



# The Water Bar

## Water Quality Update for Loggers and other Forestry Professionals



March 2001

Serving: Alexander, Alleghany, Ashe, Avery, Burke, Caldwell, Wilkes

### Catawba Buffer Rule Set for Adoption

On February 8 the NC Environmental Management Commission (E.M.C.) approved moving to public hearings with a draft temporary rule that would preserve riparian buffers along the mainstem Catawba River and lakeshores from Lake James to the South Carolina line. This temporary rule is the first step in a process to create a permanent buffer rule that would eventually include all perennial and intermittent streams in the Catawba River basin. Similar rules have been imposed on the entire Neuse and Tar-Pamlico River basins in eastern North Carolina. Unlike the Forest Practice Guidelines that are monitored by the NC Division of Forest Resources, the Catawba Buffer Rules will be monitored and enforced by the NC Division of Water Quality.

In its present form, the Catawba Buffer Rule would require preservation of a 50 foot wide riparian buffer along the riverbank and lakeshores to protect the waters from sediment and other runoff pollutants. The first 30 feet closest to the water, referred to as Zone 1, is to remain undisturbed except for certain allowed activities. The outer 20

feet, referred to as Zone 2, must be vegetated but certain additional uses are allowed.

The rule will apply to all land uses including residential and industrial development, agriculture, mining, and forestry. Existing land uses will be exempt from the rule but any change in land use will be subject to the requirements of the rule. For example, when a forested tract is converted to residential development, then the residential development will be subject to the rule. The buffer rule considers forest harvesting a "change of use". Therefore the buffer rules will apply to all timber harvesting and forest management activities.

For timber harvesting operations, the rule prohibits loading decks and sawmill sites within Zone 1. Selective harvesting is allowed in Zone 1 if the land has a deferment for use value under forestry (present-use tax valuation) or has a written forest management plan prepared or approved by a registered professional forester. In the first 10 feet of Zone 1 only high value trees with a stump diameter of 18 inches or more may be removed. Both felling and skidding must be directed away

from the water body and done so as to prevent soil disturbance and channeling of stormwater runoff. In the outer 20 feet of Zone 1 trees with a stump diameter greater than 12 inches may be removed. In Zone 2, normal timber harvesting is allowed as long as it complies with the Forest Practice Guidelines.

Bear in mind, this is only a summary of the rules that will have the most impact on forestry operations. Also, these rules have not been finalized and could change before they become effective on June 30.

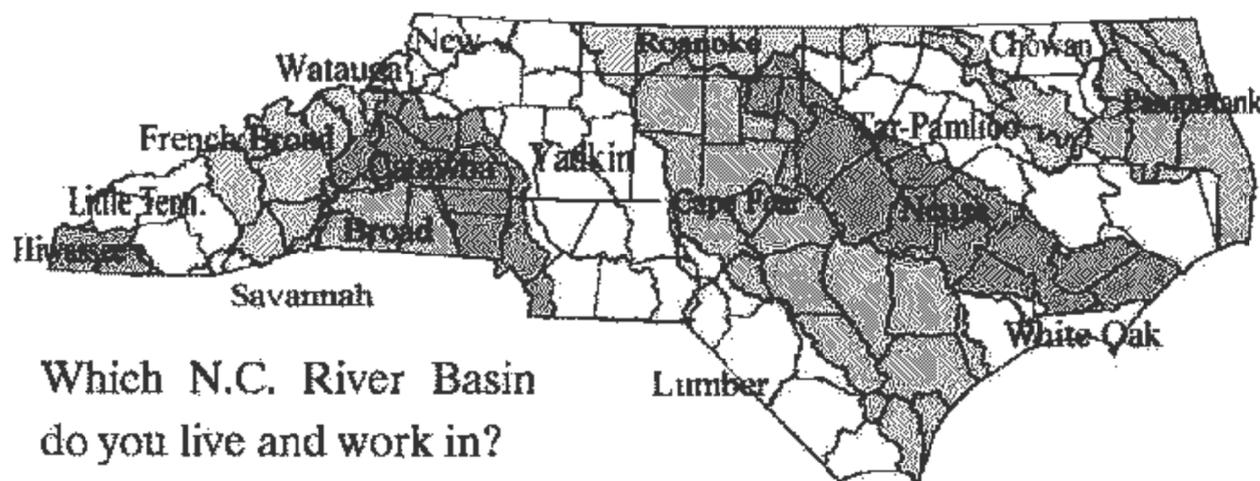
The E.M.C. has planned two public meetings to allow citizens to comment on the proposed rules. They will be held at the following locations:

**March 22, 2001, 6:00 pm**  
Old Rock School, 400 Main St., W.  
Valdese, NC

**March 20, 2001, 6:00 pm**  
Old Gym, 123 Hawthorne Rd.  
Mt. Holly, NC

More information about the meetings and full copies of the buffer rules can be obtained from Jamie Smith with the N.C. Div. of Water Quality at (919)733-5083. The full text of the buffer rules can also be found at the Div. of Water Quality's website at: <http://h2o.enr.state.nc.us/admin/pubinfo/pubinfo.html>.

