

Sustainable Forestry Information for Georgia Landowners





The Sustainable Forestry Initiative® (SFI)



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Contact these SFI® Program Supporters in Georgia for more forestry information and technical assistance:

- Georgia Department of Natural Resources – www.georgiawildlife.org
- Georgia Forestry Commission – www.gatrees.org
- UGA Warnell School of Forestry and Natural Resources – www.warnell.uga.edu

For the full list of Georgia's SFI-certified companies, supporting organizations, and more sustainable forestry information, please visit sfi-georgia.org

Glossary of SFI® and Forestry Terms

afforestation: The establishment of a forest or stand in an area where the preceding vegetation or land use was not forest.

American Tree Farm System® (ATFS): A national *program* that promotes the sustainable management of forests through education and outreach to private forest landowners.

best management practices (BMPs): A practice or combination of practices for *protection* of water quality that is determined by a federal, provincial, state, or local government or other responsible entity, after problem assessment, examination of alternative practices, and appropriate public participation, to be the most effective and practicable (including technological, economic and institutional considerations) means of conducting a forest management operation while addressing any environmental considerations.

biological diversity, biodiversity: The variety and abundance of life forms, processes, functions, and structures of plants, animals and other living organisms, including the relative complexity of species, communities, gene pools and ecosystems at spatial scales that range from local to regional to global.

certified forest content: Raw material from lands third-party certified to acceptable forest management standards.

certified sourcing: Raw material sourced in conformance with all appropriate SFI requirements

acceptable forest management standards: These standards are all endorsed in the United States by the Program for the Endorsement of Forest Certification schemes (PEFC).

- SFI 2015-2019 Forest Management Standard
- American Tree Farm System (ATFS) individual and group certification

conservation: 1. Protection of plant and animal habitat. 2. The management of a renewable natural resource with the objective of sustaining its productivity in perpetuity while providing for human use compatible with sustainability of the resource.

illegal logging: Harvesting and trading of wood fiber in violation of applicable laws and regulations in the country of harvest.

critically imperiled: A plant or animal or community, often referred to as G1, that is globally extremely rare or, because of some factor(s), especially vulnerable to extinction. Typically, five or fewer occurrences or populations remain, or very few individuals (<1,000), acres (<2,000 acres or 809 hectares), or linear miles (<10 miles or 16 kilometers) exist.

culturally important: Having significance for or being representative of human activities or beliefs (e.g., documented areas such as cemeteries, sacred sites).

economic viability: The economic incentive necessary to keep forest ownerships profitable and competitive, and to keep people gainfully employed.

ecosystem services: Components of nature, directly enjoyed, consumed or used to yield human well-being.

fiber sourcing: Acquisition of roundwood (e.g., sawlogs or pulpwood) and field-manufactured or primary-mill residual chips, pulp and veneer to support a forest products facility.

forestry: The profession embracing the science, art and practice of creating, managing, using and conserving forests and associated resources for human benefit and in a sustainable manner to meet desired goals, needs and values.

forests with exceptional conservation value: Critically imperiled (G1) and imperiled (G2) species and ecological communities.

critically imperiled: A plant or animal or community, often referred to as G1, that is globally extremely rare or, because of some factor(s), especially vulnerable to extinction. Typically, five or fewer occurrences or populations remain, or very few individuals (<1,000), acres (<2,000 acres or 809 hectares), or linear miles (<10 miles or 16 kilometers) exist.

imperiled: A plant or animal or community, often referred to as G2, that is globally rare or, because of some factor(s), is very vulnerable to extinction or elimination. Typically, six to 20 occurrences, or few remaining individuals (1,000 to 3,000), or acres (2,000 to 10,000 acres or 809 to 4,047 hectares), or linear miles (10 to 50 miles or 16 to 80.5 kilometers) exist.

habitat: 1. A unit area of environment. 2. The place, natural or otherwise (including climate, food, cover and water) where an individual or population of animals or plants naturally or normally lives and develops.

invasive exotic plants and animals: Species introduced from another country or geographic region outside its natural range that may have fewer natural population controls in the new environment, and often becomes a pest or nuisance species.

landscape: A spatial mosaic of multiple ecosystems, landforms and plant communities across a defined area irrespective of ownership or other artificial boundaries and repeated in similar form throughout.

long-term: Extending over a relatively long time period – for the SFI 2015-2019 Standards, this means the length of one forest management rotation or longer.

minimize: To do only that which is necessary and appropriate to accomplish the task or objective described.

native: Species of ecological communities occurring naturally in an area, as neither a direct or indirect consequence of recent human activity.

non-forested wetland: A transitional area between aquatic and terrestrial ecosystems that does not support tree cover and is inundated or saturated for periods long enough to produce hydric soils and support hydrophytic vegetation.

natural regeneration: Establishment of a plant or a plant age class from natural seeding, sprouting, suckering or layering.

old-growth forests: A forested ecosystem distinguished by old trees and related structural attributes, such as tree size, down woody debris, canopy levels, and species composition.

planting: The establishment of a group or stand of young trees created by direct seeding or by planting seedlings or plantlets.

policy: A written statement of commitment to meet an objective or to implement a defined program or plan to achieve an objective or outcome.

principle: In the SFI program, the vision and direction for sustainable forest management as embodied in the principles of the SFI 2015-2019 Standards.

program participant: An organization certified by an accredited certification body to be in conformance with the SFI 2015-2019 Forest Management Standard, and/or SFI 2015-2019 Fiber Sourcing Standard and/or SFI 2015-2019 Chain-of-Custody Standard.

protection: Maintenance of the status or integrity, over the long term, of identified attributes or values including management where appropriate and giving consideration to historical disturbance patterns, fire risk and forest health when determining appropriate conservation strategies.

qualified logging professional: A person with specialized skills in timber harvesting gained through experience or formal training who has successfully completed wood producer training programs and continued education

requirements recognized by SFI Implementation Committees.

qualified resource professional: A person who by training and experience can make forest management recommendations. Examples include foresters, soil scientists, hydrologists, forest engineers, forest ecologists, fishery and wildlife biologists or technically trained specialists in such fields.

riparian area: Transition zone characterized by vegetation or geomorphology adjacent to rivers, streams, lakes, *wetlands* and other water bodies.

