georgia’s trees provide extensive and varied opportunities for outdoor activity while supporting healthy people and healthy communities across the state. Forests contribute to a high quality of life for all those who call Georgia home and the millions who visit the state each year.

Outdoor recreation is also big business in the state. About 400,000 Georgians hunt and more than twice as many fish, bringing in \$5.5 billion and supporting 40,000 jobs.

Biomass Industry

Biomass energy is a renewable, carbon neutral energy source generated from organic materials. The residual materials from forestry management and mills, including logging residue, sawdust and small diameter trees from timber harvests, are used to create biomass energy.

In 2016, biomass and waste fuels generated 71.4 billion kilowatt hours of electricity, according to the U.S. Energy Information Administration.

This makes up 2 percent of total electrical generation in the country. The market for clean energy is expanding, which means that biomass plants present a growing opportunity for both the forest and energy industries.

More than a dozen bioenergy plants have been built in Georgia since 2007 and that number is expected to increase. As of 2018, there are 10 wood pellet mills and four biomass electricity

plants in Georgia. Other companies in the state are investing in research and development focused on innovative technologies to expand and improve efficiencies in the market.



UP CLOSE: BILL DE ST. AUBIN

Bill de St. Aubin loved to build tree forts as a kid. His family always lived near trees and forests and he grew up with a love of the outdoors and an appreciation for both the majesty of the forest and the opportunities for adventure within.

As a young architect he was particularly interested in buildings that maximize peoples’ experience of nature while protecting the impact of buildings on natural resources. His Master’s thesis discussed the use of natural light and he incorporates renewable sources such as daylight and cisterns in many of his projects.

de St. Aubin, now the CEO of Atlanta-based Sizemore Group, has 30 years experience designing healthy sustainable environments and is a strong advocate for using mass timber in building projects. Mass timber is an emerging approach to buildings that incorporates timber panels for wall, floor, column and roof structures.

Mass timber is an excellent option, according to de St. Aubin, because it is stronger than concrete and steel by weight, is affordable and provides a warm natural aesthetic when the beauty of the wood structure is left exposed. In addition, mass timber helps decrease the carbon footprint of construction. He also recognizes that a healthy industry for forest products provides a financial incentive for owners to continue growing trees on their land – which in turn benefits all of us in the form of environmental benefits such as carbon capture and water filtration.

“I am focused on designing structures that use natural materials and bring the outdoors inside,” said de St. Aubin. “Mass timber offers a way to do that both structurally and aesthetically. And as the use of mass timber in construction increases, Georgia has a real opportunity to be on the leading edge.”



Bill stands in the Sizemore Group’s office on Marietta Street in Atlanta. The remodeled office building was constructed in 1905. The exposed heavy timbers from the original building add a unique feel to the office environment.



Forests for Georgia's Environment

SUPPORTING OUR ECOSYSTEM

Just beneath the surface of a serene and peaceful forest there is a tremendous amount of hard work happening quietly and mostly unnoticed. Without fanfare, forests keep our air clean. They filter our water. They absorb carbon dioxide. They help control erosion. And they offer habitats for wildlife.

The University of Georgia estimates that forests provide \$37.6 billion worth of environmental services for Georgians, cleaning our air and water each year. That value comes from water quality, carbon sequestration and wildlife habitat.

Carbon sequestration takes place when trees absorb carbon dioxide from the atmosphere, storing it in their branches, trunks, roots, leaves and in the soil of forest floors when trees die and decay. This process can help combat climate change. Georgia's forests sequester between one and four tons of carbon per acre each year, offsetting approximately eight percent of the state's emissions.

Georgia's Carbon Sequestration Registry, established in 2004, enables forest owners to voluntarily report projects that promote sequestration. The registry helps raise the profile of projects and participants. To make an increased impact, the state could pass a

greenhouse gas policy that includes forest-based offset projects. When forest owners have the opportunity to benefit from the ecosystem services provided by their property, they are less likely to convert the land for other uses that may offer greater financial incentives.

Many of the thousands of Georgia's streams flow through forestlands. These forest streams filter and purify water for millions of Georgians. Water produced by these forest streams is much less expensive to treat at municipal treatment plants than streams flowing from land used for other purposes. The estimated 7,000 forestry operations conducted on some 800,000+ acres per year statewide highlight the importance of following Best Management Practices (BMPs) to protect these water resources.

