

A Landowner's Guide to Forestry in North Carolina



**Bob & Jean Cooper are NCFE Members and the
NC Tree Farm Program's Tree Farmers of the
Year in 2007.**

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

The NC SIC 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 will be able to supply the needs of future generations.

A significant part of the NC SIC's 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. These goals can be viewed on the following website: www.sfiprogram.org.

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.

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Introduction

The purpose of this publication is to provide private landowners of North Carolina with the appropriate information and guidance to successfully manage their land to its desired potential.

There are over 600,000 private, non-industrial landowners who own 78% 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' quality of life. Healthy forests not only provide the best wildlife habitat, clean air, clean water and the base for a host of recreation activities, but they also prove to be the most profitable for the landowner.

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 State University Cooperative Extension Service and the North Carolina Division of Forest Resources.

The North Carolina Forestry Association (NCFA) and the North Carolina Sustainable Forestry Initiative State 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 benefit of 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, Bob Slocum, at (800) 231-7723 or at www.ncforestry.org.

The NCFA, established in 1911, is the state's oldest conservation organization and is comprised of 4,500 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 better educated by being involved with a local forestry club and one or more forestry associations. Membership dues for landowners are well-worth the investment. Landowners should also contact their county ranger with the Division of North Carolina Forest Resources and their county extension agent with the N.C. State Cooperative Extension. By getting involved, a landowner will become more educated in the current tax regulations, cost-share programs and environmental issues. Landowners who are involved with the forestry community have the best knowledge and access to cost-share programs, tax incentives, easements and market-prices. ❖



Steven Burgess of Conway accepts the Northampton Forestry Club's Landowner of the Year from County Ranger Rodney Black during the club's annual dinner.

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 can 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. Professional forestry assistance is available from a number of sources.

The North Carolina Division of Forest Resources of-

fers technical assistance to all forest landowners through its county rangers and foresters, who provide general management recommendations and oversee cost-share programs.

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, especially when selling timber, but also to oversee the general management of their property. 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 N.C. Cooperative Extension, the N.C. Division of Forest Resources or online at www.dfr.state.nc.us/tending/tending_consulting.htm.

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. ❖



Weyerhaeuser forester Steve Cox (right) explains the logging of timber purchased by his company's foresters with landowners during a N.C. Tree Farm workshop.

Develop a 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 appropriate management plan.

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. 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.

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

- Landowner objectives
- Maps, 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 by creating healthy forests. While some threats cannot be totally eliminated, landowners can minimize risk 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 not only provide an economic return, but will also provide wildlife habitat, recreational opportunities and aesthetic values to the landowner at the same time. ❖

Enroll Forestland in Present Use Value Tax Program

Landowners who qualify for the state's present use value tax program should seek to enroll their lands. 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, especially those who own property near urban centers. This program was established through state legislation in 1974.

To be eligible, a forestland owner must have at least 20 acres of forestland under a sound management plan that includes timber production 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 NCFA urges landowners to work with a registered forestry 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. The property being enrolled must be owned for four years by the current owner to be eligible if it has not been in the program previously. 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.

Eligibility requirements are subject to change in accordance with North Carolina General Statutes. ❖

How to Plan a 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 five 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 23% higher return on their land. They are more satisfied with the quality of the harvest and compliance with North Carolina's Best Management Practices. It is estimated that the land is 120% more productive after the harvest that is under the guidance of a qualified resource professional.

2. Have Your Timber Appraised – 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



Consulting foresters such as David Henderson (left) provide landowners such as Hayes Harbour assistance and direction through a management plan to help them realize the goals they may have for their property.

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. The removal of the biggest and the best timber while leaving the low quality trees is called high-grading. This destructive harvesting practice reduces the current and future value of the forest. Again, professional assistance from the North Carolina Division of Forest Resources, 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 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 Practice Guidelines and defined Best Management Practices and River Basin 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 the ideal condition for reforestation. A properly planned and executed harvest will reduce the cost of reforestation.



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

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 Division of Forest Resources 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 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 line.
- Protect/conserv e “special sites” such as old houses, barns, cemeteries, etc.