SFI certification: A systematic and documented verification process to obtain and evaluate evidence objectively to determine whether a Program Participant's SFI program conforms to the requirements of SFI 2015-2019 Standards and Rules.

SFI Implementation Committee (SIC): A state, provincial or regional committee organized by SFI Program Participants to facilitate or manage the programs and alliances that support the growth of the SFI program, including sustainable forest management.

silviculture: The art and science of controlling the establishment, growth, composition, health and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

special sites: Sites that include geologically unique or culturally important features.

stand: A contiguous group of trees sufficiently uniform in age, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

sustainable forestry: To meet the needs of the present without compromising the ability of future generations to meet their own needs by practicing a land stewardship ethic that integrates reforestation and the managing, growing, nurturing and harvesting of trees for useful products

and ecosystem services such as the conservation of soil, air and water quality, carbon, biological diversity, wildlife and aquatic habitats, recreation and aesthetics.

Sustainable Forestry Initiative Inc. (SFI): SFI Inc. is a 501c(3) non-profit charitable organization, and is solely responsible for maintaining, overseeing and improving the Sustainable Forestry Initiative program. SFI Inc. directs all elements of the Sustainable Forestry Initiative program including the SFI Standard(s), including forest management, fiber sourcing and chain-of-custody certifications, and labeling and marketing. SFI Inc. is overseen by a three-chamber board of directors representing social, environmental and economic sectors.

third-party certification: An assessment of conformance to the SFI 2015-2019: Standards and Rules conducted according to the requirements of SFI Section 9 SFI 2015-2019 Audit Procedures and Auditor Qualifications and Accreditation, and ISO 19011 by a qualified certification body.

threatened and endangered: Listed under The U.S. Endangered Species Act or The Canadian Species at Risk Act and listed under applicable state or provincial laws requiring protection.

visual quality: The seen aspects of both the land and the activities that occur upon it.

visual quality management: Minimization of the adverse visual effects of forest management activities.

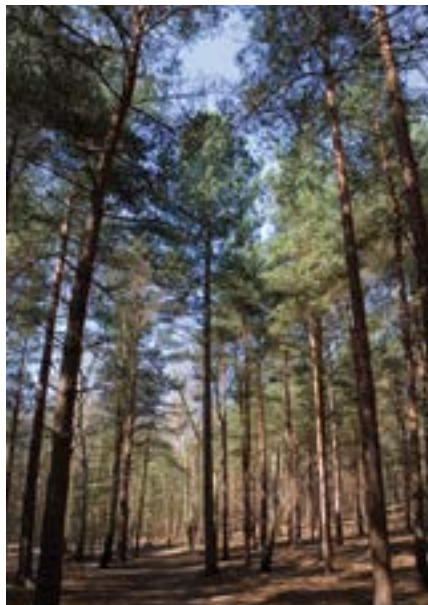
wood and fiber supply area: The geographic area from which a Program Participant procures, over time, most of its wood and fiber from wood producers.

wood producer: A person or organization, including loggers and wood dealers, involved in harvesting or regularly supplying wood fiber directly from the forest for commercial purposes.



The Sustainable Forestry Initiative® (SFI)

This forest landowner information packet is provided by the Georgia Sustainable Forestry Initiative® (SFI) Implementation Committee. So what is SFI and why should you care about the SFI program? Below are answers to basic questions about the SFI program and what it means for you as a consumer and as a forest landowner.



What is SFI?

The SFI program is a forest and forest products certification program whose participants manage their land in a way that combines the perpetual growing and harvesting of trees with the protection of wildlife, plants, and soil and water quality. For a forest owner or forest products manufacturer to be SFI-certified, it must pass independent audits to verify compliance with SFI's high standards.

SFI-certified product labeling provides consumers with assurance that they are buying wood and paper products from well-managed forests, backed by rigorous third-party certification audits. The SFI program provides a means for foresters, landowners, loggers, and wood and paper producers to satisfy the growing demand of the American people for environmentally sound forestry while still producing—at an affordable price—the forest products upon which people rely. The SFI program balances responsible environmental practices and sound business practices to benefit all stakeholders.

The SFI Standards are requirements that SFI-certified companies and landowners must follow to provide assurances of sustainable forest management or fiber sourcing (wood procurement). The standards include measures requiring program participants to protect and maintain long-term forest and soil productivity, conserve biological diversity, support training programs for loggers, and monitor the use of forestry best management practices, among other things. The SFI program is science-based, and the standards were developed specifically for the U.S. and Canada to complement the respective social conditions and regulatory framework.

Who is SFI?

SFI Inc.—an independent, non-profit organization—is responsible for maintaining, overseeing and improving the SFI program and SFI Standard. The SFI program's unique grassroots network of SFI Implementation Committees, like the one in Georgia, facilitate collaborative sustainable forest management activities on a state (U.S.), province (Canada), or regional level. The Georgia SFI Implementation Committee includes approximately 35 SFI-certified companies operating in Georgia and supporting organizations including the Georgia Forestry Commission, Georgia Department of Natural Resources, UGA Warnell School of Forestry and Natural Resources, Georgia Forestry Association, and other natural resource-focused supporting organizations.



How does the SFI program benefit you as a Georgia landowner?

