

North Carolina

Forestry

Best Management Practices

Manual

To Protect

Water Quality

Amended September 2006

**North Carolina Forestry Best Management Practices Manual To Protect Water Quality.
Amended September 2006.**

Fourth Printing: September 2015 of 500 copies at an approximate cost of \$2,351 (\$4.70 per copy)

Third Printing: July 2012 of 600 copies at an approximate cost of \$2,640 (\$4.40 per copy).

Second Printing: March 2010 of 500 copies at a cost of \$3,810 (\$7.62 per copy).

First Printing: December 2006 of 6,000 copies at a cost of \$37,198.82 (\$6.20 per copy).

North Carolina Forest Service publication number FM-01-06 (formerly FM0801)

This publication is also available on the Web at www.ncforestservation.gov.

This document and the companion *North Carolina Forestry BMP Quick-Reference Field Guide* (WQ0407) replace all versions and printings of the following publications and brochures:

- *Best Management Practices Checklist for Forest Harvest Operations*. Multiple printings.
North Carolina Division of Forest Resources publication number WQ0295.
- *Best Management Practices for Forestry in the Wetlands of North Carolina - June 1990*.
North Carolina Department of Environment, Health, and Natural Resources.
- *Forestry Best Management Practices Manual - September 1989*.
North Carolina Division of Forest Resources, Department of Environment, Health, and Natural Resources.
- *Pocket Guide to the Forest Practices Guidelines Related to Water Quality*. Multiple printings.
North Carolina Division of Forest Resources publication number WQ0501.
- *Riparian Forest Buffers*. Multiple printings.
North Carolina Division of Forest Resources publication number WQ0198.

This Forestry Best Management Practices Manual was amended as allowed under 15 NCAC 01I .0101(c) with revisions guided under the direction of:

- Technical Advisory Committee for the Forest Practices Guidelines Related to Water Quality as established and defined under N.C. General Statute Ch.113A-52.1(c).
- Director and technical staff of the North Carolina Forest Service.

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Funding

Funding for the development and first printing of this 2006 revision was provided, in part, through (alphabetically):

- Albemarle - Pamlico National Estuary Program
- Forestry Nonpoint Source Unit of the N.C. Division of Forest Resources
- Natural Resources Leadership Institute of the N.C. Cooperative Extension Service
- North Carolina Division of Forest Resources
- USDA-Forest Service Forest Land Enhancement Program
- U.S. Environmental Protection Agency Nonpoint Source 319 Grant Program via N.C. Division of Water Quality

Funding for the second, third, and fourth printing of this 2006 revision was provided, in part, through (alphabetically):

- N.C. Dept. of Agriculture and Consumer Services; and the N.C Forest Service
- USEPA Nonpoint Source 319 Grant Program via N.C. Division of Water Resources

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November 7, 2006

As participant-members of the Technical Advisory Committee for the Forest Practices Guidelines Related to Water Quality, as defined within N.C. General Statute 113A-52.1(c), and/or stakeholder participants in the first-ever revision to North Carolina's forestry best management practices, we present the new *North Carolina Forestry Best Management Practices Manual to Protect Water Quality*.

This revised Best Management Practices (BMP) Manual is the result of nearly four years of deliberation, scrutiny and two rounds of technical peer review by professionals from across North Carolina. Agencies that reviewed the document include the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency and the North Carolina Division of Water Quality. The recommendations in this new BMP Manual have been carefully considered for their merits related to the continued protection of water quality during forestry activities.

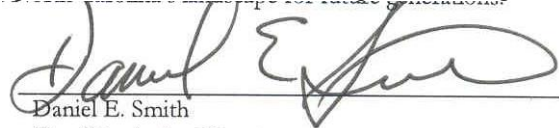
Built upon the expertise found within the multi-interest stakeholder participants, the recommendations in this new manual embody the concepts of forestry best management practices, as defined in North Carolina Administrative Code 15A NCAC 011 .0102 (4), whereas:

"Best Management Practice (BMP) means a practice, or combination of practices, that is determined to be an effective and practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals."

We are proud to have contributed our time, thought and energy to the development of this comprehensive collection of BMPs that enhances the value of working forests as a viable and sustainable part of North Carolina's landscape for future generations.



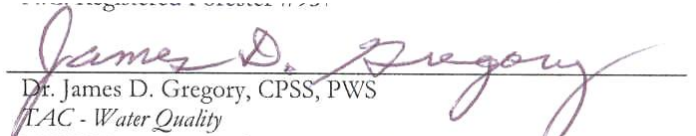
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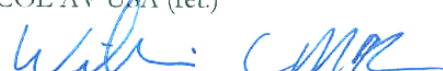
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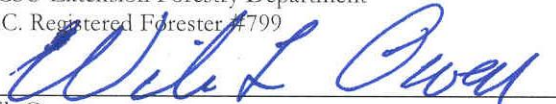
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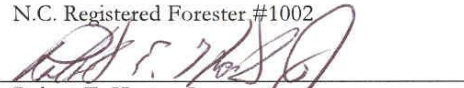
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Updates made in the 2015 (fourth) printing

