

Chapter 10

Forestry in the Little Tennessee River Basin

10.1 Forestland Ownership and Resources

Approximately 52 percent of forestland in the Little Tennessee basin is privately owned. The majority of the balance is comprised of publicly owned land in the Nantahala National Forest and Great Smoky Mountains National Park. This ownership estimate comes from the most recent data published by the USDA-Forest Service *Forest Statistics for North Carolina, 2002*. (Brown, Mark J. Southern Research Station Resource Bulletin SRS-88. January 2004).

10.1.1 Forest Management

At least 800 acres of land were established or regenerated with forest trees across the basin from September 1, 1999 through August 31, 2004. During this same time period the Division of Forest Resources provided nearly 600 individual forest plans for landowners that encompassed almost 25,000 acres in the basin.

10.1.2 Forest Legacy Program

In 2002, the USDA Forest Service provided initial match funding through its Forest Legacy Program to be used for the acquisition of a conservation easement encompassing nearly 1,100 acres. This funding supplemented private and state grants that were used to conserve a significant portion of forestland within the viewshed of the Blue Ridge Parkway, near Balsam Mountain in Jackson and Haywood counties. This Forest Legacy project is located in subbasin 04-04-02 of the Little Tennessee basin.

The Forest Legacy Program partners with participating states to support efforts that protect environmentally sensitive forestlands. The program is specifically designed to encourage the protection of privately owned forestlands and is entirely voluntary. It encourages and supports acquisition of conservation easements that most often are used to place restrictions on development, while requiring sustainable forestry practices, and protecting other values. The program's Web site has more information: www.fs.fed.us/spf/coop/programs/loa/flp.shtml.

10.1.3 Christmas Tree Production

The Division of Forest Resources does not oversee regulations related to land clearing activities for Christmas tree production or the associated BMPs for tree farming operations. These activities are deemed to be an agricultural/horticultural activity and are under the oversight of the NC Department of Agriculture & Consumer Services (NCA&CS) and their recommended agricultural BMPs. The NC Cooperative Extension Service through NC State University has developed extensive guidelines and recommendations for Christmas tree operations. This material is available on-line at www.ces.ncsu.edu/fletcher/programs/xmas/.

10.2 Forestry Water Quality Regulations in North Carolina

10.2.1 Forest Practice Guidelines (FPG) for Water Quality

Forestry operations in North Carolina are subject to regulation under the Sedimentation Pollution Control Act of 1973 (G.S. Ch.113A Art.4 referred to as “SPCA”). However, forestry operations may be exempted from the permit and plan requirements of the SPCA, if the operations meet the compliance standards outlined in the *Forest Practices Guidelines Related to Water Quality* (15A NCAC II .0101 - .0209, referred to as “FPGs”) and General Statutes regarding stream obstruction (G.S.77-13 & G.S.77-14).

The North Carolina Division of Forest Resources (DFR) is delegated the authority to monitor and evaluate forestry operations for compliance with these aforementioned laws and/or rules. In addition, the DFR works to resolve identified FPG compliance questions brought to its attention through citizen complaints. Violations of the FPG performance standards that cannot be resolved by the DFR are referred to the appropriate State agency for enforcement action.

During the period September 1, 1999 through August 31, 2004 the Division of Forest Resources conducted 349 FPG inspections of forestry-related activities in the basin; 87 percent of the sites inspected were in compliance.

10.2.2 Other Forestry Related Water Quality Regulations

In addition to the State regulations noted above, DFR monitors the implementation of the following Federal rules relating to water quality and forestry operations:

- The Section 404 silviculture exemption under the Clean Water Act
- The federally-mandated 15 Best Management Practices (BMPs) related to road construction in wetlands
- The federally-mandated BMPs for mechanical site preparation activities for the establishment of pine plantations in wetlands of the southeastern U.S.

10.2.3 Water Quality Foresters

While the DFR currently has a Water Quality Forester located in ten of the DFR’s thirteen Districts across the State, there are none assigned within the Little Tennessee River basin. However, the forester staff based in the DFR’s Sylva District Office and Asheville Regional Office address water quality issues related to forestry as time permits, while also handling wildfire suppression and forest management duties.

10.2.4 Forestry Best Management Practices (BMPs)

Implementing Forestry Best Management Practices is strongly encouraged by the Division of Forest Resources in order to efficiently and effectively protect the water resources of North Carolina. During this reporting period, the DFR recorded over 500 instances across 28,000 acres in which BMPs were either noted in use or had been recommended. The Forestry Best Management Practices Manual describes recommended techniques that should be used to help comply with the State’s forestry laws and help protect water quality. This manual is currently undergoing its first revision since adoption in 1989. This revision, led by the DENR-appointed Technical Advisory Committee (TAC) has undertaken four years of effort.

