Water & the Draft Forest Plan

Callie D. Moore Western Regional Director



Protecting the Places We Share.





Whitewater Recreation



Tyler Shields with 66-pound record striped bass caught on Hiwassee Lake on March 31, 2012



Reservoir fishing



Other river & reservoir sports





Swimming













Industrial Use





• Plan Positives

- Highlights of major water-related concerns with Forest Wide Plan Components
- Summary of water-related Geographic Area Components & proposed revisions
- Q & A



Positive Aspects of Draft Plan

- Providing clean and abundant water is one of four central plan themes
- The Desired Conditions for Water (pg. 36-37) are excellent; also good water-related Desired Conditions and Management Approaches under Climate Change (pg. 27-28)
- We also especially like GEO-DC-05 (pg. 29) and SLS-DC-02 (pg. 34)
- The Objectives for improving aquatic habitat conditions and/or protecting water quality in Priority Watersheds are strong (pg. 32-33)
- Portions of 10 rivers and streams currently eligible for Wild & Scenic designation are carried over and sections of nine others are added

Forestwide Plan Components – Proposed Revisions

- Streamside Zones
- Aquatic Organism Passage
- Plans for Road Maintenance
- Timber Harvest Practices
- Omission: Recognizing Outstanding Resource Waters



Draft Plan Proposal -Streamside Zones

- No protection for ephemeral streams
- 15 feet on either side of intermittent streams
- 100 feet on either side of perennial streams
- Possibility of encroachment if "satisfactory mitigation measures have been designed"



Ephemeral Stream

- Flows only briefly during and following a period of rainfall in the immediate locality
- Doesn't connect with the water table below ground, even at a wet time of year
- Runoff from rainfall is the primary source of water
- May or may not have a welldefined channel



Intermittent Stream

- Flows during a portion of every normal rainfall year (typically winter and spring)
- Has a well-defined channel
- Obtains its flow from both surface runoff and groundwater
- Water is often retained within the stream substrate during dry periods



Perennial Stream

- Typically has water flowing year-round
- Is well-connected to groundwater/water table
- Most of the water comes from smaller upstream waters or groundwater
- Runoff from precipitation is supplemental



Value of Riparian Buffers (aka Streamside Zones)

- Filters, traps & holds sediment from overland runoff
- Provides food (organic material) for aquatic life
- Supplies pieces of woody debris that provide **habitat** for fish, invertebrates and amphibians
- Alters how sunlight reaches the stream which **moderates water temperature**
- Stabilizes stream banks and reduces erosion
- Absorbs nutrients from overland and subsurface flows
- Reduces the impacts of flooding through temporary storage, interception and slow releases from heavy rains

Our Proposal for Streamside Zones

- 25 feet on either side of ephemeral streams
- 50 feet on either side of intermittent streams
- 100 feet on either side of perennial streams
- Encroachment during timber harvest only allowed in the outer 50' on perennials in rare justifiable situations

Other Streamside Zone Component Concerns

SZ-O-01 & SZ-O-02 on page 41 should be accomplished *in addition to* the Priority Watershed plan implementation Objectives. In other words, we'd like to see the following Objectives be accomplished outside of Priority Watersheds:

- Restore at least three acres of streamside zones annually to increase vegetation diversity
- Implement 3-5 stream channel improvement projects annually focusing on restoring floodplain connectivity, bank stability and aquatic habitat diversity

Draft Plan Proposal – Aquatic Organism Passage

- Work with partners to complete assessment of AOP needs over the life of the plan
- Prioritize projects that improve:
 - Entire aquatic community and
 - Enables reconnection or restoration of populations of native brook trout and other aquatic federally-listed species or species of conservation concern
- Replace a minimum of two impaired stream crossings annually

Our Proposal for Aquatic Organism Passage

- Replace a minimum of two large impaired stream crossings (>\$60K) annually – one on each Forest
- Replace a minimum of three small (<\$60K) impaired crossings annually – making an effort to spread them out
- Tier 2: Replace 3 large and 6 small (one in each RD) annually
- AQS-G-04 replace "should" with "shall" use channel spanning structures on fishbearing streams...

AQS-G-04 (pg. 40) discusses "other passage techniques" to be used during forest management activities when spanning the stream is not feasible "e.g. over-sized, sunken pipes that will collect substrate and naturalbottom fords on closed system roads where stream channel gradient and approaches can provide resource protection."

We support this approach when a spanning structure isn't feasible.

