

A Landowner's Guide to Forestry in North Carolina



This guide is provided courtesy of The North Carolina Sustainable Forestry Initiative® Implementation Committee (NC SFI) in cooperation with the North Carolina Forestry Association.

The SFI program was launched in 1994 as one of the U.S. forest sector's contributions to the vision of sustainable development established by the 1992 United Nations Conference on Environment and Development. Its original principles and implementation guidelines began in 1995, and it evolved as the first SFI national standard backed by third-party audits in 1998.

Today, SFI Inc. is an independent, non-profit organization responsible for maintaining, overseeing and improving a sustainable forestry certification program that is internationally recognized and is the largest single forest standard in the world.

The SFI 2015-2019 Standard is based on principles and measures that promote sustainable forest management and consider all forest values. It includes unique fiber sourcing requirements to promote responsible forest management on all forestlands in North America.

SFI certification also extends to the market. When consumers see the SFI label on a product, they can be confident the products – whether it is paper, packaging, or lumber products – are from certified sourcing and/or certified forests.

The NC SFI is a coalition of individuals representing landowners, industry representatives, consulting foresters, universities, conservation organizations and government agencies.

The goal of the committee is to ensure that forestland in North Carolina is managed wisely and that North Carolina's forests are able to supply the needs of future generations.

Towards this goal, the NC SFI maintains a grant program open to forest industry professionals, private forest owners, educators and others who support the SFI principles. Grant amounts range between \$500 and \$20,000. Applications must be submitted by July 1. Complete details can be found at www.ncsfi.org.

The NC SFI maintains a SFI Inconsistent Practices toll free phone number - (877) 271-6531. The Inconsistent Practices number is a resource for the general public to report any forest management activity that is not consistent with the goals of the SFI program. All phone calls are investigated by the program's third-party monitor and reports are investigated in the strictest confidence. ❖

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Introduction

The purpose of this publication is to provide non-industrial, private forest landowners (NIPF) of North Carolina with the appropriate information and guidance to successfully manage their land to its desired potential.

There are over 500,000 NIPFs in North Carolina who own 64% of the forestland in the state. The management decisions these people make regarding the care of their forests have long-term environmental and economical impacts on all North Carolinians. Healthy forests not only provide the best wildlife habitat, cleanest air, cleanest water and the base for a host of recreation activities, but these forests also provide the resource for the state's top manufacturing industry, forest products.

The information contained in this publication regarding taxation and applicable regulations is accurate but should not be construed to be official government interpretation. Since regulations and laws are constantly evolving, landowners should always check with a qualified resource professional, an accountant and an attorney before making any final decisions. Additional resource publications and information can be obtained from the North Carolina Cooperative Extension Service and the North Carolina Forest Service.

The North Carolina Forestry Association (NCFA) and the North Carolina Sustainable Forestry Initiative Implementation Committee (NC SIC) hope this landowner's guide will be a useful resource in improving the management, health and value of North Carolina's forests. As our state continues to grow and urban areas expand, it is important for forest landowners to be active in their communities, educating others about the positive environmental benefits that are synonymous with well-managed forests.

Landowners who have an environmental issue with a regulatory agency or a forest management question are encouraged to contact the NCFA's Executive Vice President, Pryor Gibson, at (800) 231-7723 ext. 5 or at pgibson@ncforestry.org.

The NCFA, established in 1911, is the state's oldest forest conservation organization and is comprised of 4,000 forest managers, landowners, mill operators, loggers, furniture manufacturers, educators and others concerned about the long-term health and productivity of the state's forest resources. ❖

Get Involved

A landowner's first step should be to become educated on forestry issues through participation in one or more forestry clubs, organizations or associations. Landowners should also reach out to their North Carolina Forest Service county ranger and their North Carolina Cooperative Extension county agent.

By getting involved and interacting with other forest landowners, a landowner will obtain more information on cost-share programs, current tax regulations, popular certification programs and the top environmental issues.

Typically, landowners who are involved with different forestry communities have better success in obtaining access to state and federal cost-share programs, are more aware of current tax incentives, and the offering of various conservation easement programs. ❖



(right) Northampton County Ranger Rodney Black presented Paul Boone with the Northampton County Forestry Association's Landowner of the Year Award at its annual meeting.

Call a Professional

A landowner's second step towards success is to contact a qualified resource professional - defined as a person who has the proper training and experience to make forest management recommendations.

In North Carolina, all foresters must be registered with the state and complete annual continuing education requirements. The list is maintained by the North Carolina Board of Registration for Foresters and can be found online at www.ncbrf.org.

The North Carolina Forest Service offers technical



Landowners are encouraged to seek advice from forestry professionals for technical assistance.

assistance to all forest landowners through its county foresters and county rangers, who can provide forest management guidance and oversee cost-share programs.

NCFS District Offices

Asheville	828-667-5211
Elizabeth City	252-331-4781
Fairfield	252-926-3041
Fayetteville	910-437-2620
Hillsborough	919-732-8105
Lenoir	828-757-5611
Lexington	336-956-2111
Mount Holly	704-827-7576
New Bern.....	252-514-4764
Rockingham	910-997-9220
Rocky Mount.....	252-442-1626
Sylva	828-586-4007
Whiteville	910-642-5093

Consulting foresters may be hired by landowners to oversee the general management of their property and/or help with timber sales. Landowners should check on a forester's qualifications and obtain references from other landowners. A list of consulting foresters can be found at a county office of the North Carolina Cooperative Extension, the North Carolina Forest Service or online at www.ncforestservice.gov or www.ncbrf.org.

Many forest product companies have professional foresters on staff who can assist private landowners. In some cases, the companies ask for the opportunity to buy the timber in the future in return for management assistance. ❖

Develop a Forest Management Plan

After contacting a qualified resource professional, a landowner's next step is to develop a forest management plan to meet his goals and objectives for the property. Landowners should evaluate their constraints, resources and priorities to create the best management plan.

A management plan is great tool that allows landowners to document and keep track of their forestry activities. By documenting management activities, landowners can potentially qualify for various cost-share programs at the state and federal level in the future. A plan is also crucial when a landowner may need to show a history of forest activities to state or federal agencies to qualify for the Right to Practice Forestry Law. A plan can also be a helpful document in the case of inheritance or property sales.

While no two management plans are the same, there are some standard sections that need to be included in the plan to qualify the land for the present-use value tax program and/or acceptance into a forest certification program.

The present-use value tax program allows land that is in agriculture, horticulture or forestry to be evaluated for tax purposes at its present-use such as in forests rather than at its highest market value use such as subdivision or shopping center.

A landowner must own at least 20 acres or more to qualify for the forestry requirement in the present-use value tax program. Applications are due in January at your county tax office.



A forest management plan allows a landowner to meet his goals and objectives for his property.

The following points are crucial to any forest management plan that is going to be submitted as part of the present-use value tax application for forestry.

- Landowner objectives
- Maps, delineating stands, plats and aerial photos
- Forest inventory and description
- Forest management prescriptions
- Harvest dates, methods and regeneration plans

Active forest management reduces risks and/or damage associated with threats such as wildfires, insect attacks and diseases. Landowners can create healthy forests and reduce threats to their forest by:

- Thinning overcrowded stands to keep the forest vigorous and reduce the potential for insect or disease attack.
- Prescribed burning in pine stands to reduce fuel for wildfires.
- Salvaging infected trees quickly after an outbreak of disease or insects such as Southern Pine Beetle.
- Applying herbicide as needed to eliminate competing species and enhance tree growth.

