

# YEAR IN REVIEW 2018



## Success Stories & Accomplishments

### North Carolina Forest Service, Nonpoint Source & Water Quality programs

## Bridgemat Loan and Education Service

For 20 years, the N.C. Forest Service (NCFS) has provided portable, temporary bridgemats to loggers as an 'in-woods' demonstration project to show how well they can protect water quality on stream or ditch crossings. During this past year, our bridgemats were used on 19 logging jobs to protect 23 water crossings and provided access to an estimated 730 acres of timber for harvesting.



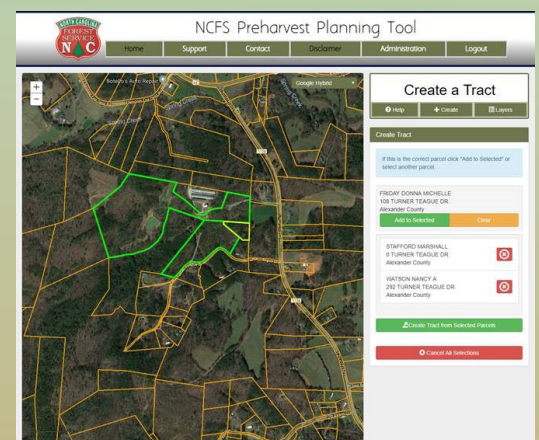
A summary report of the Bridgemat Loan and Education Service between 2009 and 2017 was produced.

The document provides an update on the service and details general information about bridgemat use and involvement in applied research studies. That report, as well as a list of bridgemat suppliers, is available from the Water Quality home page of the "Programs and Services" section of the [ncforestservice.gov](http://ncforestservice.gov) website.



## Forest Preharvest Planning Tool (FPPT)

The number of users of this free online tool continued to increase over the past year. The Branch's Senior Water Quality Specialist worked with Emergency Programs staff to implement several improvements that increased tool speed, reliability and overall usefulness. New image layers were added to allow FPPT users to observe different base maps and data specific to forest planning. The user can prepare their own map, add specific features (such as roads, wet areas, fences and future placement of BMPs) and modify them where needed. While there is no fee to use the tool, FPPT users must first register and create an account. A how-to user guide, is available at this website: [https://www.ncforestservice.gov/water\\_quality/pdf/FPPT\\_Users.pdf](https://www.ncforestservice.gov/water_quality/pdf/FPPT_Users.pdf)



Staff continue to implement new features suggested by its users. These changes continue to improve the utility of the tool for our customers. In 2019, we will focus on communicating these changes to customers, and advertising it to reach more people.



[ncagr.gov](http://ncagr.gov)



[www.buynctrees.com](http://www.buynctrees.com)



[ncforestservice.gov](http://ncforestservice.gov)

# River Basin Deck Exhibit Returned to Clemmons Educational State Forest

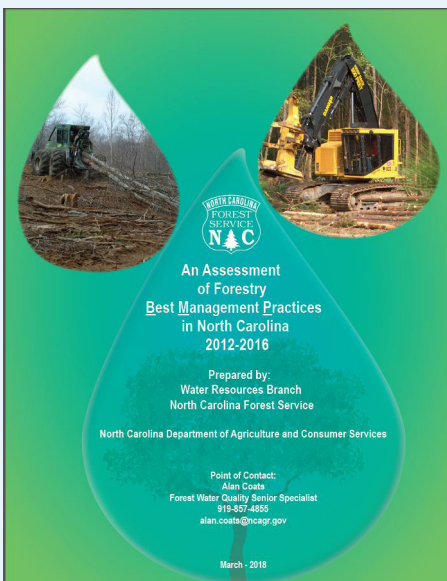


First constructed in 2007/2008 using 319-Grant funds, the river basin deck was a popular venue for school groups learning about forests and water. Over time, the failing deck boards were replaced and the display removed. NCFS staff and volunteers worked to reinstall and paint the deck back to its original design in early 2018. The process, from creating a grid, using a router on the deck boards, painting lines, and the finished product are pictured here.

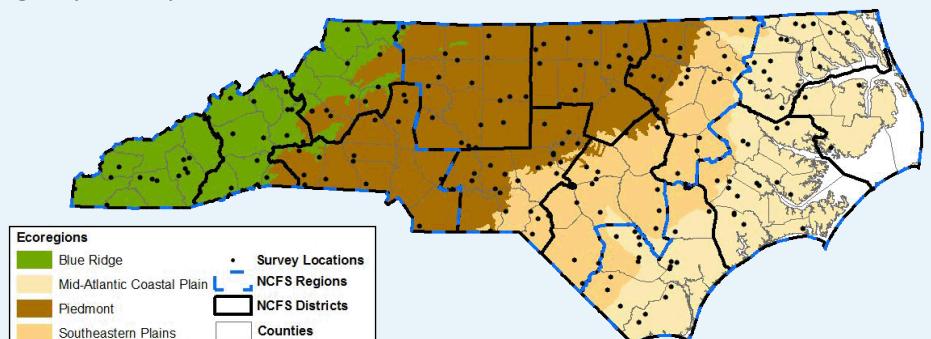


# BMP Implementation Survey Report

In March 2018, the Branch released the results of the latest BMP implementation survey. Products from this project included: a comprehensive survey report (cover pictured below), summary leaflet, online story map, an appendix with full statistical results, survey procedure and form, and presentation slides. Each of these publications, along with products from previous rounds of surveys, can be found here: [https://www.ncforestservice.gov/water\\_quality/wq\\_bmp\\_studies.htm](https://www.ncforestservice.gov/water_quality/wq_bmp_studies.htm)



