



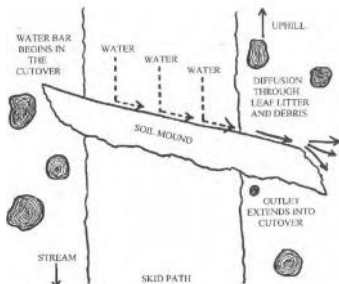
Waterbar refresher

The waterbar shown below is properly angled diagonally across the skid trail to allow runoff to flow off the surface. A shallow trench can carry the runoff. This waterbar extends past the edge of the skid trail which is excellent for drainage.

A. Photo by the N.C. Forest Service.



B. Overhead view sketch of waterbar.



C.

Slope Grade (percent)	Waterbars (feet)*
20 +	40 to 30
16 to 20	60 to 40
11 to 15	80 to 60
6 to 10	100 to 80
0 to 5	120+ to 100

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Forest Preharvest Planning Tool update

The N.C. Forest Service (NCFS) online Forest Preharvest Planning Tool (FPPT) update is coming soon!

NCFS Water Resources Branch (WRB) staff continue to work with the N.C. Department of Agriculture and Consumer Services (NCDACS) Emergency Program Division (EPD) staff to improve the FPPT's reliability and usefulness.

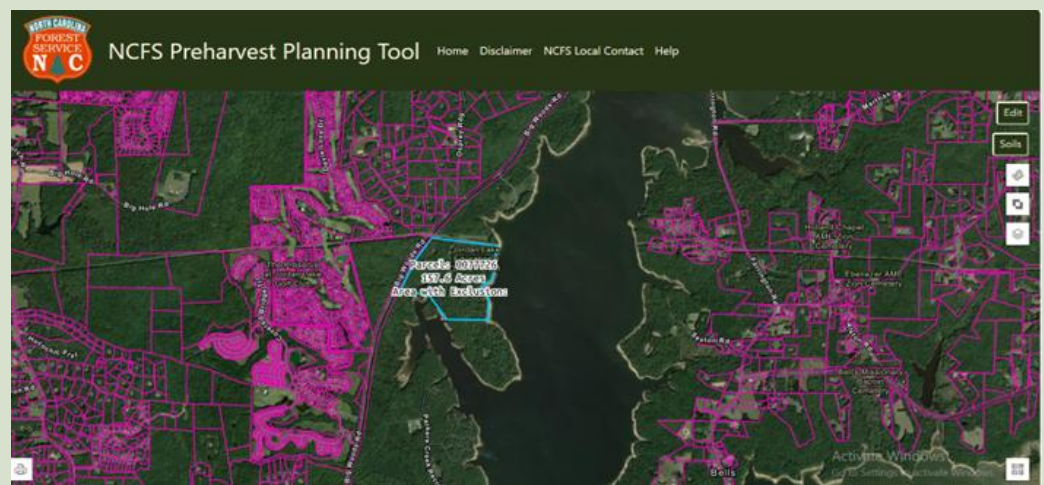
As of June 2025, the FPPT had more than 600 registered users. A new version (2.0) of this online program was developed during Fall 2025 with new features including no account required, a published county soils book layer (for buffer rules and other uses) and many other user friendly features.

NCFS WRB staff recently completed a filming session with the N.C. Forestry Association (NCFA) to help promote the FPPT 2.0 and spread the work through the 2026 Prologger training module.

Stay tuned for further details on a transition timeline. Until then, the original version is still available for use online at [N.C. Forest Service-Online Forestry Preharvest Planning Tool](#).



Photo courtesy of N.C. Forest Service.





What's wrong with this picture?

Wooden and steel bridgemat panels should be placed so there is NOT a gap between the panels.

Gaps between panels can result in soil and debris falling through the gaps. Butting panels together reduces the risk of sedimentation.

For additional tips on bridgemat usage, see the [NC Forestry BMP Field Guide, Section 7-2](#).

FPG spotlight of the quarter
02 NCAC 60C .0205
Prohibition of waste entering streams, waterbodies and groundwater.

Measures shall be taken to prevent equipment servicing waste, petroleum, fertilizers or other chemical waste from entering streams, perennial waterbodies and groundwater that results in a violation of a water quality standard.

See your [BMP Manual](#) or [BMP Field Guide](#) for additional details.

