



August 16, 2010

John Huisman  
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**Re: Draft Falls Lake Rules (15A NCAC 02B .0275-.0283 and .0235-0.236)**

Dear Mr. Huisman,

Thank you for the opportunity to provide comments on the Draft Falls Lake Rules on behalf of the Neuse **RIVERKEEPER**<sup>®</sup> Foundation and our more than 1,500 members throughout the Falls Lake Watershed, including the Falls Lake sub-watershed. **Founded in 1980, the Neuse RIVERKEEPER<sup>®</sup> Foundation protects, restores and preserves the Neuse River basin through education, advocacy and enforcement, in order to provide clean water for drinking, recreation and enjoyment to the communities that it serves.**

We appreciate the great amount of time and effort that have gone into the development of these rules, and feel that the Division's in-depth and publicly accessible Stakeholder Process has resulted in a rule that is comparably well-vetted, fair, and balanced in its approach to legal requirements and scientific realities. However, we are disheartened by the efforts of some Stakeholders to undermine portions of this rule that were thoroughly and openly discussed during the Technical Advisory Committee (TAC) and subsequent full Stakeholder Process. As one of the only non-governmental entities to participate in the entire rule development process, we have dedicated a substantial amount of time to ensuring that the diverse opinions of the Stakeholder Group were heard and discussed, and that the needs of the whole were represented in the final rule draft. **Despite candid conversations and numerous concessions on our part, only now are some stakeholders beginning to come forward to challenge decisions that were made through group consensus and staff expertise,** attempting to use a limited number of uncertainties to cast a questionable light on the entire rule development process and resulting draft rule package. The concept of "point" versus "area" approach to compliance is one of these decisions; countless hours were spent in discussions with the TAC and DWQ staff in order to decide how to move forward and it was widely understood that, regardless of the decision made, the model would be wrong because *all* models are wrong. However, based upon internal review and the memo prepared by Tetra Tech for the City of Durham (June 29, 2010), we believe that the model upon which the reductions for this rule are based, *is* useful for this purpose and the calibration decisions made on how to define "compliance" were appropriate.

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The Neuse **RIVERKEEPER<sup>®</sup>** Foundation protects, restores and preserves the Neuse River basin through education, advocacy and enforcement, in order to provide clean water for drinking, recreation and enjoyment to the communities that it serves.



So much of the rhetoric of the past months has focused on uncertainty, both in what we know and in what is to come, that there has been a lack of clarity on the part of the public—and even many intimately involved with the rulemaking process—as to what the draft rules actually do and do not do. For the clarity of all, below is a brief summary of the facts surrounding the most pertinent areas of contention.

The draft rules (and associated fiscal note) do *not*:

- Require restoration of the Lake to “pristine,” but instead are designed to protect the basic health and safety of those who interact with the resource by fishing and/or swimming (.0275);
- Require reductions from sources for which there is insufficient scientific knowledge on which to base targets (.0275);
- Prevent Stakeholders and/or regulated entities from submitting new or additional information to inform the process of adaptive management (.0275 (5)(a));
- Require regulated entities to make reductions additional to those required to bring the Lake back into compliance with water quality standards (.0275 (5)(a)(vii));
- Require regulated entities to achieve reductions that are beyond technological or economic feasibility (.0278 (5) and .0281 (3)(b<sup>1</sup>);
- Cease growth and development in the Falls Lake watershed (.0279 (8));
- Prevent the reasonable use of any piece of property (instead, each rule provides offsite offset options for instances where loading targets cannot be met onsite);
- Evaluate the possibility for acquiring external funding to assist in the restoration;
- Take into consideration the constantly decreasing cost of cutting-edge stormwater technologies, as regions throughout the US battle these same issues.

In fact, the rules *encourage* regulated entities to:

- Acquire, evaluate and submit additional information and modeling to more accurately determine the reductions required to meet Lake loading targets (.0275 (5));
- Coordinate to achieve cumulative success so that the sum of the whole is greater than that of the parts (.0275 (7)(c) and .0280);
- Work together to find the most flexible and cost-effective ways of achieving their required reductions (.0279 and .0282);
- Find and use innovative methods and technologies and “toot their own horn” by submitting the acquired reduction estimates to the Division for inclusion into their accounting methodologies (.0278 (4)(h));
- Bring in new, green industries and grow the long-term economy of our region; and

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<sup>1</sup> The current draft contains 2 items numbered as .0281 (3)(b); one beginning on page 46, line 12, and a second beginning on page 50, line 6 – this is intended to refer to the second (3)(b), relating to “Elements of Load Reduction Programs”

- Experiment with “pilot projects” which can be substantially funded with State or Federal dollars.

