

## **15A NCAC 02B .0275 FALLS WATER SUPPLY NUTRIENT STRATEGY: PURPOSE AND SCOPE**

**PURPOSE.** The purpose of this Rule and Rules 15A NCAC 02B .0276 through .0282 and .0315(q) shall be to attain the classified uses of Falls of the Neuse Reservoir set out in 15A NCAC 02B .0211 from current impaired conditions related to excess nutrient inputs; protect its classified uses as set out in 15A NCAC 02B .0216, including use as a source of water supply for drinking water; and maintain and enhance protections currently implemented by local governments in existing water supply watersheds encompassed by the watershed of Falls of the Neuse Reservoir. The reservoir, and all waters draining to it, have been supplementally classified as Nutrient Sensitive waters (NSW) pursuant to 15A NCAC 02B .0101(e)(3) and 15A NCAC 02B .0223. These Rules, as enumerated in Item (6) of this Rule, together shall constitute the Falls water supply nutrient strategy, or Falls nutrient strategy, and shall be implemented in accordance with 15A NCAC 02B .0223. The following items establish the framework of the Falls nutrient strategy:

- (1) **SCOPE AND LIMITATION.** Falls of the Neuse Reservoir is hereafter referred to as Falls Reservoir. All lands and waters draining to Falls Reservoir are hereafter referred to as the Falls watershed. The Falls nutrient strategy rules require controls that reduce nitrogen and phosphorus loads from significant sources of these nutrients throughout the Falls watershed. These Rules do not address atmospheric emission sources of nitrogen that is deposited into the watershed but do include provisions to account for reductions in such deposition as the water quality benefits of air quality regulations are quantified. Neither do these Rules address sources on which there is insufficient scientific knowledge to base regulation, other sources deemed adequately addressed by existing regulations, sources currently considered minor, or nutrient contributions from lake sediments, which are considered outside the scope of these Rules. The Commission may undertake additional rulemaking in the future or make recommendations to other rulemaking bodies as deemed appropriate to more fully address nutrient sources to Falls Reservoir. While the scope of these Rules is limited to the reduction of nutrient loads to surface waters, practitioners are encouraged to maximize opportunities for concurrently benefiting other ecosystem services where feasible in the course of achieving the nutrient objectives.
- (2) **CRITICAL WATER SUPPLY WATERSHED DESIGNATION.** Water supply waters designated WS-II, WS-III, and WS-IV within the Falls watershed shall retain their classifications. The remaining waters in the Falls watershed shall be classified WS-V. The requirements of all of these water supply classifications shall be retained and applied except as specifically noted elsewhere within the Falls nutrient strategy. In addition, pursuant to G.S. 143-214.5(b), the entire Falls watershed shall be designated a critical water supply watershed and through the Falls nutrient strategy given additional, more stringent requirements than the state minimum water supply watershed management requirements. Water supply requirements of 15A NCAC 02B .0104 apply except to the extent that requirements of the Falls nutrient strategy are more stringent than provisions addressing agriculture, forestry, and existing development. These requirements supplement the water quality standards applicable to Class C waters, as described in Rule .0211 of this Section, which apply throughout the Falls watershed. Water supply watershed requirements shall be as follows:
  - (a) For WS-II, WS-III, and WS-IV waters, the retained requirements of Rules 15A NCAC 02B .0214 through .0216 are characterized as follows:
    - (i) Item (1) addressing best usages;
    - (ii) Item (2) addressing predominant watershed development conditions, discharges expressly allowed watershed-wide, general prohibitions on and allowances for domestic and industrial discharges, Maximum Contaminant Levels following treatment, and the local option to seek more protective classifications for portions of existing water supply watersheds;
    - (iii) Sub-Item (3)(a) addressing wastewater discharge limitations;
    - (iv) Sub-Item (3)(b) addressing nonpoint source and stormwater controls; and
    - (v) Sub-Items (3)(c) through (3)(h) addressing aesthetic and human health standards.
  - (b) For waters classified WS-V, the requirements of water supply Rule 15A NCAC 02B .0218 shall be applied.
- (3) **GOAL AND OBJECTIVES.** To achieve the purpose of the Falls nutrient strategy, the Commission establishes the goal of attaining and maintaining nutrient-related water quality standards identified in 15A NCAC 02B .0211 throughout Falls Reservoir pursuant to G.S. 143-215.8B and 143B-282(c) and (d) of the Clean Water Responsibility Act of 1997. The Commission establishes a staged and adaptive implementation plan, outlined hereafter, to achieve the following objectives. The objective of Stage I is to, at minimum, achieve and maintain nutrient-related water quality standards in the Lower Falls

Reservoir as soon as possible but no later than January 15, 2021 and to improve water quality in the Upper Falls Reservoir.