Private individuals like you own more than 56 percent of Georgia's forestland. The Georgia SFI Implementation Committee values the contributions of family forest owners and wants to provide you with the resources that will help you sustain your forests today and for the future. The SFI program has been making a positive difference in Georgia forests since 1995. A few notable accomplishments of the SFI Committee in Georgia include:

- Helped train (and continue to train) over 1,500 loggers, foresters, and others on sustainable forestry practices and Georgia's Forestry Best Management Practices;
- Annually provide sustainable forestry information to more than 10,000 family forest owners like you; and
- Apply SFI principles on millions of acres of SFI Program participant lands in Georgia and beyond through the wood procurement activities of SFI certified mills in Georgia.

SFI provides global market access to family forest owners through recognition by the American Tree Farm System® (ATFS). ATFS recognizes and validates family forest owners for their work and commitment to sustainable stewardship of their land.

As a landowner, when you seek forestry advice or sell your timber, it should give you assurance that sustainable forestry practices will be followed when you work with a forestry or logging professional who is associated with SFI.

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The Sustainable Forestry Initiative® (SFI)

How can I support SFI?

Buy responsibly. Whenever you shop—look, ask, buy SFI. You can find the SFI on-product label on a wide range of items you buy for the home, office and everyday life. Whether it is tissue paper, copy paper, packaged products, or paper cups and plates for your upcoming party, look for the SFI label. If you don't see the SFI label, ask your supplier to start stocking it. Taking these steps means you are supporting responsible forestry today and in the future.

Consider certifying. Sustainable forest management doesn't require certification but choosing to certify is a public demonstration of commitment to sustainable forestry. SFI certification is an option for any forestland owner, though American Tree Farm System (ATFS) may be more appropriate for woodland owners with less than 10,000 acres. Since 1941, the ATFS, has educated and recognized the commitment of small landowners that share a commitment to protect wildlife habitat and watersheds, to conserve soil, and to provide recreation for their communities while producing wood. The SFI program collaborates with ATFS to increase forest certification on family forest lands.

Learn More

- SFI North America: www.sfiprogram.org
- SFI in Georgia: www.sfi-georgia.org or by calling 706-542-7691
- Tree Farm in Georgia: www.gfagrow.org/forest-certification-program or by calling 478-972-7899





Qualified Professionals

Consider working with qualified professionals to help meet your personal forest stewardship goals and maximize the benefits from your forest management activities. Combining the expertise of a professional forester with the skills of a logger who has participated in Master Timber Harvester training increase your odds of meeting your forest management objectives, maximizing your profit, and sustaining your forest resources.

Georgia Registered Foresters

Studies have shown that using a professional forester can increase your income today while protecting your land's productivity and keeping more of your high-quality trees for the future. A professional forester also can help you develop a forest management plan for your property and assist you with other forest management activities. At the least, landowners should consider contracting with a professional forester before selling timber because many landowners are not familiar with the process of selling timber or the recommended steps to maximize their harvest income.

To legally practice forestry in Georgia, a forester must be registered with the Georgia State Board of Registration for Foresters. According to state law, to practice professional forestry in Georgia is defined as:

Any professional service relating to forestry, such as investigation, evaluation, development of forest management plans or responsible supervision of forest management, forest protection, silviculture, forest utilization, forest economics or other forestry activities in connection with any public or private lands, provided that forestry instructional and educational activities shall be exempted.

The Board shall issue licenses only to those applicants who meet the

requirements of the Code section, which include completing a degree from a Board-approved institution, passing the state examination, and completing at least two years of forestry work. Registered foresters must stay current in their profession through continuing education to retain registration.

For more information on forester registration, to verify a registration or to file a complaint, contact the Georgia Secretary of State's Georgia State Board of Registration for Foresters sos.ga.gov/index.php/licensing/plb/23

All Georgia registered foresters are issued a wallet card that bears the individual's name, registration number, expiration date, and certifies that the individual is registered as a "forester." The plans, maps, specifications and reports issued by a registrant shall be endorsed with his name and registration number during the life of the registrant's license. To verify whether a forester is registered to practice forestry in Georgia, ask to see her or his registration.

Above and beyond legally required State registration, two additional organizations - the Society of American Foresters and the Association of Consulting Foresters, offer additional credentialing to foresters. Standards for these designations require enhanced education, work experience and adherence to strict codes of conduct for foresters. Georgia does not require either of these designations to practice forestry in the State.

Qualified Logging Professionals

Timber harvests can have a long-term impact on the forest, and if properly planned and implemented, can benefit all of the values of your forest—from timber production to wildlife and water quality. Just as a professional forester can provide invaluable assistance with forest management decisions, including timber sales, at harvest time a qualified logging professional may be equally beneficial to forest landowners. Harvesting affects reforestation options, effective protection of water quality and wildlife, and ultimately impacts the profitability of your forest management. In Georgia there is no state registration program for loggers comparable to that for foresters. However, there are qualifications to look for; for example, SFI®-certified companies in Georgia require their wood suppliers to participate in the Georgia Master Timber Harvester (MTH) program. Georgia MTH is a voluntary logger education program, designed with the objective of fostering improvement in the professionalism of wood producers or loggers.



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Qualified Professionals

This Georgia Master Timber Harvester (MTH) program is offered by the University of Georgia's Harley Langdale, Jr. Center for Forest Business through sponsorship from the Georgia SFI® Implementation Committee and in cooperation with the Georgia Forestry Commission, Georgia Department of Natural Resources, Georgia Department of Public Safety and the Southeastern Wood Producers Association. The information presented in the Georgia MTH introductory workshop provides participants with information on:

- The Environment – Principles of sustainable forestry, forest stewardship: conservation and regeneration, wildlife and rare species, forest soils, Georgia best management practices for forestry, harvest planning
- Business Management – Business management, public policy and outreach, federal and state employment laws, employee hiring and retention
- Safety – OSHA compliance, transportation safety, loss control

After completing the introductory workshop, twelve hours of continuing education are required every two years to maintain the voluntary Master Timber Harvester designation.

