

Falls Nutrient Strategy

Rules Approved by the RRC on December 16, 2010

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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).

15A NCAC 02B .0276 FALLS WATER SUPPLY NUTRIENT STRATEGY: DEFINITIONS

(a) Unless the context indicates otherwise, the following words and phrases, which are not defined in G.S. 143, Article 21, shall be interpreted as follows for the purposes of the Falls nutrient strategy:

- (1) "Allocation" means the mass quantity of nitrogen or phosphorus that a discharger, group of dischargers, nonpoint source, or collection of nonpoint sources is assigned. For point sources, possession of allocation does not authorize the discharge of nutrients but is prerequisite to such authorization through a NPDES permit, and allocation may be further distinguished as follows:
 - (A) "Active" allocation means that portion of an allocation that has been applied toward and is expressed as a nutrient limit in an individual NPDES permit;
 - (B) "Reserve" allocation means allocation that is held by a permittee or other person but which has not been applied toward and is not expressed as a nutrient limit in an individual NPDES permit;
- (2) "Applicator" means the same as defined in 15A NCAC 02B .0202(4);
- (3) "Atmospheric nitrogen" means total oxidized nitrogen (NO_y) which includes all nitrogen oxides (including NO₂, NO, N₂, nitrogen trioxide [N₂O₃], nitrogen tetroxide [N₂O₄], dinitrogen pentoxide [N₂O₅], nitric acid (HNO₃) peroxyacid nitrates (PAN)), the sum of which is referred to as reduced nitrogen (NH_x);
- (4) "Delivered," as in delivered allocation, load, or limit, means the allocation, load, or limit that is measured or predicted at Falls Reservoir;
- (5) "Development" means the same as defined in 15A NCAC 02B .0202(23);
- (6) "Discharge," as in discharge allocation, load, or limit means the allocation, load, or limit that is measured at the point of discharge into surface waters in the Falls watershed;
- (7) "Existing development" means development, other than that associated with agricultural or forest management activities that meets one of the following criteria:
 - (A) It either is built or has established a vested right based on statutory or common law as interpreted by the courts, as of the effective date of either local new development stormwater programs implemented under 15A NCAC 02B .0277 for projects that do not require a state permit or, as of the applicable compliance date established in 15A NCAC 02B .0281(5) and (6); or
 - (B) It occurs after the compliance date set out in Sub-Item (5)(d) of Rule .0277 but does not result in a net increase in built-upon area;
- (8) "Falls nutrient strategy," or "Falls water supply nutrient strategy" means the set of 15A NCAC 02B .0275 through .0282 and .0315(p);
- (9) "Falls Reservoir" means the surface water impoundment operated by the US Army Corps of Engineers and named Falls of Neuse Reservoir;
- (10) "Upper Falls Reservoir" means that portion of the reservoir upstream of State Route 50;
- (11) "Upper Falls Watershed" means that area of Falls watershed draining to Upper Falls Reservoir;
- (12) "Lower Falls Reservoir" means that portion of the reservoir downstream of State Route 50;
- (13) "Lower Falls Watershed" means that area of Falls watershed draining to lower falls Reservoir without first passing through Upper Falls Reservoir;
- (14) "Load" means the mass quantity of a nutrient or pollutant released into surface waters over a given time period. Loads may be expressed in terms of pounds per year and may be expressed as "delivered load" or an equivalent "discharge load;"
- (15) "Load allocation" means the same as set forth in federal regulations 40 CFR 130.2(g), which is incorporated herein by reference, including subsequent amendments and editions. These regulations may be obtained at no cost from <http://www.epa.gov/lawsregs/search/40cfr.html> or from the U.S. Government Printing Office, 732 North Capitol St. NW, Washington D.C., 20401;
- (16) "New development" means any development project that does not meet the definition of existing development set out in this Rule;
- (17) "Nitrogen" means the sum of the organic, nitrate, nitrite, and ammonia forms of nitrogen in a water or wastewater;
- (18) "NPDES" means National Pollutant Discharge Elimination System, and connotes the permitting process required for the operation of point source discharges in accordance with the requirements of Section 402 of the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq;
- (19) "Nutrients" means total nitrogen and total phosphorus;

- (20) "Phosphorus" or "total phosphorus" means the sum of the orthophosphate, polyphosphate, and organic forms of phosphorus in a water or wastewater;
- (21) "Stream" means a body of concentrated flowing water in a natural low area or natural channel on the land surface;
- (22) "Surface waters" means all waters of the state as defined in G.S. 143-212 except underground waters;
- (23) "Technical specialist" means the same as defined in 15A NCAC 06H .0102(9);
- (24) "Total nitrogen" means the same as 'nitrogen' defined in Item (17);
- (25) "Total phosphorus" means the same as 'phosphorus' defined in Item (20);
- (26) "Wasteload" means the mass quantity of a nutrient or pollutant released into surface waters by a wastewater discharge over a given time period. Wasteloads may be expressed in terms of pounds per year and may be expressed as "delivered wasteload" or an equivalent "discharge wasteload;" and
- (27) "Wasteload allocation" means the same as set forth in federal regulations 40 CFR 130.2(h), which is incorporated herein by reference, including subsequent amendments and editions. These regulations may be obtained at no cost from <http://www.epa.gov/lawsregs/search/40cfr.html> or from the U.S. Government Printing Office, 732 North Capitol St. NW, Washington D.C., 20401.

(b) The definitions in Rule .0279 shall also apply throughout these Falls Water Supply Nutrient Strategy rules.

History Note: Authority G.S. 143-214.1; 1432-214.3;143-214.5; 143-214.7; 143-215.1; 143215.3; 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).