-
- Changed the NCAC Administrative Code reference citations for the FPGs that changed on April 1, 2014
 - Replaced DWQ / Division of Water Quality with DWR / Division of Water Resources in body of text
 - Replaced DLR / Division of Land Resources with DEMLR / Division of Energy, Mineral and Land Resources in body of text
 - Ch.6: pg 90, 91: Deleted “Classifications and Examples of Forested Wetlands in North Carolina.”
 - Ch.6: pg 93: Deleted “Generally the term ‘waters of the US’ includes” paragraph. New text now refers user to the August 2015 federal rule that re-defines “waters of the US” as outlined in Appendix 1.
 - Ch.6, pg 95, 96: deleted “Isolated Wetlands” paragraph.
 - **APPENDIX 1 IS NOT INCLUDED IN THIS 2015 RE-PRINT**, due to many ongoing review and revisions to state and federal rules at the time of this reprinting. Appendix 1 is available as a separate document from the NCFS website and it will be kept as current as feasible when changes to rules and laws are known. Specific changes in Appendix 1 since the prior printing include:
 - Added a note about current review of NC rules for possible changes or revisions
 - Replaced USACE Regulatory Guidance Letter RGL 87-07 on ditch maintenance with a summary and weblink to download RGL 07-02, which supersedes the earlier Letter
 - Added a new section, 1.17: citation of exemption from temporary driveway permits for forestry operations

How To Use This Manual

Explaining the 'Sidebar Column'

Also Refer To...

-- Other reference materials either in this manual, or elsewhere.

Did You Know?

-- Additional information about the topic in the text.

For Forest Owners:

-- Information that forest owners may find useful.

FPG

-- Reminders that at least one of the FPG rule standards apply to the topic being discussed.

Helpful Hints:

-- Ideas for improvement or options to consider.

Watch Out!

-- Situations or indicators in which you should stop and evaluate your intended course of action.

What the BMP Manual Does

This manual provides practical, effective and economically feasible recommendations aimed at protecting water quality during forestry activities.

What the BMP Manual Doesn't Do

This manual is not intended to be a complete and full description of all possible rules and options for protecting water quality during forestry related activities. Implementation of recommended BMPs for forestry at an intensity greater or less than the guidelines provided in this manual, or using alternative practices, is acceptable if the intent is to achieve the same or better results related to water quality protection.

Though alternative practices are acceptable and encouraged, they should be implemented with caution by an experienced individual. BMP implementation helps, but does not insure, that a site will achieve compliance with the requirements of the North Carolina Forest Practices Guidelines Related to Water Quality, the Clean Water Act, or other applicable regulations.

Forest Practices Guidelines Related to Water Quality (FPGs)

In North Carolina, the performance standards defined by 02 NCAC 60C .0100 -- .0209 *Forest Practices Guidelines Related to Water Quality* must be met if a forestry operation is to remain exempt from submitting an erosion and sedimentation control plan, obtaining permits and meeting other requirements described under the state's Sedimentation Pollution Control Act.

Other Required Practices

The recommendations in this manual are not formal regulatory guidance or legal interpretation from any federal or state regulatory agency.

For your convenience, this manual includes citations of required practices and guidance documents that are known to exist at the time of this manual's printing. This helps assure that forestry activities protect water quality as defined by federal or state laws, rules, or other regulatory guidance documents.

Citations are clearly denoted in the manual using these techniques:

- The cited text is introduced as such
- The text is within "double quotation marks"
- The statement <start citation> appears at the beginning of the text
- The statement <end citation> appears at the end of the text
- In some cases, the document source of the rule or law is provided.

The Rules Related To..... Text Box

At the start of each chapter, this rules box will appear, and a list of rules and/or laws that may apply to your forestry operation is provided.

FPG

Supporting text and references to the specific FPG rule are also included here.

Throughout this manual, you will see this label **FPG** on the left sidebar column whenever a FPG rule applies to the topic discussed in the text.

Remember: FPGs are the rules. BMPs are the tools you can use to help meet the performance-based FPG standards.

A Note on..... More Text Boxes

Also in this manual, you will find text in a box that further explains a concept or topic being discussed in that chapter. The header for these boxes will state

A Note on _____ { topic } _____.

Did You Know?

All state of North Carolina regulatory agencies that have jurisdiction over forestry operations were provided an opportunity to conduct a peer-review of the content and material of this 2006 revision.

Peer Reviewed

Although applicable sections of this manual have been peer-reviewed by technical staff of the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers and applicable North Carolina regulatory agencies, the citations and recommendations provided in this manual must not be considered as the final or most current version or interpretation of any rule, law or other regulatory guidance.

Glossary of Select Terms

Select terms are defined in a glossary located in Appendix 13. Other terms are defined within the various rules citations found in Appendix 1.

The NC-BMP Field Guide

The *North Carolina Forestry BMP Quick-Reference Field Guide* includes numerous illustrations along with user-friendly summaries of some of the BMP recommendations that are provided in this BMP manual.