Finding Qualified Professionals

Registered foresters may work as private consulting foresters, or for logging companies, forest products companies or government agencies, such as the Georgia Forestry Commission. Contact your local GFC office to request assistance from their foresters or find other qualified professionals as noted below.

For Qualified Loggers, visit:

- Georgia Master Timber Harvesters (ga-mth.forestry.uga.edu): A searchable directory allows you to verify someone is currently active in this education program.

For Registered Foresters, visit one of the following sites:

- Georgia Forestry Commission (www.gatrees.org): Directory of Consulting Registered Foresters under the Resources section.
- American Consulting Foresters (www.acf-foresters.org): "Find a Forester" feature.
- Society of American Foresters (www.safnet.org): "Find a Certified Forester" feature.



Landowner Incentives

Family forestland owners may qualify for incentives for a variety of forest management activities, including tree planting, timber stand improvement, wildlife habitat enhancement, and other conservation practices. Your state forestry or wildlife agency can provide you with detailed information about these programs. Several common programs are listed below.

- **Conservation Stewardship Program (CSP).** Administered by the USDA Natural Resources Conservation Service, this Farm Bill program provides financial and technical assistance to agricultural producers and non-industrial private forestland owners to maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resource concerns – including soil, air, and habitat quality, among others. Participants earn CSP payment for conservation performance – the higher the performance, the higher the payment.
- **Conservation Reserve Program (CRP).** Administered by the USDA Farm Services Agency, this Farm Bill program is a incentive-based, voluntary program that pays farmers attractive incentives for putting their least productive lands into conservation uses that benefit wildlife, improve water quality, and conserve soil. CRP allows for certain forest management practices such as thinning and prescribed fire, according to program guidance and standards.
- **Emergency Forest Restoration Program (EFRP).** Administered by the USDA Farm Services Agency, this

Farm Bill program works with county committees to determine if non-industrial private forestland is eligible for financial assistance as a result of a natural disaster that if left unaddressed would create harm to natural resources of the land and significantly affect future land use.

- **Environmental Quality Incentive Program (EQIP).** Administered by the USDA Natural Resources Conservation Service, this Farm Bill program provides financial and technical assistance to agricultural producers and non-industrial private forestland owners in order to address natural resource concerns and deliver environmental benefits such as improved water and air quality, improved or created wildlife habitat, among others. Typical incentive payments range from 75 percent to 90 percent of average costs for qualified landowners.
- **Southern Pine Beetle Initiative (SPBI).** Administered by the Georgia Forestry Commission, this program helps landowners implement various silvicultural practices that will either prevent or minimize impacts of future Southern pine beetle infestations or to restore areas already impacted by these destructive insects.

Property Tax

The state of Georgia also provides property tax reductions for landowners who actively manage their woodlands. For example, the Conservation Use Value Assessment program provides property tax reductions for landowners who maintain their property in

conservation use for a set number of years. The Forestland Protection Act provides a similar conservation option for private and corporate forest landowners with larger acreages (200+ acres), who primarily managed their land for timber production or wildlife habitat. For more information, contact your county Tax Assessor's office or the Georgia Department of Revenue.

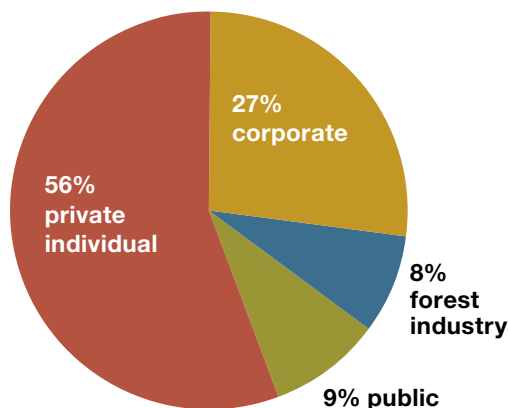
Learn More

Resources are available online or by calling:

- Georgia Forestry Commission
- Go to the Cost Share and Incentives section of the website (www.gatrees.org) or call 1-800-428-7337.
- Georgia DNR Wildlife Division
(www.georgiawildlife.com)
- Search the website for a downloadable reference entitled "Landowner's Guide to Conservation Incentives."
- Georgia Land Conservation Program (glcp.georgia.gov) – Go to the Landowners section of the website.
- USDA Natural Resource Conservation Service - Go to the Programs section of the website (www.ga.nrcs.usda.gov) or call 706-546-2272.
- USDA Farm Services Agency
- Go to the Conservation Programs section of the website (www.fsa.usda.gov) or call 706-546-2262.

Healthy Markets - Healthy Forests

Family forest owners are critical to the forest industry in Georgia, which requires a sustainable supply of wood grown from local forestlands. More than 90 percent of Georgia's 24 million acres of timberland land is privately owned.



Trees sustain and enhance the quality of life by providing numerous benefits to all citizens; we count on our forests to provide clean air, clean water, and wildlife habitat along with meeting society's demand for forest products such as lumber, paper, food additives and clothing. Can't we just count on our family forests to always be there to provide these benefits? Healthy forests and a healthy forest industry are inextricably linked—each one relies on the other.

For a landowner, keeping the land as forest may not be a simple decision because of necessary tradeoffs. Regardless of the owner's primary objectives, most want or need to generate income from their land to offset the cost of ownership. Income opportunities include harvesting timber, recreational leases such as hunting rights, agriculture,

and developing or selling land for residential or other non-forest compatible uses. While development is needed to accommodate growing populations, land that is developed is typically lost for growing trees at least for a long period of time, if not forever.

