November 16, 2024

N.C. DEQ Division of Water Resources
ATTN: Niki Maher, Basin Planner
1611 Mail Service Center
Raleigh, NC 27699-1611

Via email to DEQ.DWR.BasinPlanning@deq.nc.gov and niki.maher@deq.nc.gov

Re: Comments on Draft 2024 Broad River Basin Plan

Dear Ms. Maher,

Please accept the following comments submitted on behalf of Broad Riverkeeper and Green Riverkeeper related to Division of Water Resources' Draft 2024 Broad River Basin Plan.

The Broad and Green Riverkeepers are the primary protectors and spokespersons for the rivers, lakes, and streams of the Broad River watershed in the Western and Piedmont regions of North Carolina. The Riverkeepers work with communities and citizens in Henderson, Polk, Rutherford, and Cleveland counties to monitor water quality and advocate for practices that will improve local waterways for drinking, swimming, and fishing. Green Riverkeeper and Broad Riverkeeper are programs of MountainTrue - a regional nonprofit that champions resilient forests, clean waters, and healthy communities in the Southern Blue Ridge. Numerous MountainTrue members live in the Broad River watershed and rely on our rivers for drinking water supply, recreation, education, spiritual renewal, and business.

We appreciate DWR including us as a stakeholder, allowing us to express our interests and concerns, provide data and local knowledge of our waters, and participate in the early stages of the planning process.

The Draft 2024 Basin Plan is a thorough and well-researched document, giving an overview of the basin, identifying pollution sources and other stressors, and making recommendations to improve water quality through bolstering water quality assessment efforts, studying effects of

pollution sources, and implementing best management practices. Particularly noteworthy are DWR's recommendations in regard to:

- Improving Stream Monitoring and Assessment:

  We agree that basin planners should work with the AMS (ambient monitoring station) program to review the location of existing stations, parameters monitored, and where additional monitoring is needed. Ambient monitoring stations should be situated near each of our water supply intakes and below all significant NPDES discharges and hydro dams.

  We agree that DWR should evaluate and better support the staffing and resource needs of the biological assessment and ambient monitoring programs.

- Erosion and Sedimentation:

  Use of appropriate BMPs and post-construction stormwater requirements, prioritizing existing buffers, and possibly offering financial incentives for preservation or restoration of riparian areas are important steps for controlling erosion. We suggest that due to highly erodible soils in the piedmont, stream buffer requirements for land disturbing activities, including agriculture and forestry, should be considered for any impaired waterway and water supply waterway.

  We appreciate that DWR Planners have acknowledged complaints associated with erosion issues from off highway vehicles (OHV) and all-terrain vehicles (ATV) disturbing large areas of land causing sediment to enter waterways. We ask that DEQ not only investigate and identify BMPs, but hold the polluters (ATV operators) accountable and liable for damages to our streams and rivers. Lake Houser ATV Park along with the adjoining Duke Energy power line right of way have dozens of trails that not only drain into the river and streams, but actually enter the river and streams. Erosion and sedimentation from these trails combined with the common practice of driving vehicles up and down the streams and into the river are causing serious impairment to water quality and aquatic life. Bridges need to be installed at stream crossings, and fences placed to

prevent entry into the river and streams. A quick look at satellite imagery shows the extensive deposition of sediment at the confluence of Sandy Run Creek and the Broad River. DEQ should be meeting regularly with the owners of Lake Houser ATV Park and Duke Energy staff to find ways to mitigate this damage to our waterways.

White Oak Creek was identified as a sub-watershed with sedimentation issues in the 2008 plan. Since then Tryon International Equestrian Center has been issued multiple violations. Their continuing development and earth moving activities need to be monitored by DEQ to ensure minimal impacts to White Oak Creek and the Green River.

- Nutrients:

  In regard to waste utilization plans (WUPs) that ensure animal waste, specifically manure from poultry CAFOs, is being applied at no greater than agronomic rates, we appreciate DWR's recommendation that a certified technical specialist develop or review the WUP to ensure waste management practices will not impact surface waters where animal waste is land applied. These WUPs should be submitted to and reviewed by DEQ, and be made public, just as other animal operations are required.

  It is surprising that currently only three of the Broad River basin's eight active ambient monitoring stations are regularly monitored for nutrients. Cleveland and Rutherford Counties are big agricultural producers. We agree that adding nutrient monitoring to all stations will provide valuable information on potential nutrient sources.

  Kings Mountain Reservoir (Moss Lake) has become eutrophic due to increasing nutrients, chlorophyll a, and temperatures. The lake has experienced harmful algal blooms. For the safety of property owners, lake users, and Kings Mountain water supply customers, it is urgent that DWR expand the algal monitoring program to better assess algal blooms and identify toxins.

