

CHAPTER EIGHT

FORESTRY

IN THE CATAWBA RIVER BASIN

CHAPTER TOPICS

- ⦿ Forestland Ownership
- ⦿ Forest Water Quality Regulations
- ⦿ Catawba River Basin Riparian Buffer Rule
- ⦿ Other Water Quality Regulations
- ⦿ Water Quality Foresters
- ⦿ Forestry Best Management Practices
- ⦿ Protecting Stream Crossings with Bridgemats
- ⦿ Forest Management
- ⦿ Education & Outreach
- ⦿ DFR - Catawba Basin Contacts



FORESTLAND OWNERSHIP*

Approximately 85% of the forestland in the basin is privately-owned, while the remaining 15% is almost entirely comprised of publically-owned lands. The North Carolina Division of Forest Resources (NC-DFR) manages two Educational State Forests (ESF) in the basin for the purposes of education, forest management demonstration, and working-lands conservation. Tuttle ESF protects in excess of 300 acres in Caldwell County along Celia Creek (sub basin 0305010107). Mountain Island ESF protects approximately 1,600 acres along the western shoreline of Mountain Island Lake (sub basin 0305010114) which serves as a primary water supply for the city of Charlotte.

** The ownership estimates come 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).*

FOREST WATER QUALITY REGULATIONS

Forestry operations in North Carolina are subject to regulation under the Sedimentation Pollution Control Act of 1973 (Article 4-GS113A, referred to as "SPCA"). However, forestry operations may be exempted from specific requirements of the SPCA if the operations meet the compliance performance standards outlined in the Forest Practices Guidelines Related to Water Quality (15A NCAC 1I .0100 - .0209, referred to as "FPGs") and General Statutes regarding stream and ditch obstructions (GS 77-13 and GS 77-14).

The FPG performance standard rule-codes and topics include:

- ⦿ .0201: Streamside Management Zone (SMZ)
- ⦿ .0202: Prohibition of Debris Entering Streams and Waterbodies
- ⦿ .0203: Access Road and Skid Trail Stream Crossings
- ⦿ .0204: Access Road Entrances
- ⦿ .0205: Prohibition of Waste Entering Streams, Waterbodies, and Groundwater
- ⦿ .0206: Pesticide Application
- ⦿ .0207: Fertilizer Application
- ⦿ .0208: Stream Temperature
- ⦿ .0209: Rehabilitation of Project Site

The NC-DFR is delegated the authority to monitor and evaluate forestry operations for compliance with these aforementioned laws and/or rules. In addition, the NC-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 NC-DFR are referred to the appropriate State agency for enforcement action. During the period January 1, 2005 through December 31, 2009 there were 1,421 FPG inspections conducted on forestry-related sites in the basin; 94% of the sites were in compliance upon the initial site inspection.

CATAWBA RIVER BASIN RIPARIAN BUFFER RULE

The Catawba River Basin is subject to riparian buffer protection rule 15A NCAC 02B .0243. Forestry activities must comply with this buffer rule in addition to the requirements for SMZ establishment as defined within the FPG rules. The NC-DFR monitors forestry activities for compliance with the buffer rule and notifies the NC-DWQ if violations are observed. During the last 5 year period, there was 1 water quality referral for enforcement recorded. To assist loggers, landowners and foresters with the implementation of the buffer rule, the NC-DFR has developed a 2-page Forestry Leaflet that is available at local NC-DFR offices and can be downloaded from the [website](#).

OTHER WATER QUALITY REGULATIONS

In addition to the multiple State regulations noted above, NC-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 for activities in wetlands;
- 💧 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.

WATER QUALITY FORESTERS

Nearly the entire river basin falls within the coverage area of a Water Quality Forester. Statewide, there is a Water Quality Forester position in 9 of NC-DFR's 13 operating districts. Water Quality Foresters conduct FPG inspections, survey BMP implementation, develop pre-harvest plans, and provide training opportunities for landowners, loggers and the public regarding water quality issues related to forestry. These foresters also assist County Rangers on follow-up site inspections and provide enhanced technical assistance to local agency staff. Water Quality Foresters are the primary point of contact in their districts for responding to water quality or timber harvesting questions or concerns that are suspected to be related to forestry activities.