Landowners who manage their forests well—considering proper tree stocking levels, planting appropriate tree species on a site, conducting timely forest thinning, and in some cases, prescribed fires—will be well-positioned to generate income from their forest but only if there are viable markets to buy their timber. Without local forest product markets, landowners would be more apt to consider development or other land uses not compatible for forestry. A strong and profitable industry helps maintain a healthy forest base that benefits all citizens.

Learn More

Resources are available online:

- Georgia Forestry Commission (www.gatrees.org) - Website includes a variety of information on the state of Georgia's forests (Reports section), lists of wood products manufacturers (Directories section) and much more.
- Georgia Forestry Association (www.gfagrow.org) - Website includes resources from the leading advocate for a healthy business and political climate for Georgia forestry, forest landowners and forest-based businesses.
- Forest Landowners Association (www.forestlandowners.com) - Website includes resources from a leading advocate for the rights of all private landowners—regardless of size, corporate structure, location, certification status or tax classification.



Harvest Residues



When a timber harvest occurs, logging professionals do their best to make sure as much wood as possible is utilized from every tree. The material that is left behind is typically referred to as logging slash and is comprised of limbs, tops and needles or leaves. A good harvest plan should address how this material will be managed.

The management of harvest residues can impact future forest conditions and management. When this material is piled and left on the harvested site, it takes many, many years to break down unless it is burned. The presence of this material may prevent the use of this area from being converted into a wildlife food plot or other valuable use.

When managed properly, harvest residues can provide many environmental benefits. If the decision is made to spread the logging slash across the harvested area, you

are contributing to the process of nutrient recycling. As this material breaks down and reenters the soil, the nutrients released become available for the residual trees to take in. Spreading slash over main skid trails can also lessen the impact that logging equipment may have on soil compaction. Finally, if this material is distributed on slopes it can prevent erosion from occurring until native vegetation can establish itself.

As our society looks for sustainable sources of energy, harvest residues are being looked at as a viable source with potential financial benefit to land-owners. For decades, existing forest product facilities have used harvest residues for power generation, also referred to as bioenergy production. More recently, dedicated bioenergy facilities have been expanding in local markets as possible buyers for this and other material.

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Harvest Residues

Landowners can save on site preparation costs if harvest residues are removed instead of paying to have it burned or windrowed. Financial benefits also extend to the logger by utilizing the entire tree that is brought to the loading area instead of incurring the cost of taking it back into the woods.

As good land stewards we need to make sure that harvest residues are managed to create the best possible situation for the benefit of the land and the landowner. Don't let the management of harvest residues be an afterthought; incorporate it into your harvest plan.





Biodiversity Protection



The worldwide decline of forest habitat and the related loss of biodiversity is a major environmental concern for us all. Practicing sustainable forestry means taking action to conserve vulnerable or rare wildlife and ecological communities whenever opportunities exist. A thorough knowledge and awareness of plant and animal species found on a property and their related habitat needs is essential

for good land stewardship. Landowners need to be particularly aware of forests of exceptional conservation value, which include those species and ecological communities that are designated imperiled, critically imperiled, rare, threatened, or endangered, and must understand how forest management activities may impact these species.

Whether intentional or not, harming protected wildlife can be punishable by fines and possible imprisonment, which are designated under federal law by U.S. Fish and Wildlife Service and under state law by the Georgia Department of Natural Resources (Georgia DNR). To best conserve biodiversity within our forests, good stewards should also take steps to protect rare and declining habitats not already protected

by law. Critically imperiled (G1) or imperiled (G2) species are defined as very high risk of extinction due to extreme rarity, restricted ranges, steep declines or other factors making them especially vulnerable to extinction. They are designated by non-government organizations such as NatureServe. Because of their scarcity, significance, and sensitivity, rare habitats are often managed solely for their unique features.



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Biodiversity Protection

Consider Conservation Easements or Other Incentives

If your forestland includes protected species or rare ecological communities, you may be able to reduce your tax burden through conservation easements and/or receive incentive and cost-share assistance for conservation practices that protect these. Be sure you understand the terms, obligations, and implications for future management before entering into an agreement.



Learn More

Resources to Help Identify and Protect Biodiversity

- The U.S. Fish and Wildlife Service's endangered species section of their website (www.fws.gov) includes searchable listings, known locations, and descriptions of protected species
- The Georgia DNR's Wildlife Division website (www.georgiawildlife.com) includes information to identify rare and protected species in Georgia, conservation easement information, and the "Landowner's Guide to Conservation Incentives."
- NatureServe (www.natureserve.org), a non-profit organization, is the Georgia DNR's partner for collecting and sharing biodiversity data by providing interactive data tools to the public.



Manage Responsibly: Harvesting and Reforestation

Sustainable forest management is the long-term goal accomplished through purposeful, short-term forest management actions. According to the Georgia Forestry Commission, “properly managed forests yield more timber, have higher net present value, suffer fewer environmental impacts, and enhance wildlife habitat more than non-managed forests.” Within this context, consider that it can take decades to grow a mature crop of timber. Many family forest landowners may only have the opportunity to harvest timber once during their lifetime—therefore careful consideration should guide timber harvesting and the reforestation that follows.

Selling Your Timber

Timber harvesting can be used as a management tool to meet your management objectives, including profits. The timber sale brings to fruition many years of past timber growth and the condition of the forestland after the harvest profoundly affects forest productivity for many years to come. Marketing your timber can be a complex process—if you are unfamiliar with selling timber you should carefully consider seeking professional advice.

