

# SOUTHERN ENVIRONMENTAL LAW CENTER

200 WEST FRANKLIN STREET, SUITE 330  
CHAPEL HILL, NC 27516-2559

Telephone 919-967-1450  
Facsimile 919-929-9421  
selcnc@selcnc.org

Charlottesville, VA  
Chapel Hill, NC  
Atlanta, GA  
Asheville, NC  
Sewanee, TN

September 14, 2007

## *Via Electronic Mail and U.S. Mail*

Rich Gannon  
1617 Mail Service Center  
Raleigh, NC 27699-1617  
[Rich.Gannon@ncmail.net](mailto:Rich.Gannon@ncmail.net)

Dear Mr. Gannon:

The Southern Environmental Law Center appreciates the opportunity to submit these comments on the proposed rules that comprise the Jordan Lake Nutrient Strategy ("Rules"). The Southern Environmental Law Center ("SELC") is a non-profit legal advocacy organization dedicated to protecting the environment of the South. SELC works with more than one hundred partner groups within a six-state region and has been actively involved in a variety of efforts in the Jordan Lake watershed to improve water quality.

Jordan Lake is considered to be impaired pursuant to the federal Clean Water Act and regularly experiences chlorophyll a and pH water quality standard violations, both of which are indicators of nutrient over-enrichment. As a result, Jordan Lake no longer meets its designated uses and the degraded water quality adversely impacts recreational uses, aquatic habitat, and its use as a drinking water resource. Although the loading targets for nitrogen and phosphorous established in the TMDL are designed to improve Jordan Lake's water quality, many streams within the Jordan Lake watershed are also impaired. The proposed Rules will have a beneficial impact on the impaired tributaries and will help to reduce pollutant loading throughout the watershed.

The proposed Rules in general are a positive step toward reducing the pollutant load to Jordan Lake and its recovery. We remain concerned, however, that the Rules will not satisfy the federal Clean Water Act with respect to pH violations, that the compliance deadline for point sources has been pushed too far, and that the existing development rule fails to adequately consider low-impact development techniques. We respectfully request that a calibrated nutrient response model be developed and implemented for pH. While this is proceeding, we request that point source compliance with both the nitrogen and

phosphorous limits be set at 2011. Finally, we request that you fully investigate all appropriate best management practices that could be used to comply with specific loading targets for existing developments. These concerns and our technical comments are provided in more detail below.

### **The legal framework.**

Section 303(d) of the Clean Water Act (“CWA”) requires the Division of Water Quality (“DWQ”) to identify waters that are failing to meet water quality standards. 40 C.F.R. § 130.7(b)(1). The United States Environmental Protection Agency’s (“EPA”) guidance states that if 10% of the samples exceed water quality standards, then the water body is considered impaired. *See* EPA, Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act, 39 (July 29, 2005). Once a water body is declared impaired, it must have a Total Maximum Daily Load (“TMDL”). A TMDL must take into consideration seasonal variations in water quality conditions and must include a margin of safety to account for any lack of knowledge concerning the relationship between effluent limitations and water quality. 33 U.S.C. § 1313(d)(1)(C); 40 C.F.R. § 130.7(c)(1). A TMDL has two components. A Waste Load Allocation (WLA) is the portion of the TMDL allocated to existing and future point sources, including waste water treatment plants and NPDES storm water discharges. 40 C.F.R. § 130.2(h). The Load Allocation (LA) is the portion attributed to existing and future non-point sources, including unregulated storm water. 40 C.F.R. § 130.2(g)

The North Carolina General Assembly also requires all nutrient-sensitive waters to have a nutrient management plan that “reduce[s] the average annual mass load of nutrients that are delivered to surface waters within the river basin from point and non-point sources.” N.C. Gen. Stat. § 143-215.8B. DWQ must develop nutrient reduction targets that insure that any degraded uses are improved and the nutrient sensitive water is no longer impaired. Furthermore, the EMC is given broad powers and direction to insure that all sources of nutrient pollution are abated to achieve compliance with water quality standards. North Carolina General Statute § 143B-282(d) provides as follows:

[T]he Environmental Management Commission may adopt rules setting out strategies necessary for assuring that water quality standards are met by any point or non-point source or by any category of point or non-point sources that is determined by the Commission to be contributing to the water quality impairment. These strategies may include, but are not limited to, additional monitoring, effluent limitations, supplemental standards or classifications, best management practices, protective buffers, schedules of compliance, and the establishment of and delegations to intergovernmental basin wide groups.

Federal and state laws require DWQ to evaluate the nutrient contributions from point sources, NPDES storm water dischargers, and non-point sources. The model and the implementing Rules appropriately recognize the multiple sources of nutrients and

divide the watershed into three sections that recognize the different contributions made by different areas. Because Jordan Lake is impaired and the TMDL establishes nitrogen and phosphorous limits to clean up the impairment, the CWA and the North Carolina General Statutes require the nitrogen and phosphorous loading to be met by some or all of the contributing sources. If reductions cannot be made by the non-point sources, the point sources and NPDES storm water discharges would be subject to greater reductions. The Rules as currently written are fair and equitable because they address the variety of sources that are responsible for the pollution in Jordan Lake and provide maximum flexibility in implementation to achieve the reductions. We strongly recommend that all components of the rules be retained.

**We strongly recommend that the existing development rule be retained to ensure that the Rules comply with the federal Clean Water Act.**

The Rules are based on the fundamental assumption that both point sources and non-point sources are responsible for the Jordan Lake impairment. The nutrient load allocation for the point sources is based on the assumption that the non-point load reduction can and will be met by implementing BMPs that meet the Rule criteria. In order for the Rules to fulfill the CWA TMDL requirements, the Rules must provide reasonable assurances that the load and waste load allocations are sufficient to improve Jordan Lake and prevent water quality standards violations. Without the current existing development rule, the total Rule package would fail to meet the load and waste load allocations and would be in violation of the CWA. If the existing development rule were removed, its load allocation would need to be reallocated and the reductions from the remaining nutrient sources would increase accordingly. Essentially, the existing development rule provides a cushion for the point source reductions. We support retaining the existing development rule.

The existing development rule provides the maximum flexibility for implementation by local governments. Pursuant to the rule, local governments are free to choose the appropriate mix of retrofit options. Local governments could identify a combination technological retrofits such as outfall retrofits and low cost BMPs such as street sweeping and rain. By requiring a feasibility study, the existing development rule gives local governments the opportunity to tailor the solution to their growth and development patterns, storm water hydrology, available funding, and other land-use concerns. The feasibility study allows local governments to set their own time frame for implementation of a suite of BMPs and gives the local governments time to investigate the rapidly changing field of storm water controls.

The Fiscal Analysis, however, fails to consider the suite of available BMPs and misreads the Rules as to time frame, and as a result, improperly inflates the price. The costs included in the fiscal note focus primarily on implementing grassed swales and bioretention areas. Smaller, low-impact development practices were not included.

Rain barrels, rain gardens, French drains, drywells, cisterns, green rooftops, and storm water planters are all examples of on-site treatment technologies that could be used to

meet the existing development rule. On-site retrofits can be used on individual rooftops, parking lots, streets, storm water hotspots, and other small impervious areas. Many of these practices are low-cost solutions amenable to creative funding mechanisms. Mechanisms for implementing storm water retrofits also abound and include on-site retrofits in neighborhoods; added local government requirements to municipal construction projects to require retrofits with infrastructure upgrades; subsidizing on-site retrofits using storm water fee structures or other incentive programs; and focusing retrofits on redevelopment projects. The Center for Watershed Protection recently published its manual for urban retrofit, a copy of which is attached for your convenience to the copy of this letter sent via U.S. Postal Service. The manual outlines a strategy for implementing urban retrofits and includes the most recent information on BMPs, the economics of retrofits, and implementation tools for local governments. It can also be found at <http://www.cwp.org/PublicationStore/USRM.htm> (last visited September 14, 2007).