7. Hire a professionally trained logger – In the invitation to bid or sale notice, landowners should require the following of any logger contracted to harvest their timber:

- 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 Practice Guidelines and the Best Management Practices.
- A list of references. ❖



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

Consider the Economics of Reforestation

Many investment analysts consider reforestation 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 fire, insect, disease protection. 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 and 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 includes fire, insect, disease and severe weather (hurricanes, tornadoes, etc.) Proper management greatly reduces the severity of these threats. ❖



Green Ash trees were planted in front of a stand of planted Loblolly on this North Carolina Tree Farm. The stand of Green Ash have grown strong in the more damp area of the farm with the Loblolly Pines taking the higher ground.

Research All Sources of Financial Assistance for Reforestation

Financial assistance for reforestation is available at the state and federal levels. State cost-share funding is available through the North Carolina Division of Forest Resources under the Forest Development Program (FDP). Landowners may be reimbursed a portion of the cost of site preparation, planting and various timber stand improvement activities.

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 N. C. Division of Forest Resources 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 for reforestation costs in the year of occurrence with an 84 month amortization rate for the remaining costs.

These changes to the reforestation tax provisions are significant. For more detail on the taxation issue, consult the section entitled *Plan for Timber Taxation* on page 15.❖



A planter takes aim to place a tree into the ground.

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:



Boon Chesson stands next to one of his Longleaf Pines. Through research, Chesson discovered that Longleaf Pines once dominated his property. He is now restoring those stands on his farm by planting and natural regeneration.

- **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. ❖

Plan For Timber Taxation

Taxation of timber income and timber assets is a major concern of 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 the applicability of current tax laws and consult with a qualified resource professional and an accountant 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 free market value on date of death of property acquired in the case of inheritance. The basis of a gift is the documented basis of the donor. Basis is used for calculating gain or loss on sales or exchanges and for computing amortization, cost recovery, depletion and casualty loss deductions.

Income from cost share programs does not have to be claimed as income, but if not, then it cannot be added to basis.

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 now will 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 for reforestation costs in the year of occurrence with an 84 month amortization of the remaining costs (a change from the current \$10,000 tax credit).

These changes to the reforestation tax provisions are significant. Now a landowner can expense \$10,000 in the year it is incurred and then expense the remaining amount over 84 months. The reforestation tax provision went into effect October 22, 2004.

Note: Check current requirements as Congress continues to adjust federal tax provisions (www.timbertax.org) or contact North Carolina Cooperative Extension. ❖

Consider All State and Federal Environmental 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.

- **State Forest Practice Guidelines for Water Quality:** Forestry operations in North Carolina must comply with the Forest Practice Guidelines (FPGs) for water quality under the state Sedimentation Pollution Control Law.

The guidelines are designed to prevent sediment and chemicals from entering streams or other water bodies during a forestry operation. Compliance with these provisions is generally considered adequate to meet federal non-point source pollution requirements under the Coastal Zone Management Act and the Clean Water Act. The N.C. Division of Forest Resources is charged with technical oversight and compliance monitoring.



NCFE ProLoggers pose for a photo after completing three days of training on safety and environmental requirements.

- **Buffer Zones:** In addition to the state Forest Practice Guidelines for water quality, mandatory rules are in place in some river basins requiring the maintenance of forested buffers along perennial and intermittent streams and water bodies.

Rules are in place in the Neuse and Tar-Pamlico river basins as well as on the mainstream of the Catawba River and the Randleman Reservoir. The N.C. Division of Forest Resources has leaflets which explain all existing regulations in these areas.

In general, the buffer provision for land that is under a forest management plan requires maintenance of a 50-foot buffer along all streams and water bodies. Timber harvesting is allowed within the buffer but it must meet the following guidelines.

- ✓ Within the first ten feet closest to the stream, pines that are 14 inches diameter at basal height (DBH) or larger and hardwoods that are 16 inches DBH and larger may be harvested provided that they do not have exposed primary roots in the stream bank.
 - ✓ Within the next 20 feet, fifty-percent of the trees that are five inches DBH and larger may be harvested.
 - ✓ In the outer 20 feet, harvesting is allowed in compliance with the Forest Practice Guidelines for water quality.
- **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 health and productivity while minimizing any environmental impacts from a harvest.