Transportation and Access

- Road maintenance Objectives should include more than just "Grading & Gravel"
 - Doesn't address surface water drainage issues
 - Doesn't prevent concentration of runoff
 - Is only a short-term solution
- While we appreciate the focus on work in Priority Watersheds for water quality improvements, all streams would be better served with a GA-scale "triage" system for maintaining the road network

Terrestrial Ecosystems Water Concerns

- Specialized logging equipment should be required on slopes greater than 40% to guard against erosion and landslides.
- Clearcutting should not be undertaken for the purpose of enhancing water yields (ECO-S-19, pg. 66)
- We love the inclusion of the Management Approach on pg. 77 regarding eradication of feral hogs

skyline main line

Steep slope equipment should be at least as protective of soil as skyline-cable systems.

Bald Mountains

- One public water supply (Cascade Branch)
- Two priority watersheds: Cold Springs Creek-Pigeon River & Spring Creek
- 3 eligible Wild & Scenic River segments: Big Laurel Creek, French Broad & Nolichucky Rivers
- Only one water goal to enhance brook trout populations in the Pigeon River watershed

Bald Mountains

- Add a goal similar to PL-GLS-09 (pg. 157) for protection of drinking water supply
- Add a goal to maintain water quality and habitat requirements for the rare & unique species found in the lower French Broad River
- Change the Wild & Scenic classification of Big Laurel Creek from Recreational to Scenic

Black Mountains

- Four public water supplies for Marion, Old Fort, Burnsville & Weaverville; also headwaters of the Catawba River
- Two priority watersheds: Dillingham Creek & Upper Ivy Creek
- Portions of the South Toe River are newly eligible Wild & Scenic
- Only one water goal to improve priority watershed function

Black Mountains

- Add a goal similar to PL-GLS-09 for protection of drinking water supplies
- Add goal to uphold the anti-degradation tenants of the ORW classification for South Toe River
- Add goal to enhance water quality/ habitat for Appalachian elktoe, native brook trout, hellbenders and other aquatic species of concern
- Add goal that recognizes S. Toe River, Rock Creek & other streams as important cold water refugia
- Add goal to ensure non-native invasive plants aren't impacting *Virginia spiraea*

Eastern Escarpment

- Public water supplies from Upper, Steels, Roses & Irish Creeks
- Upper & Lower Wilson Creek, Upper, Middle & Lower St. Johns River, and Lake James-Catawba River are priority watersheds
- Wilson Creek is a designated Wild & Scenic River & Linville River is eligible
- Goal to improve watershed conditions, particularly in the Johns River watershed & mitigate impacts from the existing OHV area
- Expand occupied range of the brook floater, a rare freshwater mussel
- Goal to reduce erosion, restore passage & improve fisheries in Wilson Creek

Eastern Escarpment

- Add a goal similar to PL-GLS-09 for protection of drinking water supply
- Add goal to uphold the antidegradation tenants of the ORW classification for Boone Fork & Wilson Creek

Pisgah Ledge

- Three streams are water supplies for Brevard & Hendersonville
- Bent Creek-French Broad River, South Fork Mills River, Mills River, Catheys Creek & North Fork French Broad are priority watersheds
- Portions of 3 river systems are eligible for Wild & Scenic designation and portions of 2 more are newly eligible
- Four excellent, conscientious water goals, including protecting water supplies, seeps and waterfalls at Courthouse Creek and improving trail conditions at high usage areas

Pisgah Ledge

Our Recommendations

 Add goal to uphold the antidegradation tenants of the ORW classification for South Fork Mills River

North Slope

- Provides an industrial water source for paper manufacturing facility in Canton
- Priority watersheds: Davidson River and Caney Fork
- One eligible Wild & Scenic River ("Big East Fork" Pigeon) and newly eligible section of West Fork Pigeon River
- Majority is in Congressionally-designated wilderness and Inventoried Roadless Areas, but also has high levels of visitation
- Goals for water include maintaining or expanding native book trout range, protecting hellbenders and improving stream passage for all aquatic organisms

North Slope

- Add goal that recognizes the West Fork of the Pigeon River & tributaries as important cold water refugia in the face of climate change
- Plan to expand not simply maintain – native brook trout populations
- Broaden NS-GLS-07 to include all unique aquatic species, not just hellbenders
- Add a goal under Partnering with Others to accomplish the brook trout range expansion

Highland Domes

- Several priority watersheds in the Chattooga, Cullasaja, & Tuckasegee River systems
- Portions of Chattooga & Horsepasture Rivers are designated Wild & Scenic; portions of 4 more waters are newly eligible
- More spray cliff habitat than any other GA
- Goals include enhancing native book trout populations by improving stream passage for all aquatic organisms
- Also a goal around maintaining/ enhancing unique sandy bottom/tannic stream habitat on the Highland Plateau
- Specific goals for special places such as Panthertown Valley & the Cullasaja Gorge

