EXHIBIT 12

FLOYD PHOTO COMPARISON MAY 31, 2019 VERSUS JUNE 29, 2015
NORTH CAROLINA HEADWATERS OF THE CHATTOOGA RIVER

The North Carolina headwaters constitute Outstanding Resource Waters ("ORW"). There is no evidence that the normal sediment transport capacity of North Carolina's headwaters is sufficient for alleviating the excessive bedded sediment problem being suffered over an extended segment of North Carolina's headwaters. This blanket of sediment has degraded the biological capacity of the stream bed for sustaining sufficient spawning and early life cycle survival of newly hatched alevin. Sustaining outstanding densities and/or biomass of naturally reproducing populations of trout constitutes the subcategorized designated use of ORW water quality which has been administratively assigned to North Carolina's headwaters.

The excessive accumulation of sediments on the stream bed is most pronounced upstream of a massive log jam which the United States Forest Service has recognized as being unique to the southeastern United States. This log jam is located at @ 35.033897, -83.128544.

Figure 5. Boaters portaging around log jam within Chattooga Cliffs Reach.
(Photo provided by Todd Corey.)

Source: *Expert Panel Field Assessment Report,* Phase I Data Collection, Upper Chattooga River, Louis Berger Group for the United States Forest Service, Appendix C at page C-3.

The photo on the left is copied from Figure 2. Large Wood jam on the upper Chattooga River, North Carolina, November 2007, as published in the *Executive Summary: Large Wood in the Upper Chattooga River Watershed November 2007,* USFS Southern Research Station, C.Andrew Dolloff, Team Leader at page 4 (otherwise requested to be placed into the administrative record being compiled during the rewrite of the Land Resource Management Plan ("LRMP") for the Nantahala National Forest as Floyd document "N-15 Executive Summary USFS LWD count Upper Chattooga Nov2007"). This 2007 study of this logjam admitted: "Wood in this jam was in various states of decay and disintegration, suggesting that it had accumulated over many years. *This jam is unique; jams of this size are unusual in the southeastern US, where as a result of past human activities most streams carry small loads of LW.*" Id. at page 4 (italics added). The photo on the right was taken in January 2007 in connection with whitewater

paddlers being allowed to paddle these headwaters as part of a visitor capacity study. This paddler field outing took place when the water flow was low—as opposed to when the river is running at higher flows which whitewater enthusiasts prefer. The ease with which these paddlers appear to be scrambling over this log jam at low water is unlikely to be achieved when the water is flowing at much higher volumes. At high water flows, paddlers would find portaging over this large log jam difficult. The above photo on the right was first published in the *Expert Panel Field Assessment Report, Phase 1 Data Collection, Upper Chattooga River,* Louis Berger Group for the United States Forest Service, Appendix C at page C-3. Both photographs constitute close-ups of this log jam. Neither photograph provides a distant or wide angle view of the log jam or of the sediments being impounded upstream of this log jam

The photo below was taken by Floyd on June 29, 2015 @ 2:45:18. This downstream wide angle photo demonstrates the visibly obvious accumulation of sedimentation on the upstream side of the log jam located @ 35.033897, -83.128544—something which wasn't shown in either of the photographs published in 2007. This downstream view shows the river right side of the log jam where whitewater paddlers were shown to be portaging in the January 2007 photo above. This bedded sediment problem extends far upstream of this log jam and far downstream of this log jam.

Prior to approving Amendment 22 in January 2012, the Nantahala National Forest never told the public how this log jam serves to slow this excessive bedded sediment pollution problem from expanding its reach downstream. The removal of this log jam (the removal of this sediment catch basin) would cause this impounded sediment to spread out downstream over a larger segment of these headwaters.

Small particles of sandy sediments (<2mm) and silt (<.6mm) (displaced by human activities taking place in the upstream watershed) have smothered the stream bed by more than a foot in certain places and bank to bank in other places. Many crevices and interstitial spaces within the granite stream

bottom have been filled as if concrete had been poured into them. This excessive embedded sediment constitutes a *hazardous threat* to the health of the various aquatic creatures living in this creek—but especially so to the early life cycle of trout.

The photo above on left evidences the presence of a large log stuck into the center of the logjam on river right at June 29, 2015. The photo above on right evidences that this large piece of wood has somehow disappeared as of May 31, 2019 although the rest of the log jam remains intact. Floyd alleges there is circumstantial evidence that this inexplicably disappeared large piece of wood may have been *unlawfully* sawed into smaller pieces to allow this piece of wood to be washed downstream during high waters in order to avoid causing additional wood to pile up in front of it.