Through active forest management, landowners have the ability to create healthy, sustainable forests that will provide an economic return while enhancing wildlife habitat, recreational opportunities and forest beauty. ❖



Judy and Dwight Batts were North Carolina Tree Farmers of the Year and also National Tree Farmers of the Year in 2014.

Enroll Forestland in Present Use Value Tax Program

Landowners who qualify for the state's present-use value tax program need to enroll their lands at their county tax office. Since this program bases the tax value of land in its current use as forestland instead of its market value, this program can provide significant tax savings for landowners. This program was established in 1974.

To be eligible, a forestland owner must have at least 20 acres of forestland under a sound management plan that includes the production and sale of forest products as a primary objective. Multiple tracts may be combined, but at least one tract must have 20 acres. While a landowner may write his own plan, the NCFCA urges landowners to work with a registered forester in preparing the plan. Individuals, LLC's and trusts are eligible.

Applications must be filed with the assessor of the county in which the property is located during the January listing period or within (30) days of a change in assessed value of the land. If the property has not previously been enrolled in the program, then one of the following conditions must apply:

- It is the owner's place of residence
- It has been owned by the current owner or a relative of the current owner for the four years preceding January 1 of the year for which the benefit of this section is claimed
- At the time of transfer to the current owner, it qualified for classification in the hands of a business entity or trust that transferred the land to the current owner who was a member of the business entity or a beneficiary of the trust, as appropriate

VERY IMPORTANT POINT - *Especially in the cases of inheriting property.* If the property was previously enrolled in the program, a new application must be filed within **60 days** of the date of transfer to remain in the program.

Once enrolled in the program, properties are reviewed every four years or at a revaluation cycle to ensure compliance. A new application may need to be completed in the event of deed activity or acreage change. There is not an annual income requirement for forestry. A landowner

is only bound by his management plan in terms of timing and type of harvests.

If at any time, a tract or part of a tract of land becomes ineligible for present-use value assessment, the deferred taxes including interest on that tract become due for the current year and the past three years. ❖

Plan Your Timber Harvest

Since forests can be managed for timber production as well as for recreation, wildlife and aesthetics, the most important decisions a landowner will make is when and how to harvest timber. The following steps are important to consider for a successful harvest:

1. Use a Professional – Every harvest should be planned with the guidance and assistance of a qualified resource professional. Research has shown that landowners who enlist the assistance of a consulting forester receive a significant higher return on their harvest on an average. They are more satisfied with the quality of the harvest and compliance with North Carolina's Forest Practices Guidelines Related to Water Quality. It is estimated that the land is also more productive after a harvest that is under the guidance of a qualified resource professional.

2. Have Your Timber Appraised/Establish Property Boundaries – When selling timber, a landowner must understand the value of his timber. In general, landowners sell timber infrequently compared to timber buyers that participate in the market as part of their business on a regular basis. Consequently, landowners should not rely on their own judgment in a timber sale. For example, an independent appraisal by a qualified resource professional can identify the tree species, the volume of timber available, the best products such as pulpwood or sawtimber, and the number of acres. To sell with confidence, it is recommended that landowners advertise widely and sell competitively by conducting a sealed bid sale.

It is also prudent to survey current market prices for the tree species growing on the land. In general, timber markets are localized. Prices will vary depending on species, access to the site, quality of the timber and a host of other factors. While these elements may be foreign to landowners, a quality resource professional such as a registered forester can provide guidance.

Before a landowner enters into any discussion on harvesting trees, it is imperative to make sure all property boundaries are confirmed by documentation and clearly marked for the logger prior to the harvest.

3. Beware of High-Graders – Landowners should be alert to the fact that some timber buyers will approach them and offer to buy the biggest trees on the property. This is sometimes referred to as a “Select Cut” harvest. The removal of the biggest and the best timber while leaving the low quality trees standing is called “High-Grading” and it is not recommended. This destructive harvesting practice reduces the current and future value of the forest. Again, professional assistance from the North Carolina Forest Service, a consulting forester or a qualified resource professional can be critical to the short and long term health of a forest.

4. Formulate a Written Timber Sale Contract – Landowners should consult with an attorney experienced in timber sales prior to engaging in a timber sale agreement. Again, research shows that professional assistance is well worth the investment.

Timber is generally sold either on a lump sum basis or under a pay-as-cut agreement. Timber quality and quantity and other factors will influence a landowner’s decision on how the timber is sold. In a lump sum sale, the landowner receives a set price for the stand of timber. Under a pay-as-cut agreement, the landowner is paid as the timber is cut and only for the timber that is harvested. For most sales, advertising widely, soliciting sealed bids, and selling lump sum has been proven to be the best sale method for



The log deck is where trees are processed and loaded onto a trailer. This area can make for an excellent wildlife opening at the conclusion of the harvesting operation.

landowners. While no two timber sale contracts are exactly alike, all should include the following basic provisions:

- ✓ Guarantee of title and description of the land and boundaries.
- ✓ Specific description of timber being conveyed, method of designating trees to be cut, estimated volumes/species/products and harvest method.
- ✓ Terms of payment.
- ✓ Duration and starting date of the agreement.
- ✓ Clauses to cover damage to non-designated trees, fences, ditches, streams, roads, bridges, fields and buildings.
- ✓ Clauses to cover fire damage if a harvesting crew is negligent and to protect the seller from liability that may arise in the course of harvesting.
- ✓ Clauses for compliance with applicable state regulations such as the Forest Practices Guidelines Related to Water Quality and riparian buffer rules where required.
- ✓ Clauses for arbitration in case of disagreement.

5. Plan Reforestation – Landowners keeping their land in forest should plan for reforestation before the timber is cut. This is particularly important if the plan to reforest the site calls for natural seeding from the existing timber stand. For this to work, the timber must be harvested at the right time of year and some preparation of the land prior to harvest may be necessary. A landowner that plans to plant new seedlings will want the land left in an ideal condition for reforestation. It is always a good rule of thumb to set aside a portion of the harvest income for reforestation. A properly planned and executed harvest will reduce the cost of reforestation.



Planning a timber harvest with an eye towards reforestation helps reduce costs of replanting and improves the success rate for the new forest.

6. Understand the Tax Implications – Although timber taxation is discussed in more detail in another section, it is important for landowners to understand the tax implications of a timber sale. Landowners should consult with an accountant for specific advice. Additional tax information is available from the North Carolina Cooperative Extension, the North Carolina Forest Service or the North Carolina Forestry Association.

7. Identify the Desired Harvest Method – Timber may be harvested several ways. Landowners should have a basic understanding of the positive and negative aspects of each method and be careful not to agree to a high-grade harvest. A comprehensive harvest plan should identify how the timber will be cut. Basic harvest methods include:

- A final harvest or clearcut harvest is one where all merchantable timber is removed. This method is employed with many mature timber and low-quality stands. This harvest method improves reforestation of species that require full sunlight such as oaks, pines, ash and cherry.
- A thinning harvest is one where smaller, poor quality trees are removed to provide more room for the remaining trees to continue to grow at a faster rate. Thinning will open the stand up for more sunlight and lessen the competition for nutrients in the soil. It will improve wildlife habitat and forest health. In general, landowners who thin their forests can expect a higher rate of return when they harvest their timber in the future.
- A seedtree or shelterwood harvest removes a majority of the existing timber. The remaining trees are left to provide seed and some shelter for reforestation. These methods can be effective in natural reforestation.
- A group selection harvest is the removal of groups of trees, creating regeneration holes in the forest. Depending on the size of the holes, a wide array of tree species can be regenerated with this method.

