RESOLUTION #9707

# RESOLUTION APPROVING CONSENSUS PRINCIPLES FOR FALLS LAKE NUTRIENT MANAGEMENT STRATEGY

WHEREAS, the City Council finds that working cooperatively with other jurisdictions will further the City of Durham's and its citizens' best interests in achieving reasonable and cost effective regulations and legislation regarding Falls Lake;

WHEREAS, the Mayors and Chairs Committee of the Triangle J Council of Governments has recommended adoption of the attached "Consensus Principles to Guide Falls Lake Nutrient Management Strategy";

WHEREAS, these principles, applied together as a whole, offer the opportunity to achieve a reasonable result regarding nutrient management in the Falls Lake watershed;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF DURHAM RESOLVES:

That the City Council of the City of Durham approves the "Consensus Principles to Guide Falls Lake Nutrient Management Strategy" as an integrated and interconnected set of principles to guide further action on development of rules and regulations regarding Falls Lake.

APPROVED BY
CITY COUNCIL

FEB 18 2010

CITY CLERK

**CONSENSUS PRINCIPLES TO GUIDE**
**FALLS LAKE NUTRIENT MANAGEMENT STRATEGY**

1. Falls Lake is currently classified by the North Carolina Environmental Management Commission (EMC) as WS-IV, B: NSW, CA. Pursuant to this classification, the designated uses of Falls Lake include aquatic life propagation and biological integrity (including fishing and fish), wildlife, primary and secondary recreation, agriculture, and water supply. Falls Lake serves as a water supply for the City of Raleigh (Raleigh) and six other municipalities in Wake County.

2. The EMC has established a water quality standard for chlorophyll-*a* of 40 ug/L to protect the designated uses of all waters in the state, including Falls Lake.

3. Since the time it was constructed, portions of Falls Lake have experienced nutrient conditions that have contributed to monitored exceedances of the chlorophyll-*a* standard. In 2005, the General Assembly directed the EMC to develop a nutrient management strategy for Falls Lake. The legislation was amended so that the nutrient management strategy and implementing rules are to be established no later than January 15, 2011.

4. In 2008, the Division of Water Quality (DWQ) found that the chlorophyll-*a* levels at certain locations in Falls Lake exceeded the water quality standard. The EMC found, in the 2009 Neuse Basin Plan, that new nutrient management measures were needed to address nutrient-related problems in Falls Lake.

5. The level of nutrient loading reductions necessary to protect and improve water quality in Falls Lake make it appropriate to establish a two-stage nutrient management strategy – the first stage (Stage 1) designed to achieve the water quality standard for chlorophyll-*a* in the lower lake below Highway 50 (Lower Lake), where the water supply intake is located, and to improve water quality in the upper lake above Highway 50 (Upper Lake), and the second stage (Stage 2) designed to further address water quality in the Upper Lake.

6. The first stage of nutrient loading reductions and protection measures for Falls Lake, as described below, are designed to achieve sufficient improvements in water quality to result in the removal of the Lower Lake from the 303(d)[1] list of impaired waters by 2021.

7. The Stage 1 management measures should include reductions in loading from all major categories of sources including point sources, agriculture and other fertilizer using activities, new development, and existing development.

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[1] Under Section 303(d) of the U.S. Clean Water Act, waters of the state that have water quality violations resulting in the failure to meet the designated and protected uses are designated as "impaired".

a. Point Sources: Large point sources as a group should be required to achieve by 2016 a 20% reduction in 2006 nitrogen loads and a 40% reduction in 2006 phosphorus loads. The allowable mass load for these point sources should be allocated among them based on 110% of current flows.[2] Smaller point sources should be required to meet limits of technology by 2016.
b. New Development: As soon as is reasonably feasible, and no later than eighteen months after adoption of rules by the EMC, new development throughout the Falls watershed should be required to meet a nitrogen annual loading limit of 2.2 pounds per acre and a phosphorus annual loading limit of 0.33 pounds per acre, a portion of which may be achieved through offset payments.
c. Existing Development: No later than three years after adoption of the rules by the EMC, all jurisdictions throughout the Falls watershed should be required to begin and continuously implement a program to reduce existing development nutrient loads to 2006 levels within ten years from adoption of the rules by the EMC.
    1. Where septic systems account for more than 20% of the nitrogen loading in the portion of a subwatershed of Falls Lake within a jurisdiction (according to DWQ's watershed model), that jurisdiction should be required, as a part of its Stage 1 existing development program, to begin and continuously implement a program to reduce loading from septic systems, discharging into waters of the State within that jurisdiction and subwatershed, which accounted any part for nutrient loading for the jurisdiction.
    2. A jurisdiction that includes any part of a subwatershed of Falls Lake in which chlorophyll *a* levels have exceeded 40 ug/L in more than 75% of the monitoring events in any calendar year should be required, as a part of its Stage 1 existing development program, to begin and continuously implement a program to reduce nutrient loading into waters of the State within that jurisdiction and subwatershed.