15A NCAC 02B .0277 FALLS RESERVOIR WATER SUPPLY NUTRIENT STRATEGY: STORMWATER MANAGEMENT FOR NEW DEVELOPMENT

The following is the stormwater strategy, as prefaced in 15A NCAC 02B .0275, for new development activities within the Falls watershed:

- (1) **PURPOSE.** The purposes of this Rule are as follows:
 - (a) To achieve and maintain the nitrogen and phosphorus loading objectives established for Falls Reservoir in 15A NCAC 02B .0275 from lands in the Falls watershed on which new development occurs;
 - (b) To provide control for stormwater runoff from new development in Falls watershed to ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows; and
 - (c) To protect the water supply, aquatic life and recreational uses of Falls Reservoir from the potential impacts of new development.
- (2) **APPLICABILITY.** This Rule shall apply to those areas of new development that lie within the Falls watershed and the planning jurisdiction of a municipality or county that is identified in 15A NCAC 02B .0275. This Rule shall not apply to development activities on state and federal lands that are set out in Rule .0281 of this Section.
- (3) **REQUIREMENTS.** All local governments subject to this Rule shall develop stormwater management programs for submission to and approval by the Commission, to be implemented in areas described in Item (2) of this Rule. Nothing in this Rule preempts local governments from establishing requirements that are more restrictive than those set forth in this Rule. Local government stormwater management programs shall include the following elements and the standards contained in Item (4):
 - (a) The requirement that a stormwater management plan shall be submitted for local government approval based on the standards in Item (4) for all proposed new development disturbing one-half acre or more for single family and duplex residential property and recreational facilities, and 12,000 square feet or more for commercial, industrial, institutional, multifamily residential, or local government property;
 - (b) A plan to ensure maintenance of best management practices (BMPs) implemented to comply with this rule for the life of the development; and
 - (c) A plan to ensure enforcement and compliance with the provisions in Item (4) of this Rule for the life of the new development.
- (4) **PLAN APPROVAL REQUIREMENTS.** A developer's stormwater plan shall not be approved by a subject local government unless the following criteria are met:
 - (a) Nitrogen and phosphorus loads contributed by the proposed new development activity shall not exceed the following unit-area mass loading rates for nitrogen and phosphorus, respectively, expressed in units of pounds/acre/year: 2.2 and 0.33. Proposed 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 the developer shall provide stormwater control at least equal to the previous development. Proposed 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 objectives stated in 15A NCAC 02B .0275 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 this Item. These requirements shall supersede those identified in 15A NCAC 02B .0104(q). The developer shall determine the load reductions needed to meet these loading rate targets by using the loading calculation method called for in Sub-Item (5)(a) or other equivalent method acceptable to the Division;
 - (b) The developer shall have the option of offsetting part of the nitrogen and phosphorus load by implementing or funding offsite offset measures. Before using an offsite offset option, a development shall implement onsite structural stormwater controls that achieve one of the following levels of reductions:
 - (i) Proposed new development activity disturbing at least one-half acre but less than one acre of land for single family and duplex residential property and recreational

- facilities, except as stated in Sub-Item (4)(b)(iv), shall achieve 30 percent or more of the needed load reduction in both nitrogen and phosphorus loading onsite and shall meet any requirements for engineered stormwater controls described in Sub-Item (4)(e) of this Rule;
- (ii) Proposed new development activity disturbing at least 12,000 but less than one acre of land for commercial, industrial, institutional, multifamily residential, or local government property, except as stated in Sub-Item (4)(b)(iv), shall achieve 30 percent or more of the needed load reduction in both nitrogen and phosphorus loading onsite and shall meet any requirements for engineered stormwater controls described in Sub-Item (4)(e) of this Rule;
 - (iii) Except as stated in Sub-Item (4)(b)(iv), proposed new development activity that disturbs one acre of land or more shall achieve 50 percent or more of the needed load reduction in both nitrogen and phosphorus loading onsite and shall meet any requirements for engineered stormwater controls described in Sub-Item (4)(e) of this Rule; or
 - (iv) Proposed development that would replace or expand structures or improvements that existed as of December 2006 and that increases impervious surface within a local government's designated downtown area, regardless of area disturbed, shall achieve 30 percent of the needed load reduction in both nitrogen and phosphorus onsite, and shall meet any requirements for engineered stormwater controls described in Sub-Item (4)(e) of this Rule;
- (c) 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 (4)(a) of this Item. A developer may use any measure that complies with the requirements of Rules .0240 and .0282. of this Section;
 - (d) 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, operation and maintenance responsibilities, vegetated setbacks, land application, and landfill provisions described in Sub-Items (3)(b)(i) and (3)(b)(ii) of the applicable rule among 15A NCAC 02B .0214 through .0216. Provided, 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 shall not be available in the Falls watershed;
 - (e) Stormwater systems shall be designed to control and treat at a minimum the runoff generated from all surfaces in the project area 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;
 - (f) To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, 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;
 - (g) New development may 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 dated June 2009, or the hydrologic criteria in the most recent version of that guidebook;
 - (h) Proposed new development shall demonstrate compliance with the riparian buffer protection requirements of 15A NCAC 02B .0233 and .0242 or subsequent amendments or replacements to those requirements.
- (5) **RULE IMPLEMENTATION.** This Rule shall be implemented as follows:
- (a) No later than March 15, 2011, the Division shall submit a model local stormwater program, including a model local ordinance that embodies the criteria described in Items (3) and (4) 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 Items (3) and (4) 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 more precise standards acceptable to the Division. At such time as data quantifying nutrient loads from onsite wastewater systems is made available, the new development nutrient export accounting tool shall be revised to require accounting for nutrient loading from onsite wastewater from newly developed lands that use such systems. Should research quantify significant loading from onsite wastewater systems, the Division may also make recommendations to the Commission for Public Health to initiate rulemaking to reduce nutrient loading to surface waters from these systems. The Division shall work in cooperation with subject local governments and other watershed interests in developing this model program;