It is important for all Georgians to protect and support the ecosystems that support and protect us.

HEALTHY HABITATS

From deer and foxes to toads and hawks, Georgia's forests are home to thousands of wildlife species - including many that are at risk for extinction. In fact, Georgia ranks eighth among states for the number of species that are at risk and fifth in the number of extinctions. Experts have



FORESTS IMPACT ON GEORGIA'S ENVIRONMENT:

\$37.6 billion
IN ENVIRONMENTAL SERVICES SUPPORTED

APPROXIMATELY **8%**
OF THE STATE'S EMISSIONS OFFSET BY FORESTS

93.2
STATEWIDE BMP IMPLEMENTATION



identified nearly 300 animal species and nearly 325 plant species that need protection.

Forestry management tools for wildlife and ecosystem conservation include prescribed fire plans, minimizing the loss of forest lands and management of invasive and alien species. Fires are both natural and necessary for long term sustainability and ecosystem health. Planned fires are an important tool to support that health while minimizing damage.

The sustainability of Georgia’s wildlife, particularly the endangered species, depends on public and private conservation lands and public policies that support forest protection and professional management.

What are BMPs?

Best Management Practices (BMPs) are practical steps for managing forests in a way that protects and preserves our natural resources. These guidelines include specific instructions for forestry professionals aiming to conserve and protect water and natural habitats. For example, BMPs include guidance for how to manage land adjacent to water sources such as lakes, ponds, streams and rivers. There is specific guidance for managing trout streams, floodplains, wetlands and other land and water types. Georgia’s BMPs are aligned with the EPA’s Water Quality Standards Handbook. They have been in place since 1981, with the most recent update released in 2019. Thanks to significant educational efforts and training, statewide BMP implementation is an impressive 93.2 percent.



Georgia Water Ways Impacted by Forests:

44,056 miles of perennial streams	23,906 miles of intermittent streams	603 miles of ditches and canals	14 major river basins
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UP CLOSE: KENNETH WATKINS

Kenneth Watkins always knew he’d be a logger – a job he has enjoyed for the past 45 years. That’s because logging runs in the family. His father and older brother ran the family logging business before him and he’s hoping that his own son will take over when he’s ready to retire. Watkins has been running things since 1992.

In the mid-90s, Watkins was introduced to Georgia’s Best Management Practices (BMPs) for forestry when the mills he worked with began asking loggers to follow them. Since then, he’s continued to learn more each year, taking classes at least twice each year.

Watkins is grateful for the way BMPs helped him understand how to harvest trees in a way that cares for our water resources.

The BMPs include Streamside Management Zones (SMZs), which are buffer strips of trees alongside streams or other waterways that protect the health of the water. SMZs provide shade that buffers water temperatures, a filter for sediment, travel corridors for wildlife and protection from erosion.

“Before the BMPs, we would cut trees right up to the water’s edge, which speeds erosion leaving holes where the water washes away the banks of waterways,” said Watkins.

Another key component of the BMPs are detailed requirements for water crossings during the harvest process to avoid water contamination and sedimentation. Through careful planning and operating stream crossings, Watkins and other loggers using the BMPs protect our wildlife and our water quality from negative impacts of logging operations.

Watkins values what he learned through the BMP classes. He said, “I’m proud to help make sure that our water is clean and clear and that wildlife continues to thrive for future generations.”



Kenneth takes a break from a logging job in middle Georgia. For him, forestry is more than a job, it is a way of life and a part of his heritage.

BMP Training

SFI certified mills require that loggers participate in the state’s logger education program. These classes, provided by tech colleges, mills, logger associations and more, are administered by the Georgia SFI Implementation Committee.



Georgia's Policies for our Forests

Government policies have a big impact on the forest industry. Policies should support the long term well being of this industry that provides so many economic and environmental benefits across the state.