Highland Domes

- Add goal to uphold the anti-degradation tenants of the ORW classification for the E Fork Tuckasegee River and Savannah River headwaters
- Change the eligible Wild & Scenic classification for Overflow Creek from Scenic to Wild
- MountainTrue will submit additional information to support adding Panthertown Creek, Greenland Creek and the E Fork Tuckasegee River to the list of eligible Wild & Scenic Rivers

Great Balsam

- West Fork & mainstem Tuckasegee River provides public water supply
- Several priority watersheds including the area draining to the upper end of Fontana, Caney Fork, Alarka Creek & Tuckasegee River watersheds
- No eligible Wild & Scenics
- Goals include enhancing native book trout populations by improving stream passage for all aquatic organisms and maintaining water quality for sicklefin redhorse
- Also a specific goal for repairing stream damage in the Roy Taylor area

Great Balsam

- Add a goal similar to PL-GLS-09 for protection of drinking water supply
- Broaden GB-GLS-09 to include all unique aquatic species, not just sicklefin redhorse
- Separate GB-GLS-22 into two parts, making the continued partnerships with fish conservation groups its own goal

Nantahala Mountains

- One public water supply (Franklin)
- Two priority watersheds: Fires Creek and Buck Creek
- One eligible Wild & Scenic River (Nantahala River) and one small segment of newly eligible (Fires Creek)
- Goals for water include maintaining or expanding native book trout range and improving stream passage for all aquatic organisms
- Also a great goal to consider acidbearing geological formations in project planning

Nantahala Mountains

- Add a goal similar to PL-GLS-09 for protection of drinking water supply
- Add goal to uphold the anti-degradation tenants of the ORW classification for the Fires Creek watershed and the Nantahala River headwaers
- Significantly expand the mileage for the newly eligible Wild & Scenic River segment on Fires Creek
- Broaden NM-GLS-09 to include all unique aquatic species (e.g. smoky dace & crayfish), not just hellbenders (pg. 176)

Nantahala Gorge

- Water is a central recreational feature in this GA
- One priority watershed: Upper Fontana Lake-Little Tennessee River
- Portions of the Nantahala River are eligible for Wild & Scenic designation
- One goal is to minimize nonpoint source pollution while continuing to provide river access for recreation
- A second water goal is to enhance hellbender and native brook trout populations where appropriate

Nantahala Gorge

Our Recommendations

• Add a goal under Partnering with Others around NNIP eradication

Fontana Lake

- Three major reservoirs are central features of this GA: Fontana, Cheoah & Santeetlah
- Five priority watersheds: Yellow, Santeetlah and Alarka Creeks and Upper & Lower Fontana Lake-Little Tennessee
- General goals are to enhance native brook trout and sicklefin redhorse populations where appropriate
- A specific set of goals is also provided for the Cheoah River that includes restoring aquatic habitat, freshwater mussel communities & riparian areas

Fontana Lake

- Add a goal similar to NG-GLS-03 for managing non-native invasive species
- Add a goal under Partnering with Others around NNIP eradication

Unicoi Mountains

- Public water supplies for Andrews & Robbinsville
- Santeetlah Creek, Yellow Creek, and Lower & Upper Fontana- Little Tennessee River are priority watersheds
- Portions of Snowbird Creek and Tellico River are eligible for Wild & Scenic designation and portions of Santeetlah Creek are newly eligible
- Goals include enhancing habitat for native brook trout and sicklefin redhorse and planning to minimize impacts in areas of acid-producing geology

Unicoi Mountains

- Add goal to uphold the antidegradation tenants of the ORW classification for the Gipp Creek watershed
- Add a goal similar to NG-GLS-03 for managing non-native invasive species
- Add a goal under Partnering with Others around NNIP eradication

Hiwassee

- Three major reservoirs are central features of this GA: Chatuge, Hiwassee & Apalachia
- One priority watershed: Shuler Creek
- No eligible Wild & Scenic Rivers
- Goals include enhancing habitat for sicklefin redhorse and planning to minimize impacts in areas of acid-producing geology

Hiwassee

- Highlight the Die Bend/Crowder Bluff rare alluvial forest and floodplain pools
- Add a goal under Connecting people to the land to improve fishing/canoe/ kayak access on Apalachia Lake
- Add goal to investigate other opportunities for water-based recreation such as paddle-in campsites on both Apalachia & Hiwassee Lakes

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Callie Moore callie@mountaintrue.org 828-837-5414