These rules, even in their Draft form are a great step forward and provide significant opportunities for wise development of our growing region, but **the following improvements and additions will help to ensure these rules achieve the task they are designed to: the complete and expeditious restoration of Falls Lake.** By adopting an appropriately strict, forward-looking set of rule and seeing to their rapid and complete implementation, the Environmental Management Commission (EMC) can take advantage of an amazing opportunity to protect and restore Falls Lake for this, and future generations.

### **Falls Lake is an important source of aquatic life, recreation, and community enjoyment**

First and foremost, I would like to stress the importance of these rules for the attainment and protection of the *full list of classified uses* for Falls Lake which does include, but only secondarily, use as a drinking water supply for the Lower Watershed and downstream users (0.275). The State has adopted water quality classifications and standards with the intention of meeting **Federal Clean Water Act standards which require all public waterbodies, including Falls Lake and its tributaries, to remain fishable and swimmable at the very least.** Supporting this intent is the fact that the impairment criteria, chlorophyll *a* (Chl-*a*) on which the Falls Lake Nutrient Management Strategy is based, is primarily indicative of a waterbody’s ability to support aquatic life propagation and maintenance of biological integrity. While it may increase the cost of appropriate treatment, excessive Chl-*a* does not necessarily cause a decrease in the quality of treated drinking water. On the other hand, excessive Chl-*a* levels *do* cause conditions such as diurnal dissolved oxygen (DO) depressions and reduced light penetration which damage the biological integrity of a waterbody and harm its ability to support necessary aquatic life (EPA Water Quality Handbook, 40 CFR 131.10).

Chl-*a*, an indicator of nutrient over enrichment, is the metric by which the abundance of aquatic plants and algae in a subject waterbody is described; an abundance of nutrients perturb the lake’s delicate balance that provides for a functional and productive ecosystem. **A system disturbed by increased nutrient loading risks losing the capability to provide vital services to the surrounding community.** Fish kills can easily be triggered by low oxygen levels resulting from algal blooms and the fact that Falls Lake is relatively shallow and warm further exacerbates DO levels. Fish kills are unsightly and damage the enjoyment value and capacity for recreation. Fish Kills can also deplete recreationally valuable fish stocks and can alter food web dynamics, as low oxygen levels have been shown to cause fish to reduce their consumption, growth rates and ability to fight infection (Boyd, C. E. 1982. Water Quality Management for Pond Fish Culture). Additionally, low DO levels diminish the capacity for carbon sequestration in aquatic vegetation, result in the production of less inhalable oxygen to local residents, and curb the breakdown of organic matter breakdown for soil formation.

**As a healthy system, Falls Lake provides enormous benefit to the surrounding community.** Recreation that includes fishing, hiking, boating, and refreshment in a natural environment is most obvious. In addition, ecological processes allow for carbon dioxide fixation, oxygen release, nutrient recycling, and soil formation. A functional Falls Lake ecosystem also gives rise

to the material benefits of a genetic repository and genetic resource, food production, and the biodiversity services of biological control and habitat formation. However, algal blooms, of which *cyanobacteria* is typically a component, may be brought on by excessive nutrient loading and their rate of occurrence in Falls Lake has increased steadily over the years. **Increased algal levels not only limit the enjoyment value of the lake, but have the potential to threaten the health of recreationists and wildlife.** Some *cyanobacteria* can produce powerful poisons for which no known antidote is known. In fact, one of these cyanotoxins, microcystin, has been found in Falls Lake in levels high enough to warrant concern (Ehrlich, 2008). These toxins have been linked to tumor promotion and liver damage and can cause illness through simple recreational contact. The Center for Disease Control warns that cyanobacterial harmful algal blooms (CyanoHABs) can make people and their pets sick, that children are at a higher risk of illness, and that care should be taken to avoid close contact with any water experiencing a CyanoHAB (CDC).

Everyone in the areas surrounding Falls Lake benefits from the ecosystem services a healthy Lake provides, and everyone has a right to the provision of the services. **These rules must ensure that the entirety of Falls Lake can comply with the water quality standard of 40 micrograms per liter** in order to protect the basic right of every North Carolina resident to have safe, clean water, regardless of which County or City they live in.