North Carolina's Division of Forest Resources maintains a BMP handbook for forestry that is available upon request or by going to www.dfr.state.us.

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, but take care to minimize soil disturbance to prevent excess erosion.



Streamside buffers and mats like the ones used in this picture protect water quality during an logging operation.

- ✓ 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 to prevent accelerated erosion.
- ✓ Proper construction of all roads to minimize erosion and channelized flow. This includes the use of broad-based dips, water bars 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 best management practices will ensure that a forestry operation does not cause adverse environmental impacts and will protect the future health and productivity of a forest.

- **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 404 dredge and fill permit provided that certain requirements are met.

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).

In addition to the federal requirements, the state rule requires that spoil from any ditch construction be deposited within 20 feet of the ditch. Further, the state rule gives authority to the Director of the Division of Water Quality, 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. Also in 2000, the North Carolina Pesticide Board adopted an enforcement policy to clarify label language concerning the application of pesticides used in forestry in wetlands. This policy states:

“No pesticide can be applied to surface water unless it has an aquatic label. An exception exists if ephemeral water is present with little likelihood of the water moving off site. Ephemeral water is surface water (1) that temporarily accumulates in shallow depressions during and following rain events, (2) that is less than one foot deep and (3) that has been present less than 30 consecutive days at the time of application. This exception does not apply if the product label has an aquatic organism toxicity statement.”

- **Prescribed Burning:** In 1999, the state legislature passed a bill (H. 316) designed to encourage the use of prescribed fire. The bill limits the liability of private landowners that use fire as part of their forest management program. Under this legislation, local government may not declare smoke from prescribed fire as a public nuisance and 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.

- **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

- ✓ The animal currently having the most 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. It does not apply to 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 a complete list in North Carolina, go to http://216.27.49.98/pg07_Wildlife-SpeciesCon/protected_species.pdf.
- **Local ordinances/zoning:** Landowners should understand any local tree ordinances or zoning requirements before conducting a timber sale. In 2005,

legislation (Senate bill 681) was passed that prohibits local governments from regulating or restricting forest management activities that are either (1) carried out under a forest management plan prepared or approved by a registered forester; or (2) on lands enrolled as timberland in the present use-value tax program. NOTE: This protection does not extend to timber harvesting carried out prior to development activities. Local governments may withhold building permits for 3-5 years if harvesting is not done in accordance with development requirements. (See G.S. 153A-451 and G.S. 160A-458.5)

A growing number of local governments have been given authority from the General Assembly to adopt local tree protection ordinances. In all cases, this granted authority prohibits the regulation of forestry activities carried out under a management plan prepared or approved by a registered forester or on lands enrolled as timberland under the state present use value tax program.

In addition, counties are prohibited from zoning bona fide agricultural operations, which by statute, includes operations for the growing or harvesting of timber and timber products. Although the above does not affect municipal zoning authority, cities and towns have generally not used zoning to regulate forestry activities.

Any landowner who encounters a problem with a regulatory official in regards to a timber harvest should contact the NCFCA for assistance. The North Carolina Cooperative Extension has established a website that lists laws, ordinances and zoning that may impact forestry activities (www.ces.ncsu.edu/forestry/ordinance).❖



Forestry operations must meet certain requirements to keep their exemption from the 404 dredge and fill permit.

Consider The Environmental Footprint of Management Decisions

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

Consequently, 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 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 logger. 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.

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:

- **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. Skid trails and forest roads should not be rutted due to wet conditions and trails should be re-seeded after the harvest is complete.



This skid trail was reseeded 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 in addition to grass seed.

- **Forest Signs** - Signs posted before a harvest such as the American Tree Farm and/or Forest Stewardship inform the public that the land is a working forest.
- **Harvest and Reforest** - Landowners should plan the harvest with an eye towards reforesting the lands as soon as possible. In final harvests, a landowner may consider a visual buffer to ease the concern of neighbors and the local community.

