



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 was taken at the N.C. State University's Lake Wheeler Road Field Laboratory. This is an example of an innovative and reusable solution to keeping mud off of public roadways. Using rock only at access entrances can help reduce mud on the road, but it cannot be easily cleaned and reused. The hard plastic yellow bumps in this example act as a rumble strip that knocks soil off of tires. Strong material such as this can be more easily cleaned, moved and reused than gravel. Much like wooden logging mats, this innovative BMP can also reduce rutting by dispersing ground pressure from vehicle tires over a larger footprint.

Soil and other debris on roadways can be a hazard to drivers. If an access entrance is near an intermittent stream, perennial stream, or perennial waterbody, this BMP may help you comply with the Access Road Entrances Forest Practice Guideline Related to Water Quality: [02 NCAC 60C .0204 Access Road Entrances](#).

Inside this issue:

N.C. Forestry BMP Manual	1
Newly Protected Aquatic Species: Atlantic Pigtoe	2
NCFS Moreland Gueth Water Quality Award	3
Is a Stream Still a Stream If There's No Water In It?	3
Recorded and Upcoming Webinars	4
Did you know...	4
NCFS Water Quality Forester Areas	4

N.C. Forestry BMP Manual

The N.C. Forestry BMP Manual, Third Edition, will be released during the first quarter of 2022 after nearly three years of review and updating. Initially, the updated version will be posted on the agency website while hard copy books will be printed for distribution. Some notable items include:

- Nearly 75% of the content remains functionally un-changed from the 2006 edition.
- Many BMPs were consolidated to improve brevity.
- **BMPs for the following topics were either totally revised, or are entirely new, so be sure you read each section thoroughly:**
 - ⇒ **Revised:** Streamside Management Zones
 - ⇒ **Revised:** Installing Minor Drainage (in Wetlands)
 - ⇒ **New:** Maintaining Drainage Ditches (in Wetlands)
 - ⇒ **New:** Shovel Logging; and Supplemental Forest Management Considerations (in Wetlands)
 - ⇒ **New:** Acknowledgement of BMP use for enhancing resiliency to climate/storm impacts and supporting aquatic threatened or endangered species.
- For stream crossings:
 - ⇒ 'Brush' crossings are no longer a 'best' practice. This is when woody debris is placed into the stream channel. Applying brush *on the approachways* to the stream crossing is still highly recommended.
 - ⇒ New BMP added for bridgemats: Lay down curb logs on either side of the platform to help catch debris from slopping-over the sides.
- For erosion and sedimentation control BMPs:
 - ⇒ The rolling dip was added for controlling runoff on roads or skid trails.
 - ⇒ New BMPs were added for using rolled erosion control products.

The N.C. Forest Service will provide opportunities to learn more about the updates. We will email notices to all who subscribe to this newsletter.

Newly-Protected Aquatic Species: Atlantic Pigtoe



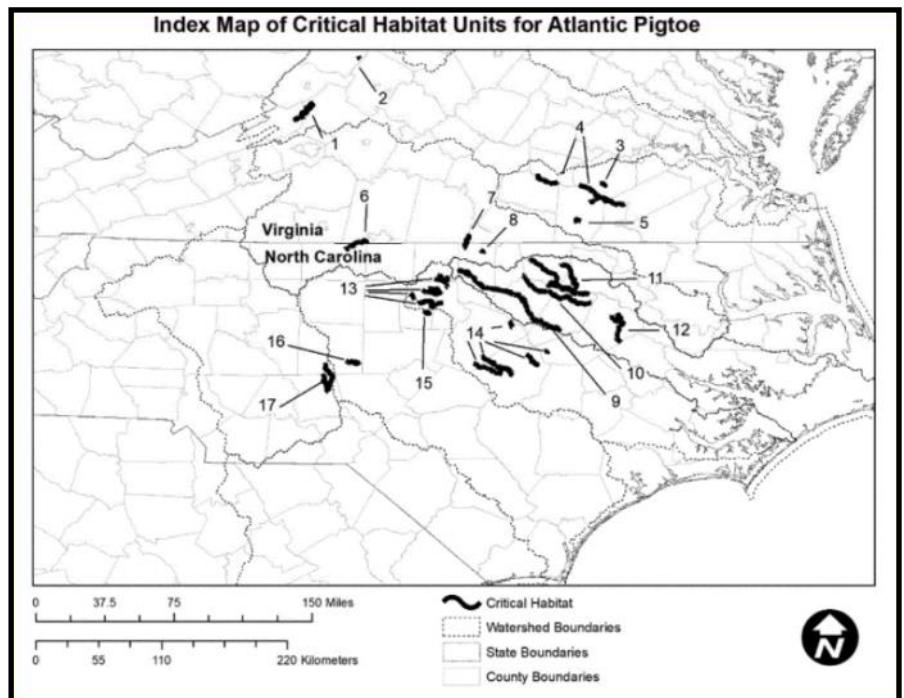
The Atlantic Pigtoe is a freshwater mussel that is now federally-protected as a Threatened species under the Endangered Species Act (ESA). There are new forestry requirements to help protect this species. These requirements are included in the species 4(d)-Rule. These Rule requirements provide an exemption for forestry from having to obtain an ESA permit from the U.S. Fish and Wildlife Service (USF&WS), if an incidental take occurs as a result of lawful forestry activities.