8. Consider Environmental and Visual Impacts – Forestry operations are subject to the perceptions of an environmentally aware public. Careful planning is recommended as a proactive approach to improving forest aesthetics. Conducting forestry operations of all types in an aesthetically acceptable manner is important to the future of forestry. The following is a list of actions to consider:

- A permanent vegetative buffer may be advised in sensitive high visibility areas such as a roadway or property line.
- Consider alternative harvesting methods and vegetative screens in highly sensitive areas.
- Require the logger to distribute wood debris throughout the tract.
- Do not allow trash to be left on your property.
- Do not leave mud on public roads.
- Do not allow rutting or churning of the soil.
- Ensure that trees are fully utilized after harvest.
- For large tracts, harvest along contour lines instead of square blocks.
- Keep logging debris at least 50 feet away from lakes, recreation waterways and public roads.
- Plan and place the location of logging decks, the place where logs will be loaded on the trucks, so they are less visible from property lines.
- Protect/conservе “special sites” such as old houses, barns, cemeteries, etc.



Albert Shaw, a North Carolina Tree Farmer of the Year, stands in front of one of the historic barns on his property.

9. Hire a Professionally Trained Logger – In the invitation to bid or sale notice, landowners should require the following of any logger:

- Proof of adequate worker’s compensation and liability insurance coverage.
- Completion of logger training/continuing education programs such as the NCFA’s ProLogger program, Virginia’s Sharp Logger program or South Carolina’s Top Logger program.
- Knowledge of the Forest Practices Guidelines Related to Water Quality and Forestry Best Management Practices.
- A list of references. ❖

Consider the Economics of Reforestation and/or Afforestation

Landowners should consider the costs of reforestation or afforestation prior to a timber harvest. Reforestation is the restocking of a forest after loss of trees through harvesting, wildfire or other means by planting or natural regeneration. Afforestation is the establishment of a forest stand in an area where the preceding vegetation or land use was not forest such as pasture and/or crop land.

Many investment analysts consider reforestation and/or afforestation to be one of the best long-term investment opportunities available to landowners. This conclusion is based on the appreciation of timber products over the past 50 years. On the basis of these and current trends, analysts believe:

- ① *Prices paid to landowners nationally for softwood sawtimber and quality hardwood sawtimber will rise at a rate at least equal to inflation.*
- ① *Prices paid for standing timber in the Southeast may rise more rapidly than in other regions because of increased demand and competition.*

To analyze the potential economic return on reforestation, a landowner needs the following information:

- ✓ The productive capability of the area to be planted, considering factors such as soil quality.
- ✓ The costs of site preparation and reforestation, which can range from zero to more than \$300/acre.
- ✓ The amount and frequency of management activities required to maintain and protect a vigorous stand by using forestry tools such as prescribed burning, boundary line maintenance and protection from fire, insect and disease. These seldom exceed \$10/acre/year.
- ✓ An estimate of the future value of harvested timber products.

FOR EXAMPLE, on typical sites in North Carolina reforested with Loblolly Pine at a cost of \$165/acre where the landowner utilized all available cost-share programs and tax incentives (reduced out-of-pocket expenses to \$47.51/acre) and assuming a one percent annual increase

in stumpage prices, the return on investment ranges from 9.06% on low quality sites to 12.67% on better quality sites. If one assumes no increase in prices, the return on investment ranges from 8.04% to 11.59%. Returns are even better if reforestation costs are less.

This example also assumes that all incomes are pre-tax, after-tax management costs are \$2/acre/year, a rotation age for pine is 35 years with 450 trees/acre planted, no thinnings, an annual discount rate of 4% and zero inflation (real rates of return).

Hardwood forests are usually regenerated naturally. This reduces the up-front investment. However, some type of timber stand improvement work is generally needed to produce quality hardwood sawtimber. Also, the holding period (rotation age) is longer for hardwoods often running 60-80 years or more. Intermediate cash flows are often possible with commercial thinnings or partial cuts. Rates of return are competitive with many other long-term investments and on good sites, may equal or exceed pine.

These examples are for illustration only. They are realistic, but actual returns will vary depending on soil quality, length of the growing period, tax bracket, investment and management strategies, and market competition. Contact a quality resource professional or a forestry extension specialist at North Carolina State University to help analyze your specific reforestation or timber management investment.

It is also important to consider the risk associated with a forestry investment. For forestry, this can include but is not limited to fire, insects, disease and severe weather (hurricanes, tornadoes, etc.) Proper management greatly reduces the severity of these threats. ❖



A landowner should ask for references when considering who is going to log her property.

Research All Sources of Financial Assistance for Reforestation and/or Afforestation

Financial assistance for reforestation and/or afforestation is available at the state and federal levels. One of the most common sources is North Carolina's cost-share fund, the Forest Development Program (FDP). This program is administered by the North Carolina Forest Service.

Landowners may be reimbursed a portion of the cost of site preparation, planting and various timber stand improvement activities. The program can be found online at www.ncforests.gov.

At the federal level, cost-share funds may be available through different programs. Since these programs depend on annual federal appropriations, landowners are encouraged to check with the North Carolina Forest Service or your local Natural Resources Conservation Service Office on availability and requirements.

In terms of taxation, the American Jobs Creation Act in 2004 changed two major federal tax policies that impact private landowners and forestry. The legislation amends the Internal Revenue Code (IRC) Section 631 (b) to eliminate the requirement for timber sale contracts to contain a retained economic interest provision. Since 631 (b) is no longer required, landowners need not sell on a pay as cut basis to retain long-term capital gains treatment (lower tax rate) on the income from the sale of business-held timber. They may now sell competitively on a lump-sum basis, which usually yields high returns.

The other provision allows expensing of up to \$10,000 per unique stand for reforestation costs in the year of occurrence with an 84 month amortization rate for the remaining costs. These unique stands must be delineated on a map prior to harvest. These changes to the reforestation tax provisions are significant. For more detail on the taxation issue, consult the section entitled *Plan for Timber Taxation*. ❖

Consider Hardwood or Pine?

A key decision landowners must make in developing a management plan is the type of tree to manage on their land. Keeping in mind that both pine and hardwood management offers sound financial returns if properly applied, a quality resource professional such as a forester is a landowner's best source of information and guidance when making this crucial decision. However, here are some general principles:

- **Match the Species to the Site.** Some sites such as river bottoms, swamps and much of the Appalachian mountain area, may be best suited to growing hardwoods while other sites are far better for pine. Many of the commercially valuable hardwood species are very site specific. Where both species have commercial value, a landowner may have the option of managing a mixed pine/hardwood stand.
- **Plan Reforestation Prior to Cutting Timber.** This is particularly important where reforestation is to be done through natural seeding or sprouting and where success may be dependent on the season in which the harvest occurs.
- **Consider all Uses of the Forest.** Pine and hardwood offer different scenery depending on the season. Pines are evergreens while most hardwoods lose their leaves in the fall. Forests provide important wildlife habitat and the presence or absence of particular species depends on forest cover type, food sources, travel patterns and several other factors. Recreational uses such as hunting, horseback riding, bird watching and other activities should also be considered. ❖



Gene Brown was North Carolina Tree Farm Program's Tree Farmer of the Year in 2013.

Plan For Timber Taxation

Taxation of timber income and timber assets is a major concern for landowners. Proper accounting and planning can save a landowner thousands of dollars in taxes. It is imperative that landowners check with their tax advisor on current tax laws to assist with tax planning and reporting.