- (b) Within five 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 .0278, to the Division for preliminary approval. These local programs shall meet or exceed the requirements in Items (3) and (4) of this Rule;
 - (c) Within 10 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 Items (3) and (4) of this 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) Within six 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) Upon implementation, subject local governments shall submit annual reports to the Division summarizing their activities in implementing each of the requirements in Items (3) and (4) of this Rule, including changes to nutrient loading.
- (6) EQUIVALENT PROGRAM OPTION. A local government may in its program submittal under Sub-Item (5)(b) of this Rule request that the Division accept the local government's implementation of another stormwater program or programs as satisfying one or more of the requirements set forth in Items (3) and (4) of this Rule. The Division shall provide determination on the acceptability of any such alternative prior to requesting Commission approval of local programs as required in Sub-Item (5)(c) of this Rule. Should a local government propose alternative requirements to achieve and maintain the rate targets described in Sub-Item (4)(a) of this Rule, it shall include in its program submittal technical information demonstrating the adequacy of those requirements. Should an alternative program propose monitoring of watersheds to compare measured loading to expected loading, it shall at a minimum include the following:
- (a) Engineering calculations that quantify expected loading from new development projects based on stormwater controls currently enforced;
 - (b) At least three years of continuous flow and nutrient monitoring data demonstrating that watershed loading rates are at or below rates that would result from meeting the requirements of this Rule and Rule .0278 of this Section based on the land cover composition of the watershed;
 - (c) An ongoing water quality monitoring program based on continuous flow and concentration sampling to be performed indefinitely into the future with results reported annually to the Division for review and approval;
 - (d) A corrective action plan to be implemented should data collected under the ongoing monitoring program demonstrate watershed loading is within 10 percent of the rate estimated in compliance with this Item; and

- (e) Should a local government submit an alternate program for consideration that includes areas within its jurisdiction outside of the monitored watershed it shall submit technical information demonstrating the areas outside of the monitored watershed can reasonably be expected to load at equal or lesser rates than those estimated in compliance with this Item based on comparative analysis of land uses and other factors affecting nutrient loading.

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).

15A NCAC 02B .0278 FALLS WATER SUPPLY NUTRIENT STRATEGY: STORMWATER MANAGEMENT FOR EXISTING DEVELOPMENT

This Rule establishes a staged, adaptive approach by which municipalities and counties shall contribute to achieving the nonpoint source loading objectives of the Falls Reservoir nutrient strategy by reducing or otherwise offsetting nutrient contributions from existing development. It provides local governments three years to develop programs that propose Stage I load reduction actions to the Division and requires local governments to begin and track measures to reduce nutrient loads from existing developed lands within their jurisdiction by January 15, 2014, as specified in Item (7). Local governments shall submit for approval and implement Stage II load reduction programs by January 15, 2021 and submit revised load reductions programs every five years thereafter. The following is the watershed stormwater strategy, as prefaced in Rule 15A NCAC 02B .0275, for existing development in the Falls watershed:

- (1) **PURPOSE.** The purposes of this Rule are as follows:
 - (a) To achieve and maintain the nonpoint source nitrogen and phosphorus percentage reduction objectives established for Falls Reservoir in Rule 15A NCAC 02B .0275 on nutrient loading from existing development in the Falls watershed relative to the baseline period defined in that rule. Existing development is defined in Rule 15A NCAC 02B .0276; and
 - (b) To protect the water supply, aquatic life, and recreational uses of Falls Reservoir.
- (2) **APPLICABILITY.** This Rule shall apply to municipalities and counties in the Falls watershed as identified in Rule 15A NCAC 02B .0275.
- (3) **STAGED AND ADAPTIVE IMPLEMENTATION REQUIREMENTS.** Local governments shall employ the following staged and adaptive implementation program. All local governments subject to this Rule shall develop load-reducing programs for submission to and approval by the Commission that include the following staged elements and meet the associated minimum standards for each stage of implementation:
 - (a) In Stage I, a local government subject to this Rule shall implement a load reduction program that provides estimates of, and plans for offsetting by calendar year 2020, nutrient loading increases from lands developed subsequent to the baseline period and not subject to the requirements of the local government's Falls Lake new development stormwater program. For these post-baseline existing developed lands, the current loading rate shall be compared to the loading rate for these lands prior to development for the acres involved, and the difference shall constitute the load reduction need in annual mass load, in pounds per year. Alternatively, a local government may assume uniform pre-development loading rates of 2.89 pounds/acre/year N and 0.63 pounds/acre/year P for these lands. The local government shall achieve this Stage I load reduction by calendar year 2020. This Stage I program shall meet the criteria defined in Item (4) of this Rule;
 - (b) By January 15, 2021 and every five years thereafter, a local government located in the Upper Falls Watershed shall submit and begin implementing a Stage II load reduction program that meets the following requirements:
 - (i) If a local government achieves the Stage I reduction objectives described in this Item, a local government's initial Stage II load reduction program shall, at the local government's election, either (A) achieve additional annual reductions in nitrogen and phosphorus loads from existing development greater than or equal to the average annual additional reductions achieved in the last seven years of Stage I or (B) provide for an annual expenditure that equals or exceeds the average annual amount the local government has spent to achieve nutrient reductions from existing development during the last seven years of Stage I. A local government's expenditures shall include all local government funds, including any state and federal grant funds used to achieve nutrient reductions from existing developed lands. The cost of achieving reductions from municipal wastewater treatment plants shall not be included in calculating a local government's expenditures. Notwithstanding this requirement, the EMC may approve an initial Stage II load reduction program based on a lower annual level of reduction or a lower annual level of expenditure if the local government demonstrates that continuing the prior annual level of reduction or annual level of expenditure is not reasonable or cost-effective given the reductions that will be achieved, or the expenditure would cause serious financial hardship to the local government;