### **Fixing Falls Lake will only get more expensive, both financially and environmentally**

While preferable to the 10-year timeline, even the proposed “alternative timeframe for Stage I of 7 years with full implementation occurring no later than 2018” is excessive. **The timeline for implementation should be further reduced to a timeframe of four (4) years for Stage I, with full implementation occurring no later than 2015 (.0275 (4)(a)).**

Particularly as related to existing development, a 2006 baseline for calculating loading and 10-year timeline for Stage I implementation, which is designed simply to return us *back to the 2006 baseline* loading rates is unacceptable. There is no reason, accept abysmally poor planning and development practices, that it should take us 10 years to undo only four (4) years of damage. Ever since the 2006 baseline year—and arguably before 2006 since S.B. 981 was passed in 2005—local jurisdictions have been aware of the problems that existed in Falls Lake and that they were contributing factors. If elected decision makers have continued to implement practices with negative water quality impacts it has been of their own volition and they should be held accountable for the consequences of their actions--not allowed to pass those consequences on to the next generation of local leaders.

In addition, we believe that the final rule package should **expand the ‘stair step’ (segment by segment) targets for achieving water quality standards in the lake**, as detailed in the comments provided by NC Conservation Network (incorporated here by reference), as this would significantly improve the ability of these rules to ensure the timely cleanup of the entire lake.

### **We cannot afford delays on the path to cleaning up Falls Lake due to misplaced fear**

We understand the EMC's possible hesitance in moving forward on a rule package that will be stringent enough to truly curtail the water quality problems in Falls Lake, but **significant flexibility—both in timing and substance—has been built into the current rule package and modification or clarification of .0275 (4)(b) is not necessary** in order to protect regulated entities from excessive cost or exertion.

Should additional information become available, the flexibility and scientific review necessary to ensure that Stage II is appropriately implemented has already been written into the Draft Rule.

For example, the current “flexibility” provisions include, but are not limited to:

1. the ability of a party to submit supplemental sampling and modeling data for EMC consideration (5)(a) and (5)(b);
2. the ability of the EMC to revisit and revise allocations based on that data (5)(b)(v);
3. direction for ongoing Division analysis and reporting of Stage I progress, new technological and financial information, additional loading estimates and sources, accounting methodologies and a host of other variables (5)(d); and
4. the conditions under which the EMC shall Approve a Stage II load reduction plan which requires regulated entities to do no more than is economically and technically feasible during each planning cycle, such as in .0278 (5).

Taking into consideration all of the “flexibility” provisions and requirements for periodic review of the associated science and financial issues, **no additional exemption or flexibility is needed in these rules in order to ensure regulated entities are not unduly damaged.** Any situation that would reasonably result in a need to alter reduction goals, on the whole or for one or more regulated entities, has already been accounted for and addressed. Implementation flexibility has also been built in, through provisions such as the “Equivalent Program Option,” “Options for Offsetting Nutrient Loads,” and the establishment/participation in compliance associations. These options will address instances where the goals and objectives are found to be appropriate but where a regulated entity identifies a preferable or more cost-effective method to achieve said goals (.0277 (5), .0282, and .0279 (11)).

**The addition of a specific provision in .0275 (4)(b) that requires review of Stage I results prior to setting State II limits is not only unnecessary, it would be a waste of valuable time and resources.** The ultimate reduction goals required to bring Falls Lake back into compliance with water quality standards have already been identified through years of sampling and modeling; looking at the same data again later will not change the results. We must start cleanup efforts now, finish them soon, and not allow anything to stall us along the way.

### **Provide greater emphasis on keeping stormwater onsite by restoring natural hydrology**

The purpose “to ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows” is stated and re-stated throughout this package of rules (.0277 (1)(b), .0277 (3)(a)(iv), .0281 (1)(b)), and yet the associated prescriptive measures provide no such assurance as they do not address the true

source of erosion: total volume. Whether in one massive swell or in many small droplets, the same amount of water will eventually do the same amount of damage. **The only solution to reducing erosion (and the phosphorous flush you get with it) is to reduce the total erosive force, or volume, of stormwater runoff; simply stretching out the time during which it acts will not correct the problem.** Peak-flow management, the primary tool of the Draft Rules for dictating appropriate stormwater system design, is an antiquated stormwater management approach; it was created to protect downstream property owners from flooding associated with larger-than-usual storm swells, and because there was not a better tool available at the time. Now we know better. In fact, studies have indicated for years that peak flow controls may actually *exacerbate* erosion problems, forcing larger volumes of flow into the channel cross section instead of allowing them to flow partially along floodplain paths (McCuen and Molgen, Journal of Hydrology, 1988).