The objective of Stage II is to achieve and maintain nutrient-related water quality standards throughout Falls Reservoir. This is estimated to require a reduction of 40 and 77 percent in average annual mass loads of nitrogen and phosphorus respectively, delivered from the sources named in Item (6) in the Upper Falls Watershed from a baseline of 2006. The resulting Stage II allowable loads to Falls Reservoir from the watersheds of Ellerbe Creek, Eno River, Little River, Flat River, and Knap of Reeds Creek shall be 658,000 pounds of nitrogen per year and 35,000 pounds of phosphorus per year.

- (4) STAGED IMPLEMENTATION. The Commission shall employ the staged implementation plan set forth below to achieve the goal of the Falls nutrient strategy:
- (a) STAGE I. Stage I requires intermediate or currently achievable controls throughout the Falls watershed with the objective of reducing nitrogen and phosphorus loading, and attaining nutrient-related water quality standards in the Lower Falls Reservoir as soon as possible but no later than January 15, 2021, while also improving water quality in the Upper Falls Reservoir as described in this Item. Implementation timeframes are described in individual rules, with full implementation occurring no later than January 15, 2021;
  - (b) STAGE II. Stage II requires implementation of additional controls in the Upper Falls Watershed beginning no later than January 15, 2021 to achieve nutrient-related water quality standards throughout Falls Reservoir by 2041 to the maximum extent technically and economically feasible, with progress toward this overall objective as described in Sub-Item (5)(a); and
  - (c) MAINTENANCE OF ALLOCATIONS. Sources shall maintain the load reductions required under these Rules beyond the implementation stages.
- (5) ADAPTIVE IMPLEMENTATION. The Commission shall employ the following adaptive implementation plan in concert with the staged implementation approach described in this Rule:
- (a) The Division shall perform water quality monitoring throughout Falls Reservoir and shall accept reservoir water quality monitoring data provided by other parties that meet Division standards and quality assurance protocols. The Division shall utilize this data to estimate load reduction achieved and to perform periodic use support assessments pursuant to 40 CFR 130.7(b). It shall evaluate use support determinations to judge progress on and compliance with the goal of the Falls nutrient strategy, including the following assessments:
    - (i) Attainment of nutrient-related water quality standards downstream of Highway NC-98 crossing of Falls Reservoir no later than January 15, 2016;
    - (ii) Attainment of nutrient-related water quality standards in the Lower Falls Reservoir no later than January 15, 2021;
    - (iii) Attainment of nutrient-related water quality standards in the Lick Creek arm of Falls Reservoir and points downstream no later than January 15, 2026;
    - (iv) Attainment of nutrient-related water quality standards in the Ledge and Little Lick Creek arms of Falls Reservoir and points downstream no later than January 15, 2031;
    - (v) Attainment of nutrient-related water quality standards at points downstream of the Interstate 85 crossing of Falls Reservoir no later than January 15, 2036;
    - (vi) Attainment of nutrient-related water quality standards throughout Falls Reservoir no later than 2041;
    - (vii) Where the Division finds that acceptable progress has not been made towards achieving nutrient-related water quality standards throughout Falls Reservoir defined in Sub-Items (i) through (vi) of this Item or that conditions have deteriorated in a segment of Falls Reservoir as described in this Item, at any time, it shall evaluate compliance with the Falls nutrient strategy rules, and may request Commission approval to initiate additional rulemaking;
    - (viii) Where the Division finds, based on reservoir monitoring, that nutrient-related water quality standards are attained in a previously impaired segment of Falls Reservoir, as described in this Item, and are met for sufficient time to demonstrate sustained maintenance of standards, as specified in individual rules of this strategy, it shall notify affected parties in that segment's watershed that further load reductions are

not required and of requirements for maintenance of measures to prevent loading increases. Sufficient time is defined as at least two consecutive use support assessments demonstrating compliance with nutrient-related water quality standards in a given segment of Falls Reservoir.