The Georgia Forestry Commission routinely provides forest owners with technical assistance. See the landowner services section of their website (www.gatrees.org) for more information and to download the publication, “Selling Your Timber.” The Forestry Commission recommends eight basics to consider as a starting point:

- 1. Hire a registered consulting forester**
- 2. Develop a forest management plan**
- 3. Plan the pre-harvest**
- 4. Determine a selling method**
- 5. Use a legal contract**
- 6. Execute the sale and harvest**
- 7. Monitor the harvest**
- 8. Closeout with buyer/logger**



Reforestation Options

Timber is a renewable resource only if the harvest area is replaced with a new forest. Reforestation, or the re-establishment of a forest that has been removed by harvesting or natural causes, and afforestation, the establishment of a forest in an area where the preceding vegetation or land use was not forest, are the basic building blocks of forest sustainability. Reforestation planning should take place before a timber sale is arranged so the harvest can be designed to meet reforestation objectives. Consider the basic reforestation options described here.



Natural Regeneration: If natural regeneration is desired, it is important to determine if an adequate seed source exists for the desired species. Proper planning increases your chances of making sure that the site regenerates with the desired species for your management objectives (what you want to achieve with your forest), the appropriate species for the existing site conditions (bottomland wet site vs. upland dry site), and that the new trees are properly

spaced (not too thick or too scattered) so that the area is fully stocked.

Seed-Tree Method: This is most commonly used for natural regeneration of pine in the Southeast. Prior to harvest, a select number of trees should be identified to be left as producers of seed for the next stand. The number of trees to be left as seed producers depends on the seed production for the species, degree of competition, and seed tree size. Seed trees can later be harvested when the young trees are established.

Shelterwood Method: This method differs from the seed-tree method in that more trees per acre are left as seed sources. This method is preferred for species such as longleaf pine where adequate regeneration of new trees may require more time. By leaving more trees, the seed source is increased and the overstory serves as a shelter for the developing reproduction. Depending on the species and management objective, the overstory could be removed after adequate regeneration is established, or selectively retained to add diversity to the stand.

Artificial Regeneration (Planting):

The planting of seedlings grown in a nursery is the most common form of artificial regeneration for Southern pines. Proper planning and site preparation is crucial to successfully regenerating the stand. Planting is either done by hand or machine, depending on the site conditions. The spacing to be used when planting is dependent on several factors including tree species, expected rotation length, desired forest products, expected mortality, wildlife considerations, and federal or state cost share programs.



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Manage Responsibly: Harvesting and Reforestation

Comparing Reforestation Costs

The cost of properly implementing natural regeneration for pine seedlings is not necessarily cheaper than planting. Planting costs are usually offset by the cost of pre-commercial thinning for naturally regenerated stands. Other deciding factors include genetics (improved seedlings), spacing control, and ease of future thinning harvest operations. Both forms of reforestation require the same level of planning in order to ensure successful regeneration. A professional forester is your best source of information to help determine your reforestation needs. A forester can evaluate your objectives and recommend which harvest methods will lead to successful natural regeneration, or if reforestation is desirable through planting or direct seeding. Forests are a long-term investment and an improper start will lead to costly problems in the future; therefore, it is essential to provide each new crop with the most favorable conditions possible.

Reforestation may be a deductible expense for qualifying taxpayers. Eligible expenses may include direct costs to plant or replant a stand for natural regeneration. Inquire with a tax professional regarding the most current rules.

Reforestation & Seedling Information

Contact a professional forester or the Georgia Forestry Commission for information on renewing or re-establishing your forests.

Seedlings are available from the Georgia Forestry Commission's nursery (order online and through local commission offices) or from private nurseries (contact a consulting forester for suggested private nurseries).



Assess Forest Health Threats: Invasive Species and Wildfire Risks

Threats to the health of your forest include invasive species and wildfire. Though you might not have control over where these problems originate at a regional level, you can take steps to reduce your risks and the negative impacts on your forest.

Your forestland is filled with plant, animal, insect, and disease species that have, over time, adapted to this specific environment. In ideal conditions, this amazing diversity of life exists in a state of perfect harmony and equilibrium. Unfortunately, our Southern forest ecosystems are under constant threat from invasive species. An invasive species (also called alien or exotic species) is any species that is non-native to a given ecosystem and whose introduction causes, or is likely to cause, environmental and economic harm. Invasive species often out-compete native species for the food and space they need to survive. Because the invading species typically have few or no natural enemies (which control their populations in their native environment), these intruders often flourish, upsetting the delicate balance of life. Invasive

species are one of the most significant threats to the long-term health of our forests.

Invasive plants are often easy to identify because they are so visible. Species such as cogongrass, kudzu, Chinese privet, honeysuckle, and Japanese stilt grass grow in such thick abundance that they literally cover and smother the surrounding native vegetation—effectively creating a monoculture.

Not every invasive species is easy to detect, however, which is problematic since early detection is essential to combating an invasive species. In fact, invasive insect species such as the hemlock woolly adelgid, Asian longhorned beetle, emerald ash borer, and Sirex woodwasp can infest large areas of forestland before they are discovered.

Even more difficult to spot are invasive microorganisms, which can wreak havoc upon a healthy forest. Invasive microorganisms have caused some of the most notorious tree diseases. For example, American chestnut blight and Dutch elm disease both single-handedly wiped out nearly every living host tree in North

America. A recently introduced insect, redbay ambrosia beetle, and its associated fungal pathogen are causing similar destruction to our native redbay trees in Georgia's maritime forests.

Managing Invasive Species

There is no single action that will eliminate the threat of invasive species. Instead, a strategy for invasive species management includes four key elements: (1) prevention, (2) detection, (3) control and management, and (4) restoration and rehabilitation.

Most invasive species are accidentally or intentionally introduced by people, so it is extremely important to prevent the arrival of invasive species in the first place. Control access to your property to reduce the chances of someone accidentally introducing an invasive species to your forest. Early detection programs are necessary to discover invasive species once they have arrived. Take periodic walks through your forest, in every season of the year, to look for any signs of invasive species – such as unfamiliar plants or unhealthy groups of trees.



The hemlock woolly adelgid, an insect from Japan, attacks hemlock trees in their native Georgia mountain range. They can be detected from fall until spring by woolly sacs that cover their eggs on trees. Image source: www.bugwood.org.



