



North Carolina Forest Service



A Division of the N.C. Department of Agriculture and Consumer Services
Steve Troxler, Commissioner

BMP Newsletter

Best Management Practices for Water Quality & Soil Conservation



This issue's cover photo is a rehabbed stream crossing in Mitchell County (photo credit: Alan Huskins). Stream crossing approaches can be the leading contributor of sediment on a logging job. Ensuring these sensitive areas are adequately stabilized during and after forest operations helps protect water quality. Grass seed and mulch, used in the picture above, has proven to be an effective BMP in many research studies. Notice that the stream channel is free of debris and only a small amount of bare soil can be found. Nice work!

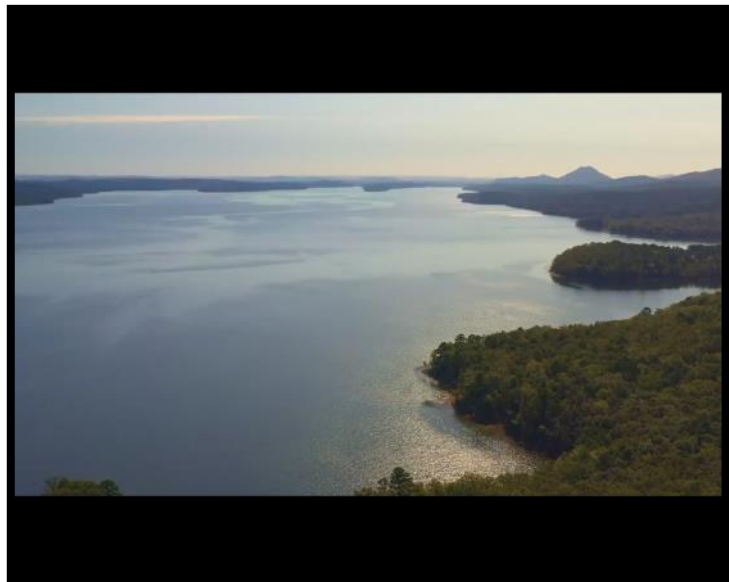
Learn more about soil stabilization here:
https://www.ncforestservice.gov/water_quality/soil_stabilization.htm

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Short Video Series: Healthy Forests = Clean Water

Through the Southern Group of State Foresters, a series of seven short high-quality videos were created to highlight that healthy forests are critical to the future of our drinking water. Topics covered in these videos include the connection between forests and water, the importance of source water protection, the forest landowner and water utility roles in protecting water quality, and the role of forests in protecting water quality during flooding events. These videos can be viewed on YouTube linked here, <https://qrqo.page.link/aq9n2>, or by clicking the picture below.



These videos have outstanding communication and educational value. Many of the messages in these short videos can be applied throughout the U.S. The N.C. Forest Service encourages everyone to share these videos far and wide. Using BMPs is key to protect water quality, drinking water and aquatic habitat. As these videos are shared, **remember that your state forestry agency can provide boots-on-the-ground forestry advice to landowners.**

Nancy Blackwood Receives the 2018 Moreland Gueth Water Quality Award

Each year the Moreland Gueth award is given to a N.C. Forest Service employee or group of employees who have demonstrated creativity and/or dedication toward the protection of North Carolina's water resources. Established in 2010, this award was created in honor of the N.C. Forest Service's former Water Quality and Wetlands Staff Forester, Moreland Gueth. Moreland took a firm stance on protecting water quality yet maintained a fair and practical approach to working with loggers, landowners, and the forestry community to keep "working forests working."



The 2018 Moreland Gueth award presented to Nancy Blackwood. Left-right: Sean Brogan, Tom Gerow, Nancy Blackwood, Scott Bisette and Brian Yeich.

Nancy Blackwood serves as a Regional Water Quality Forester and covers a 26-county area (see Page 5 for her work area). She works diligently and engages all parties early and often when needing to communicate during complex cases. Nancy continues to build positive interagency relationships, that help support consistency in the Water Quality program and timely customer service. In the fall of 2018, she participated in an interagency review of the N.C. Forest Service's Water Quality Program. Her contribution to the review led to positive feedback of the agency's field staff.

If all of that isn't enough, her time and effort spent teaching and mentoring others certainly is! It is clear that Nancy has a passion for her work and has the heart of a teacher. She has demonstrated this through her time spent with each of her assigned counties/districts to work one-on-one with N.C. Forest Service field personnel.

Thank you, Nancy, for demonstrating leadership and for your sustained commitment to the N.C. Forest Service and to the citizens of North Carolina!

BMP Focus: Wet-Weather Harvesting

It's that time of year again. Trees have dramatically reduced water uptake due in part to a decrease in daylight and leaf fall. Water is often more plentiful or at least more abundant than it was in the summer months.

But forest product processing mills don't close shop for the winter months and their ability to store wood is limited. Therefore, the reality is that forest operations must occur to some extent on wet sites.

Yes, more abundant water leads to more challenging forest operations. Communications to implement harvest plans become even more critical this time of year.

The forestry community has found ways to modify operations to facilitate harvesting on wet sites and reduce site disturbances.

In what ways have they modified methods you ask?

