



2021 Year in Review

N.C. Forest Service, Nonpoint Source & Water Quality programs



Several resources completed and set to be delivered in early 2022 including:

- ✓ Revised forestry BMPs for North Carolina, the first update since 2006.
- ✓ Findings from a statewide survey of logging sites between 2018 and 2020, assessing the implementation and function of forestry BMPs.
- ✓ Publication of a peer-reviewed journal article describing soil erosion estimates at stream crossings on logging jobs across the state.
- ✓ A new forest-water educational workbook correlated with North Carolina's teaching curriculum standards.
- ✓ Rollout of the 2020-2030 Forest Action Plan, which includes goals and priority areas for sustaining North Carolina's forest water resources.

Stay tuned to the Water Quality section of the NCFS website and our quarterly BMP Newsletter.

Bottomland Hardwood Forest Management Training

The NCFS collaborated with multiple partners to host a webinar workshop on managing bottomland hardwood forests. The event was capped-off with a two-day field tour at Bladen Lakes State Forest to observe silvicultural treatments that have been implemented to stimulate regrowth of forest tree species that are important for migratory songbirds.

More information is available in the 'Managing Your Forest' section of the NCFS website.



Emerging tree seedlings one year after a bottomland swamp timber harvest, with cypress on the left and oak on the right.

Foresters for Healthy Waters:

Protecting Habitat for Aquatic At-Risk Animals

A cooperative effort from the N.C. Forest Service and U.S. Fish and Wildlife Service.

This pilot project kicked off in 2021 across a seven-county area (see map). Eligible forest landowners can receive cost share assistance for hiring a qualified forestry or wildlife professional to prepare a detailed preharvest plan for their future timber harvest.

These plans emphasize measures to protect streams and waterways that are essential for several federally listed or proposed threatened or endangered aquatic animals.

There are various species in the waterways of this area that depend on cool, clean, swift flowing stream waters. Forest management is a preferred solution to sustain these habitats.

The project is funded by the U.S. Fish and Wildlife Service and may serve as an example that could be replicated in other regions to demonstrate the principles of engaging in cooperative conservation among diverse stakeholders.

If you are planning a timber harvest in one of the following counties, contact the N.C. Forest Service to confirm if your tract is eligible to participate:

- **Franklin, Edgecombe, Halifax, Nash, Warren:**
District 5 Office, 252-442-1626.
- **Granville, Vance:**
District 11 Office, 919-732-8105.

You can also visit the NCFS website to learn more: www.ncforestsERVICE.gov/healthy_waters/costshare.htm



This streamside management zone (SMZ) protects the stream from erosion and sedimentation and maintains shade to sustain water temperatures for aquatic life. Leave robust SMZs on your timber harvest and minimize disturbance within them.



State Forest BMP Demonstrations

Funds derived from the USEPA's Nonpoint Source 319-Grant Program were made available to make BMP infrastructure improvements to multiple state forests that also serve as demonstrations for proper forestry management techniques. Illustrated below are before and after photos of some of the work.



Road drainage and surfacing at Bladen Lakes State Forest

BEFORE: The structural integrity of the road had diminished over time and rainwater was not draining, leaving the road impassable. The soft soil made it difficult to drive upon.

AFTER: Shallow ditches were pulled on either side of the road, and the road's profile was crowned to allow water to run off into the new roadside ditches. Gravel was applied to harden the surface through the soft spot.



'Sediment speedbumps' on a sloping forest road at Clemmons Educational State Forest

BEFORE: Due to a lack of water control diversions, erosion has washed away the soil and gravel.

DURING: Roadside ditches were pulled, the road was smoothed over, and new berms were installed using pressure-treated wood timbers staked down with rebar and capped with gravel.

AFTER: Gravel was applied atop of the improved roadway between the new berms. This solution is only suitable for low-traffic roads. It will not support log trucks or heavy loads.

Bridgemats

During the fiscal year 2020-21, NCFS-owned bridgemats were used by loggers to protect waterway crossings:

- 15 tracts
- 17 crossings
- 323 acres of timber harvest accessed

The photo to the right shows a set of bridgemats from a logging job in May 2021. Note the panels are tightly butted together to minimize soil and debris from falling into the channel.

(Photo courtesy of Albert Coffey.)



Education, Training and Outreach

Over the past year, we continued to provide training through distance-learning and video-conferencing sessions, as well as some limited in-person events. Below is a count of attendees at notable events where NCFS employees instructed or presented on BMPs or forest water quality:

- ▶ 99 NC Prologgers
- ▶ 182 Soil and Water Conservation commissioners, board supervisors and staff
- ▶ 30 new N.C. Forest Service rangers
- ▶ 145 private and public sector forestry professionals
- ▶ 181 local government officials, staff, and environmental consulting professionals

In addition, the NCFS participated as a member of an expert panel on forestry BMP monitoring at the North American Lake Management Society’s 12th National Monitoring Conference.

Erosion & Sedimentation Control, and Water Quality Compliance Assistance

Below are the findings recorded by the N.C. Forest Service while conducting inspections of forestry-related, land-disturbing activities to determine compliance with the standards of the Forest Practices Guidelines Related to Water Quality (“FPGs”: 02 NCAC 60C .0100 to .0209), as part of the N.C. Sedimentation Pollution Control Act. These results are from the state fiscal year July 2020 through June 2021.

Type of Operation	In-Compliance	Out-of-Compliance	Total
Timber Harvest: Active	1,825	5	1,830
Timber Harvest: Completed	647	5	652
Reforestation and Site Prep	160	0	160
Other*	145	0	145
Subtotal	2,777	10	2,787
Reinspections			3,594
Grand Total, All Inspections			6,381

**Other activities include silvicultural management practices such as precommercial thinning, crop-tree release, herbicide or fertilizer application, prescribed burning or forest road construction not associated with a timber harvest.*

The N.C. Forest Service is a division of the N.C. Department of Agriculture and Consumer Services. Steve Troxler, Commissioner

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