VALUATIONS AND TAX STRUCTURE

Property tax policies for forest lands have a significant impact on decision making by owners. Two Georgia laws provide tax benefits for forest conservation: Conservation Use Valuation Assessment in 1991 (CUVA) and the Forest Land Protection Act in 2008 (FLPA). Each of these laws provide for ad valorem tax exemptions for forestland that will be preserved as such for a decade or 15 years respectively. Nearly half of Georgia land (47 percent) was enrolled in these programs from 2009-2012.

In 2018, Georgia voters approved "Amendment 3" to the state constitution to make the valuation of forest lands more uniform across the state. It will continue to be important that counties across Georgia administer the valuation and tax laws consistently. Fair valuations, consistency across the state and conservation incentives will help ensure that Georgia continues to benefit from the ecosystem services and the jobs and industry that support our economy.

TIMBER SECURITY

Supporting forest landowners by providing protection from timber theft is important for ensuring the long-term sustainability of Georgia's forests. Since 2014, Georgia's timber security has been more rigorous with the passage of House Bill 790. The Georgia Forestry Commission (GFC) is responsible for enforcing timber security in the state. Since 2014, GFC has investigated 483 complaints resulting in \$413,434 of recovered damages to date (with many additional complaints pending judgment).

NATURAL DISASTER RESPONSE

Forestlands are continually at risk for damage due to natural disasters. Most recently, more than two million acres of Georgia forests were impacted by Hurricane Michael in October 2018. The value of this damage was estimated at \$762,683,909 and meant generational losses for many of the state's private landowners.

Georgia's state leadership responded by passing emergency legislation (HB 1EX and HB 14EX) that provided \$270 million for relief. The funds were directed to a tax relief program for forest landowners as well as cleanup efforts and heavy firefighting equipment. Landowners are required to reforest their land in order to be eligible for the tax relief program. This kind of swift action in support of the forestry community will continue to be important in coming years.