FORESTRY BEST MANAGEMENT PRACTICES

Implementing forestry Best Management Practices (BMPs) is strongly encouraged to efficiently and effectively protect the water resources of North Carolina. In 2006, the first ever revision to the North Carolina forestry BMP manual was completed. This comprehensive update to the forestry BMP manual is the result of nearly four years of effort by the NC-DFR and a DENR-appointed Technical Advisory Committee consisting of multiple sector stakeholders, supported by two technical peer-reviews. The forestry BMP manual describes measures that may be implemented to help comply with the forestry regulations while protecting water quality. Copies of the forestry BMP manual can be obtained at a County Ranger or District Forester office, or [online](#).

In the basin during this period, the NC-DFR assisted with or observed 2,575 forestry activities in which BMPs were either implemented or recommended, encompassing a total area greater than 86,160 acres.

From March 2000 through March 2003, the DFR conducted a statewide BMP Implementation Survey on 565 active forest harvest operations to evaluate the usage of forestry BMPs. This survey evaluated 49 sites in this river basin, with a resulting BMP implementation rate of 76%. The problems most often cited in this survey across the state relate to stream crossings, skid trails and site rehabilitation. A copy of this report is available from the DFR Raleigh Central Office or can be downloaded from the [water quality webpage](#). A second round of BMP Implementation Surveys was conducted on additional logging sites statewide from 2006 to 2008; at this time, the data is being compiled and a report of the findings will be available in 2010. These periodic, recurring BMP surveys serve as a basis for focused efforts in the forestry community to address water quality concerns through better and more effective BMP development, implementation and training.

PROTECTING STREAM CROSSINGS WITH BRIDGEMATS

The NC-DFR provides bridgemats on loan to loggers for establishing temporary stream crossings during harvest activities in an effort to educate loggers about the benefits of installing crossings in this manner. Temporary bridges can be a very effective solution for stream crossings, since the equipment and logs stay completely clear of the water channel. Since 2005 all District Offices in the basin have had bridgemats available for loan-out. Periodic status reports, a list of bridgemat suppliers, and additional information are available on the [DFR bridgemat webpage](#).

FOREST MANAGEMENT

Forest management is a valued and prevalent land-use across much of the river basin. This area of North Carolina consistently ranks high in the number of acres in which sustainable forestry is being practiced. As a testament to this, more than 13,000 acres of land were established or regenerated with forest trees across the basin from January 1, 2005 through December 31, 2009. During this same time period the NC-DFR produced 2,220 individual forest plans for landowners that encompassed an estimated 105,600 acres of forestland in the basin.

EDUCATION & OUTREACH

The two Educational State Forests located in the basin are primary outlets for reaching school-aged children through structured, hands-on teaching. Tuttle ESF hosts on average approximately 4,000 students annually. While Mountain Island ESF is not yet open to the public, the personnel assigned to this ESF routinely instruct students at their schools or via specially-guided field tours at the ESF. More information about all of the ESFs is available on the [ESF website](#).

Each year since 2004 the NC-DFR summarizes its BMP, water quality, and nonpoint source accomplishments in a color brochure entitled “Year In Review”. This report is available on the [DFR Year in Review webpage](#).

The North Carolina Forestry Association, in cooperation with forest industry, NC-DFR, and NCSU, conducts educational programs annually at different locations in the North Carolina. The first program is called the Forestry and Environmental Camp, and is for middle and high school aged children. These 3-day long camps introduce children to the basic science and math skills needed when practicing forestry. The second program is the Sustainable Forestry Teachers Academy/ Tour, and educates school teachers about forestry practices and how forest products are manufactured. For more information about these programs visit the [North Carolina Forestry Association website](#).

NORTH CAROLINA DFR CONTACTS FOR THE CATAWBA RIVER BASIN

Office Location	Contact Person	Phone	Address
Asheville District: D1	Asst. District Forester	(828) 667-5211	220 Sardis Road Asheville, NC 28806-8504
Lenoir District: D2	Water Quality Forester	(828) 757-5611	1543 Wilkesboro Blvd., NE Lenoir, NC 28645-8215
Mount Holly District: D12	Water Quality Forester	(704) 827-7576	1933 Mountain Island Highway Mt. Holly, NC 28120
Regional Office: Region III	Asst. Regional Forester	(828) 665-8688	14 Gaston Mountain Road Asheville, NC 28806-9101
Raleigh Central Office	Nonpoint Source Branch - Forest Hydrologist	(919) 857-4856	1616 Mail Service Center Raleigh, NC 27699
Griffiths Forestry Center	Water Quality & Wetlands Staff Forester	(919) 553-6178 Ext. 230	2411 Old US Hwy 70-West Clayton, NC 27520