   However, the total amount of nutrient loading reductions in Stage 1 is not increased for local jurisdictions by the requirement to add specific program components to address septic loading or high nutrient loading levels.
d. State and Federal Agencies: State and federal agencies, including but not limited to DOT, shall be required to reduce nitrogen and phosphorus loading from new and existing development to a similar degree and within a similar time schedule as local governments.

[2] The Consensus Principles rely on, and do not seek any change from, the apportionment of load allocations as proposed by DWQ in the draft rules issued on January 14, 2010

8. Stage 2 management measures should be designed to achieve water quality standards in the Upper Lake and to maintain water quality in the Lower Lake. The compliance date for achieving all additional reductions from point sources and agriculture should be no earlier than 2036. Additional existing development reductions, as determined pursuant to paragraph 9 should begin in 2021 and should be continuously implemented according to timelines proposed by each local government in plans periodically submitted to and approved by the EMC, subject to the limitations on the EMC's authority regarding existing development criteria contained in the Jordan Lake legislation.[3]

9. The process by which the proposed regulatory scheme has been developed relied on a limited data base which will be substantially enhanced by a more rigorous program of sampling, monitoring and analysis. In addition, it may not be feasible to attain all currently designated uses in the Upper Lake and attempting to do so may result in substantial and widespread economic and social impact. The EMC should therefore begin a re-examination of its nutrient management strategy for Falls Lake by January 1, 2018. The re-examination should consider, among other things, (i) the physical, chemical, and biological conditions of the Lake with a focus on nutrient loading impacts and the potential for achieving the Stage 1 goal by 2021 as well as the feasibility of both achieving the Stage 2 reduction goals and meeting the water quality standard for chlorophyll-*a* in the Upper Lake, (ii) the cost of achieving, or attempting to achieve, the Stage 2 reduction goals and the water quality standard in the Upper Lake, (iii) the existing uses in the Upper Lake and whether alternative water quality standards would be sufficient to protect those existing uses, and (iv) the impact of the management of Falls Lake on water quality in the Upper Lake. As the first step in the re-examination, a Scientific Advisory Board should analyze and review the information identified above along with the additional monitoring and modeling data compiled since the model was approved and should present its recommendations for changes in the Nutrient Management Strategy and its implementing rules to DWQ and the EMC by

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[3] Session Law 2009-216 (the Jordan Lake legislation), at Section 3(d)(2)(f), sets the following limitations on the authority of the Environmental Management Commission for its review and approval of local government programs to control nutrient loading from existing development: "The Commission shall approve the program if it meets the requirements of this subdivision, unless the Commission finds that the local government can, through the implementation of reasonable and cost-effective measures not included in the proposed program, meet the reductions in nutrient loading established by the Department pursuant to sub-subdivision b. of this subdivision by a date earlier than that proposed by the local government. . . .In determining whether additional or alternative load reduction measures are reasonable and cost effective, the Commission shall consider factors including, but not limited to, the increase in the per capita cost of a local government's stormwater management program that would be required to implement such measures and the cost per pound of nitrogen and phosphorus removed by such measures. The Commission shall not require additional or alternative measures that would require a local government to:

1. Install or require installation of a new stormwater collection system in an area of existing development unless the area is being redeveloped.
2. Acquire developed private property.
3. Reduce or require the reduction of impervious surfaces within an area of existing development unless the area is being redeveloped."

January 1, 2019. In light of the report from the Science Advisory Board, the EMC should direct the DWQ to prepare proposed rule revisions, if any, and an updated fiscal note on Stage 2 by August 1, 2019. In its development of any proposed rule revisions, DWQ shall consult with the local governments and other interested parties. Except to the extent that management measures identified as a part of Stage 2 are required to achieve the Stage 1 goal, local governments should not be required to begin implementing Stage 2 management measures without a determination by the EMC of whether alternative goals and/or standards should be established for the Upper Lake.

10. Annual monitoring of chlorophyll-*a* in Falls Lake should be funded and implemented through a collective effort by all jurisdictions partially or wholly within the Falls Lake watershed. The limited resources available to DWQ and DENR for the implementation of the nutrient management strategy and the need for a robust and active sampling and monitoring program, as well as additional modeling, make it desirable for the affected local governments to share resources and undertake these important activities, and other activities associated with the re-examination of the Nutrient Management Strategy, collectively. The affected local governments should share resources and assist with funding for the examination of the Nutrient Management Strategy. The affected local governments created the Upper Neuse River Basin Association, among other reasons, as a means to more effectively perform functions related to Falls Lake and the Upper Neuse River Basin. The Association with an expanded mission and authority, or some similar organization, should be considered for expanded duties that the local governments may agree to assume consistent with this paragraph and paragraph 11 of this document. The results of the additional monitoring and modeling and other relevant information gathered by the collective efforts of the local governments should be shared on a regular basis with DWQ and made available to the Scientific Advisory Board and the EMC in connection with the review described in Paragraph 9.

11. A robust and innovative trading program among all regulated sources is critical to the success of the nutrient management strategy for Falls Lake. In addition, local governments should be able to use any combination of point and nonpoint control/reduction strategies, including land preservation, within their respective jurisdictions to meet their overall obligations under the nutrient management strategy.

12. Nothing in these principles is intended to imply that the EMC is precluded from complying with the requirements of federal law.