- Turbidity:

  DWR has identified sections of the First Broad River and Buffalo Creek as having high turbidity levels. Both of these streams supply our drinking water. Both are located in

Cleveland County which the 2022 US Department of Agriculture data indicates has more farmed acres than the other two main counties in the Broad River Basin. This emphasizes the need for buffer requirements, at least along designated water supply streambanks or impaired streams.

- Bacteria:

  First Broad River, Buffalo Creek, and the Broad River have been identified as having higher bacteria levels where there is more animal livestock agriculture (mostly cattle and poultry). There is also a high concentration of land applied residuals in the Buffalo Creek watershed. These are our drinking water supplies and protection is critical.

  Sections of both Buffalo Creek and the First Broad River are on the Draft 2024 303d list as impaired for fecal coliform. This Plan should address the impairment now, not wait for the next plan 10 years from now.

- Point Source Pollution:

  Best Available Technology (BAT) and technology based effluent limits (TBELs) are effective pollution reduction strategies and should be required components of wastewater treatment to minimize the amount of pollution being discharged by industrial and municipal polluters who hold NPDES permits.

  While biological sampling declined from 56 stations in 2015 to 4 stations in 2021, industrial pollution sources have increased. Considering far fewer benthos stations and zero fish communities being sampled, we support DWR's recommendation to increase staffing of the Biological Assessment Branch in order to assess the condition of the Broad River's aquatic life. Biological assessment is needed below the zinc plant (Befesa) on the Broad River, considering a long history of violations and exceedances in both the NPDES process discharge and stormwater permits, and the toxic nature of these discharges.

  Biological assessment should also occur below each of our reservoirs and below other significant NPDES discharges.

  We see that Ch3-Water Quality Permitting Activities does not include a section for DWR recommendations. A section should be added that reviews known significant violations or exceedances in discharge limits for permitted facilities, how these violations can affect water quality, and how DEQ staff should address and monitor these polluters.

- Non-point Source Pollution:

  We appreciate your attention to the issue of land applied residuals, mostly in the Buffalo Creek and First Broad River watersheds. Again, both of these are water supplies. We agree that more research needs to be conducted to better protect groundwater and surface water quality. 218 fields, over 3000 acres, are allowing spreading of land applied residuals, one third of which are coming from the Catawba and Yadkin-Pee Dee river basins. This interbasin transfer of nutrients and pollutants is not sustainable or justified.

  With poultry farming operations tripling since 2002, there is a dire need for more research on the effects to surface and groundwater quality. More regulation of these facilities would help control pollution. Safe handling of the enormous amounts of poultry litter is imperative to protect water quality. Litter sheds (dry stacks) should be required by DEQ, not just encouraged. The waste utilization plans should be submitted to the State and reviewed as needed to ensure compliance and protection of our environment and communities. A poultry impact study needs to be conducted by the State to assess water quality impacts from poultry manure in NC.

  DWR points out that streams near the highest cattle inventories and most poultry operations also have the highest levels of fecal coliform. There are many streams that may be receiving pollution from cattle, poultry, and land applied residuals. This results in not only high bacteria levels, but high nutrient levels as well. Studies should be conducted to assess the combined effects of these pollution sources. Again, adequate stream buffers would offer a great deal of protection from runoff that pollutes our waters.

- PFAS:

  We appreciate that DWR is adding effluent monitoring and/or limits to NPDES discharge permits. Considering that treatment plants who hold permits for land applied residual application also have a large number of significant industrial users, we recommend that a study be conducted to evaluate the effect of land applied residuals to PFAS levels in Buffalo Creek/Kings Mountain Reservoir (Moss Lake).

- Cattle/livestock in Streams:

  We support DWR's suggestion that financial incentives be considered (i.e., grants or tax credits) to promote strategic preservation or restoration of riparian areas. Incentives should be implemented along with better rules and regulations to protect the buffer area. Said another way, a carrot is more effective when paired with a stick.

Considering the numerous violations issued to the Tryon International Equestrian Center, we support a thorough assessment of water quality in White Oak Creek, and an investigation into how TIEC's development activities affect water quality and stream health.

- Algal Blooms and Fish Kills:

  DWR notes one algal bloom and one fish kill in the watershed. We know of 2 more that need to be noted.