If the buffer rules are expanded to include all streams, almost all logging operations in the basin will be affected. Loggers, buyers, and landowners will need to understand the rules. The Div. of Forest Resources plans to conduct workshops to help familiarize loggers with the requirements of the rules and how they apply to their logging jobs.

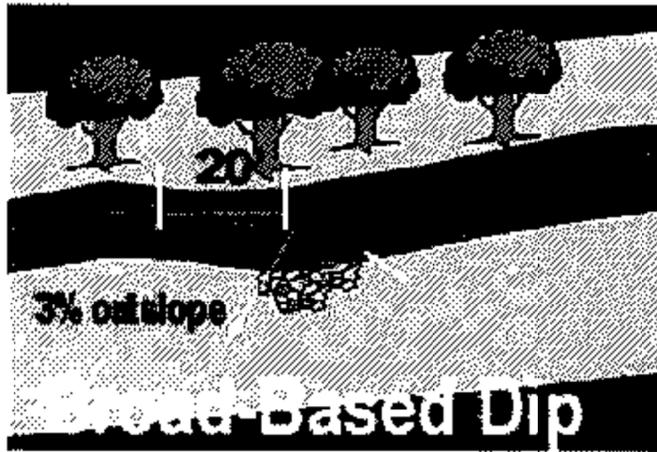


Which N.C. River Basin  
do you live and work in?

## Broad-Based Dips

As the name implies, a broad-based dip is a broad dip-hump combination built into a road. They are very effective at controlling runoff and sediment coming from actively used truck roads and, sometimes, skid trails. They will also continue to work long after you've finished logging and hold up well to use by 4-wheelers.

Just like a water bar, the dip forms a reverse or outsloped cross drain to divert flowing water from the road surface. Unlike water bars, broad-based dips can be crossed by trucks and other equipment and will continue to function with a minimum of



maintenance. We most commonly see them built on truck roads with grades of 12% or less.

It takes a little more practice to construct good broad-based dips than water bars since they are stretched out over a longer distance making the dip and hump less distinct. It's ideal to grade the dips into a road as it is being built but they can be constructed on existing roads easily enough. Key points to remember when building broad-based dips include: 1) tying the upper end of the dip and hump into the road bank to avoid water by-passing the dip, 2) constructing the dip with about 3% outslope to ensure that water flows off the road surface, 3) placing brush or stone on fragile fill slopes below dip outlet to prevent fill from eroding.

Additional measures that we sometimes recommend, particularly near streams, include placing heavy washed stone on road surface at dips and constructing sediment basins at dip outlets to catch sediment until permanent stabilization is accomplished.

Road Grade (%)	Spacing (feet)
2-4	200-300
5-7	160-180
8-10	140-150

**Broad-Based Dip Spacing Guide**



Congratulations to the 100-plus loggers who completed ProLogger training in Statesville on March 2. The 3-week course was sponsored by the N.C. Forestry Association and several area forest industries. Contact NCFA at (800)231-7723 for information on future ProLogger courses.



Broad-based dip on truck road. Gravelled with vegetation at outlet. (Parton Land & Timber)

## Dragline Mats Available

Don't forget that the N.C. Forest Service has a set of dragline mats (portable bridges) available for loggers to borrow free of charge. The mats are 24 feet long and will make a 12 foot wide bridge suitable for a skid trail or truck road. The mats are located at our Wilkes County office. Contact Water Quality Forester Roger Miller (828)757-5611 about borrowing them. In other parts of western N.C. Water Quality Foresters Greg Yates (Asheville) and Kevin Harvell (Mt. Holly) also have mats available for loan.



Dragline mats on skid trail stream crossing

## New Equipment

Hartley Brothers Sawmill recently purchased two sets of portable steel bridges for use on their logging operations in Wilkes and surrounding counties. The 3-piece bridges are 35 feet long and make a 14 foot wide deck suitable for skidding or trucking across. Although the cost of steel bridges (approx. \$6500 per set) is 2-3 times that of wooden dragline mats, the Hartleys felt the steel bridges were a better value. The extra length and superior durability of the steel bridges is what convinced Gene and James to purchase them. Gene Hartley believes the bridges will certainly pay for themselves by eliminating culvert purchases.



Please let us know if you'd like to be included on our mailing list. We'd also like to hear your comments on this publication and suggestions for future articles.

The Water Bar is edited by:

Roger Miller, Water Quality Forester, District 2  
N.C. Division of Forest Resources  
1543 Wilkesboro Blvd., NE

Lenoir, NC 28645

phone: (828)757-5611

FAX: (828)757-5614

Email: roger.miller@ncmail.net