With all of these considerations on the table, “recent discussion by stormwater opinion leaders is now pointing to a convergence on what we will call volume-based hydrology (VBH) and movement away from the peak-flow-based version” (Reese, Stormwater Magazine, Sept 2009). In addition to the reduction in erosion potential that stormwater management based upon VBH has, the pollutant removal efficiency of this kind of management is incredible since a large portion of conventional “runoff” is actually infiltrated, evaporated, or stored for later infiltration. In addition to providing treatment efficiencies greater than conventional stormwater systems, forms of treatment that incorporate these methods of volume control can be implemented at a fraction of the cost.

**Implementing stormwater management practices based on volume control** and acquiring the associated pollutant reductions, including those for our pollutants of concern (nitrogen and phosphorous), **can be accomplished through the use of Low Impact Development (LID)**, a growing movement towards lot-level stormwater management. “Essentially, LID attempts to model nature and match predevelopment hydrology through infiltrating, storing, filtering, evaporating, and detaining runoff” (Hager, Stormwater Magazine, January 2003). The Draft Rules incorporate this concept through .0277 (3)(a)(vii), but providing LID as an *option* will not achieve the stated goal of protecting surface waters and riparian buffers from erosive flows; **only requiring New and Re-Development to apply stormwater management based on LID and hydrologic matching will get us where we need to be to protect Falls Lake.**

The portion of this rule package which addresses “State and Federal Entities” (.0281) allows new development to satisfy “the requirements of this rule by meeting the post-development hydrologic criteria set out in Chapter 2 of the North Carolina Low Impact Development Guidebook...” but the reality is that **all Federal entities will be required to exercise the LID option in the near future.** Section 438 of the 2007 Energy Independence and Security Act requires federal facility development projects “with a footprint that exceeds 5,000 square feet [to] use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property...”(P.L. 110-140, H.R. 6)

While planning water quality improvements for the next 25 years, rules of this magnitude should take future trends into consideration and indications are that the Environmental Protection

Agency (EPA) thinks LID is here to stay. **Implementing the hydrologic matching principles of Low Impact Development (LID) should be mandated for all new and redevelopment in the Falls Lake watershed.** In addition to the increased pollutant removal efficiencies, reduced cost, and additional protection for highly erosive soils that would be gained from aggressively implementing a LID approach to stormwater management in the Falls Lake Watershed, marching into the next decade with a firm grip on LID will benefit us in the long run as local developers and regulators become familiar with this form of stormwater management before it becomes the status quo.

### **Governing new development should mean *strictly governing all* new development**

The inclusion of the provision “Notwithstanding the allowance in water supply watershed rules for 10 percent of a jurisdiction to be developed at up to 70 percent built-upon area without stormwater treatment, proposed new development in the Falls watershed shall not have the option to forego treatment” shows forethought and a solid grasp of the interaction this rule package will have with other applicable regulations, but it does not go far enough. Given the enormity of the job before us, it should be required of *all* development to assist with achieving the goals of the Falls Lake Nutrient Management strategy by meeting the target loading rates, with offsite offsets immediately available for development disturbing less than 5,000 square feet. However, in the context of the presented rule package, **“Land Disturbance Threshold Option B,”** which specifies rule applicability to development “disturbing 5,000 square feet or more” **is the most appropriate selection for both sections .0277 (3)(a) and .0281(3)(a)** to ensure the timely achievement of the goals set out in .0275. 5,000 square feet is slightly greater than 1/10 of an acre; comparable to two good-sized 3-4 bedroom houses or an average corner store. In most instances, standard-sized single family homes and maintenance facilities would not be tipped by this scale.