An example of the Atlantic pigtoe (*Fusconaia masoni*). Photo credit: USF&WS (www.fws.gov/southeast/wildlife/mussels/atlantic-pigtoe/).

The 4(d) rule requirements apply anywhere the mussel occurs, even outside of designated Critical Habitat. Several waterways in central and eastern North Carolina have been designated as Critical Habitat. A snapshot map is provided below. The USF&WS has an online map viewer that allows you to zoom-in and see more detailed locations, at this website: <https://ecos.fws.gov/ecp/report/table/critical-habitat.html>

Readers are encouraged to regularly visit the N.C. Forest Service webpage containing regulations that apply forestry activities. Information pertaining to Federal 4(d)-Rules and Critical Habitat for Aquatic Species are near the bottom of this webpage: https://www.ncforestservice.gov/water_quality/regulations.htm.

N.C. Forest Service staff strive to provide a succinct document for listed species with forestry focused information. Additional information on the listed species can be found at the [USF&WS website](http://www.usfws.gov).



NCFS Moreland Gueth Water Quality Award

The agency's 2020 water quality award was presented to Katie Stovall, Assistant County Ranger for Randolph County. Upon joining the NCFS, Katie substantially increased the number of logging inspections and made personal connections with loggers in the county, with positive outcomes. Her work to focus on water quality logging inspections was in addition to the many other duties required of an Assistant County Ranger, including all-hours response to wildfires, and the intensive in-house training progression for new Rangers. Katie's work has been appreciated and we will miss her diligence as she departs the NCFS for other career opportunities. Nonetheless, her hard work has been noted as an example that others can build upon. Congratulations to Katie and good luck.



Katie Stovall (center) being presented with the 2020 Moreland Gueth Water Quality Award at the NCFS Lexington District Headquarters, by Assistant District Forester Nancy Blackwood (left) and District Forester Mark Bost (right).

Is a Stream Still a Stream If There's No Water in It?

The short answer: Yes!

North Carolina has not seen a [drought](#) for some time, but so far this late Fall and early winter has proven to be quite dry, and indications are that the [2021-2022 winter's La Nina climate pattern](#) will bring weather that is warmer and drier than normal. In the winter, it's usually easier to see streams because trees are not cycling water for evapotranspiration. But, during an extended dry period, even during the winter months, some small streams can dry-up, making it harder to identify if a channel feature is a stream.



This dry intermittent stream still requires protection during logging and other forestry operations. Just because it's dry, that doesn't mean BMPs get a 'free pass'.

Reasons why it's important to still use BMPs for a dry stream channel:

- Aquatic animals often burrow into the moist soil below the streambed. Skidders that drive through the stream will compact the soil and damage the habitat, possibly harming the hidden animals.
- Logging debris in the channel may block stream flow when water returns. Excessive woody debris can draw oxygen out of the water when it decomposes.
- Sedimentation into the channel can smother gravel beds and other nesting/spawning micro-sites in the streambed that are important for aquatic animals.

Western Region Events

Piedmont Region Events

Eastern Region Events

For recorded and live webinars related to forestry and/or erosion control, check out:
[The Forestry & Natural Resources Webinar Portal](#)
[Source Water Protection Through Forestry Partnerships](#)
[How the River Flows Podcast](#)

Did you know...

Soil erosion is a natural process, but can be accelerated by people. It cannot be completely halted without significantly altering the landscape (e.g., paving). Streams cut channels, erode banks and advance upslope into our hilly and mountainous areas. Erosion forms erosional and depositional landscapes, the former frequently in forests and the latter more often in agricultural or urban use.



North Carolina Forest Service

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

Protect, Manage and Grow Your Forest
www.ncforestservic.gov

NCD&CS Agricultural Services
www.ncagr.gov

Go Out and Learn in the Forest
www.ncesf.org

Purchase NCFs Forest Tree Seedlings
www.buynctrees.com

Keep Your Home Safe From Wildfire
www.resistwildfirenc.org

Locate North Carolina Farm Products
www.ncfarmfresh.com
www.gottobenc.com