Prescribed fire risks and benefits to water

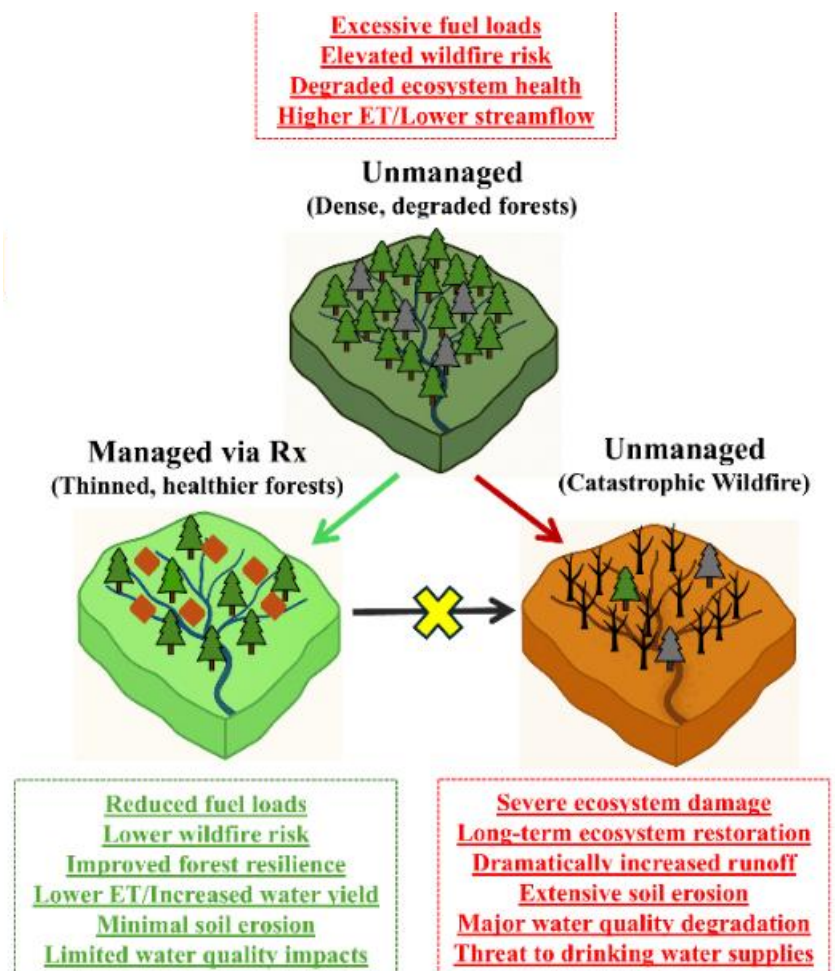
In a recent research article published by Zhang and others (2025), the authors summarize research on the impacts of prescribed fire and wildfire on water quality while offering an adaptive framework to guide prescribed burning in a way that balances ecological and hydrological benefits. Many variables influence burning effects on water quality, but research clearly indicates wildfire has many more negative influences on water quality.

Three key sequential stages are described for using prescribed fire:

- 1) Pre-burn planning and risk assessment;
- 2) Post-burn monitoring and response and;
- 3) Adaptive strategies for future burns.

Excerpted from Zhang and others (2025), the figure to the right illustrates comparative hydrological outcomes across management scenarios. Like BMPs, when properly implemented, prescribed fire can contribute to managing healthy forests that yield clean water in sustainable quantities. The full article is available at the link below:

Zhang, Y., W. Li, P. Caldwell, S.D. Sebestyen, C. Tang, R. Toot, C. Mihlar, Z. Mondry, Y. Song, D. Mosher, and G. Sun. (2025). [Contemporary Patterns of Prescribed Fire and its Risks and Benefits to Water Quantity and Water Quality over the Conterminous United States](#). *Environmental Research Letters*, 20, 123002. DOI: [10.1088/1748-9326/ae20af](#).



N.C. Forest Service Moreland Gueth Water Quality Award



Congratulations to NCFS Warren County staff on receiving the 2025 Moreland Gueth Water Quality Award. Led by NCFS County Ranger Jim Short, staff demonstrated exceptional efforts in delivering water quality program services. These included 76 active initial tract inspections, 32 completed tract inspections and 190 re-inspections. Key for these accomplishments is fostering good working relationships with consultants, timber buyers and loggers so they're comfortable contacting the NCFS when harvesting timber in Warren County. NCFS Warren County staff also provide landowners with information on protecting and utilizing SMZs on their property. They offer advice on SMZ width and effectiveness to the land-

owner, consultant, timber buyer or harvesting professional when performing a WQ inspection. They understand that finding active logging sites makes it easier to keep a site in compliance with Riparian Buffer Rules, FPGs and BMPs.

From L to R: Chad Brandon, D5 District Forester; Brian Yeich, R2 Assistant Regional Forester-Forest Management; Jim Short, Warren County Ranger; Glen Garner, Forest Fire Equipment Operator; Sam Wright, Assistant County Ranger and Jeremy Seaman, Assistant County Ranger.

N.C. Forest Service completes ranger training classes for water quality

Nearly 50 NCFS employees from across the state recently completed agency training for water quality. This course combines online training with a final classroom day and field sessions to teach new employees BMPs, FPGs, soils mapping info and buffer rules. Congratulations students!



Terminology today

Brush barriers

Brush barriers are piles of leftover, unusable tree and vegetation debris that is piled carefully and packed down to act as a temporary filter barrier to slow runoff and capture sediment. Creating brush barriers is a productive use and disposal method for debris that is generated by road or skid trail construction and can be a low-cost method of temporary sediment capture. Places where brush barriers may be helpful:

- ☐ Alongside newly constructed or graded roads
- ☐ Around edges of log decks
- ☐ Alongside and on top of skid trails
- ☐ Stream crossing approaches



Stream crossing approaches stabilized with brush. Photo courtesy of N.C. Forest Service.

The NCFS Water Resources Branch recently provided NCFS educational state forests with updated tools to teach children about water quality. This included pH test kits, dissolved oxygen kits, dip nets and water thermometers.



N.C. Forest Service - Water Quality

<https://www.ncagr.gov/divisions/nc-forest-service/water-quality>

Healthy trees, healthy lives

www.healthytreeshealthyvives.org

N.C. Forest Service

WATER RESOURCES BRANCH

1616 Mail Service Center. Raleigh, NC. 27699-1600

Protect, manage and grow your forest

www.ncagr.gov/divisions/nc-forest-service

Purchase NCFS tree seedlings

www.buynctrees.com

NCDA&CS Agricultural Services

www.ncagr.gov

Keep your home safe from wildfire

www.resistwildfirenc.org

Go out and learn in the forest

www.ncesf.org

Locate North Carolina farm products

www.ncfarmfresh.com
www.gottobenc.com