- (ii) If Stage I reduction objectives are not achieved, a local government's initial Stage II load reduction program shall, at the local government's election, either (A) achieve additional annual reductions in nitrogen and phosphorus loads from existing development greater than or equal to the average annual additional reductions achieved in the highest three years of implementation of Stage I or (B) provide for an annual expenditure that equals or exceeds the average annual amount the local government has spent to achieve nutrient reductions from existing development during the highest three years of implementation of Stage I. Annual expenditures shall be calculated in accordance with Sub-Item (3)(b)(i) of this Item;
 - (iii) Subsequent five year programs shall be designed to achieve the Stage II percent load reduction goals from existing developed lands in a local government's jurisdiction, shall include timeframes for achieving these goals and shall meet the requirements of Item (4) of this Rule;
- (4) ELEMENTS OF LOAD REDUCTION PROGRAMS. A local government's Stage I and Stage II load reduction program shall address the following elements:
- (a) Jurisdictions in the Eno River and Little River subwatersheds shall, as a part of their Stage I load reduction programs, begin and continuously implement a program to reduce loading from discharging sand filters and malfunctioning septic systems discharging into waters of the State within those jurisdictions and subwatersheds;
 - (b) Jurisdictions within any Falls subwatershed in which chlorophyll a levels have exceeded 40 micrograms/liter in more than seventy-five percent of the monitoring events in any calendar year shall, as part of their Stage I load reduction programs, begin and continuously implement a program to reduce nutrient loading into the waters of the State within those jurisdictions and that subwatersheds;
 - (c) The total amount of nutrient loading reductions in Stage I is not increased for local jurisdictions by the requirements to add specific program components to address loading from malfunctioning septic systems and discharging sand filters or high nutrient loading levels pursuant to Sub-Items (4)(a) and (b) of this Item;
 - (d) In preparation for implementation of their Stage I and Stage II load reduction programs, local governments shall develop inventories and characterize load reduction potential to the extent that accounting methods allow of the following by January 2013:
 - (i) Wastewater collection systems;
 - (ii) Discharging sand filter systems, including availability of or potential for central sewer connection;
 - (iii) Properly functioning and malfunctioning septic systems;
 - (iv) Restoration opportunities in utility corridors;
 - (v) Fertilizer management plans for local government-owned lands;
 - (vi) Structural stormwater practices, including intended purpose, condition, potential for greater nutrient control; and
 - (vii) Wetlands and riparian buffers including potential for restoration opportunities;
 - (e) A local government's load reduction need shall be based on the developed lands that fall within its general police powers and within the Falls watershed;
 - (f) The load reduction need shall not include lands under state or federal control, and a county shall not include lands within its jurisdictional boundaries that are under municipal police powers;
 - (g) Nitrogen and phosphorus loading from existing development, including loading from onsite wastewater treatment systems to the extent that accounting methods allow, shall be calculated by applying the accounting tool described in Sub-Item (7)(a) and shall quantify baseline loads of nitrogen and phosphorus to surface waters in the local government's jurisdiction as well as loading changes post-baseline. It shall also calculate target nitrogen and phosphorus loads and corresponding load reduction needs;
 - (h) The Commission shall recognize reduction credit for early implementation of policies and practices implemented after January 1, 2007 and before timeframes required by this Rule, to reduce runoff and discharge of nitrogen and phosphorus per Session Law 2009-486. The load reduction program shall identify specific load-reducing practices implemented to date

subsequent to the baseline period and for which the local government is seeking credit. It shall estimate load reductions for these practices and their anticipated duration using methods provided for in Sub-Item (5)(a);

- (i) The program shall include a proposed implementation schedule that includes annual implementation expectations. The load reduction program shall identify the types of activities the local government intends to implement and types of existing development affected, a prioritization of practices, magnitude of reductions it expects to achieve from each, and the costs and efficiencies of each activity to the extent information is available. The program shall identify the duration of anticipated loading reductions, and may seek activities that provide long-term reductions;
- (j) The load reduction program shall identify anticipated funding mechanisms or sources and discuss steps take or planned to secure such funding;
- (k) The program shall address the extent of load reduction opportunities intended from the following types of lands:
 - (i) Lands owned or otherwise controlled by the local government;
 - (ii) Each land use type of privately owned existing development including projected redevelopment, on which the local government's load reduction need is based as described in this Item; and
 - (iii) Lands other than those on which the local government's load reduction need is based as described in this Item, including lands both within and outside its jurisdiction and including the use of interlocal agreements and private third party sellers;
- (l) The program shall address the extent of load reduction proposed from the following stormwater and ecosystem restoration activities:
 - (i) Bioretention;
 - (ii) Constructed wetland;
 - (iii) Sand filter;
 - (iv) Filter strip;
 - (v) Grassed swale;
 - (vi) Infiltration device;
 - (vii) Extended dry detention;
 - (viii) Rainwater harvesting system;
 - (ix) Treatment of redevelopment;
 - (x) Overtreatment of new development;
 - (xi) Removal of impervious surface;
 - (xii) Retrofitting treatment into existing stormwater ponds;
 - (xiii) Off-line regional treatment systems;
 - (xiv) Wetland or riparian buffer restoration; and
 - (xv) Reforestation with conservation easement or other protective covenant;
- (m) The program shall evaluate the load reduction potential from the following wastewater activities:
 - (i) Creation of surplus relative to an allocation established in Rule 15A NCAC 02B .0279;
 - (ii) Expansion of surplus allocation through regionalization;
 - (iii) Connection of discharging sand filters and malfunctioning septic systems to central sewer or replacement with permitted non-discharge alternatives;
 - (iv) Removal of illegal discharges; and
 - (v) Improvement of wastewater collection systems;
- (n) A local government may propose in its load reduction program the use of the following measures in addition to items listed in (l) and (m), or may propose other measures for which it can provide accounting methods acceptable to the Division:
 - (i) Redirecting runoff away from impervious surfaces;
 - (ii) Soil amendments;
 - (iii) Stream restoration;
 - (iv) Improved street sweeping; and