  - 1) An Algal Bloom was reported and verified in Kings Mountain Reservoir in June 2020. See 2 attachments DWR Report and Lab Results.
  - 2) An extensive fish kill in the Broad River was reported and verified by DWR and NCWRC in August of 2015. See attachment Broad River fish kill activities – DWR WQROS Asheville Region

  We agree with the need to more actively assess water quality in Kings Mountain Reservoir, due to its transition toward eutrophy and presence of harmful cyanobacteria. DEQ should conduct extensive research to understand the combined effects from the application of land applied residuals, poultry manure and other fertilizers, as well as possible contributions from septic systems and the old Cleveland County landfill. DWR should work with local Soil and Water Conservation District staff to implement BMPs and remediation as soon as possible.

- Dams:

  Antiquated dams such as the Old Lawndale Power Dam in the First Broad River, Big Hungry Dam in the Green River watershed, and several on the Second Broad River serve no purpose, impair connectivity needed for aquatic biodiversity, and present hazards to recreational users. Serious study, consideration, and execution of dam removals are important and overdue.

  The 2008 Basin Plan called for minimum flow and stage release requirements for the dam at Lake Lure. The stream segment below the dam is listed as impaired for Benthos. These unhealthy flow conditions remain. A minimum flow requirement should be in place. Recreational releases should also be considered. With the Town of Lake Lure planning to replace the dam, DWR should be especially concerned and advising engineers on flow requirements for the new dam that will revive the health of the Broad River downstream.

Lake Lure Dam on the Broad, and Tuxedo and Turner Shoals Dams on the Green River are currently nonjurisdictional to FERC oversight. This needs to be reconsidered, as navigation occurs regularly in each of these stream segments. All of these dams were severely damaged during Hurricane Helene and need DEQ's attention, addressing the health of the river, and for the health of our local economy and the outdoor industry.

In order to improve the ecological health of the Green River, minimum flow requirements should be in place for Tuxedo and Turner Shoals dams. Continuous flows that allow recreational use of the river below Turner Shoals should be required. Scheduled recreational releases from Turner Shoals would further our work in advocating for a Green and Broad River Paddle Trail and boost our outdoor recreation economy.

In the Broad River, the combined uncoordinated releases from Lake Lure and Lake Adger cause extreme fluctuations in flow on an almost daily basis. NCDEQ should work with NCWRC to determine the effect on fish populations and other aquatic life. Staggering releases from the two dams would greatly improve water quality and bring a more natural flow pattern back to the Broad River below the confluence with the Green.

USGS Stream Gages should be installed below every reservoir in the basin for use by DWR, water supply authorities, biologists who study the aquatic ecosystems, and recreational users.

The Plan notes, there are several dams on the small tributaries and two on the First Broad: Lawndale Dam (CLEVE-269) and Stice Shoals Dam (CLEVE-043). The FERC found Stice Shoals to be non-jurisdictional to FERC oversight due to lack of historical evidence of navigability or interstate commerce. This is a mistake, as boating and interstate commerce have been taking place on this section of the First Broad River for hundreds of years. There are actually 4 dams on the First Broad River: Cleveland County Water intake, the old decommissioned Lawndale Power Dam, Shelby Water intake, and Stice Shoals Hydro Dam. Authorities should consider prioritizing removal of Cleveland County Water and Lawndale Power dams. Cleveland County Water intake dam is a low head rip rap dam that could feasibly be removed and the intake reengineered so as to not require a dam. Lawndale Power Dam has been in disrepair for over 50 years and presents a significant hazard to recreational users, and blocks passage of aquatic wildlife.

Cliffside Dam on the Second Broad River has no minimum flow requirement and is in dire need of repair. In June of 2022 the dam suffered a gate failure resulting in a significant deposition of sediment into the downstream river. This resulted in a NOV (notice of

violation) issued by NCDEQ. The hundred-year-old wooden broken gate was never repaired, just “blocked”. The sediment removal plan was never successfully implemented. The penstock has rusted through and is leaking profusely. The Cliffside Dam is now operating under a “dam safety order”. This exemplifies an urgent need for NCDEQ to work with owners of these old small hydro dams that are operating under conditions which endanger human and aquatic life, and require action to either return them to safe operating conditions or remove them from our waterways.

- Flood and Resiliency:

  Hurricanes and other storms can cause significant damage in both the Piedmont and mountain regions of the Broad Basin. Section 4.12.4 NC Office of Recovery and Resiliency, states that, “During the basin plan period, Broad River basin counties were not included in NCORR service areas because they were not targeted counties affected by recent disasters.” Post Helene, it is evident our counties need to be included.