- **Invasive Species** - These undesirable species cause economic and/or environmental harm. Invasive species can be aquatic or terrestrial, including plants, animals (including insects) and micro-organisms. Not all non-native species become invasive species. Landowners should become familiar with invasive species that can now be found in North Carolina such as the Gypsy Moth, Kudzu, Tree-of-Heaven and Chinese Tallow. 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.
- **Log Decks** - Log deck locations should be based on topography, ground conditions and proximity to travel routes and recreation areas. Avoid leaving excessive debris on the log deck by spreading slash on the harvest area. Log decks make excellent wildlife food plots at the conclusion of the harvest.
- **Wildlife** - Through a forest management plan, landowners can provide the ideal habitat for a particular game species such as deer, quail or turkey. 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.
- **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. ❖



A young Longleaf Pine stand.

Sources For Cost Share Programs and Conservations Easements

There are numerous state and federal programs as well as some private organizations to assist landowners with maintaining their forests in the face of the growing urbanization of North Carolina. 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 must understand the programs and agreements they are entering into with their land. Landowners should consult with a qualified forestry 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. Firstly, landowners must not relinquish their ability to manage their land. 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.

The Forest Development Program

Administered through the North Carolina Division of Forest Resources, this program provides cost share monies for reforestation through funds generated by a tax on the forest products industry and through state appropriations. Landowners should apply through the North Carolina Division of Forest Resources.

The 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 N.C. Division of Forest Resources at (919) 733-2162 or check out www.dfr.state.nc.us.

N.C. Natural Resources Conservation Service Program (NRCS)

NRCS delivers technical assistance based on sound science and suited to a customer's specific needs. Cost shares 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 program can be found at North Carolina Soil and Water Conservation District Offices. The state headquarters can be reached at (919) 873-2100 or www.nc.nrcs.usda.gov.

N.C. Conservation Tax Credit Program

A unique incentive program to assist landowners to protect the environment and their quality of life, landowners are given a tax credit that is allowed against individual and corporate income taxes when property is donated for perpetual conservation purposes. The office can be reached at (919) 715-4191 or at <http://www.enr.state.nc.us/conservationtaxcredit>.

The Land Trust Alliance

This alliance maintains a list of land trust in the United States and breaks them down by region. For more information, contact (919) 424-4427 or check www.lta.org/find-landtrust/NC.htm.

Conservation Trust for North Carolina

This is an umbrella organization for the state's 22 local and regional land trusts. For more information, contact (919) 828-4199 or check www.ctnc.org. ❖

Landowners Assistance Programs

The 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 N.C. Division of Forest Resources Stewardship Coordinator at (919) 733-2162 or at www.dfr.state.nc.us.



Forest landowners C.D and Carolyn Barrett are members of the Tree Farm and the Forest Stewardship programs.

The North Carolina Tree Farm Program

The North Carolina Tree Farm Program is part of the American Tree Farm System. Consisting of private landowners across North Carolina, the program is the only certification system that is completely free to the landowners. Landowners enrolled in the program must have a forest management plan and be certified by a North Carolina Tree Farm Inspector. Tree Farms are re-inspected on a rotating basis. The program, which traces its roots back to the 1940's, provides certification and signs to landowners free of charge. For more information on this program, contact the NCFE at (800) 231-7723 or check out www.nctreefarm.org.

Beaver Management Assistance Program

The North Carolina Beaver Management Assistance Program (BMAP), established in November of 1992, has cooperative agreements with 43 counties in the state to provide cost-share assistance with controlling the booming beaver population. Landholders residing in nonparticipating counties can negotiate service costs that they will have to pay on a non-cost-share basis.

The BMAP Advisory Board set the landholder cost share at \$15 for each separate visit a wildlife specialist makes to a landholder's property or properties. There is no charge for the initial assessment which is defined as the time spent with a landholder whether in person or over the phone to discuss the BMAP and sign the paperwork. Landholders are also charged \$100 for beaver dam removal.

Landholders should make requests for assistance through their local cooperative extension service office or, in some cases, their local soil and water conservation district office or other designated contact.

Each year a BMAP leaflet listing telephone contacts, by county, is distributed to all interested parties. Requests for technical assistance, educational programs, and similar activities are given high priority and are provided at no cost to cooperators and the general public.

For more information, call the BMAP program at (919) 786-4480. ❖



BMAP staff prepare to demolish a beaver dam. The program helps landowners remove beavers and dams that are damaging their property.