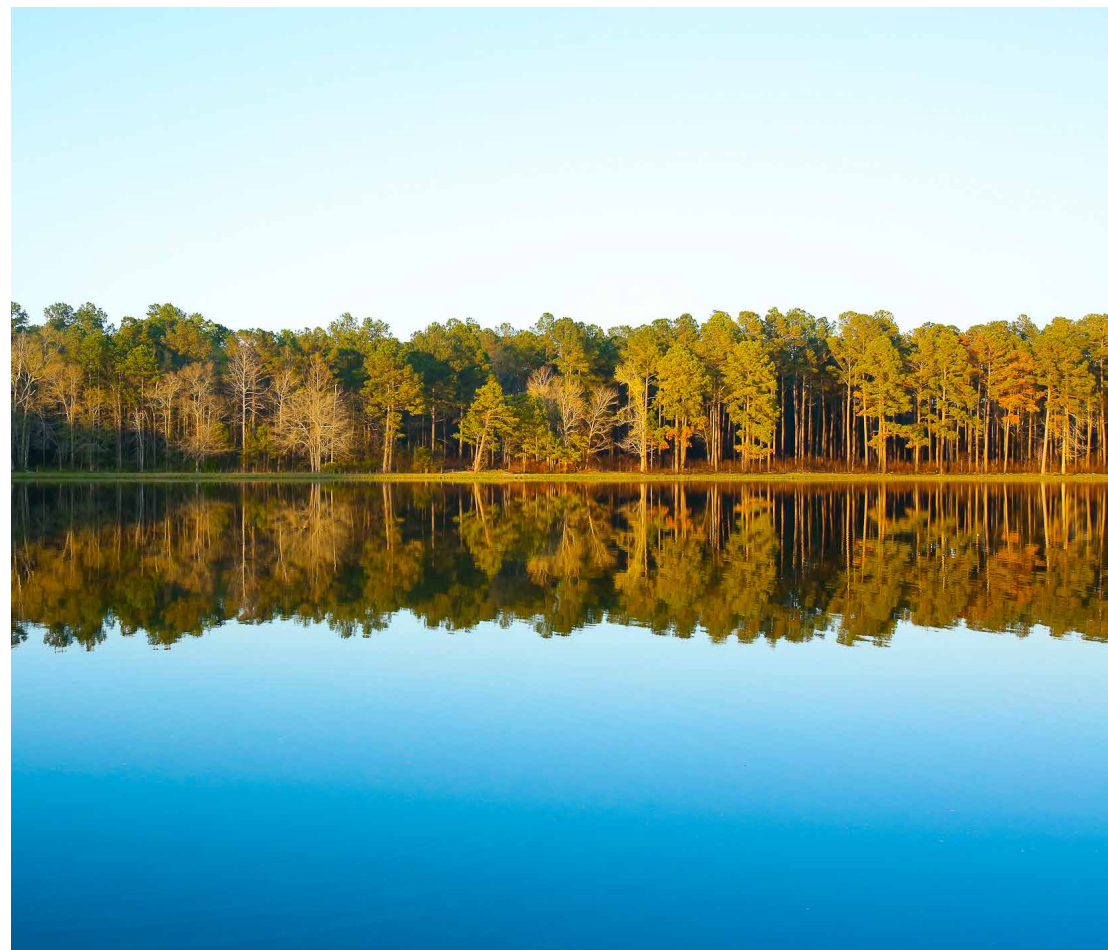


Forest certification programs

The market for responsibly sourced forestry products is driving an increase in forests that are certified as sustainable. The Sustainable Forestry Initiative (SFI), the American Tree Farm System (ATFS), and the Forest Stewardship Council (FSC) are the forest certifications used in the United States. Forest owners can achieve these certifications by enlisting third-party verification of their sustainable forestry management practices as outlined by the respective organization.

In addition to forest owners, many manufacturers and other users of wood products want to demonstrate that their input materials are responsibly and sustainably grown. SFI's Fiber Sourcing Standard allows these non-forest owners to seek third-party verification that their raw materials come from legal and responsible sources, whether or not the forests are certified.

(Disclosure: this report is funded in part by SFI).



UP CLOSE: HEIRS PROPERTY

Picture this: you own 1/24 of a plot of forested land. The rest is divided between members of your family—scattered across the country. Who is in charge of paying property taxes? How do you get a loan to invest in the property or use it as collateral for other investments? These are just some of the challenges of what is called Heirs property.

Heirs property is created when a landowner dies without a will and their property is divided in even parts among their heirs. According to a 2017 report, 72,583 acres in just 10 Georgia counties is Heirs property, with an estimated value of \$2.15 billion.

“Scale that to 159 counties, and we’re looking at \$34 billion in acreage that is essentially frozen capital,” says Delene Porter, chief operating officer at the Georgia Heirs Property Law Center (GHPLC). “If you don’t have that clear title, it makes it impossible for you to manage your land as though it were an asset, rather than a liability.”

Heirs property is a particular challenge for the African American community because of discriminatory land ownership policies that date back before the Civil War and continue long afterwards. According to the US Department of Agriculture, Heirs property is the leading cause of involuntary land loss among African Americans.

Non-profits such as the GHPLC have been established to help untie the legal knots of Heirs property. They are also providing valuable information to Heirs owners through the Georgia Landowners Academy, which recently concluded its fifth session. This course offers owners of 10 or more acres the opportunity to learn about harvesting and reforestation, effective marketing and record keeping, and managing their private forest for maximum benefit. The subject matter may be difficult but participants leave feeling more confident.



Matilda Rimes is a small family landowner from Liberty County. She is involved in the Sustainable Forestry and Land Retention Program made possible by the U.S. Endowment for Forestry and Communities. The program improves forest management by connecting African American landowners to established networks of forestry support including federal and state government programs, businesses, and nonprofit conservation, legal, and community development organizations.

THREATS TO FORESTS

Georgia forests face a number of threats that will require attention from policy-makers in the coming years. These include:

- **Logging Infrastructure:** significant investment in infrastructure that supports the logging industry will be necessary to provide good paying industry jobs that contribute to Georgia's economy.
- **Wildfires:** support for prescribed fires and wildfire suppression are among the necessary ways that forestry professionals support public safety and fire prevention.
- **Pests and Invasive Species:** from southern pine beetle and kudzu, these natural threats require constant monitoring and suppression when necessary. The Georgia Forestry Commission is charged with combating these challenges.
- **Urbanization:** According to the US Forest Service assesment, urbanization and fragmentation are the biggest threats to forests in the Southern US.

SFI CERTIFICATION