



# Year in Review 2012

## Success Stories & Accomplishments

North Carolina Forest Service, Nonpoint Source & Water Quality programs

### Started a New Forest

Nearly 600 new trees were planted at DuPont State Recreational Forest along the 500-foot long segment of the Lake Julia Outfall stream channel that was restored in 2011.



In March, blue plastic tubes were installed around each seedling to protect it from damage by wildlife. By October, seedling growth was excellent.

### Protected the Resource

The N.C. Forest Service provides portable steel bridgemats to loggers for protecting stream crossings during logging.

Over this past year\* the NCFS bridgemats were used on 35 logging jobs to protect 35 stream crossings, providing access to more than an estimated 1,600 acres of timber.

*\*State Fiscal Year FY11-12*



*A set of NCFS bridgemats placed atop of an old, narrow timber bridge for logging trucks to safely cross a stream in Halifax County.*



Website: [ncforestservation.gov](http://ncforestservation.gov)



# Inspected, Studied & Monitored

## The results\* of compliance inspections made by N.C. Forest Service personnel statewide resulted in:

*\*Compliance inspection results and personnel time reported here are from state fiscal year 2011-2012.*

- 3,506: Number of forestry sites inspected for compliance with the statewide rules known as the *Forest Practices Guidelines Related to Water Quality* (abbreviated as *FPGs*; rules code 15A NCAC 01I .0100 - .0209)
- 111: Number of inspected sites which were not in compliance upon initial inspection
- 97%: Statewide FPG compliance rate
- 3: Number of cases that were referred to an environmental enforcement agency due to non-compliance
- 128: Sites that were inspected as a result of receiving a complaint
- 41: Number of complaint sites which were not-in-compliance upon inspection
- 2,560: Number of re-inspections

*In the previous fiscal year\*, a total of 29,741 hours were recorded by N.C. Forest Service personnel for water quality inspections and overall program management*

## Not only does the Forest Service make compliance inspections, but we are also studying the effects that forestry operations may have on stream flow, sedimentation and nutrient loading.

With our partners at the USDA-Forest Service, we continued water sampling and monitoring on two long-term watershed study sites in Durham and Granville counties.

In addition, we established 2 stream crossing study sites with cooperation from forest managers at N.C. State University and Duke University.

Water samples were collected from each stream crossing for a prolonged period of time, and were then analyzed in a lab.

We will establish three more stream crossing study sites across central North Carolina next year.

At the end of this entire project we will report on the findings from all of our studies to determine how well forestry best management practices (BMP's) are protecting our water.



*Temporary stream gages are installed to calibrate the stream flow, so that precise measurements of sediment in the stream can be obtained. The stream above was temporarily pumped around this site during installation. Upon conclusion of the study, the gage structure is removed.*

## Monitoring of stream restoration work done on NCFS properties is ongoing.



A North Carolina Division of Water Quality (DWQ) Biological Assessment Team sampled aquatic insects from the restored section of the Lake Julia Outfall stream at DuPont State Forest in Transylvania County. The photo at left shows the team collecting and analyzing samples.

Recovering a suitable in-stream biological habitat is an important step to supporting trout fisheries. The work by the DWQ team is vital to our long term monitoring of the restoration's success.



## Trained, Educated, and Instructed

### Forest Service personnel led, assisted, or helped to coordinate education and training for:

- ✓ 30 N.C. Forest Service fire-fighting equipment operators
- ✓ 69 loggers through the North Carolina ProLogger Program
- ✓ 37 forestry college students from N.C. State University and Wayne Community College
- ✓ 81 high school students at the Resource Conservation Workshop at Clemmons Educational State Forest
- ✓ 30 water-resource professionals at a workshop of N.C. State University's Stream Restoration Program



*A team of NCFS operators watches while another team member prepares to install a waterbar runoff diversion on a trail at Gill State Forest in Avery County*



*A group of water resource professionals at a stream restoration workshop on a restored reach of Purlear Creek at Rendezvous Mountain Educational State Forest in Wilkes County.*

## Provided BMP Technical Assistance

### Examples of technical assistance we provided over the past year include:



- Providing stabilization advice on a logging road in Hoke County (photo shown at left)
- Timber harvest and stream crossing planning on an Outstanding Resource Waters stream in Montgomery County
- Evaluating improvements to existing roadways through a blackwater riverine swamp in Robeson County
- Assessing proposed silvicultural activities within a forested wetland in Washington County
- Offering options for a permanent forest road stream crossing on water-supply watershed lands in Orange County (photo shown at right)



# Communicated

## ProLogger Training Module

One of our staff specialists is featured in a 20-minute long video segment for the 2012-2013 ProLogger Annual Training Module, describing the findings of our most recent BMP Implementation Survey report. This is an important feedback loop to the loggers, who are a vital link in the adoption and use of BMPs.

## River Basin Water Quality Management Plans

We provide forestry-related accomplishments and information to the N.C. Division of Water Quality each time that they revise one of the 17 River Basin Water Quality Management Plans for our state. During this past year, several river basin plans were revised, and below are five-year summaries of forestry facts for select basins:

### Chowan

Forest Ownership:

86% private 12% industry 2% public

- 30,000 acres reforested
- 1,581 management plans
- 913 site inspections
- 98% FPG compliance

### Pasquotank

Forest Ownership:

46% public 44% private 10% industry

- 15,560 acres reforested
- 1,074 management plans
- 579 site inspections
- 97% FPG compliance

### Little Tennessee

Forest Ownership:

56% private 44% public

- 650 acres reforested
- 593 management plans
- 248 site inspections
- 90% FPG compliance

### White Oak

Forest Ownership:

45% private 40% public 15% industry

- 5,300 acres reforested
- 317 management plans
- 163 site inspections
- 97% FPG compliance

### Hiwassee

Forest Ownership:

55% private 45% public

- 880 acres reforested
- 307 management plans
- 137 site inspections
- 85% FPG compliance

### Cape Fear

Forest Ownership:

83% private 10% industry 7% public

- 109,000 acres reforested
- 8,300 management plans
- 4,148 site inspections
- 96% FPG compliance

# Interacted

## Personnel of the Nonpoint Source program provided outreach at the following events:

- Society of American Foresters Annual National Convention, where we served on a panel of experts to describe forestry BMPs and associated program implementation at the state level
- Southeastern Biennial Stream Restoration Conference
- North Carolina Association of Professional Loggers Annual Meeting
- North Carolina Association of Soil and Water Conservation Districts Annual Meeting
- Southern Farm Show; Southern Ideal Home Show; and Got To Be NC Agriculture Festival

## Partners and Cooperators



Duke Forest



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