Sources of Assistance

N.C. Division of Forest Resources

919-733-2162

www.dfr.state.nc.us

Provides forest management planning, seedlings for reforestation, lists of consulting foresters and timber buyers by county, cost-share programs, BMP implementation, fire control and insect and disease control.

N.C. Cooperative Extension, Forest Resources at N.C. State University

919-515-5638

www.ces.ncsu.edu/forestry

Provides research based information and education on all aspects of forest management, timber taxes, wildlife, policy and economics.

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

919-733-2302

www.enr.state.nc.us/DSWC/

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 N.C. Division of Forest Resources website or at <http://members.aol.com/nbrf/>.

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 NCFCA or are available from the County Cooperative Extension offices or from the North Carolina Division of Forest Resources. ❖

The NCFA

Who We Are

The NCFA, the state's oldest forest conservation organization, was established in 1911 and is a private, nonprofit partnership of 4,500 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. The association offers a variety of educational programs and resources for forestry professionals and the general public that promote responsible use and management of our state's forest resources.

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 and forest management.

How We Can Help

■ **Technical Assistance:** The NCFA's staff provides technical assistance to association members who will visit with landowners to discuss a particular issue and speak on behalf of the landowner when a forestry or private landowner's rights are being disputed by a regulatory or government official.

How We Communicate

■ **Communications:** The NCFA publishes 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.

■ **Membership 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. It is a great opportunity for NCFA members to address key forestry issues.

■ **NCFA 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 (SFI) Program is the belief that responsible environmental policy and sound business practices go hand in hand. The SFI Program strives to ensure that forestland in North Carolina is managed wisely and that North Carolina's forests will be able to supply the needs of future generations.



SUSTAINABLE
FORESTRY
INITIATIVE

What is the SFI Program?

The Sustainable Forestry Initiative Program was developed nationally through the American Forest and Paper Association, whose members produce 90 percent of the paper and 60 percent of the lumber produced in America Today. Compliance with SFI Programs on company-owned forestland is mandatory for all AF&PA member companies. Today, over 200 companies, organizations and government agencies are SFI Program participants. The SFI Program is a land stewardship ethic that integrates the growing, nurturing and harvesting of trees for useful products with the conservation of soil, air and water quality, wildlife and fish habitat and aesthetics.

What does the SFI Program mean to private landowners?

The SFI Program impacts the management of our forests on the ground level.

Landowner Outreach - Since 90% of the 17.6 million acres of forests that cover North Carolina are privately owned, any forest conservation must start with the people who own these forests. In fact, over 76% of the forests are owned by non-industrial private landowners. The NC SIC reaches out to landowners to encourage and broaden the practice of sustainable forestry through involvement in forestry clubs, publications and public service announcements.

Logger Education - The NC SIC supports the North Carolina Forestry Association's ProLogger Program, which trains loggers to be safe and smart in the woods. The ProLogger Program educates loggers about North Carolina's Best Management Practices (BMPs) as well as the state's Forest Practice Guidelines.



Forestry Mutual's Bryan Wagner is one of the instructors involved with the NCFCA's ProLogger Program, which teaches loggers to be smart and safe in the woods.

Inconsistent Practices - A significant part of the NC SIC's 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.❖

NORTH CAROLINA FOREST FACTS

Total Acres in North Carolina:

31 million acres

Acres in Forestland:

17.6 million acres (58% of State)

Timber Species Across State:

Hardwoods: 55%

Softwood (pines): 28%

Mixed Stands: 17%

Acres Lost to Development since 1990:

1.6 million acres

Acres Gained from Agricultural Land:

600,000 acres

Net loss of Forestland Since 1990:

1 million acres

Ownership of Forestland in acres:

Public: 1.9 million

National Forest: 1.2 million

Other Public: 700,000

Private: 15.7 million

Forest Industry: 1.7 million

Non-industrial Private: 13.9 million

Estimated # of Private Landowners:

>600,000

Acres Harvested/Year and Retained in Timberland:

247,000 acres/year

Annual Reforestation:

315,000 acres/year (67% natural)

North Carolina Forestry Association

www.ncforestry.org

1600 Glenwood Ave, Raleigh, NC 27608

(919) 834-3943

(2008)