To begin, a landowner must first determine the timber basis, which is a broad term used to determine the capital invested in property. The basis of property is usually the cost of the property when it was first acquired or the fair market value on date of death of property acquired through inheritance. The basis of a gift is the documented basis of the donor or the value of the timber if that is less. Basis is used for calculating gain or loss on sales or exchanges and for computing amortization, cost recovery, depletion and casualty loss deductions.

In general, cost-share payments must be reported as part of your gross income unless a specific exclusion is provided by law. Under Section 126 of the Internal Revenue Code, payments made under certain state and local cost-share programs qualify for exclusion.

In October of 2004, the President signed H.R. 4520, the American Jobs Creation Act. This bill included two major changes in federal tax policy that affect private landowners and forestry. The legislation amends the Internal Revenue Code (IRC) Section 631 (b) to eliminate the requirement for timber sale contracts to contain a retained economic interest provision, which means that non-industrial private forest landowners continue to be able to use lump sum sales with no concern over the loss of capital gains treatment. The other provision allows expensing of up to \$10,000 per unique stand for reforestation costs in the year of occurrence with an 84 month amortization of the remaining costs.

These changes to the reforestation tax provisions are significant. Now a landowner can expense \$10,000 per unique stand in the year it is incurred and then expense the remaining amount over 84 months.

It is important to check with your tax advisor when determining the best way to deal with tax issues. Congress continues to adjust federal tax provisions, check updates online at - www.timbertax.org. ❖

Consider Local, State and Federal Regulations

Forestry operations must comply with certain state and federal environmental regulations. Landowners should be aware of these requirements, obtain professional advice on specific requirements prior to conducting a timber sale or management activity and include appropriate provisions in all timber sale and timber management contracts. General requirements are identified below.

- **North Carolina Forest Practices Guidelines Related to Water Quality:** Forestry operations in North Carolina must comply with the North Carolina Forest Practices Guidelines Related to Water Quality (FPGs) under the North Carolina Sedimentation Pollution Control Act.

The FPGs are rules that protect water quality from a variety of potential pollution sources, including sediment. Compliance with the FPGs is mandatory on forestry sites and there may be other state or federal rules that also must be followed in addition to the FPGs. The North Carolina Forest Service is charged with technical oversight and compliance monitoring.



NCFA ProLoggers pose for a photo after completing the base course, which includes two days of training on safety and environmental requirements.

- **Best Management Practices:** Best Management Practices (BMPs) were developed under the original Clean Water Act when states were called on to improve methods for reducing pollution. Today, BMPs are voluntary actions that protect forest water quality by offering practical, effective and affordable measures to implement when conducting forestry activities.

The North Carolina Forest Service maintains a BMP handbook that is available upon request or by going to www.ncforestservice.gov.

To be able to participate in state and federal cost-share programs, landowners must be in compliance with applicable state rules related to forestry and agree to implement BMPs. Some general BMPs are:

- ✓ Identification and maintenance of stream side management zones (SMZs), or buffer strips, along perennial and intermittent streams and water bodies. Selective harvesting is allowed in these areas as long as it can be achieved with minimal soil disturbance.
- ✓ Keeping logging debris out of flowing streams and water bodies.
- ✓ Minimizing stream crossings by logging trails or access roads. When a stream must be crossed, the crossing should be at a right angle and constructed with bridge mats to prevent accelerated erosion.
- ✓ Proper construction of all forest roads to minimize erosion and steam flow. This includes the use of broad-based dips, water bars, bridge mats and culverts.
- ✓ Restricting use of heavy equipment during very wet conditions to protect soil structure and productivity.
- ✓ Minimizing soil disturbance on steep slopes to prevent accelerated erosion.
- ✓ Prompt reforestation of harvested sites and rehabilitation of logging trails, roads and loading decks.

Proper use of BMPs ensures that a forestry operation does not cause adverse environmental impacts and protects the future health and productivity of a forest.

- **Buffer Zones:** In addition to the North Carolina Forest Practices Guidelines Related to Water Quality, mandatory riparian buffer are in place in some river basins and watersheds. These buffer rules require the maintenance of forested buffers along perennial and intermittent streams and water bodies.

These rules can be complicated to implement and landowners are encouraged to seek advice from the North Carolina Forest Service or a qualified resource professional to understand what is permissible in the area.

- **Wetlands:** Wetlands are considered waters of the United States and are subject to federal regulations under the Clean Water Act. Ongoing forestry operations are exempt from obtaining a permit from the United States Army Corps of Engineers under Section 404 of the Clean Water Act.

To maintain this permitting exemption, the forestry operation (1) must be established and ongoing, (2) must not change or convert the wetland to an upland, (3) must not change the use of the wetland, and 4) must not alter the reach and flow of waters. Change in use is generally defined as changing forestland to agriculture or forestland to development. Since specific regulatory requirements and interpretations are constantly evolving, landowners should understand current requirements prior to implementing forestry operations on lands that are or may be considered wetlands.

In 2000, the North Carolina Environmental Management Commission adopted a rule (15A NCAC 2B .0230) that incorporated the federal wetland provisions for forestry and agriculture into state rule. This provides the mechanism for forestry and agricultural operations to comply with the state wetland standards found in (15A NCAC 2B .0231).



Properly constructed stream crossings are critical to protecting water quality during an logging operation.

In addition to the federal requirements, North Carolina views the maintenance of drainage ditches in compliance with wetlands standards “provided that spoil is removed to high ground, placed on top of previous spoil, or placed parallel to one side or the other of the ditch within a distance of 20 feet and the spoils are placed in a manner that minimizes damages to existing wetlands, and the ditch maintenance is no greater than the original depth, length and width of the ditch.”

Further, the state rule gives authority to the Director of the Division of Water Resources, in consultation with the Corps of Engineers and/or EPA, to determine if an activity falls within or is in compliance with the permitting exemption.

The N.C. Coastal Area Management Act (CAMA) regulates coastal wetlands and marshlands in the 20 coastal zone counties. Generally, silvicultural activities are exempt from permitting under CAMA and the Dredge/Fill Law, as long as there is no discharge of dredged or fill material into a marsh, estuary, or coastal wetland. However, no logging roads should be constructed into or across a coastal marsh, but shovel logging is acceptable. The construction of an actual forest road in a marsh would require a permit from the N.C. Division of Coastal Management. Also, under the CAMA rules - small ditches used for agricultural or forestry purposes with a maximum dimensions equal to or less than six feet deep (top width) by four feet deep are exempted from the CAMA permit requirements.

- **Reducing Wildfire Risk:** North Carolina ranks as one of the top states in the country in terms of the amount of acreage that falls inside wildland/urban interface (WUI) zones. The WUI is defined as the area where homes and communities meet or intermingle with undeveloped wildland vegetation. Considering that wildfire is such a natural part of the state’s ecosystems, forestland owners need to be diligent in their preparations to prevent wildfires.

The North Carolina Forest Service is responsible for the prevention, detection and suppression of wildfires along with the local fire departments, but forest landowners are crucial to this fire prevention effort. Landowners can learn more online at www.southernwildfirerisk.com.

Another preventative method for landowners to employ are firebreaks throughout their forests. A firebreak is a gap in trees and vegetation that acts as a barrier to slow

or stop the progress of a wildfire. Firebreaks should be constructed around the perimeter the property and within the forest tract. In addition to providing added barriers to a wildfire, firebreaks provide access to the property for fire fighting equipment. These firebreaks are also potential areas for wildlife food plots. Landowners should also seek to reduce the potential dangers on their property that is adjacent to roadways and entrance areas by keeping brush and vegetation maintained.

