

## Builder News Update January 8, 2010

### Falls Lake Nutrient Management Rules

The NC Division of Water Quality initiated a special study of Falls Lake (also called the Falls of the Neuse Reservoir) in February 2005. The 2008 Draft North Carolina Impaired Waters List includes the entire lake for chlorophyll-a standard violations. The part of the lake above the I-85 bridge is also listed for turbidity standard violations. The data collected in the monitoring study and the subsequent modeling analysis will allow the DWQ to determine the extent of the impairments.

Falls Lake is now subject to three sets of water quality regulations, each of which would require a nutrient management strategy: (1) North Carolina has established water quality criteria and standards for all surface waters as required by federal mandate, (2) Falls Lake was classified as a Nutrient Sensitive Waters in 1983, and (3) the North Carolina General Assembly passed the Drinking Water Supply Reservoir Act in 2005.

The DWQ Falls Lake study has been designed to provide an approximate measure of Falls Lake's capacity to assimilate nutrients and to support the development of a [Total Maximum Daily Load \(TMDL\)](#) for the lake. The study is also designed to provide the information needed to guide management approaches. The ultimate goal of the study is to produce a nutrient management strategy that will meet any relevant regulatory requirements.

A nutrient management strategy for Falls Lake must be sound, practical and achievable to be effective. An effective strategy is in the interests of both the DWQ, which manages water quality statewide, and those in the watershed that will be responsible for implementing the nutrient management strategy. A sound, practical and achievable nutrient management strategy for Falls Lake will be developed most effectively through an open, inclusive stakeholder process.

The Upper Neuse River Basin Association (UNRBA) and the NC Division of Water Quality (DWQ) are sponsoring the Falls Lake Stakeholder Project. The purpose of the project is to engage a diverse group of stakeholders representing a wide range of interests in developing a nutrient management strategy for the Falls Lake Watershed.



- (a) (a) An approved stormwater management plan shall be required for all proposed new development disturbing one acre or more for single family and duplex residential property and recreational facilities, and one-half acre or more for commercial, industrial, institutional, multifamily residential, or local government property. These stormwater plans shall not be approved by the subject local governments unless the following criteria are met:
- (i) (i) Nitrogen and phosphorus loads contributed by the proposed new development activity shall not exceed the unit-area mass loading rates as follows for nitrogen and phosphorus, respectively, expressed in units of pounds per acre per year: 2.2 and 0.33. The developer shall determine the need for engineered stormwater controls to meet these loading rate targets by using the loading calculation method called for in Sub-Item (4)(a) or other equivalent method acceptable to the Division.
- (ii) (ii) Developers shall have the option of offsetting part of their nitrogen and phosphorus loads by implementing or funding offsite management measures as follows: Before using offsite offset options, a development shall implement BMPs that attain a minimum of **(Option: 50% or 60% reduction)** in the post-construction nitrogen and phosphorus loading rates on-site and shall meet any requirements for engineered stormwater controls described in Sub-Item (3)(a)(iii) of this Rule. Offsite offsetting measures shall achieve at least equivalent reductions in nitrogen and phosphorus loading to the remaining reduction needed onsite to comply with the loading rate targets set out in Sub-Item (3)(a)(i) of this

Rule. A developer may make offset payments to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. A developer may use an offset option provided by the local government in which the development activity occurs. A developer may propose other offset measures to the local government, including providing his or her own offsite offset or utilizing a private seller. All offset measures identified in this Sub-Item shall meet the requirements of 15A NCAC 02B (Trading Rule).

- (iii) (iii) Proposed new development subject to NPDES, water supply, and other state-mandated stormwater regulations shall comply with those regulations in addition to the other requirements of this Sub-Item. Proposed new development in any water supply watershed in the Falls watershed designated WS-II, WS-III, or WS-IV shall comply with the density-based restrictions, obligations, and requirements for engineered stormwater controls, clustering options, and 10/70 provisions described in Sub-Items (3)(b)(i) and (3)(b)(ii) of the applicable Rule among 15A NCAC 02B .0214 through .0216;
- (iv) (iv) Stormwater systems shall be designed to control and treat at a minimum the runoff generated from all surfaces by one inch of rainfall. The treatment volume shall be drawn down pursuant to standards specific to each practice as provided in the July 2007 version of the *Stormwater Best Management Practices Manual* published by the Division, or other at least technically equivalent standards acceptable to the Division. To ensure that the

integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, stormwater flows from the new development shall not contribute to degradation of waters of the State. At a minimum, the new development shall not result in a net increase in peak flow leaving the site from pre-development conditions for the one-year, 24-hour storm event;

- (v) (v) Proposed new development that would replace or expand structures or improvements that existed as of December 2006, the end of the baseline period, and that would not result in a net increase in built-upon area shall not be required to meet the nutrient loading targets or high-density requirements except to the extent that it shall provide stormwater control at least equal to the previous development. Proposed new development that would replace or expand existing structures or improvements and would result in a net increase in built-upon area shall have the option either to achieve at least the percentage loading reduction goals stated in 15A NCAC 02B (Goals Rule) as applied to nitrogen and phosphorus loading from the previous development for the entire project site, or to meet the loading rate targets described in Sub-Item (3)(a)(i). These requirements shall supersede those identified in 15A NCAC 02B .0104(q);