  Hurricane Helene demonstrated the need to plan for floods and implement a resiliency plan that will help mitigate future damage from flooding. Miles of the Green River above Lake Adger and Broad River above Lake Lure were devastated. Stream channels were rearranged, banks severely eroded, homes and businesses washed away, roads destroyed, and large debris is now scattered throughout these waterways. DEQ should be involved with the recovery and restoration efforts that will continue for years. Special consideration and advice from DEQ on where to build back in relation to floodplains should be a priority.

  Along the Green, we will be partnering with the NC Wildlife Resource Commission to identify locations along the streambanks and in the river for future restoration work. We will also work closely with private property owners below Turner Shoals Dam to identify areas that need restoration in the years to come.

  Upper Big Hungry Dam failed and breached, which destroyed the bridge downstream on Big Hungry Road and sent vast amounts of sediment downstream that settled in the Lower Green. Impacts to ecosystems and aquatic life should be evaluated by DWR. Over 30 homes were completely destroyed, and properties washed away. This will severely impact the outdoor recreation industry along the Lower Green.

  It should be noted that the NC Wildlife Resources Commission (WRC) had prioritized removal of the Upper Big Hungry Dam in 2011 and put out an RFP to do that work.

Although they removed the Lower Big Hungry Dam, complications with that project and rising costs put the upper dam removal on hold. WRC had the opportunity to move forward with removal of the Upper Big Hungry Dam with the inclusion of $7.5 million in a draft state budget in 2021 (https://webservices.ncleg.gov/ViewBillDocument/2021/52656/1/S105-BD-NBC-9099, page H-20). WRC declined this funding and ultimately negotiated for $7.2 million in general WNC dam removal funding in the final budget.

The Lake Lure Dam was at one point in "imminent" danger of failing, water washing out either side of the dam embankments. DEQ's Dam Safety staff should closely monitor the current situation and advise during the dam replacement process.

The Lake Lure waste water treatment plant was flooded and destroyed along with parts of its collection system. The stormwater pond at Befesa Zinc Corp. was inundated and destroyed. An inventory of hurricane-flood damaged infrastructure that contributed to a decline in water quality should be developed along with recommendations for avoiding future similar polluting incidents. Planning for future severe flooding events should be a priority for DWR.

- Use and Users:

  While DWR recognizes instream flow needs as an important component of stream health, they do not lay out a plan for studying stream flows. Flows and resulting impacts to aquatic life should be studied below each of our reservoirs: Lake Lure, Lake Summit, Lake Adger, and Kings Mountain Reservoir (Moss Lake). A first step would be to install USGS Stream Gages below each reservoir for use by NCDEQ, water supply authorities, biologists who study the aquatic ecosystems, and recreational users.

  One of the duties of DEQ's Division of Water Resources is to ensure that our waterways are protected to meet water quality standards and for the current uses of those waters. The Basin Plan's Chapter 5, Water Use and Users, identifies uses such as water supplies for drinking and agriculture. Although mentioned occasionally in other chapters of the Plan, recreational use of our rivers is overlooked in this chapter.

  On the Green River alone, in the summer you will see almost 1,000 tubers on any given day floating down. This does not include kayakers, summer camp groups, anglers, and more. On the Upper Green and the Narrows, you could expect to see over 100 folks on any given weekend between kayakers, outdoor guided river trips and anglers. This doesn't account for the hundreds of people that recreate on the river during the week as

well, or the thousands of folks that travel in from all over the region and world to participate in or watch the annual Green River Narrows Race. Many of the folks that recreate on this river also support our local economy and without those river users, our small mountain towns could face severe loss of income, jobs and tourism.

Many of our rivers are extensively used for primary and secondary recreation. Green River Cove and the mainstem of the Broad are hosts to boaters, anglers, and swimmers on warm days of the year. We need to have these waters protected for their current actual uses and classified accordingly. Segment 9-(40.5) of the Broad River, which includes our Broad River Greenway, has frequent and organized primary recreation occurring throughout the spring, summer, and fall. That usage, along with its good water quality, merits reclassification from class C to class B. Other stream segments should also be considered for reclassification.

Since the last Basin Plan in 2008, NC Wildlife Resources Commission has built six new boating access sites on the Broad and First Broad Rivers, and two more are in progress. These projects bring opportunities for our communities to enjoy outdoor recreation and they bring economic growth to the region. Our rivers should be protected for recreational use and DWR should be planning for that.

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Thank you for the opportunity to submit comments on the 2024 Broad River Basin Plan. We enjoy working together for the health of our communities and the waters that sustain us.

Sincerely,

David Caldwell
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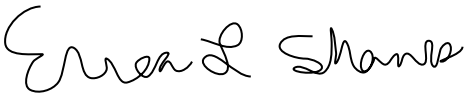

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