Chinese privet, which was introduced as an ornamental throughout the South, has now invaded every ecoregion of Georgia. It prefers low-lying moist sites and dominates the understory of many bottomland hardwood stands. Image source: www.eddmaps.org.

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Assess Forest Health Threats: Invasive Species and Wildfire Risks

Once an invasive species is well established, it is often impossible to entirely and permanently remove it from your land; however, you can take steps to control its spread and minimize its impact on native species. Keep your forests healthy through sound forest management so that they better resist the effects of invasive species. In the unfortunate event that an invasive species causes major changes to your land (such as widespread tree mortality), efforts can be taken to restore and rehabilitate your land to a condition that meets your needs and objectives.



The redbay ambrosia beetle, an exotic from southeastern Asia, introduces a fungus into native redbay trees that causes laurel wilt disease, which is killing redbay throughout most of the coastal plain. Image source: www.ipmimages.org.

Learn More about Invasive Species

Resources are available online or by calling:

- Georgia Forestry Commission (www.gatrees.org) - Go to the Forest Health section.
- Georgia Exotic Plant Pest Council (www.gaepcc.org)
- Georgia Invasive Species Task Force (www.gainvasives.org)
- University of Georgia, Center for Invasive Species and Ecosystem Health – Go to the website (www.bugwood.org) or call 229-386-3298.

Wildfire Risk Reduction

Wildfire can be defined as an uncontrolled fire capable of destroying or significantly damaging all vegetation, including mature trees. According to the Southern Group of State Foresters, the South consistently has the highest number of wildfires per year compared to the rest of the country partly due to a year-round fire season. Fortunately there are basic forest practices that can reduce the risk of wildfire on your property.

Begin by assessing your risk. Conditions that put a forest at higher wildfire risk include dense or impenetrable layer of shrubs, trees, and vines; ladder fuels such as vegetation that “climbs” into the upper tree canopy (thus allowing fires to climb); hazardous buildup of understory vegetative fuel; and a lack of firebreaks.

If you find conditions that need attention, the following management practices help reduce risks:

- Prescribed fire is a method to apply a natural process that reduces the buildup of woodland fuels and typically improves ecosystem health.
- Cutting or removing trees (thinning) to reduce the density of standing trees that could serve as a ladder fuel or later accumulate as woody debris on the forest floor.
- A network of firebreaks, including both natural and man-made types, reduces the risk of wildfires spreading. All firebreaks should be built and maintained according to Georgia’s Forestry BMPs.

To maximize the benefits of these and other management practices, consider seeking assistance from a registered professional forester.

Learn More about Reducing Wildfire Risks

Resources are available online or by calling:

- Georgia Forestry Commission (www.gatrees.org) - Go to the Forest Fire section of the website or call 1-800-428-7337.
- North Carolina Cooperative Extension (<http://content.ces.ncsu.edu/catalog/>) - Search for the publication “Minimizing Wildfire Risk—A Forest Landowner’s Guide”.
- The National Fire Protection Associations’ Firewise Communities Program (Firewise.org) - Training resources to help communities reduce wildfire risks.



Protect Water and Soil Quality: Georgia Best Management Practices

Georgia has 44,056 miles of perennial streams, 23,906 miles of intermittent streams, and 603 miles of canals and ditches. Many of these begin or flow through forestlands. It is critical for forest landowners to follow Georgia Best Management Practices (BMPs) for Forestry when conducting forestry operations. BMPs not only protect water quality and the integrity of the land, but certain violations can result in fines and penalties. In fact, violations of state water quality standards for sediment or stream temperatures can result in fines and penalties up to \$50,000 per ay.



Since 1977, the Georgia Forestry Commission (GFC) has been the lead agency—designated by the Georgia Environmental Protection Division—responsible for developing, educating, implementing and monitoring the use of BMPs for forestry operations. BMPs are designed to minimize or prevent erosion and subsequent stream sedimentation during forestry operations, such as forest road construction, harvesting, site preparation, controlled burning and tree planting. Before conducting any forestry operation, landowners should seek

expertise and advice from a professional forester to develop a plan.

Georgia Forestry BMP recommendations or requirements include:

- **Streamside Management Zones (SMZs):** The SMZ areas adjacent to perennial or intermittent streams are designed to prevent erosion from reaching these waterways and to keep stream temperatures cool. SMZ widths may range from 20 to 100 feet, depending on slope and stream type. They should be marked and identified on the ground and any timber to be harvested should be marked as well. SMZs should never be clearcut.
- **Forest Roads:** Existing road and stream crossings should be assessed for compliance with BMPs. Improvements may be needed before any forest practice begins.
- **Stream Crossings:** Construction of temporary or permanent stream crossing must comply with 15 BMPs federally mandated by the U.S. Environmental Protection Agency.
- **Loading Decks and Skid Trails:** Exposed soil in critical areas such as loading decks and skid trails should be promptly stabilized.
- **Fire and Firebreaks:** Intense fire should be kept out of SMZs and firebreak installation should follow applicable BMPs. Georgia Forestry Commission personnel are appropriately trained and landowners should require any other operators to also follow BMPs.



- **Chemicals:** Avoid the broadcast application of chemicals into SMZs, unless it is specifically prescribed and labeled for the area.

Professionals with BMP Training

Professional foresters, loggers, and others participating in the Georgia Master Timber Harvester (MTH) voluntary education program have been specifically trained on Georgia's forestry BMPs. To verify that someone is a current Georgia MTH participant, visit the program website: ga-mth.forestry.uga.edu

The Georgia Forestry Commission's Water Quality Division provides educational resources and promotes the use of forestry best management practices (BMPs) among the forestry community, and additionally investigates and mediates forestry water quality and wetland complaints. The Georgia BMP Manual for Forestry and Water Quality Division contact information is available online at www.gatrees.org or by calling 800-428-7337.