- (v) Source control, such as pet waste and fertilizer ordinances;
- (o) The program shall include evaluation of load reduction potential relative to the following factors:
 - (i) Extent of physical opportunities for installation;
 - (ii) Landowner acceptance;
 - (iii) Incentive and education options for improving landowner acceptance;
 - (iv) Existing and potential funding sources and magnitudes;
 - (v) Practice cost-effectiveness (e.g., cost per pound of nutrient removed);
 - (vi) Increase in per capita cost of a local government's stormwater management program to implement the program;
 - (vii) Implementation rate without the use of eminent domain; and
 - (viii) Need for and projected role of eminent domain;
- (5) The Commission shall approve a Stage I load reduction program if it is consistent with Items (3) and (4) of this Rule. The Commission shall Approve a Stage II load reduction program if it is consistent with Items (3) and (4) of this Rule unless the Commission finds that the local governments can, through the implementation of reasonable and cost-effective measures not included in the proposed program, meet the Stage II nutrient load reductions required by this Rule by a date earlier than that proposed by the local government. If the Commission finds that there are additional or alternative reasonable and cost-effective measures, the Commission may require the local government to modify its proposed program to include such measures to achieve the required reductions by the earlier date. If the Commission requires such modifications, the local government shall submit a modified program within two months. The Division shall recommend that the Commission approve or disapprove the modified program within three months after receiving the modified program. In determining whether additional or alternative load reduction measures are reasonable and cost effective, the Commission shall consider factors identified in Sub-Item (4)(o) of this Rule. The Commission shall not require additional or alternative measures that would require a local government to:
 - (a) Install or require installation of a new stormwater collection system in an area of existing development unless the area is being redeveloped;
 - (b) Acquire developed private property; or
 - (c) Reduce or require the reduction of impervious surfaces within an area of existing development unless the area is being redeveloped.
- (6) A municipality shall have the option of working with the county or counties in which it falls, or with another municipality or municipalities within the same subwatershed, to jointly meet the loading targets from all lands within their combined jurisdictions within a subwatershed. A local government may utilize private or third party sellers. All reductions involving trading with other parties shall meet the requirements of Rule 15A NCAC 02B .0282.
- (7) RULE IMPLEMENTATION. This Rule shall be implemented as follows:
 - (a) By July 2013, the Division shall submit a Stage I model local program to the Commission for approval that embodies the criteria described in Items (3)(a) and (4) of this Rule. The Division shall work in cooperation with subject local governments and other watershed interests in developing this model program, which shall include the following:
 - (i) Model local ordinances as applicable;
 - (ii) Methods to quantify load reduction requirements and resulting load reduction assignments for individual local governments;
 - (iii) Methods to account for discharging sand filters, malfunctioning septic systems, and leaking collection systems; and
 - (iv) Methods to account for load reduction credits from various activities;
 - (b) Within six months after the Commission's approval of the Stage I model local program, subject local governments shall submit load reduction programs that meet or exceed the requirements of Items (3) and (4) of this Rule to the Division for review and preliminary approval and shall begin implementation and tracking of measures to reduce nutrient loads from existing developed lands within their jurisdictions;
 - (c) Within 20 months of the Commission's approval of the Stage I model local program, the Division shall provide recommendations to the Commission on existing development load reduction programs. The Commission shall either approve the programs or require changes

based on the standards set out in Item (4) of this 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) Within three months after the Commission's approval of a Stage I local existing development load reduction program, the local government shall complete adoption of and begin implementation of its existing development Stage I load reduction program;
- (e) Upon implementation of the programs required under Item (4) of this Rule, local governments shall provide annual reports to the Division documenting their progress in implementing those requirements within three months following each anniversary of program implementation date until such time the Commission determines they are no longer needed to ensure maintenance of reductions or that standards are protected. Annual reports shall include accounting of total annual expenditures, including local government funds and any state and federal grants used toward load reductions achieved from existing developed lands. Local governments shall indefinitely maintain and ensure performance of implemented load-reducing measures;
- (f) By January 15, 2021 and every five years thereafter until accounting determines that assigned load reductions have been achieved, standards are met in the lake, or the Commission takes other actions per Rule 15A NCAC 02B .0275, local governments located in the upper Falls watershed as defined in Item (3) of Rule 15A NCAC 02B .0275 shall submit and begin implementation of a Stage II load reduction program or program revision to the Division. Within nine months after submittal, the Division shall make recommendations to the Commission on approval of these programs. The Commission shall either approve the programs or require changes based on the standards set out in this Rule. If the Commission require changes, the applicable local governments shall submit revisions within two months, and the Division shall provide follow-up recommendations to the Commission within three months after receiving revisions. Upon program approval, local governments shall revise implementation as necessary based on the approved program;
- (g) A local government may, at any time after commencing implementation of its load reduction program, submit program revisions to the Division for approval based on identification of more cost-effective strategies or other factors not originally recognized;
- (h) Once either load reductions are achieved per annual reporting or water quality standards are met in the lake per Rule 15A NCAC 02B .0275, local governments shall submit programs to ensure no load increases and shall report annually per Sub-Item (e) on compliance with no increases and take additional actions as necessary;
- (i) At least every five years after the effective date, the Division shall review the accounting methods stipulated under Sub-Item (7)(a) to determine the need for revisions to those methods and to loading reductions assigned using those methods. Its review shall include values subject to change over time independent of changes resulting from implementation of this Rule, such as untreated export rates that may change with changes in atmospheric deposition. It shall also review values subject to refinement, such as nutrient removal efficiencies.

History Note: Authority G.S. 143-214.1; 143-214.5; 143-214.7; 143-214.12; 143-214.21; 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;
Eff. January 15, 2011 (this permanent rule replaces the temporary rule approved by the RRC on December 16, 2010).

15A NCAC 02B .0279 FALLS WATER SUPPLY NUTRIENT STRATEGY: WASTEWATER DISCHARGE REQUIREMENTS

The following is the NPDES wastewater discharge management strategy for the Falls of the Neuse Reservoir watershed (the Falls watershed):

- (1) **PURPOSE.** The purpose of this Rule is to establish minimum nutrient control requirements for point source wastewater discharges in the Falls watershed in order to restore and maintain water quality in the reservoir and protect its designated uses.
- (2) **APPLICABILITY.** This Rule applies to all wastewater treatment facilities discharging in the Falls watershed that receive nutrient-bearing wastewater and are subject to requirements for individual NPDES permits.
- (3) **DEFINITIONS.** For the purposes of this Rule, the definitions in 15A NCAC 02B .0276 and the following definitions apply:
 - (a) In regard to point source dischargers, treatment facilities, and wastewater flows and discharges,
 - (i) "Existing" means that which was subject to an NPDES permit as of December 31, 2006;
 - (ii) "Expanding" means that which has increased or will increase beyond its permitted flow as defined in this Rule; and
 - (iii) "New" means that which was not subject to an NPDES permit as of December 31, 2006.
 - (b) "Limit" or "limitation," except when specified as a concentration limit, means the mass quantity of nitrogen or phosphorus that a discharger or group of dischargers is authorized through an NPDES permit to release into surface waters of the Falls watershed.
 - (c) "MGD" means million gallons per day.
 - (d) "Permitted flow" means the maximum monthly average flow authorized in a facility's NPDES permit as of December 31, 2006.
- (4) **INITIAL NUTRIENT ALLOCATIONS FOR EXISTING UPPER FALLS DISCHARGERS.** This Item establishes initial Stage I and Stage II nutrient allocations for existing dischargers in the Upper Falls watershed:
 - (a) Stage I nitrogen and phosphorus allocations for dischargers with permitted flows of 0.1 MGD or greater are as follows:

Facility Name	NPDES No.	Mass Allocations (pounds/year)	
		Total Nitrogen	Total Phosphorus
North Durham	NC0023841	97,665	10,631
SGWASA	NC0026824	22,420	2,486
Hillsborough	NC0026433	10,422	1,352

- (b) Stage I allocations for dischargers with permitted flows less than 0.1 MGD are equal to the Stage II allocations specified in Sub-Items (c) and (d) of this Item.
- (c) Stage II nitrogen and phosphorus allocations are as follows:

Discharger Subcategories	Mass Allocations (pounds/year)	
	Total Nitrogen	Total Phosphorus
Permitted flows \geq 0.1 MGD	97,617	5,438
Permitted flows $<$ 0.1 MGD	1,052	175

- (d) The Stage II allocations in Sub-Item (c) of this Item shall be divided among the existing dischargers in each subcategory in proportion to the dischargers' permitted flows as defined in this Rule, and the resulting nutrient allocations shall be assigned to each individual discharger.
- (5) **CHANGES IN NUTRIENT ALLOCATIONS.**
 - (a) The aggregate and individual nutrient allocations available to point source dischargers in the Falls watershed are subject to change:

- (i) Whenever the Commission, through rulemaking, revises the nutrient reduction targets in or pursuant to 15A NCAC 02B .0275 in order to ensure the protection of water quality in the reservoir and its tributaries or to conform with applicable state or federal requirements;
 - (ii) Whenever one or more point source dischargers acquires any portion of the nonpoint load allocations under the provisions in this Rule and 15A NCAC 02B .0282, Options for Offsetting Nutrient Loads; or
 - (iii) As the result of allocation transfers conducted between point sources or between point and nonpoint sources and in accordance with this Rule, provided that nutrient allocation can be transferred and applied only within the portion of the Falls watershed to which it was originally assigned (Upper or Lower).
- (b) In the event that the Commission changes any nutrient reduction target specified in 15A NCAC 02B .0275 or in Item (4) of this Rule, the Commission shall also re-evaluate the apportionment among the dischargers and shall revise the individual allocations as necessary.
- (6) NUTRIENT DISCHARGE LIMITATIONS FOR EXISTING UPPER FALLS DISCHARGERS.
- (a) Beginning with calendar year 2016, any existing discharger with a permitted flow of 0.1 MGD or greater shall limit its total nitrogen and phosphorus discharges to its active, individual Stage I allocations as defined or modified pursuant to this Rule.
 - (b) Beginning with calendar year 2036, except as provided in Sub-item (d) of this Item, each existing discharger with a permitted flow greater than or equal to 0.1 MGD shall limit its total nitrogen and phosphorus discharges to its active, individual Stage II allocations as defined or modified pursuant to this Rule.
 - (c) Not later than March 15, 2011, the Director shall notify existing permittees of the individual Stage I and Stage II nutrient allocations initially assigned to them pursuant to this Rule.
 - (d) Not later than January 15, 2027, each existing discharger with a permitted flow greater than or equal to 0.1 MGD shall submit to the Division a plan for meeting its Stage II mass limitations. The plan shall describe the discharger's strategy for complying with the limitations and shall include a schedule for the design and construction of facility improvements and for the development and implementation of related programs necessary to the strategy. If a discharger determines that it cannot meet its limitations by calendar year 2036, the discharger may include its findings in the plan and request an extension of its compliance dates for the nitrogen and phosphorus limitations. This alternate plan shall document the compliance strategies considered and the reasons each was judged infeasible; identify the minimum loadings that are technically and economically feasible by 2036; and propose intermediate limits for the period beginning with 2036 and extending until the Stage II limitations can be met. Within 180 days of receipt, the Division shall approve the plan as submitted, which could include intermediate limits, or inform the discharger of any changes or additional information needed for approval. The Division shall incorporate the approved nitrogen and phosphorus mass limitations and compliance dates into the discharger's NPDES permit upon the next renewal or other major permit action following plan approval. If the Division extends the dates by which a discharger must meet Stage II limitations, the discharger shall update and submit its plan for Division approval every five years after the original submittal, and the Division shall take necessary and appropriate action as with the original plan, until the Stage II limitations are satisfied.
 - (e) It is the intent of this Item that all dischargers shall make continued progress toward complying with Stage II mass limitations. The Division shall not approve intermediate limitations that exceed either the applicable Stage I limitations or intermediate limitations previously approved pursuant to this Item.
- (7) NUTRIENT DISCHARGE LIMITATIONS FOR EXISTING LOWER FALLS DISCHARGERS.
- (a) Beginning with calendar year 2016, any existing discharger with a permitted flow of 0.1 MGD or greater shall limit its total nitrogen and phosphorus discharges as specified in this Item.
 - (b) CONCENTRATION LIMITS. The nitrogen and phosphorus discharge limits for existing dischargers shall be as follows:

Limit Type	Discharge Limits (milligrams/liter)	
	Total Nitrogen	Total Phosphorus
Monthly Average	8.0	1.0
Annual Average	5.5	0.5

Existing facilities must meet both monthly average and annual average limits in any given calendar year.

(c) **MASS LIMITS.**

- (i) In addition to the concentration limits specified in this Item, the collective annual mass discharge of total phosphorus shall not exceed 911 pounds in any calendar year.
- (ii) Any discharger may request a mass discharge limit in lieu of the concentration limit for nitrogen or phosphorus or both, in which case the Director shall set a limit equivalent to the annual average concentration limit at the facility's permitted flow. The resulting mass limit shall become effective with the ensuing calendar year or with calendar year 2016, whichever is later.