To further assess BMPs, the DFR conducted a detailed, statewide BMP Implementation Survey from March 2000 through March 2003 to evaluate Forestry BMPs on *active* harvest operations. This survey evaluated 26 harvest sites in the basin, with a resulting BMP implementation rate of 73 percent. The problems most often cited in this survey relate to stream crossings, skid trails, and site rehabilitation. This survey, and additional surveys to be conducted, will serve as a basis for focused efforts in the forestry community to address water quality concerns through better and more effective BMP implementation and training.

10.2.5 Watersheds and BMP Research

In 1933 the USDA-Forest Service set aside 3,900 acres (later increased to 5,750 acres) of the Nantahala National Forest located between the communities of Franklin and Otto (Subbasin 04-04-01) to create the Coweeta Experimental Forest for an expanded program in watershed research. An intensive program of weir construction began in 1934 along with a network of 56 standard rain gages, numerous groundwater wells, and meteorological stations.

Since then, scientists have conducted a variety of watershed experiments at Coweeta. Early studies documented the harmful effects on soil and water resources by unrestricted land-use practices that included farming, grazing, and logging. The knowledge gained in these early experiments was the basis for a pilot test of intensive multi-resource management of Southern Appalachian forests and has provided guidelines for watershed management and Best Management Practices on public and private lands alike.

More recent experiments have demonstrated improved methods for managing steep mountain lands to minimize damage to soil and water. The centerpiece of today's efforts is the Long-Term Ecological Research (LTER) Program with the University of Georgia, begun in 1980 and funded through the National Science Foundation. More information about Coweeta LTER is available at: <http://coweeta.ecology.uga.edu/>.

10.2.6 Bridgemats

The DFR has been providing bridgemats on loan out to loggers for establishing temporary stream crossings during harvest activities. Temporary bridges are usually the best solution for stream crossings, instead of culverts or hard-surfaced 'ford' crossings. Wooden timber bridgemats have been available for use in the basin for nearly seven years, and are available upon request from the Sylva District Office. In 2005, six new 25-foot wooden bridgemats were assigned to the Sylva District; these mats were acquired with USEPA 319-Grant funds, allowing DFR to continue this successful program. More information about using bridgemats, and the above noted BMP survey, is available on the 'Water Quality' section of the DFR's Web site www.dfr.state.nc.us.

10.2.7 Forest Products Industry

There are five forest products-related manufacturers or processors located within the basin. These manufacturers pay an assessment to the state, which is then combined with annual legislative appropriations, to fund the "Forest Development Program" (FDP), which provides cost-shared reforestation assistance for forest landowners.

10.2.8 Protection from Wildfires

The “Firewise Communities” program is a national, multi-agency effort designed to reach homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildfires, before a fire starts. The Firewise Communities program offers a series of practical steps that individuals and communities can take to minimize wildfire risks. The Firewise approach emphasizes community responsibility for planning in the design of a safe community as well as effective emergency response, and individual responsibility for safer home construction and design, landscaping, and maintenance. In North Carolina, the most susceptible areas for wildfires in which homes and woodlands co-exist are in the mountains and areas of the coast.

Some examples of Firewise practices include:

- Maintaining a ‘defensible perimeter’ around homes and structures by controlling vegetation growth
- Removing so-called ‘ladder fuels’ from around structures, that may allow a small fire on the ground to move upwards, and into the structure
- Constructing access roads and driveways in a way that will allow access by fire trucks and other heavy emergency response vehicles.

More information is available on the North Carolina Firewise Web site

<http://www.ncfirewise.org/> and the national Web site <http://www.firewise.org/>

10.2.9 Forestry Accomplishments

Since the previous basinwide plan was produced, the DFR accomplished the following tasks in an ongoing effort to improve compliance with forest regulations and, in turn, minimize nonpoint source (NPS) pollution from forestry activities:

- Replaced worn-out wood timber bridgemats in the Sylva District with new mats available for use throughout the basin.
- Established a Forestry NPS Unit that develops and oversees projects throughout the state that involves protection, restoration and education on forestry NPS issues.
- Revised and produced 10,000 copies of a pocket field guide outlining the requirements of the FPGs and suggested BMPs to implement.
- Created and published 15,000 copies of a new brochure “Call Before You Cut” for landowners promoting pre-harvest planning to insure water quality issues are addressed prior to undertaking timber harvesting.
- Continued to assist with workshops in cooperation with the N.C. Forestry Association’s “ProLogger” logger training program.
- DFR continues its efforts to protect water quality through various protection, restoration, and education projects. This includes research projects, on-site demonstrations, and integration of NPS topics through the DFR’s network of Educational State Forests and State Forests. Progress reports and summaries are posted in the ‘Water Quality’ section of the DFR’s Web site <http://www.dfr.state.nc.us/> as they are completed.