It is also important for landowners to control access to their property in general with gates or other barriers. It is important to make sure these gates are visible. Limiting trespassers will reduce the risk of wildfire and/or other damages. No trespassing signs or purple paint should be employed to notify the public of your property lines.

Absentee landowners must reach out to their neighbors, a consulting forester and/or members of the hunt club to keep watch on the property throughout the year. These people can provide an extra set of eyes for the absentee landowner.

Landowners can also reduce the threat of wildfires by conducting prescribed burns. In 1999, the state legislature passed the North Carolina Prescribed Burning Act designed to encourage the use of prescribed fire.

It limits the liability of private landowners that use fire as part of their forest management program. Under this legislation, smoke from prescribed burning conducted in compliance with General Statute 113-60.43 does not constitute a public or private nuisance. Landowner liability for any damage caused by smoke from a prescribed fire is limited provided that the burn is conducted by a certified burner and the burn is done in accordance with a prescribed burning plan.

Landowners may burn up to 50 acres of their own land provided it is done in accordance with a burning plan prepared and approved by a certified burner. A landowner can apply for permit online with the North Carolina Forest Service. The Forest Service will provide free firelines for landowners conducting a burn upon request.

- **Endangered Species:** The presence of a federally listed threatened or endangered animal species on a landowner's property may have a direct impact on the management of timberland. Landowners need to understand the basic requirements of the Endangered Species Act and how they may relate to their property.

Private lands are regulated under Section 9 and potentially under Section 7 of the federal Endangered Species Act (ESA). Section 9 specifies that no person shall “take” a listed endangered or threatened species. A take is generally defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conducts. Under a Supreme Court decision in 1995, (*Sweethome Communities v. Babbit*) habitat modification, including timber harvesting, that causes direct injury to a listed species may be considered a “take” of an endangered species.

Section 7 governs federal agency conduct. It prohibits federal agencies from engaging in or authorizing any action likely to jeopardize the continued existence of a listed species. As in Section 9, this includes destruction or adverse modification of designated habitat. Agency action includes timber sales, issuance of permits and funding grants. It may also include approval of federal cost-share funds for forest management/reforestation on private lands.

Key Points About Endangered Species

- ✓ One of the most well known animals having an impact on forestry in North Carolina is the Red-Cockaded Woodpecker, which generally inhabits older pine stands that are in a park-like condition.
 - ✓ Landowners are responsible for not taking an endangered species. They are not responsible for recovery of the species and are not required to manage for or provide new habitat for the species.
 - ✓ Section 9 of the ESA applies only to animal species, not listed plant species on private lands.
 - ✓ Some programs are available that offer some incentives to landowners for providing habitat such as the Safe Harbor Program for the Red-Cockaded Woodpecker. For more information on these programs, visit <http://www.fws.gov/Endangered/about/index.html>.
- **Local Ordinances/Zoning:** Landowners should understand any local tree ordinances or zoning requirements before conducting a timber sale and/or harvest. The North Carolina Cooperative Extension

has established a website that lists laws, ordinances and zoning that may impact forestry activities: <https://forestry.ces.ncsu.edu/nreos/forest/ordinance/>.

In 2005, Session Law 2005-447 “The Right to Practice Forestry” was passed in the North Carolina General Assembly. This law prohibits local governments from regulating or restricting forest management activities that are either (1) carried out under a forest management plan prepared by a registered forester and/or (2) on lands enrolled as timberland in the present use-value tax program.

A number of local governments have been given authority from the General Assembly to adopt local tree protection ordinances. This tree ordinance authority does not apply or regulate forestry activities carried out under a management plan prepared or approved by a registered forester and/or on lands enrolled as timberland under the state present use value tax program, *except for Orange County and the town of Matthews*. Again, these are forestry operations tied to a forest management plan with the goal of keeping the land forested into the future.

The Right to Practice Forestry protection does not extend to timber harvesting carried out prior to development activities. Local governments may withhold building permits for 3-5 years if timber harvesting was not done in accordance with existing development requirements. (See G.S. 153A-451 and G.S. 160A-458.5)

Consequently, forest landowners, who want to keep all of their options available into the future, may want to consult local development regulations. Typically, tree preservation areas or buffers must be established on the property in a development scenario. This could save money in the long run since the costs of fines, legal costs, restoration costs, and other expenses could apply if zoning and other land use regulations were ignored and/or violated.

In addition, municipal zoning authority by cities and towns may impact forestry operations. In general, municipalities have been reluctant to use zoning to regulate agriculture and forestry activities.

Any landowner or forester who encounters a problem with a regulatory official in regards to a timber harvest should contact the NCFCA for assistance. ❖

Consider The Environmental Footprint of Management Decisions

North Carolina forest landowners have always been recognized for their conservation values. For generations, these landowners have provided a raw material for the state's largest manufacturing industry, forest products, while also providing environmental benefits such as clean air and water, wildlife habitat, and recreation.

Aside from the mandatory regulations on forestry, forest landowners continually face the task of conducting their private business in an increasingly public forum. Forestry operations, particularly harvests, are viewed by the public from travel routes and recreation areas and may generate public concern. This is particularly true in a final harvest. With this in mind, landowners are encouraged to be creative when considering all types of harvests. Some things to consider:

- **Forests with Exceptional Conservation Value (FECV)** - Landowners are encouraged to determine if they own a Forest with Exceptional Conservation Value (FECV), which means the land has an area(s) that contain a globally rare plant, animal or community. If a plant, animal or community is found to be very rare in the world and especially vulnerable to extinction, then it may be classified as imperiled or critically imperiled.

This designation is similar to the threatened and endangered designations afforded to animals protected under the Endangered Species Act (ESA), but imperiled or critically imperiled plants, animals or communities may not be legally protected. Typically, but not always, imperiled or critically imperiled species and communities are more rare than species protected under the ESA.

Landowners also can consult with government agencies, non-governmental organizations, academic institutions and natural resource consultants such as The North Carolina Natural Heritage Program (www.ncnhp.org) to learn more about this designation.

It is important to note that landowners are not required by law to do anything for imperiled or critically

imperiled species and communities unless that species is listed under the Endangered Species Act. Many times, threatened and endangered plants, animal or communities can thrive in well-managed forests.

As a guideline, whenever planning a harvest or other forest management activity where imperiled or critically imperiled species and communities occur, the location and protection measures associated with these sites should be communicated to the ProLogger. Measures may range from setting aside an area from harvesting to harvesting the area in a different manner in order to conserve the species in question. Ultimately, it is up to landowners to decide if conservation is one of their priorities in their forest management plan.

- **Forest Signs** - Signs posted before a harvest from programs such as American Tree Farm System and/or Forest Stewardship Program inform the public that the land is a working forest.
- **Forest Roads and Skid Trails** - The design, location, number and maintenance of forest roads and skid trails, which are the trails used by the logging equipment, can soften the visual impact of a harvest. Log trucks must not track mud onto paved roads. Operations should be limited during wet weather and operators must avoid excess rutting of roads, skid trails and the harvest site. Roads and skid trails should be seeded or otherwise stabilized after the harvest is complete.



This skid trail was seeded and will serve as a fire lane and access road on the property. Landowners can encourage wildlife such as deer and turkeys by planting clover.



Here is the same skid trail a year later.