(8) **NUTRIENT CONTROL REQUIREMENTS FOR NEW DISCHARGERS.**

- (a) Any person proposing a new wastewater discharge in the Upper Falls watershed shall meet the following requirements prior to applying for an NPDES permit:
 - (i) Evaluate all practical alternatives to said discharge, pursuant to 15A NCAC 02H .0105(c)(2);
 - (ii) If the results of the evaluation support a new discharge, acquire sufficient nitrogen and phosphorus allocations for the discharge. The proponent may obtain allocation for the proposed discharge from existing dischargers pursuant to the applicable requirements of Item (10) of this Rule or obtain allocation from other sources to offset the increased nutrient loads resulting from the proposed discharge. The proponent may fund offset measures by making payment to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that program or to another seller of offset credits approved by the Division or may implement other offset measures contingent upon approval by the Division, either of which shall meet the requirements of Rule 15A NCAC 02B .0282. The amount of allocation or offsets obtained shall be sufficient for the duration of the discharge or for a period of 30 years, whichever is shorter. Payment for each allocation or offset shall be made prior to the ensuing permit issuance;
 - (iii) Determine whether the proposed discharge of nutrients will cause local water quality impacts; and
 - (iv) Provide documentation with its NPDES permit application demonstrating that the requirements of Sub-Items (a)(i) through (a)(iii) of this Item have been met.
- (b) The nutrient discharge limits for a new facility in the Upper Falls watershed shall not exceed the mass loads equivalent to a concentration of 3.0 milligrams per liter nitrogen or 0.1 milligrams per liter phosphorus at the permitted flow in the discharger's NPDES permit.
- (c) Upon the effective date of its NPDES permit, a new discharger in the Upper Falls watershed shall be subject to nitrogen and phosphorus limits not to exceed its active individual discharge allocations in any given calendar year.
- (d) The Director shall not issue an NPDES permit for any new wastewater facility that would discharge in the Lower Falls watershed and to which this Rule would apply.

(9) **NUTRIENT CONTROL REQUIREMENTS FOR EXPANDING DISCHARGERS.**

- (a) Any person proposing to expand an existing wastewater discharge in the Upper Falls watershed beyond its permitted flow shall meet the following requirements prior to applying for an NPDES permit:
 - (i) Evaluate all practical alternatives to said discharge, pursuant to 15A NCAC 02H .0105(c)(2);
 - (ii) If the results of the evaluation support an expanded discharge, acquire sufficient nitrogen and phosphorus allocations for the discharge. The proponent may obtain allocation for the proposed discharge from existing dischargers pursuant to the

applicable requirements of Item (10) of this Rule or obtain allocation from other sources to offset the increased nutrient loads resulting from the proposed discharge.

The proponent may fund offset measures by making payment to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that program or to another seller of offset credits approved by the Division or may implement other offset measures contingent upon approval by the Division, either of which shall meet the requirements of Rule 15A NCAC 02B .0282. The amount of allocation or offsets obtained shall be sufficient for the duration of the discharge or for a period of 30 years, whichever is shorter. Payment for each allocation or offset shall be made prior to the ensuing permit issuance;

- (iii) Determine whether the proposed discharge of nutrients will cause local water quality impact; and
- (iv) Provide documentation with its NPDES permit application demonstrating that the requirements of Sub-Items (a)(i) through (a)(iii) of this Item have been met;
- (b) The nutrient discharge limits for an expanding facility in the Upper Falls watershed shall not exceed the mass value equivalent to a concentration of 3.0 milligrams per liter nitrogen or 0.1 milligrams per liter phosphorus at the expanded flow limit in the discharger's NPDES permit; except that this provision shall not result in an active allocation or limit that is less than originally assigned to the discharger under this Rule.
- (c) Upon expansion or upon notification by the Director that it is necessary to protect water quality, any discharger with a permitted flow of less than 0.1 MGD in the Upper Falls watershed, shall become subject to total nitrogen and total phosphorus permit limits not to exceed its active individual discharge allocations.
- (d) The Director shall not issue an NPDES permit for the expansion of any wastewater discharge in the Lower Falls watershed to which this Rule applies.

(10) ADDITIONAL PROVISIONS REGARDING NUTRIENT ALLOCATIONS AND LIMITATIONS.

- (a) Annual mass nutrient limits shall be established as calendar-year limits.
- (b) Any discharger holding nutrient allocations pursuant to this Rule may by mutual agreement transfer all or part of its allocations to any new, existing, or expanding dischargers or to other person(s) in the Falls watershed, subject to the provisions of this Rule and the Falls nutrient strategy, except that allocation shall not be transferred between the Upper and Lower Falls watersheds.
- (c) For NPDES compliance purposes, the enforceable nutrient limits for an individual facility or for a compliance association described in Item (11) of this Rule shall be the effective limits in the governing permit, regardless of the allocation held by the discharger or association.
- (d) The Director may establish more stringent nitrogen or phosphorus discharge limits for any discharger upon finding that such limits are necessary to prevent the discharge from causing adverse water quality impacts on surface waters tributary to Falls Reservoir. The Director shall establish such limits through modification of the discharger's NPDES permit in accordance with applicable rules and regulations. When the Director does so, the discharger retains its nutrient allocations, and the non-active portion of the discharger's allocation becomes reserve allocation. The allocation remains in reserve until the Director determines that less stringent limits are allowable or until the allocation is applied to another discharge not subject to such water quality-based limits.
- (e) In order for any transfer of allocation to become effective as a discharge limit in an individual NPDES permit, the discharger must request and obtain modification of the permit. Such request shall:
 - (i) Describe the purpose and nature of the modification;
 - (ii) Describe the nature of the transfer agreement, the amount of allocation transferred, and the dischargers or persons involved;
 - (iii) Provide copies of the transaction agreements with original signatures consistent with NPDES signatory requirements; and
 - (iv) Demonstrate to the Director's satisfaction that the increased nutrient discharge will not violate water quality standards in localized areas.