In addition, given the lack of LID mandate present in the current draft and the extremely limited availability of large-scale mitigation sites in the Falls Lake watershed, on-site treatment of stormwater must be stressed to the greatest extent possible. To truly protect the future of Falls Lake, **new development should be required to achieve at least an 80% reduction in nitrogen and phosphorous before seeking offsite offsets. However, given the options presented in the draft rule, adoption of Onsite Treatment Option B may be tolerated.** Onsite Treatment Option B requires development to “attain a minimum of 60 percent reduction in post-construction nitrogen loading rate and 60 percent reduction in post-construction phosphorus loading rate on-site;” provisions that required on-site reductions of at least this level should be adopted as the preferable option for sections .0277 (3)(a)(ii), .0281 (3)(a)(ii), and .0281 (4)(c)(iii).

### **Redevelopment should be addressed within the “New Development” rule (.0277)**

Section (3)(v) of the New Development rule speaks to the “replacement or expansion of existing structures” one of these which is, by definition, redevelopment, and requires that development to meet at least the new development loading rates or the target reductions from the previous

development. The provision of this option implies that there may be instances in which the required percentage reduction from existing development would result in loading rates greater (easier to meet) than the numeric targets ascribed to new development. This is further supported by the existing development rule (.0278) ascribing “uniform pre-development loading rates of 2.89 pounds/acre/year N and 0.63 pounds/acre/year P” which are larger than the loading rates new development activities are required to meet via these rules (2.2 pounds/acre/year N and 0.3 pounds/acre/year P).

**Placement of redevelopment within the existing development rule** would favor developers, as working within the larger rate targets would be more desirable due to their lesser stringency, but **may damage the ability of regulated entities to meet their final reduction targets** by preventing them from gaining an extra 0.79 pounds/acre/year N and 0.3 pounds/acre/year P from redeveloped lands. The political reality is that if the State has already declared redevelopment as “existing development” it will be difficult for local governments to impose additional reductions requirements on those properties, **regardless of their legal ability to adopt more stringent rules** and the appropriateness of applying the more stringent loading rates to all development activities within the jurisdiction. The placement of redevelopment within this rule package is important and we believe that redevelopment activities should not be exempt from the responsibilities that apply to other forms of development in the watershed.

### **Beginning to address loading from existing development must occur immediately**

The “Existing Development” component of the rule package (.0278) is perhaps the single most important aspect of this rule package for ensuring the long-term health and safety of Falls Lake. If no additional development occurred in the Falls Lake watershed issues of impairment and concerns regarding the safety of recreational contact during much of the year; the legacy of intensive development with little to no treatment of the associated stormwater runoff must be addressed in order to correct the problems in the Lake and achieve the goals of the Falls Lake Nutrient Management Strategy.

The rule’s treatment of credit for early implementation which asks regulated entities to submit proposed actions and calculations to the EMC in order for them to be counted is both time- and cost-effective since regulated entities will best know their own work and be in the most appropriate position to evaluate the implications of their selected management strategies (.0278(4)(h)). **With careful Division review, credit for early implementation may lead to participant satisfaction as they are awarded for positive decisions, as well as a more robust set of data** to use in developing accounting tools and methodologies that may be used in future efforts.

While positive impacts occurring between the year 2006 and effective date of this rule have been addressed in terms of accounting for their associated reductions, **negative impacts during 2006-2011 time period, as well as those which occurred prior to the 2006 baseline year have been insufficiently addressed in this rule.** As stated before, a rule implementation timeline of 10 years to return to baseline is simply unacceptable; even more concerning is the fact that this rule is structured in such a way that **essentially no progress will be made on reducing loading from**

**existing development in the first four-five years** following rule adoption. The offending provisions include:

- 30 months (2.5 years) for the Division to submit a Stage I model local program; (7)(a)
- Additional 6 months (total of 3 years) for local governments to submit load reduction programs; (7)(b)
- Another 14 months (20 months past the Commission's approval of the Stage I model local program, for a total of 4< years) for the Division to provide recommendations on the submitted existing development load reduction programs; and (7)(c)
- An additional 3 months (for a total of 53 months, or nearly *4.5 years* past rule adoption) before local governments are required to actually begin on-the-ground implementation of any sort (7)(d).