- **Forest Biomass Utilization** - As the demand for renewable energy sources continues to grow, landowners should weigh the benefits and costs of biomass production from their forestland. With careful planning and adherence to state's Best Management Practices, this can be accomplished using the same landing and road systems of the initial harvest with little impact to the site. Additionally, when utilizing logging residues, it is important to retain stumps, leaves and small limbs to support soil productivity, nutrient levels and to minimize soil movement during a harvest.

Benefits of biomass utilization following harvests or through other operations include:

- Reduction in dependency on fossil fuels while satisfying growing energy needs.
- Creation of jobs and business opportunities.
- Income for landowners from biomass sales.
- Decreased site preparation costs as harvested sites are left cleaner.
- Opportunities for low to no cost timber stand improvement.
- Increased forest health by reducing threats and/or restoration costs from fire, disease/pest infestations, invasive species and storm damage.

- **Climate Change & Carbon Sequestration** - Climate change may be caused by natural factors, such as changes in the sun's intensity and/or in ocean circulation.

Forests store carbon as trees absorb carbon dioxide through photosynthesis as they grow. Since the amount of carbon in the earth is a constant, when there is more carbon sequestered in long-term sinks such as trees and captured in forest products such as furniture and lumber, there is less carbon in our atmosphere.

When wood is burned for energy or trees die and decay, the once stored carbon is released back into the atmosphere. Since these products are not adding new carbon to the atmosphere, they are considered carbon-neutral compared to the burning of fossil fuels which releases carbon that was trapped beneath the earth's surface back into the atmosphere.

Landowners are encouraged to learn more about the developing carbon trading markets that support sustainable forest management and recognize the role forests can play in carbon sequestration and storage.

■ **Afforestation of Non-Forested Lands** -

Landowners may want to consider potential ecological impacts of the selection and planting of tree species in non-forested landscapes. Although the vast majority of North Carolina originally was forested, there are rare situations where planting trees may not be suitable, such as mountain balds or native Piedmont prairies. A qualified resource professional can help in determining if planting trees in a non-forested area is appropriate.

■ **Harvests and Reforestation** -

Landowners should plan a harvest with an eye towards reforesting the lands as soon as possible. In final harvests, a landowner may consider a vegetated or forested buffer to ease the visual impacts of the harvest.

■ **Invasive Exotic Species and Animals** -

Invasive exotic plants and animals are those that are found outside their native range. They can potentially have negative ecological, financial and social impacts. Invasive species pose a threat to the survival and reproduction of native species and can decrease forest productivity, complicate forest management and degrade biodiversity, wildlife habitat and the visual value of your forest. These undesirable species cause economic and/or environmental harm. Invasive species can be aquatic or terrestrial, including plants, animals, insects and micro-organisms. Not all non-native species become invasive species.

Invasive species are typically able to thrive due to geographic and climatic conditions being similar to those of their native range and to the lack of their natural predators of animals and diseases. Effective control can only be accomplished when landowners know what species to be on the lookout for and how to identify the species or their impacts.

There are hundreds maybe even thousands of invasive species across the United States. Some of the more common ones are listed here:

- *Plants* - Cogongrass, Kudzu, Japanese Climbing Fern, Chinese Tallow, Tree-of-Heaven, Water Hyacinth, Chinese Privet, Autumn Olive.
- *Animals & Insects* - Gypsy Moth, Emerald Ash Borer, Asian Longhorned Beetle, Hemlock Woolly Adelgid, Sirex Woodwasp.
- *Microorganisms* - Sudden Oak Death, Dutch Elm Disease, American Chestnut Blight, Fuisform Rust, Hypoxylon Canker.

Preventing the introduction of non-native species is by far the most effective and economical control measure. Landowners should have an effective, ongoing surveillance program in place. If an invasive species should get established, the second most important control measure is a rapid response to prevent spread and eradicate the unwelcome competitor.

Depending on the invasive species and particular circumstances, control measures can involve one or a combination of methods – mechanical (e.g., hand-picking, traps, tillage), biological (e.g., promoting beneficial predators), chemical (e.g., pesticides, herbicides). Following this, it may be beneficial to establish and/or release fast-growing native plants that can out-compete any surviving invasive plants while preventing soil erosion.

Maintaining a healthy forest through sound forest management practices will increase a forest's ability to combat invasive species.

More information on invasive species can be found on the National Invasive Species Council's website, www.invasivespecies.gov or the Forest Health Technology Enterprise Team's website, www.invasive.org. The Nonnative Invasive Plants of Southern Forests publication can be found online at: www.srs.fs.usda.gov/pub/gtr/gtr_srs062.

- **Log Decks** - Log deck locations should be based on topography, ground conditions and proximity to travel routes and recreational areas. Avoid leaving excessive debris on the log deck by spreading slash on the harvest area. Log decks can make excellent wildlife food plots at the conclusion of the harvest.
- **Special Sites** - Landowners are encouraged to identify and protect special sites and landscapes on their property. Special sites can be features of cultural or historical significance such as grave sites, old home sites and battlefields. Other non-forested special sites include unique landscapes such as bluffs, cliffs and caves.

Sensitive sites such as riparian areas, water bodies (creeks, rivers, waterfalls, pools and ponds), natural openings in the forest such as prairies, glades and dry sandhills may harbor many of the critically imperiled and imperiled aquatic and terrestrial species. All of these areas are important and are often very easy to work around while following a forest management plan.

- **Tree Species** - Species selection should be based on the goals of the landowner, the site soil and climatic factors, and the ability of the species to compete. Some landowners may choose to plant a particular species in order to restore the species on a location or area. One such example is the Longleaf Pine. Before the arrival of European settlers, extensive, pure stands of Longleaf Pine could be found throughout the southeast. Now, only about 1% of the estimated original 24 million hectares (60 million acres) exist.
- **Wildlife Habitat and Biodiversity** - Forest management plans contain more than just information about the trees and harvesting recommendations. Balanced forest management plans, tailored to landowners' objectives, can detail several practices or techniques through which landowners can promote habitat for a number of wildlife species, including game species such as deer, quail or turkey as well as increase the biological diversity of their property.

The SFI standard defines biodiversity as: “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.”

While many believe that biodiversity is most effectively addressed at the watershed or larger level, there are opportunities to contribute to biodiversity at all levels. Landowners can influence compositional and structural diversity through management choices. During forestry activities, landowners should consider preserving critical wildlife habitat elements such as leaving dead standing trees, conserving wet areas and establishing brush piles.

Landowners may also follow a more general plan that promotes a habitat for a wide range of species such as songbirds or birds of prey.

Techniques landowners can use to ensure biodiversity involve maintaining:

- A mix of habitat and cover types – both terrestrial and aquatic.
- A mix of species – both flora and fauna.
- A distribution of age classes within and between stands.
- Special sites and other unique stand features such as snags, low-value trees, seeps, etc.

More information on increasing wildlife habitat can be found online at www.ncwildlife.org/index.htm or by calling the North Carolina Wildlife Resources Commission at (919) 707-0050 to locate your district biologist.

- **Protecting Pollinators** - Honey bees, native bees, butterflies, moths, flies, bats, and beetles contribute substantially to the food production systems and to the health of our environment. Native pollinators pollinate more than 80% of wild flowering plants in temperate latitudes, thereby enhancing biodiversity and supporting stronger and more resilient ecosystems.