This past implementation survey was conducted on 210 sites spread across the state (photo below). In 2019, the Branch will begin the next round of BMP implementation surveys and plans to evaluate 216 sites. During this next iteration Branch staff will collect additional data to estimate soil erosion near streams and utilize agency smart phones for the data collection.



# Another Successful Year of Training and Outreach

## Water Quality Refresher Workshop Series Concluded

We completed our series of water quality-themed workshops across the state in 2018, finishing strong with a group of 42 in Sanford, NC. Between 2017 and 2018 the Branch reached a total audience of approximately 320 forestry, water quality and natural resources professionals. If you didn't make it out, all nine presentations can be viewed or downloaded from the Water Quality home page via the "Programs and Services" section of our agency website, [ncforestservice.gov](http://ncforestservice.gov).

## North Carolina and South Carolina Drinking Water Forum



The NCFS in partnership with several other groups took part in planning and accomplishing a drinking water forum this past September with leaders from forestry, drinking water and conservation communities. The purpose of this forum was to discuss the connections between forests and drinking water and explore approaches to collaborate with a common goal of sustaining our water resources. The event started at the Mountain Island Educational State Forest with a group of 45 attendees. Field tour speakers described the basic processes of proper forest management as well as some of the science and history behind how forests are sustainably managed today. The following day, 90 individuals gathered to share their experiences and challenges with source water protection and funding.



## Field Staff Training and College Lab Exercises



The Water Quality Chapter of NCFS's Ranger training was instructed for the second time this past year. Twenty-three forest rangers learned about the state's regulations pertaining to forestry and water quality. Instructors also delivered presentations addressing the fundamentals of BMPs, forest operations, forest hydrology and state regulations. The course ended with a field trip to a mountain logging job to bring the training full circle (pictured left).

Congratulations to the Rangers passing the final exam!

## BMP Assists



Several BMP technical assists were conducted this past year. An example of one such assist was in Wake County. Prior to a logging operation, a forestry consultant spoke with NCFS personnel to find a temporary crossing solution for a deeply incised and wider than usual stream.

After evaluating a Forestry Preharvest Planning Tool map and walking the site, NCFS staff helped narrow a list of potential crossing locations and methods. The forestry consultant selected bridgemats with a unique abutment (left photo) and worked with NCFS staff to implement additional stabilization tactics (left photo). The timber was safely extracted, and the tract remained in-compliance with Forest Practice Guidelines Related to Water Quality throughout the operation.



## Other Training, Education & Outreach

### Notable events that included a significant contribution of information on BMPs, water quality or forest watersheds:

- 98 loggers through the N.C. Forestry Association's ProLogger Base Program.
- 90 high school students in the annual Resource Conservation Workshop at Clemmons Educational State Forest.
- 80 attendees of the Division of Energy, Mineral and Land Resources Local Program Workshop.
- 75 grade school students through N.C. Forestry Association's Forestry and Environmental Camp.
- 65 consulting foresters attending an update meeting in eastern North Carolina.
- 60 consulting foresters attending an update meeting in central North Carolina.
- 55 attendees of the state's Surface Water Identification and Training Certification Course.
- 50 Boy Scouts through N.C. State University's Boy Scout Merit Badge College.
- 30 college students participating in field labs and forestry summer camp.
- 23 attendees of the Wilkes Soil and Water District meeting.
- 12 members of the Cary Flotilla of the U.S. Conservation Coast Guard Auxiliary at a monthly meeting.
- Contributed to the Water Resources Committee at winter and annual meetings of the Southern Group of State Foresters.
- Attended the annual conference of the North Carolina Water Resources Research Institute



ProLogger Base Course Group in Marion, Sept. 2018  
(Photo credit: Jack Swanner, N.C. Forestry Association)



Branch staff member Lang recorded in a video module discussing BMP surveys and site rehabilitation methods for Prologger's annual training.

## Water Quality and Erosion and Sediment Control Site Inspections

For the state Fiscal Year of July 2017 through June 2018, the following results were observed by the North Carolina Forest Service while conducting inspections of forestry-related, land-disturbing activities to determine compliance with the standards of the Forest Practice Guidelines Related to Water Quality ("FPGs": 02 NCAC 60C .0100 to .0209), as part of the N.C. Sedimentation Pollution Control Act.

Type of Operation	In-Compliance	Out-of-Compliance	Total
Timber Harvest: Active	2,341	33	2,374
Timber Harvest: Completed	784	14	798
Reforestation and Site Prep	196	0	196
Other*	168	0	168
<b>Total</b>	<b>3,489</b>	<b>47</b>	<b>3,536</b>

\* 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.

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