- (b) The Division, to address resulting uncertainties including those related to technological advancement, scientific understanding, actions chosen by affected parties, loading effects, and loading effects of other regulations, shall report to the Commission and provide information to the public in January 2016 and every five years thereafter as necessary. The reports shall address all of the following subjects:
  - (i) Changes in nutrient loading to Falls Reservoir and progress in attaining nutrient-related water quality standards as described in Sub-Items (5)(a)(i) through (vi) of this Rule;
  - (ii) The state of wastewater and stormwater nitrogen and phosphorus control technology, including technological and economic feasibility;
  - (iii) Use and projected use of wastewater reuse and land application opportunities;
  - (iv) The utilization and nature of nutrient offsets and projected changes. This shall include an assessment of any load reduction value derived from preservation of existing forested land cover;
  - (v) Results of any studies evaluating instream loading changes resulting from implementation of rules;
  - (vi) Results of any studies evaluating nutrient loading from conventional septic systems and discharging sand filter systems;
  - (vii) Assessment of the instream benefits of local programmatic management measures such as fertilizer or pet waste ordinances, improved street sweeping and the extent to which local governments have implemented these controls;
  - (viii) Results of applicable studies, monitoring, and modeling from which a baseline will be established to address changes in atmospheric deposition of nitrogen;
  - (ix) Recent or anticipated changes in regulations affecting atmospheric nitrogen emissions and their projected effect on nitrogen deposition;
  - (x) Results of any studies evaluating nutrient loading from groundwater;
  - (xi) Updates to nutrient loading accounting tools; and
- (c) The Division shall submit a report to the Commission in July 2025 that shall address the following subjects in addition to the content required elsewhere under this Item:
  - (i) The physical, chemical, and biological conditions of the Upper Falls Reservoir including nutrient loading impacts;
  - (ii) Whether alternative regulatory action pursuant to Sub-Item (5)(g) would be sufficient to protect existing uses as required under the Clean Water Act;
  - (iii) The impact of management of the Falls Reservoir on water quality in the Upper Falls Reservoir;
  - (iv) The methodology used to establish compliance with nutrient-related water quality standards in Falls Reservoir and the potential for using alternative methods;
  - (v) The feasibility of achieving the Stage II objective; and
  - (vi) The estimated costs and benefits of achieving the Stage II objective;
- (d) The Division shall make recommendations, if any, on rule revisions based on the information reported pursuant to Sub-Items (b) and (c) of this Rule;
- (e) In developing the reports required under Sub-Items (b) and (c) of this Rule, the Division shall consult with and consider information submitted by local governments and other persons with an interest in Falls Reservoir. Following receipt of a report, the Commission shall consider whether revisions to the requirements of Stage II are needed and may initiate rulemaking or any other action allowed by law;
- (f) Recognizing the uncertainty associated with model-based load reduction targets, to ensure that allowable loads to Falls Reservoir remain appropriate as implementation proceeds, a person may at any time during implementation of the Falls nutrient strategy develop and submit for Commission approval supplemental nutrient response modeling of Falls Reservoir based on additional data collected after a period of implementation. The Commission may

consider revisions to the requirements of Stage II based on the results of such modeling as follows:

- (i) A person shall obtain Division review and approval of any monitoring study plan and description of the modeling framework to be used prior to commencement of such a study. The study plan and modeling framework shall meet any Division requirements for data quality and model support or design in place at that time. Within 180 days of receipt, the division shall either approve the plan and modeling framework or notify the person seeking to perform the supplemental modeling of changes to the plan and modeling framework required by the Division;
  - (ii) Supplemental modeling shall include a minimum of three years of lake water quality data unless the person performing the modeling can provide information to the Division demonstrating that a shorter time span is sufficient;
  - (iii) The Commission may accept modeling products and results that estimate a range of combinations of nitrogen and phosphorus percentage load reductions needed to meet the goal of the Falls nutrient strategy, along with associated allowable loads to Falls Reservoir, from the watersheds of Ellerbe Creek, Eno River, Little River, Flat River, and Knap of Reeds Creek and that otherwise comply with the requirements of this Item. Such modeling may incorporate the results of studies that provide new data on various nutrient sources such as atmospheric deposition, internal loading, and loading from tributaries other than those identified in this Sub-item. The Division shall assure that the supplemental modeling is conducted in accordance with the quality assurance requirements of the Division;
  - (iv) The Commission shall review Stage II requirements if a party submits supplemental modeling data, products and results acceptable to the Commission for this purpose. Where supplemental modeling is accepted by the Commission, and results indicate allowable loads of nitrogen and phosphorus to Falls Reservoir from the watersheds of Ellerbe Creek, Eno River, Little River, Flat River, and Knap of Reeds Creek that are substantially different than those identified in Item (3), then the Commission may initiate rulemaking to establish those allowable loads as the revised objective of Stage II relative to their associated baseline values;
  - (g) Nothing in this strategy shall be construed to limit, expand, or modify the authority of the Commission to undertake alternative regulatory actions otherwise authorized by state or federal law, including the reclassification of waters of the State pursuant to G.S. 143-214.1, the revision of water quality standards pursuant to G.S. 143-214.3, and the granting of variances pursuant to G.S. 143-215.3.
- (6) **RULES ENUMERATED.** The Falls nutrient strategy rules consists of the following rules titled as follows:
- (a) Rule .0275 Purpose and Scope;
  - (b) Rule .0276 Definitions. An individual rule may contain additional definitions for terms that are used in that rule only;
  - (c) Rule .0277 Stormwater Management for New Development;
  - (d) Rule .0278 Stormwater Management for Existing Development;
  - (e) Rule .0279 Wastewater Discharge Requirements;
  - (f) Rule .0280 Agriculture;
  - (g) Rule .0281 Stormwater Requirements for State and Federal Entities;
  - (h) Rule .0282 Options for Offsetting Nutrient Loads; and
  - (i) Rule .0315 Neuse River Basin.
- (7) **APPLICABILITY.** Categories of parties required to implement the Falls nutrient strategy rules and, as applicable, their geographic scope of responsibility, are identified in each rule. The specific local governments responsible for implementing Rules .0277, .0278, and .0282 shall be as follows:
- (a) All incorporated municipalities, as identified by the Office of the Secretary of State, with planning jurisdiction within or partially within the Falls watershed. Those municipalities are currently:
    - (i) Butner;
    - (ii) Creedmoor;

- (iii) Durham;
    - (iv) Hillsborough;
    - (v) Raleigh;
    - (vi) Roxboro;
    - (vii) Stem; and
    - (viii) Wake Forest;
  - (b) All counties with jurisdiction in Falls watershed and for land where municipalities listed in Sub-Item (7)(a) do not have an implementation requirement:
    - (i) Durham;
    - (ii) Franklin;
    - (iii) Granville;
    - (iv) Orange;
    - (v) Person; and
    - (vi) Wake;
  - (c) A unit of government may arrange through interlocal agreement or other instrument of mutual agreement for another unit of government to implement portions or the entirety of a program required or allowed under any rule of this strategy to the extent that such an arrangement is otherwise allowed by statute. The governments involved shall submit documentation of any such agreement to the Division. No such agreement shall relieve a unit of government from its responsibilities under these Rules.
- (8) ENFORCEMENT. Failure to meet requirements of Rules .0275, .0277, .0278, .0279, .0280, .0281, or .0282 of this Section may result in imposition of enforcement measures as authorized by G.S. 143-215.6A (civil penalties), G.S. 143-215.6B (criminal penalties), and G.S. 143-215.6C (injunctive relief).

*History Note:* Authority G.S. 143-214.1; 143-214.3; 143-214.5; 143-214.7; 143-215.1; 143-215.3; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143-215.8B; 143B-282(c); 143B-282(d); S.L. 2005-190; S.L. 2006-259; S.L. 2009-337; S.L. 2009-486;  
*Eff. January 15, 2011 (this permanent rule replaces the temporary rule approved by the RRC on December 16, 2010).*