**This rule should require local governments to begin a set level of retrofit work immediately** and allow adjustment to occur as accounting tools are finalized and additional data is gained through implementation of these early efforts. The addition of a provision similar to that found in .0278(4)(h), credit for early implementation, but applicable to efforts occurring between the rule effective date and finalization of the necessary accounting tools should address the needs of regulated entities to ensure their efforts are rewarded. **The following is a suggested schedule** for retrofit activity that should begin immediately and adjust as additional data and accounting information is gathered:

- Reduce annual mass loads of nitrogen by 5% and phosphorus by 10% no later than 2015, in order to meet water quality standards downstream of the Highway 98 crossing of Falls Lake;
- Reduce annual mass loads of nitrogen by 10% and phosphorus by 20% no later than 2018, in order to meet water quality standards throughout Lower Falls Reservoir;
- Reduce annual mass loads of nitrogen by 15% and phosphorus by 35% no later than 2021, in order to meet water quality standards in the Lick Creek arm of Falls Reservoir;
- Reduce annual mass loads of nitrogen by 25% and phosphorus by 50% no later than 2024, in order to meet water quality standards in the Ledge and Little Lick Creek arms of the lake;
- Reduce annual mass loads of nitrogen by 35% and phosphorus by 65% no later than 2027, in order to meet water quality standards at points downstream of the Interstate 85 crossing of Falls Reservoir;
- Reduce annual mass loads of nitrogen by 40% and phosphorus by 77% no later than 2030, in order to meet water quality standards throughout Falls Reservoir.

### **Allocations for wastewater dischargers should not be transferred between Falls Reservoir and the Neuse River**

Under the Neuse Rules, wastewater dischargers were assigned nitrogen allocations which could be bought, sold, or aggregated by a compliance association (.0234). Some of the Falls Lake wastewater dischargers currently “own” an excess nitrogen allocations which they will not be able to utilize due to the reduced allocations necessary to bring Falls Lake into compliance and it has been proposed that these dischargers be allowed to transfer or sell these excess pounds of nitrogen to dischargers below the dam, elsewhere within the Neuse River basin; this should not be allowed to occur.

Despite almost 10 years of work to decrease nutrient loading to the Neuse River estuary and reduce the associated negative impacts, the estuary continues to experience loading levels that are far beyond its capacity to assimilate. Last year, the Neuse River experienced the largest fish kill in decades when more than 100 million fish, mostly Atlantic menhaden, died in a single season. Clearly, the Neuse River estuary cannot effectively handle even the current delivered nutrient loads; transfer of reserve allocations to users downstream would only aggravate already dangerous conditions. **At a minimum, excess nitrogen pounds currently allocated to dischargers above Falls of the Neuse Dam should be required to hold these until a thorough review and revision of the Neuse River TMDL can be conducted** and appropriate management measures identified. The preferred alternative would be the permanent retirement of this “excess” loading in order to definitively reduce the overall nutrient loading rates to both Falls Lake and the Neuse River, protecting the future of one of only three solely North Carolina-governed watersheds. This could be accomplished through regulatory structure, or through the creation of a system or entity to purchase available allocation for retirement.

### **Agricultural “collective compliance” is appropriate if backup measures remain in place**

Given the track record of the agricultural community to reduce their nutrient impacts on the Neuse River, as directed by the Neuse Rules, the concept of **collective compliance, with Local Advisories Committees reporting to a Watershed Oversight Committee (WOC), is appropriate as long as backup measures remain in place to ensure the final goal is met if collective compliance fails.** The measures currently present in .0280 (5)(e), which require individual buffer and exclusion should the collective community fail to achieve the goals of Stage I should provide not only an incentive to work towards fulfilling Stage I obligations, but provide firm and appropriate penalties for failing to achieve the objective. While the threat of individual compliance may cause fear for many, the rules provide escape hatches sufficient enough to protect reasonable use of agricultural property in the watershed, through the allowance of offsite offsets

Through participation on the Neuse Basinwide Oversight Committee, we have become keenly aware of the importance of having environmental representation on the Committee in charge of accounting and reporting for a system of collective compliance. Section (7)(a)(vi) which requires **WOC representation, including “Three environmental interests, at least two of which are residents of the Falls watershed”** wisely recognizes the value of the

**agriculture-environment relationship** and ensures that the agricultural and environmental communities will continue to work together as we move forward with addressing the nutrient reductions required from agricultural lands.

