## Debris removal causing more harm

I'm a wildlife biologist with 25 years working in mountain streams and educating the public about the importance of maintaining trees and native vegetation along our mountain streams and rivers. Down and dead wood is also important component of streams. This wood provides habitat for fish, cover for salamanders and aquatic insects, backwater areas for wood ducks and other waterfowl, and can reduce the velocity of the water, acting to trap sediment and reduce erosion.

That's why I was surprised



to see the huge tree grapplers/ haulers in the river, under oversight of the U.S. Army Corps of Engineers, while I was attempting to enjoy a leisurely paddle trip on the river last weekend from the state line to Riverside Road in Otto.

While I think everyone understands and supports the need for debris removal in streams to the east of us that were hardest hit by Hurricane Helene, such as many parts of the French Broad watershed where whole stands of trees, cars, sheds, and even houses are piled up in the river and along banks, the Little Tennessee did not experience those same impacts. It was just a "normal" flood.

When I looked at the USGS stream discharge data from the Prentiss gauge between Otto and Franklin, the Helene flood in the upper Little Tennessee barely made the top 10 floods (coming in at #9) since the data collection began in 1944. The high-

est discharge recorded was in January 2016 when the river was a little over 8,000 cubic feet/sec; Hurricane Ivan in September 2004 caused the river to rise to 7,900 cubic feet/sec. In comparison, the Helene flood was a little over 5,000 cubic feet/sec.

In none of these previous flood events was it necessary to have such wide scale wood removal operations. Apart from a few areas where there is significant debris, such as in the Cullasaja River across from Walmart, there is really

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no need for disaster recovery in rivers that did not experience a disaster – there is no justification other than Macon County was deemed eligible for disaster recovery from the federal government and agreed to "opt-in" for debris removal.

While there are areas where trees and logs can redirect the energy of the river into an adjacent stream bank, causing erosion and bank failure, most bank failure that I see along our rivers is when landowners remove vegetation along streambanks, leaving only the short roots of fescue and a thin line of black walnut to stabilize a six-foot bank. In that scenario, the river always wins.

When I inquired about this large-scale operation, one that is unprecedented in its scope, I was told that the U.S. Army Corps of Engineers knows what it is doing as it is the entity that regulates such activities in our rivers, streams, and wetlands. I was told that certain areas in our rivers were identified for clean-up, but that contractors can clear up to a mile upstream and downstream from the entry points. Contractors are paid by the tonnage, thus incentivizing removing as much wood as the official policies and procedures dictate.

When I repeatedly asked exactly where the debris removal would be taking place and how many miles would be impacted, I was told I was not party to the contract between the Corps, FEMA, and North Carolina Emergency Management and that I would have to file a Freedom of Information Act to get this information, which takes 20 days to process.

The Little Tennessee and Cullasaja are among dozens of rivers impacted by these operations. While everyone agrees that there needs to be removal of log jams and other debris washed into the rivers from the catastrophic flooding to our east, many contractors are being overzealous in their removal and there has been a complete lack of communication between the removal efforts and state and federal biologists, resulting in crushed endangered mussels and nearly complete elimination of woody stream habitat.

There was a stark contrast in sections I paddled where this work took place. In areas that had been impacted by the debris removal activities, the current flowed swiftly with few slack areas where water could pool and there was a noticeable decline in the number of overhanging branches (e.g., shade) over the river, as several live trees had been cut, the sap still oozing from their stumps. The habitat was homogeneous with few to no areas where fish could shelter out of the current. In stretches that have yet to be "cleaned up", there was a lot of fish habitat, and you had to pay attention when paddling. There were overhanging limbs that created shade. The habitat was heterogeneous. In short, it was what a natural river is supposed to look like and how a natural river is supposed to function.

When I paddled the river, I didn't see a threat to public safety. Some of the same logs that have been there the past half dozen years are still there, even after Helene. From an ecological standpoint, thousands of cubic yards of fish habitat are being removed, reducing habitat complexity in a stretch of river that has few natural rock shoals and boulders to begin with. Fishing will be worse and increased velocity will hasten erosion of streambanks. It also sets a precedent that it is OK to remove wood from rivers that experienced no natural disaster to "clean them up" despite multiple empirical studies showing otherwise. In the case of the Little Tennessee, the Corps is creating a disaster on the taxpayers' dime, not solving one.

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