Four Year Assessment of Forestry Best Management Practices (BMPs)

Findings show an 84 percent statewide average implementation performance rate. Nearly 100 percent of the time, water quality risk was prevented by using forestry BMPs.

Study Highlights:

- Evaluated 204 sites in 94 of the state’s 100 counties from 2012 to 2016.
- Assessed 28,491 BMP implementation opportunities across North Carolina.
- Statewide, the average effective width of protective buffer zones along perennial streams was about 30 feet.
- Overall BMP implementation minimized soil disturbance during timber harvests.
- Portable, temporary bridgemats appeared most effective in protecting water quality when crossing streams.
- Our use of technology improved the study’s workflow efficiency, data management and analysis of results.

Forestry BMPs are the recognized non-regulatory approach to achieving state and federal water quality standards. Every 5 to 6 years, the North Carolina Forest Service evaluates data from logging operations to assess the degree to which BMPs are being used and how they are functioning. The report of findings will be completed in early 2018 and published at ncforestservice.gov, along with a story map of the study.

This type of BMP implementation monitoring survey is conducted by each of the southern states following an established framework adopted by the Southern Group of State Foresters. North Carolina’s results will be included in the next south-wide regional summary report, also due to be published in 2018.
In 2017, our focus was on training, education and outreach for both external audiences as well as with N.C. Forest Service employees.

- Completed a multi-year revision to update the N.C. Forest Service Water Quality Program’s operating policies to improve customer service consistency and efficiencies. Several roll-out training sessions were held for N.C. Forest Service personnel to highlight notable revisions.

- Our agency’s highly-regarded Ranger Training Program was updated to incorporate a full chapter and exam exclusively on water quality rules and BMPs. This new chapter was taught to a large class of 40 rangers.

- Conducted a series of seven water quality refresher workshops around the state (details on the next page).

- We partnered with the USDA-Forest Service and the Extension Forestry Department of N.C. State University to host the Bottomland & Swamp Forests Symposium in Wilmington. This event drew approximately 150 attendees and guest speakers from across the southern U.S. (details below).

- We continued our partnership with the N.C. ProLogger Program to provide training for new loggers; as well as our partnership with local colleges to instruct students on forestry, water quality and timber harvesting logistics.

**Bottomland & Swamp Forest Silviculture Symposium**

This symposium was the crowning achievement of a grant allocated by the USDA-Forest Service to examine the regeneration of forests in bottomland swamps that typically have deep mucky soils and standing water through much of the year. The event included bottomland forest experts from across the south who spoke on their work, as well as a full-day field tour of multiple examples of these important forest systems. A summary of the presentations, poster abstracts and speaker bios is available at the symposium’s website, http://go.ncsu.edu/bottomland-symposium.
Water Quality Refresher Workshop Series

We conducted seven workshops across the state, reaching a total audience of approximately 280 forestry, water quality, and natural resources professionals. Topics included a summary of the water quality rules governing forestry, BMPs for forest roads and stream crossings, highlights of recent forestry BMP research, how to stabilize a logging job, understanding the relationships between forests and watersheds, how to identify streams, and a demonstration of the Forest Preharvest Planning Tool. Presentations from these workshops can be viewed or downloaded from the Water Quality homepage via the “Programs and Services” section of our agency website, ncforestservice.gov.

Other Training, Education & Outreach

Notable events that included a significant contribution of information on BMPs, water quality, or forest watersheds:
- 155 loggers through the N.C. ProLogger Program.
- 23 college students from N.C. State University and Wayne Community College.
- 27 Boy Scouts through N.C. State University’s Boy Scout Merit Badge College.
- 97 high school students in the annual Resource Conservation Workshop at Clemmons Educational State Forest.
- 35 employees from the U.S. Army Corps of Engineers at their statewide programs update workshop.
- 29 attendees of the state’s Surface Water Identification and Training Certification Course.
- Presented a poster on the costs of BMP materials at the 19th Biennial Southern Silviculture Research Conference.
- Participated in a special session on forested wetlands during the annual southern regional meeting of the National Council for Air and Stream Improvement.
- Contributed to the Water Resources Committee at the annual meeting of the Southern Group of State Foresters.
- Attended the annual conference of the North Carolina Water Resources Research Institute.

Marion ProLogger Base Course Group, October 2017 (Photo credit: Chris Brown, N.C. Forestry Association)
Partners and Cooperators

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