See the annotated pictures set forth below on next page.

The photo below on the left evidences a piece of log resting on the river right side of the log jam on May 31, 2019. The bright yellow end of this piece of log suggests the log has been recently cut. The photo on the right evidences wood shavings like those that are created when a chain saw is used to cut a log. These yellow colored wood shavings were observed beneath where the sawed off piece of log rests. These two photos were taken on May 31, 2019 at 5:52 pm and 5:51 pm. The bright yellow end of the cut piece of log and presence of the wood shavings would imply that the log had been recently cut. Sawing out pieces of large woody debris is not allowed on these headwaters.

The photo below evidences a second piece of wood that has been sawn into pieces lying inside the log jam on its river right side. This photo was taken on May 31, 2019.

The cut end of this second piece of wood does not evidence a bright yellow color. This second piece of log has been discolored by the passage of time. Both photos evidence somebody is cutting wood out of this log jam. Somebody is trying to encourage this log jam to collapse sending sediment downstream. The photos shown below document the size of the sediments that are covering up and filling in the interstitial spaces between the larger stream bed substrates which would otherwise be suitable for spawning and early life cycle survival of trout. The photo on the left below evidences the small particle size sandy sediments that have blanketed the stream. The photo on the right below evidences the kind of stream bed substrates that have been filled in and covered by this sandy sediment. Both photos were taken in front of the massive logjam on May 31, 2019.

The photo below was taken underwater at 6:01 PM in front of the logjam.

But for this sediment, this stream bed substrate could be used by trout.

The following photos compare the deteriorating condition of a minor pool which once contained trout but which has now been severely degraded as suitable trout habitat because of excessive bedded sediments.

JUNE 29 2015

MAY 31 2019


JUNE 29 2015 @ 3:12 PM UPSTREAM VIEW AT HEAD OF MINOR POOL
@ 35.035512 -83.127586
SEE WATER
BEING
OXYGENATED
BY TURBULENCE


MAY 31 2019 @ 6:17 PM VIEW FROM RIVER RIGHT LOOKING UPSTREAM AT HEAD OF MINOR POOL @ 35.035512 -83.127586
ROCK X
OXYGEN NOT BEING CREATED BECAUSE OF LOSS OF TURBULENCE DUE TO SEDIMENT FILLING IN THE SHELF
CONTRAST TO JUNE 29 2015


JUNE 29 2015 @ 3:12 PM VIEW UPSTREAM INTO MINOR POOL @ 35.035512 -83.127586
HEAD OF POOL
CURRENT LINE REDUCED TO SEVERAL FEET ON RIVER RIGHT DUE TO ACCUMULATION OF SEDIMENT-OVER A FOOT IN DEPTH IN POOL
FINE SEDIMENTS ARE EMBEDDING THE COARSER STREAM BED SUBSTRATES > 1 FOOT IN DEPTH


MAY 31 2019 @ 6:18 PM VIEW DOWNSTREAM AT SEDIMENT IN MINOR POOL @ 35.035512 -83.127586
NO IMPROVEMENT IN SEDIMENT CONDITION COMPARED TO JUNE 29 2015 CONDITIONS: COARSE STREAM BED SUBSTRATES NOW BLANKETED WITH FINE SANDS
STREAM BED BLANKETED WITH SANDS:COARSER SUBSTRATES NO LONGER VISIBLE; CURRENT LINE ON RIVER RIGHT NARROWER COMPARED TO JUNE 29 2015

These photos (taken at the same minor pool after the passage of four years of time) demonstrate (1) the non-temporary nature of the excessive bedded sediment problem being suffered on North Carolina's headwaters, and (2) how the normal sediment transport capacity of these headwaters is insufficient for alleviating this excessive bedded sediment condition over a short enough period of time.

North Carolina has classified the Chattooga's headwaters as Outstanding Resource Waters ("ORW"). Preserving these headwaters' biological capacity for sustaining outstanding densities and/or biomass of naturally reproducing populations of trout constitutes North Carolina's sub-categorized designated use of these headwaters' ORW water quality. The continuing existence of this bedded sediment problem violates the intense antidegradation mandate of the Clean Water Act as it applies to these ORW headwaters. This mandate prohibits any non-temporary diminishment in the subcategorized designated uses of these headwaters' ORW water quality.