The health of pollinator population, has been negatively impacted over recent decades by a variety of factors, including the loss, degradation, and fragmentation of habitat; diminished quantity and quality of food sources; reduced availability of sites for mating, nesting, and migration; exposure to pesticides; and increased adverse effects from pathogens, arthropod pests, and parasites.

Landowners are encouraged to use consider using methods to improve pollinator habitat. There are eight common factors to consider when evaluating projects for conserving pollinator habitat:

- ✓ Determining the quality of foraging habitat
- ✓ Identifying important pollinator reproduction sites
- ✓ Determining important nesting and overwintering sites
- ✓ Identifying pollinators of sensitive or at-risk plant species on Federal, State, local, or nongovernmental organization (NGO) (e.g., NatureServe) lists as outlined in the National Academy of Sciences report Status of Pollinators in North America.
- ✓ Identifying and removing invasive species to improve pollinator habitat;
- ✓ Identifying, collecting, and using local, genetically appropriate native seeds;
- ✓ Implementing adaptive management; and
- ✓ Engaging and informing the public.

Six common managed habitat types are forests (thinning and understory control); Roadsides (promoting native plant communities for pollinators); Fields (conversion to native meadows); Riparian areas (maintaining forb diversity); and Wildlife openings (managing to improve and sustain pollinator habitat.)

As part of their forest management plan, landowners should consider these general guidelines to help the pollinators on their land.

- ✓ Minimize the use of pesticides toxic to pollinators or that will remove useful floral resources is best for conserving local pollinators. When use of pesticides harmful to pollinators cannot be avoided, managers should seek to reduce exposure to pollinators.
- ✓ The proper and regular use of prescribed fire. The right fire at the right place at the right time reduces hazardous fuels, protects human communities from extreme fires, minimizes the spread of pest insects and 26 disease, removes unwanted species, provides forage for game, recycles nutrients back to the soil; and promotes the growth of trees, and wildflowers. ❖



Bee hives on the forest edge of a Tree Farm.

Cost-Share, Easement and Assistance Programs for Landowners

There are numerous state and federal programs as well as private programs organizations established to assist landowners with managing their forests.

While it is difficult to list all the cost-share programs and easement programs, this section highlights places where landowners may research these programs at their own pace. Landowners should consult with a qualified resource professional, a lawyer and an accountant before entering any cost-share program or conservation agreement.

Cost-share programs can simply help to reforest the land after a harvest. In some cases, the land may need to be managed in a particular manner to gain the cost-share benefit. In others, the cost-share may be tied to water quality protection.

Conservation easements are agreements where a landowner either donates or is paid for the development rights to the property. There are two key elements for all landowners who plan on maintaining a working forest and/or farm to consider. A conservation easement does not necessarily prevent the continued land use whether it is in agriculture, horticulture or forestry. Secondly, a landowner should define the term and provisions of the easement. Some easements are permanent while others have a set term that can be rolled over. Again with any agreement, landowners should investigate all of their options to identify the best program(s) that provide the most benefit for their objectives.

Agricultural Development and Farmland Preservation Trust Fund

The Agricultural Development and Farmland Preservation Trust Fund (ADFPTF) was established by state legislation in 2005. The fund supports the farming, forestry, and horticulture communities 1) with the purchase of agricultural conservation easements (on farm, forest, and horticulture lands), including transaction costs and 2) Funding enterprise programs that promote sustainable family farms by providing production facilities/equipment for food, fiber, and value-added products. Learn more at <http://www.ncadfp.org/aboutus.htm> or by calling (919) 707-3071.

Beaver Management Assistance Program

The North Carolina Beaver Management Assistance Program (BMAP) has cooperative agreements with over 40 counties in the state to provide cost-share assistance to forest landowners in their efforts to control a booming beaver population. The BMAP Advisory Board set the landholder cost share at \$25 for each separate visit a wildlife specialist makes to a landholder's property or properties. Landowners are also charged \$125 for beaver dam removal. Landowners can make requests for assistance through their local cooperative extension service office or, in some cases, their local soil and water conservation district office. You can learn more online at: <http://www.ncwildlife.org/Conserving/Programs.aspx> or by calling (919) 786-4480.



BMAP technicians prepare to demolish a beaver dam with a high pressure hose. The BMAP program also uses rakes and in some cases, explosives.

Conservation Fund

By creating solutions that make environmental and economic sense, the Conservation fund seeks to redefine conservation easements. The Fund is a national organization with state offices. It has easements all 50 states, protecting more than 7.8 million acres of land since 1985. It's focus is on conservation and communities - creating as many pathways possible for people and organizations to protect their natural resources and save the places that matter most - properties with ecological, historic and/or cultural significance. We deliver this through strong partnerships with government, business and colleague organizations. For more information, contact Bill Holman at (919) 951-0119 or online at www.conservationfund.org.

Conservation Trust for North Carolina

This is an umbrella organization for the state's local and regional land trusts. For more information, contact (919) 828-4199 or check www.ctnc.org.

Forest Development Program

This is a state cost-share program administered through the North Carolina Forest Service. This program provides cost-share monies for reforestation and timber stand improvement through funds generated by a tax on the forest products industry. It carries a 10-year maintenance agreement. Landowners should contact the North Carolina Forest Service at (919) 857-4801 or check out www.ncforests-service.gov.

Forest Legacy Program

Created by Congress in the 1990 Farm Bill, its purpose is to help landowners, state and local governments and private land trusts identify and protect environmentally important forestlands that are threatened by conversion to non-forest uses. Willing owners can sell the right to develop the land to the state government. The government will pay for these rights at full fair market value. The owner keeps any remaining property rights and usually continues to live on and manage the property. Property taxes are paid by the owner on any retained rights as determined by local assessors. For more information on this program, contact the North Carolina Forest Service at (919) 857-4801 or check out www.ncforests-service.gov.

Forest Stewardship Program

A cooperative effort to help owners realize the objective of managing their forests for the benefits they desire, the program is voluntary and participants receive recognition for achievements in promoting total forest resource management. Landowners receive technical assistance in developing a stewardship management plan. For more information on this program, contact the North Carolina Forest Service's Stewardship Coordinator at (919) 857-4801 or online at http://ncforests-service.gov/fsandfl/are_you_stewardship_material.htm.

Land Trust Alliance

This alliance maintains a list of land trusts in the United States and breaks them down by state. For more information, contact (919) 515-0760 or check online at <http://findalandtrust.org/states/northcarolina37>.

Natural Resources Conservation Service Program (NRCS)

NRCS delivers technical assistance based on sound science and suited to a customer's specific needs. Cost-share monies and financial incentives are available through various programs such as the Conservation Reserve Enhancement Program (CREP), Wildlife Habitat Incentive Program (WHIP) and Environmental Quality Incentive

Program (EQIP). Applications for these programs can be found at USDA Service Centers. Landowners can find the appropriate USDA Service Center by looking on the web at <http://offices.sc.egov.usda.gov/locator/app?service+page/CountyMap&state=NC&stateName=North%20Carolina&staeCode=37>. The state headquarters can be reached at (919) 873-2100 or www.nc.nrcs.usda.gov.

North Carolina Tree Farm Program

The North Carolina Tree Farm Program is part of the American Tree Farm System (ATFS), which traces its roots back to the 1940's. The ATFS is the most popular certification system among non-industrial, private landowners. Landowners must have a forest management plan and be certified by a North Carolina Tree Farm Inspector to enroll in the program. The North Carolina Tree Farm Program hosts several field day and classroom workshops for landowners throughout the state regularly. For more information on this program, contact the North Carolina Tree Farm program at (919) 917-8646 or at nctreefarm@gmail.com.