Consider the View: Aesthetics and Special Sites



The sudden removal of mature trees can seem like an all-out environmental assault, especially to the uninformed. Now, consider that people use products from the forest every day—from paper and packaging to building products. Unlike fossil fuels, trees do re-grow and are a renewable natural resource. In fact, even if not replanted, forestland will usually regenerate itself quickly if harvested correctly, shortening the length of time of the land's unsightly appearance. Even armed with this knowledge about society's need for forest products and the renewability of forests, to the general public

freshly harvested land can be a short-term eyesore, which can further be aggravated by adverse weather, difficult site conditions or poor planning.

There are several strategies that can help landowners minimize the visual impact of a forest harvest—many of which are also addressed through Georgia BMPS for Forestry. They include:

- Applying gravel on haul roads to minimize dirt deposited on the highway;
- Locating the log deck (landing) away from public roads;
- Installing a curve in a haul road to screen the harvest from public view;
- Seeding the landing and haul road with native grasses once the harvest is completed to create wildlife habitat and prevent erosion; and
- Installing a gate at the entrance of the haul road to reduce trespassing and prevent damage to the road.

If your property is located next to a major road or sensitive area such as a school or church, you may also consider leaving a strip of woods (sometimes called a visual buffer) along the road or sensitive area to minimize public concerns.

Your forest management plans should also consider other special sites based on their significant social concerns. Whether a cemetery, an old home site or a location of family significance, such sites add unique characteristics to the land and should be protected.

Careful planning can minimize visual impact and protect special sites when harvesting your land; these measures frequently cost little or nothing to implement. Close consultation with a professional logger and/or forester is essential. A little bit of forethought before your timber harvest will provide many long-term benefits.





Enhance Your Forest: Manage for Wildlife

Well-managed forests provide diverse habitats required by a multitude of game and nongame wildlife species. With careful planning, you can manage your forest and harvest timber to improve wildlife habitat, even in areas where endangered or imperiled species or rare habitats are found.

What You Can Do

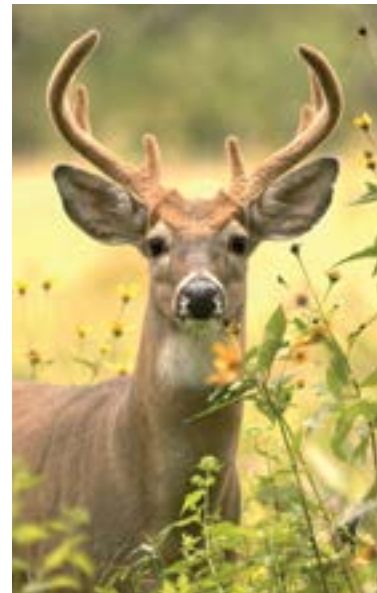
Use borders or edges of harvest sites to create unique wildlife management opportunities. Edges are transition zones between forests and other land use types (cropland, pasture, etc.) and are used by wildlife for travel corridors, escape cover, nesting, and as a food source. Wider transition zones containing a



diverse composition of shrubs, soft mast, heavy-seeded legumes, and native grasses provide greater benefits to wildlife. The edges can be managed for native forage by prescribed fire, disking, mowing, herbicides or plantings along borders on a one- to three-year rotation. Additionally, timber harvests with irregular shapes (e.g., avoiding square blocks) create additional edge, while also reducing the harvest's visual impact.

Consider planning for a diverse forest by maintaining a mixture of tree species, both hardwood and pine, and different aged stands—from seedlings to mature trees.

Diversify your forest to attract a greater abundance and diversity of wildlife.



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Enhance Your Forest: Manage for Wildlife

Periodically thin stands to keep at least 30 percent of the ground in direct sunlight, implement a prescribed fire program on a two-year rotation among 15-40 acre burn units throughout the forest creating a checkerboard pattern, and maintain long stand rotations to ensure quality habitat diversity. Maintain unique features on the landscape, such as openings and wetlands, and try to retain and enhance conditions for mast-producing hardwoods in your forests that are favored by wildlife.

Create forest openings to encourage native vegetation. Wildlife openings can provide early successional habitat composed of grassy and/or shrubby vegetation recovering from recent disturbance, which serves as escape cover, brood areas, forage, nesting cover, and many other benefits to wildlife. Maintain different stages of this early successional habitat by incorporating shrubby cover, fallow patches, and annual disturbance to promote quality vegetation for wildlife. Manage for native forage by prescribed burning and winter disking or by planting 30 to 50 percent of the openings on a two-year rotation. Consider keeping 5 to 20 percent of the property in wildlife openings. These openings typically should be two to three acres each and can be abandoned agricultural fields, logging decks, power line right-of-ways, haul roads, skid trails, and firebreaks.



Learn More

**Georgia Department
of Natural Resources'
Wildlife Division
Website ([www.
georgiawildlife.org](http://www.georgiawildlife.org))
contains guidance
on opportunities
to obtain personal
technical assistance
through landowner
programs and
publications about
wildlife and wildlife
habitat management-
read "How to
Evaluate and Improve
Land for Wildlife."**

Sustainable Forestry Information for Georgia Landowners



Publication sponsored by the
Georgia SFI® Implementation Committee



For more information on SFI:
www.sfi-georgia.org
706-542-7691



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- Georgia Department of Natural Resources – www.georgiawildlife.org
- Georgia Forestry Commission – www.gatrees.org
- UGA Warnell School of Forestry and Natural Resources – www.warnell.uga.edu

Contact these SFI® Program Supporters in
Georgia for more forestry information and
technical assistance:

For the full list of Georgia's SFI-certified companies, supporting organizations, and
more sustainable forestry information, please visit sfi-georgia.org