These low-impact development or on-site retrofits have multiple benefits outside of nutrient reduction. The current drought is severely taxing the Triad and Triangle's water supply. By promoting on-site infiltration, on-site retrofit projects such as these, recharge our groundwater supplies through infiltration and increase the baseflows of our surface waters. Cleaner, more abundant water is an unrecognized benefit that is not included in the Fiscal Analysis.

Furthermore, non-structural techniques can also reduce the existing development nutrient loading. The existing development rule is flexible enough to allow street sweeping, pet ordinances or other fertilizer ordinances to be part of an existing development strategy.

The entire set of Rules also maximizes flexibility for local governments. Local governments can meet the existing development rule from any sector that over treats. For example, any additional treatment provided by a waste water treatment plant can be traded to existing development plan. The adaptive management portion of the rule also imparts flexibility to the local governments as the Rules start to improve Jordan Lake.

**We strongly recommend that the adaptive management rule be retained and that DWQ comply with EPA guidance for adaptive management implementation.**

EPA promotes adaptive management as a mechanism to help offset the uncertainties inherent in the implementation of non-point source loading reductions. "Adaptive implementation is an iterative process that makes progress toward achieving water quality goals while using any new data and information to reduce uncertainty and adjust implementation activities." EPA, *Clarification Regarding "Phased" Total Maximum Daily Loads*, August 2, 2006. Adaptive implementation requires more intensive monitoring and added administrative steps. It cannot simply take incremental steps towards meeting water quality standards but is instead a process by which uncertainties in modeling or in non-point source efficiency rates can be addressed over the life of the TMDL. Adaptive management does not allow TMDL implementation to start slow and work upwards to the correct loading targets. Instead, adaptive management recognizes

that quantifying non-point source reduction targets is not a precise science and that additional refinements may be necessary to ensure compliance with the TMDL. If any adaptive management technique changes the loading targets, EPA must approve any revisions prior to implementation. We agree that adaptive management is appropriate for the Jordan Lake Rules. We caution, however, that using adaptive management is not a substitute for complying with water quality standards, and any changes to the TMDL must adhere to the CWA.

**We strongly recommend that the deadline for point source reductions be moved to 2011 for compliance with both nitrogen and phosphorous limits.**


Waste water treatment discharges account for a substantial portion of the nutrient loading to all three sections of Jordan Lake, and reductions at waste water treatment plants are the most likely to effect immediately Jordan Lake's water quality. Non-point source nutrient loading reductions are more difficult to quantify and may take place over a longer period of time. By reducing the waste water treatment nutrient loading by 2011, the Rules would take a significant step forward to reducing Jordan Lake's impairment. This is particularly true because the water in Jordan Lake is primarily derived from waste water treatment plants. As water quality in Jordan Lake decreases due to prolonged drought, the cost to treat that water for drinking increases and the problems associated with odor and taste increase as well. Waste water treatment plant upgrades would have an immediate effect on the water quality. Furthermore, Jordan Lake waste water treatment plant improvements have been anticipated since the 1997 Clean Water Responsibility Act was passed and are an integral part of the federal TMDL process.

**Conclusion:**

Jordan Lake is a vital resource for North Carolina. The proposed Rules are an important step towards eliminating the current pollution and offsetting future pollution. In order to comply with federal and state law, all contributing sources of pollution must reduce the nutrient loading and insure that Jordan Lake complies with water quality standards. SELC supports strong Rules to protect Jordan Lake and recommends that the current proposed Rules, with the above-mentioned changes, be approved.

If I can answer any questions or provide additional information, please do not hesitate to contact me.

Sincerely,

  
Amy Pickle  
Staff Attorney