(vi)

**(vii) \*POSSIBLE ADDITIONAL REDEVELOPMENT OPTION**

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- (viii) (vi) Proposed redevelopment that increases impervious surface located within a local government's designated downtown overlay zoning district is required to achieve a 30% reduction in nitrogen and phosphorus loading from the untreated condition onsite before the remainder of the 40% nitrogen and 77% phosphorus reduction from the previous condition can be achieved through offsite offsets.
      - (ix)
      - (x) \*POSSIBLE LID OPTION (PENDING MORE DISCUSSION)\***
      - (xi)
      - (b) (vii) New development may satisfy rule requirements in Sub-Item (3)(a)(i) by meeting the pre-development and post-development hydrologic criteria set out in the North Carolina Low Impact Development Guidebook dated June 2009.
    - (c)
      - (i) \*CURVE NUMBER OPTION (PENDING MORE DISCUSSION)\***
      - (d)
      - (e) (viii) New development may satisfy rule requirements in Sub-Item (3)(a)(i) by managing runoff so that after development the site will not exceed specific NRCS runoff curve number in accordance with procedures specified in the United States, Department of Agriculture, Natural Resources Conservation Service, Technical Release 55.
  - (i)

- (ii) (ix) Proposed new development shall comply with the riparian buffer protection requirements of 15A NCAC 02B .0233 and .0242; and
        - (iii)
      - (f) (b) A plan to ensure maintenance of best management practices (BMPs) implemented as a result of the provisions in Sub-Item (3)(a) of this Rule for the life of the development;
      - (g) (c) A plan to ensure enforcement and compliance with the provisions in Sub-Item (3)(a) of this Rule for the life of the new development; and
      - (h) (d) The following requirements in water supply 15A NCAC 02B .0104 shall apply to new development throughout the Falls watershed:
        - (i) (i) Requirements in Paragraph (f) for local governments to assume ultimate responsibility for operation and maintenance of high-density stormwater controls, to enforce compliance, to collect fees, and other measures;
        - (ii) (ii) Variance procedures in Paragraph (r);
        - (iii) (iii) Assumption of local programs by the Commission in Paragraph (x); and
        - (iv) (iv) Delegation of Commission authorities to the Director in Paragraph (aa).
- (v)
  - (4) (4) **RULE IMPLEMENTATION.** This Rule shall be implemented as follows:
    - (a) (a) Within 6 months after the effective date of this Rule, the Division shall submit a model local stormwater program, including a model local ordinance, in conjunction with similar requirements

in 15A NCAC 02B (Existing Development Rule), that embodies the criteria described in Item (3) of this Rule to the Commission for approval. The model program shall include a tool that will allow developers to account for nutrient loading from development lands and loading changes due to BMP implementation to meet the requirements of Item (3) of this Rule. The accounting tool shall utilize nutrient efficiencies and associated design criteria established for individual BMPs in the July 2007 version of the *Stormwater Best Management Practices Manual* published by the Division, or other at least technically equivalent standards acceptable to the Division. At which time data quantifying nutrient loads from onsite wastewater systems is made available, the new development nutrient export accounting tool shall be revised and require accounting for nutrient loading from onsite wastewater from newly developed lands that use such systems. The Division shall work in cooperation with subject local governments and other watershed interests in developing this model program.

- (b) (b) Within six months after the Commission's approval of the model local stormwater program and model ordinance, subject local governments shall submit stormwater management programs, in conjunction with similar requirements in 15A NCAC 02B(Existing Development Rule), to the Division for preliminary approval. These local programs shall meet or exceed the requirements in Item (3) of this Rule;
- (c) (c) Within 15 months after the Commission's approval of the model local stormwater program, the Division shall provide recommendations to the Commission on local stormwater programs. The Commission shall either approve the programs or require changes based on the standards set out in Item (3) of this

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- Rule. Should the Commission require changes, the applicable local government shall have two months to submit revisions, and the Division shall provide follow-up recommendations to the Commission within two months after receiving revisions;
- (d) (d) Within three months after the Commission's approval of a local program, or upon the Division's first renewal of a local government's NPDES stormwater permit, whichever occurs later, the affected local government shall complete adoption of and implement its local stormwater management program; and
- (e) (e) Upon implementation, subject local governments shall submit annual reports to the Division summarizing their activities in implementing each of the requirements in Item (3) of this Rule, including changes to nutrient loading due to implementation of Sub-Item (3)(a) of this Rule.
- (5) (5) RELATIONSHIP TO OTHER REQUIREMENTS. Local governments shall have the following options with regard to satisfying the requirements of other rules in conjunction with this Rule:
- (a) (a) A local government may in its program submittal under Sub-Item (4)(b) of this Rule request that the Division accept the local government's implementation of another stormwater program or programs, such as NPDES municipal stormwater requirements or an existing Neuse NSW stormwater program, as satisfying one or more of the requirements set forth in Item (3) of this Rule. The Division will provide determination on acceptability of any such alternatives prior to requesting Commission approval of local programs as required in Sub-Item (4)(c) of this Rule. The local government shall include in its program submittal technical information demonstrating the adequacy of the alternative requirements.