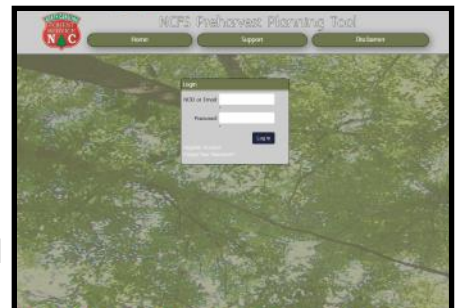
Here are a few:

- **Preharvest planning.** A greater emphasis is placed on planning as wet site operations tend to be more complex and costlier. The free [Forestry Preharvest Planning tool](#) can help!
- **Altering a silvicultural system.** A clearcut harvest on a wet-natured site may be an attractive alternative to selective cutting. This silvicultural system decreases the frequency of heavy traffic along low standard forest roads. Such roads are often cited as a leading contributor of sedimentation from forestlands.

- **Protecting soil with vegetative cover.** A fundamental concept of BMPs... slow it down, spread it out and cover it up quick!



Wet site timber harvest operation in late winter/early spring in Currituck County.



Slash and straw at a former skid trail stream crossing (above). Wood chips spread across a deck (left).

{Continued on next page}

BMP Focus: Wet-Weather Harvesting continued...

In what ways have we modified methods...continued.

- **Modifying equipment.** Using lower tire pressures, wider tires, or dual tires can lessen compaction and rutting.



Skidder tire selection, sizes 23, 28 and 34-inch wide (left). Dual-tired skidder using a bridgemat stream crossing (right).

- **Harvest scheduling.** Forest managers often reserve tracts with well-drained soil for harvest during these wet times and plan their BMPs accordingly.
- **Restoring/repairing ground afterward.** Mechanical site preparation can be used to offset compaction on some sites. Other sites can be ameliorated through natural processes such as shrink-swell clay soils and sediment inputs from flooding events.



A mole plow (left) is a ripping shank with a plug used in conjunction bedding (right) to create pore space in the beds subsurface.

- **Replanting vegetation after harvest.** Trees will modify the soils over time, opening pore space as roots elongate and slough off.

It is critical to understand the site hydrology and the silvics of regenerating trees on wet sites to plan for and predict long-term effects!

Note that this is not just a coastal plain concern nor specific to winter months! Wet site conditions can occur any time of year and in any area of North Carolina.

Upcoming Events:

Western Region Events

Feb 6 @ Danbury,
[Woodland Stewards Webinar Series: Getting to Know Your Woodlands](#)
 Mar 26 @ Hayesville,
[4-H Fly Fishing Club](#)

Piedmont Region Events

Feb 23-26 @ Raleigh,
[IECA Annual Conference and Expo](#)
 Mar 18-19 @ Raleigh,
[Water Resources Research Institute Meeting](#)

Eastern Region Events

Jan 29 @ Beaufort,
[Nature-based Solutions for Coastal Hazards Workshop](#)
 Jan 29-31 @ Norfolk, Virginia
[2020 APSAF Winter Meeting](#)



Joe Moore recently accepted the vacant Water Quality Forester position in the Western Mountains Region (Districts 1 & 9). He brings a couple of years of experience as a service forester in the area and is a graduate from Clemson University. We are very pleased to have Joe as one of our Water Quality Foresters!

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Email: Joe.moore@ncagr.gov

North Carolina Forest Service

WATER RESOURCES BRANCH
 1616 Mail Service Center. Raleigh, NC. 27699-1600



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www.ncfirewise.org

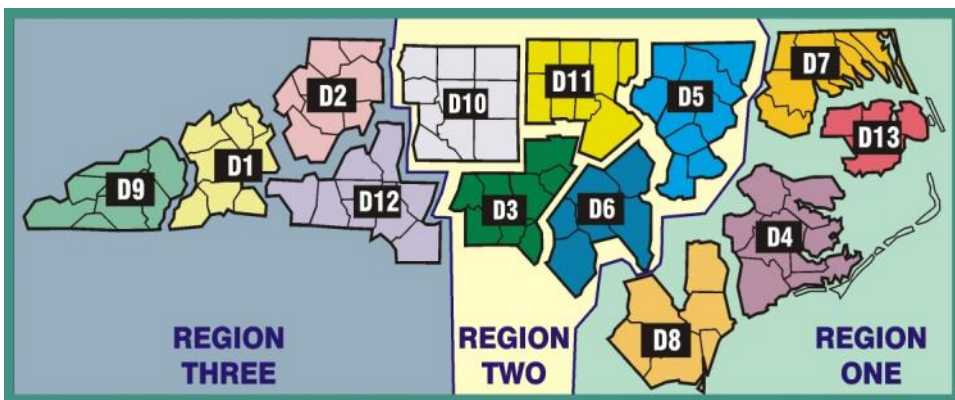
Go Out and Learn in the Forest

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Western Region

Western Mountains (D9, D1)

Joe Moore: 828-774-8362

Foothills (D2, D12)

Richard Cockerham: 704-616-0747

Piedmont Region

Northern Piedmont (D5, D10, D11 [North of I-40])

Nancy Blackwood: 336-500-3661

Southern Piedmont (D3, D6, D10 [South of I-40])

Matt Vincett: 910-334-0025

Eastern Region

Northern Coastal Plain (North of the Neuse River)

Cathy Gilkeson: 252-286-0881

Southern Coastal Plain (South of the Neuse River):

Paul Mowrey: 252-286-0862