Finally, for the purposes of this rule, it is the *commercial* nature of activities—activities conducted primarily for financial profit (4)(a)—that distinguishes “agriculture” from activities that are unregulated or are regulated within other rules. Based upon the Neuse RIVERKEEPER® Foundation’s knowledge of and experience with the Falls Lake watershed, **we believe the classification of “Five or more horses” as falling within the sphere of agricultural regulation is appropriate**, as this seems to be the approximate level which indicates commercial, rather than recreational intentions. As a side note, we believe that section (5)(d) of this rule may be eliminated due to redundancy; it simply restates the same content as that found in (5)(b).

**Offsets should be available only with the demonstration of quantitative reductions and each offset value should be available for purchase only once**

The Foundation, and other environmental advocates, have long opposed the use of acreage that has already been used to offset one environmental impact to offset an additional impact(s), regardless of whether these impacts are derived from different sets of regulations, as this may result in re-crediting of the *same* nutrient removal function already used to “replace” the lost function of the first impact and, ultimately, in a net *degradation* of water quality. Particularly given recent press and N.C. policy issues, we appreciate the inclusion of the extremely important stipulation that “Load reductions eligible for credit shall not include reductions achieved to mitigate or offset actions that increase nutrient loading under regulations other than the Falls nutrient strategy” (.0282 (2)(a)). Accounting is an important piece of ensuring that the purchase of offset credits actually results in tangible equivalent improvements elsewhere and this provision helps to set clear standards from the outset.

Accounting is equally important on the credit production side as it is on the credit acquisition side of the equation. Section (2)(b) of .0282 requires a party that seeks to produce reduction credits to “define the nature of the activities that would produce reductions and define the magnitude and duration of those reductions...” Since this requirement cannot be fulfilled without requiring improvements to the property, **land acquisition and conservation activities are not appropriate mechanisms for achieving nutrient reduction credit within the Falls Lake Nutrient Management Strategy**. We have no argument with the fact that preserving open space is a sound environmental practices that benefits the community overall, but the preservation of property does not, in itself, result in the demonstration of quantitative reductions that could qualify as nutrient credits. Supporting this conclusion is the fact that these rules actually require a reduction from background loading rates for new development, essentially resulting in a situation where, if we use bit of *Reductio ad absurdum*, we could “develop ourselves into compliance.” Data suggests, and the rules enumerate, estimated background loading rates of 2.89 pounds/acre/year N and 0.63 pounds/acre/year P (.0278); the new development loading rates of 2.2 and 0.3 N/P, respectively, actually include a reduction from this background level in order to assist overall compliance. Therefore, preserving acreage in its

natural state not only fails to produce the quantitative reduction results needed to properly account for salable credits, it actually *reduces* our ability to gain the maximum level of reductions from new development, forcing an additional burden onto other regulated entities.

## Which Future Do You Want For Falls Lake?



Despite the substantial efforts of the Stakeholder Group and the excellent work of the Division staff involved in the rule drafting, these concerns and opportunities for improvement remain and must be addressed in order for these rules to be as efficacious as possible and to ensure cleanup and continued protection of our vital water resources. Please don't hesitate to contact either of us should you have any questions regarding our comments; we look forward to implementation of this exciting step toward the long term health and safety of Falls Lake and the North Carolinians who rely upon it!

Sincerely,

Alissa Bierma

Upper Neuse RIVERKEEPER®

Larry Baldwin

Lower Neuse RIVERKEEPER®

### Attachments:

1. NC Conservation Network comments on Draft Falls Lake Rules
2. Ehrlich, L.C., Gholizadeh, A., Wolfinger, E.D., & McMillan, L. 2008. "A progressive comparison of cyanobacterial populations with raw and finished water microcystin levels in Falls Lake Reservoir." *Cyanobacterial Harmful Algal Blooms: State of the Science and Research Needs*. Triangle Park, N.C.: Environmental Protection Agency.
3. Centers for Disease Control (CDC). *Facts About Cyanobacteria & Cyanobacterial Harmful Algal Blooms*. Washington, D.C.: U.S. Department of Health and Human Services.
4. Reese, Andrew J. Sept., 2009. "Volume-Based Hydrology: Examining the shift in focus from peak flows and pollution treatment to mimicking predevelopment volumes." *Stormwater Magazine*. Available from: <http://stormh20.com/september-2009/volume-based-hydrology.aspx>
5. Hager, M.C. Jan., 2003. "Low-Impact Development: Lot-level approaches to stormwater management are gaining ground." *Stormwater Magazine*. Available from: <http://stormh20.com/january-february-2003/stormwater-management-low-impact-development.aspx>