It's a Family Affair - Dale Newport (purple shirt) and his family are proud North Carolina Tree Farmers.

Working Lands Trust

The Working Lands Trust was established in 2014 to ensure the long-term production and sustainability of our nation's food and fiber supply. The Trust seeks to conserve working farms and forestlands through conservation easements that promote working farms and forests. For more information, contact Will Peete at (336) 430-6643 or workinglandstrust@gmail.com. ❖

Sources of Assistance

North Carolina Forest Service

919-857-4801 **www.ncforestservice.gov**

Provides forest management planning, seedlings for reforestation, lists of consulting foresters and timber buyers by county, cost-share programs, pre-harvest planning, help with interpreting harvesting rules and regulations, FPG and BMP compliance oversight and monitoring fire control and insect and disease control.

North Carolina Cooperative Extension

919-515-5638 **<http://forestry.ces.ncsu.edu/>**

Provides research based information and education to enable landowners to make informed management decisions of their forest resources. Delivers information through workshops and direct requests from landowners.

N. C. Wildlife Resources Commission

919-733-3391 **www.ncwildlife.org**

A state agency that provides information and assistance to landowners in wildlife management.

N.C. Division of Soil & Water Conservation

919-807-6300 **<http://www.ncagr.gov/SWC/>**

Provides assistance in protecting and conserving the state's soil and water resources, delivering programs in non-point source pollution management, cost share for agricultural best management practices, technical and engineering assistance, soil surveys, conservation easements and environmental and conservation education.

Consulting Foresters **www.acf-foresters.com**

Consulting foresters generally offer a full range of services to private landowners. Lists of local consulting foresters are available from the county extension office or from the county office of the North Carolina Division of Forest Resources. A list of all the registered foresters in North Carolina can also be accessed at the North Carolina Forest Service's website.

Forest Products Companies

Some forest product companies offer forest landowner assistance programs. Industry professionals will usually assist with management planning and may make contractors available at cost for site preparation and seedling planting. A list of timber buyers in North Carolina can be accessed by calling the NCFA or are available from the County Cooperative Extension offices or from the North Carolina Forest Service. ❖

The NCFA

Who We Are

The NCFA, the state's oldest forest conservation organization, was established in 1911 and is a private, non-profit partnership of 4,000 forest managers, landowners, mill operators, loggers, furniture manufacturers, educators and others concerned about the long-term health and productivity of the state's forest resources and the industries they support.

What We Do

■ **Legislative Affairs:** The NCFA's staff actively represents its members with the state legislature, regulatory bodies and the North Carolina congressional delegation. This includes direct contact with legislative representatives, offering testimony on key issues, briefing legislators and conducting tours to educate them on forestry.

■ **Education and Outreach:** The NCFA's education program reaches out to forestry professionals through its professional development programs, including the ProLogger program. In terms of the general public, the NCFA sponsors Forestry & Environmental Camps for six grade students, coordinates Sustainable Forestry Teachers' Academies, and produces educational materials.

How We Can Help

■ **Technical Assistance:** The NCFA's staff will visit with landowners to discuss any forestry issues. On request, NCFA staff will speak on behalf of a landowner when a forestry practice or private property right is being disputed by a regulatory or government official.

How We Communicate

■ **Communications:** The NCFA publishes weekly e-mail release, a monthly newsletter and maintains www.ncforestry.org for its members. The NCFA interacts with the media on a regular basis to forward forestry issues.

■ **Events:** The NCFA sponsors an Annual Meeting for its members to come together and discuss the issues impacting forestry in North Carolina. The NCFA also holds a Forestry Day in the Legislature that allows NCFA members to come to Raleigh and have lunch with their elected officials.

■ **Membership:** For NCFA membership information, call (800) 231-7723 or check www.ncforestry.org. ❖

The Sustainable Forestry Initiative®

At the heart of the Sustainable Forestry Initiative® Program is the belief that responsible environmental policy and sound business practices go hand in hand.

SFI Standards Updated for 2015-2019

A major change to the structure of the SFI 2015-2019 Standards and Rules was to separate the fiber sourcing requirements into their own standard. There are now three stand alone standards.

The SFI 2015-2019 Forest Management Standard

promotes sustainable forestry practices based on 13 Principles, 15 Objectives, 37 Performance Measures and 101 Indicators. These requirements include measures to protect water quality, biodiversity, wildlife habitat, species at risk and forests with exceptional conservation value.

The SFI 2015-2019 Fiber Sourcing Standard

promotes responsible forestry practices through 14 Principles, 13 Objectives, 21 Performance Measures and 55 Indicators that address 90 percent of the world's forests that are not certified. These fiber-sourcing requirements include measures to broaden the practice of biodiversity, use best management practices to protect water quality, and use the services of forest management and harvesting professionals. Because it governs how SFI Program Participants procure fiber from non-certified land, the standard is encouraging the spread of responsible forest practices. This standard distinguishes SFI from all other forest certification programs in that it requires the responsible procurement of fiber from non-certified forests. SFI program participants only utilize professional loggers who have completed the SIC supported training programs such as ProLogger, SHARP Logger and Top Logger.

The SFI 2015-2019 Chain-of-Custody Standard

is an accounting system that tracks forest fiber content (certified forest content, certified sourcing and recycled content) through production and manufacturing to the end product. Companies can use chain-of-custody certification to track and communicate forest fiber content using one of three approaches for chain of custody: physical separation, average percentage or volume credit method. The standard is for any organization globally that sources, processes, manufactures, handles, trades, converts or prints forest-based products.

What does the SFI Program mean to private landowners?

The SFI Program impacts the management of our forests on the ground at the local level through the involvement of the State Implementation Committees.

Landowner Outreach - Since 85% of the 18.6 million acres of forests that cover North Carolina are privately owned, any forest conservation must start with the people who own these forests. The NC SFI SIC reaches out to landowners to encourage and broaden the practice of sustainable forestry through its financial of and involvement with the North Carolina Forestry Association, the North Carolina Tree Farm Program and other forest/wildlife related organizations across the state.

Inconsistent Practices - A part of the NC SFI effort is the SFI Inconsistent Practices toll free phone number - 1-877-271-6531. The Inconsistent Practices number is a resource to report any forest management activity that is not consistent with the goals of the SFI program. All phone calls are investigated by the program's third-party monitor. All reports are investigated in the strictest confidence. This program documents any inconsistent practices, if any, that may take place in North Carolina in a given year. The monitor is not an enforcement agency nor does the monitor have the authority to mediate a complaint.

ProLogger/Forester Education - The NC SFI provides input to the training programs for the North Carolina Forestry Association's ProLogger program. Training topics are selected and approved to address current environmental issues of concern. The topics are incorporated into the annual training modules as well as the base program. ❖



Forestry Mutual's Bryan Wagner (right) is one of the instructors in the NCFAs ProLogger Program.

Notes

NORTH CAROLINA FOREST FACTS

**Total Acres in North Carolina:
31 million acres**

**Acres in Forestland:
18.7 million acres (60% of state)**

Timber Species Across State:

Hardwoods:	55%
Softwood (pines):	28%
Mixed Stands:	17%

Ownership of Forestland:

Public: 15%

National Forests: 7%

Other Federal: 3%

State: 4%

County & Municipal: 1%

Private: 85%

Non-industrial Private: 64%

Non-industrial Corporate: 15%

Forest Industry: 6%

Estimated # of Private

Landowners: > 500,000

North Carolina Forestry Association

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(2017)