- (f) Changes in a discharger's nutrient limits shall become effective upon modification of its individual permit but no sooner than January 1 of the year following modification. If the modified permit is issued after January 1, the Director may make the limit effective on that January 1 provided that the discharger made acceptable application in a timely manner.
 - (g) REGIONAL FACILITIES. In the event that an existing discharger or group of dischargers accepts wastewater from another NPDES-permitted treatment facility and that acceptance results in the elimination of the discharge from the other treatment facility, the eliminated facility's nutrient allocations shall be transferred and added to the accepting discharger's allocations, except that allocation shall not be transferred between the Upper and Lower Falls watersheds.
- (11) GROUP COMPLIANCE OPTION.
- (a) Any facilities within the Upper or the Lower Falls watersheds may form a group compliance association to meet nutrient limits collectively within their respective portion of the Falls watershed. More than one group compliance association may be established in either portion of the watershed. No facility may be a co-permittee member of more than one association for any given calendar year.
 - (b) Any such association must apply for and shall be subject to an NPDES permit that establishes the effective nutrient limits for the association and for its members.
 - (c) No later than 180 days prior to the proposed date of a new association's operation or expiration of an existing association's NPDES permit, the association and its members shall submit an application for an NPDES permit for the discharge of nutrients to surface waters of the Falls watershed. The association's NPDES permit shall be issued to the association and its members. It shall specify the nutrient limits for the association and for each of its co-permittee members. Association members shall be deemed in compliance with the permit limits for nitrogen and phosphorus contained in their individually issued NPDES permits so long as they remain members in an association.
 - (d) An association's nitrogen and phosphorus limits shall be the sum of its members' individual active allocations for each nutrient plus any other active allocation obtained by the association or its members.
 - (e) The individual limits for each member in the association permit shall initially be equivalent to the discharge limits in effect in the member's NPDES permit. Thereafter, changes in individual allocations or limits shall be incorporated into the members' individual permits before they are included in the association permit.
 - (f) An association and its members may reapportion the individual allocations of its members on an annual basis. Changes in individual allocations or limits must be incorporated into the members' individual permits before they are included in the association permit.
 - (g) Changes in an association's nutrient limits shall become effective no sooner than January 1 of the year following permit modification. If the modified permit is issued after January 1, the Director may make the limit effective on that January 1 provided that the association made acceptable application in a timely manner.
 - (h) Beginning with the first full calendar year that the nitrogen or phosphorus limits are effective, an association that does not meet its permit limit for nitrogen or phosphorus for a calendar year shall, no later than May 1 of the year following the exceedance, make an offset payment to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that program or by implementing other load offsetting measures contingent upon approval by the Division, either of which shall meet the requirements of Rule 15A NCAC 02B .0282.
 - (i) Association members shall be deemed in compliance with their individual limits in the association NPDES permit for any calendar year in which the association is in compliance with its group limit for that nutrient. If the association fails to meet its limit, the association and the members that have failed to meet their individual nutrient limits in the association NPDES permit shall be deemed out of compliance with the association NPDES permit.

History Note: Authority G.S. 143-214.1; 143-214.5; 143-215; 143-215.1; 143-215.3(a)(1); 143-215B; 143B-282(c); 143B-282(d); S.L. 2005-190; S.L. 2006-259;

Eff. January 15, 2011 (this permanent rule replaces the temporary rule approved by the RRC on December 16, 2010).

15A NCAC 02B .0280 FALLS RESERVOIR WATER SUPPLY NUTRIENT STRATEGY: AGRICULTURE

This Rule sets forth a staged process, as prefaced in 15A NCAC 02B .0275, by which agricultural operations in the Falls watershed will collectively limit their nitrogen and phosphorus loading to the Falls Reservoir. This process is as follows:

- (1) **PURPOSE.** The purposes of this Rule are to achieve and maintain the percentage reduction objectives defined in 15A NCAC 02B .0275 for the collective agricultural loading of nitrogen and phosphorus from their respective 2006 baseline levels, to the extent that best available accounting practices will allow, in two stages. Stage I shall be 10 years and Stage II shall be 15 years, as set out in Item (5) of this Rule. Additionally this Rule will protect the water supply uses of the Falls Reservoir.
- (2) **PROCESS.** This Rule requires accounting for agricultural land management practices at the county level in the Falls watershed, and implementation of practices by farmers to collectively achieve the nutrient reduction objectives on a watershed basis. Producers may be eligible to obtain cost share and technical assistance from the NC Agriculture Cost Share Program and similar federal programs to contribute to their counties' nutrient reductions. A Watershed Oversight Committee and Local Advisory Committees will develop strategies, coordinate activities, and account for progress.
- (3) **LIMITATION.** This Rule does not fully address significant agricultural nutrient sources in that it does not directly address atmospheric sources of nitrogen to the Falls watershed from agricultural operations located both within and outside of the Falls watershed. As better information becomes available from ongoing research on atmospheric nitrogen loading to the Falls watershed from these sources, and on measures to control this loading, the Commission may undertake separate rule-making to require such measures it deems necessary from these sources to support the objectives of the Falls Nutrient Strategy.
- (4) **APPLICABILITY.** This Rule shall apply to all persons engaging in agricultural operations in the Falls watershed, including those related to crops, horticulture, livestock, and poultry. This Rule applies to livestock and poultry operations above the size thresholds in this Item in addition to requirements for animal operations set forth in general permits issued pursuant to G.S. 143-215.10C. Nothing in this Rule shall be deemed to allow the violation of any assigned surface water, groundwater, or air quality standard by any agricultural operation, including any livestock or poultry operation below the size thresholds in this Item. This Rule shall not apply to dedicated land application sites permitted under 15A NCAC 02T .1100. This Rule does not require specific actions by any individual person or operation if agriculture in the Falls watershed can collectively achieve its Stage I nutrient reduction objectives, in the manner described in Item (5) of this Rule, by calendar year 2020. If the Stage I nutrient reduction objectives are not met by calendar year 2020, Stage II of implementation shall require specific actions by individuals and operations. For the purposes of this Rule, agricultural operations are activities that relate to any of the following pursuits:
 - (a) The commercial production of crops or horticultural products other than trees. As used in this Rule, commercial shall mean activities conducted primarily for financial profit.
 - (b) Research activities in support of such commercial production.
 - (c) The production or management of any of the following number of livestock or poultry at any time, excluding nursing young:
 - (i) Five or more horses;
 - (ii) 20 or more cattle;
 - (iii) 20 or more swine not kept in a feedlot, or 150 or more swine kept in a feedlot;
 - (iv) 120 or more sheep;
 - (v) 130 or more goats;
 - (vi) 650 or more turkeys;
 - (vii) 3,500 or more chickens; or
 - (viii) Any single species of any other livestock or poultry, or any combination of species of livestock or poultry that exceeds 20,000 pounds of live weight at any time.
- (5) **METHOD FOR RULE IMPLEMENTATION.** This Rule shall be implemented in two stages and through a cooperative effort between the Watershed Oversight Committee and Local Advisory Committees in each county. The membership, roles and responsibilities of these committees are set forth in Items (7) and (8) of this Rule. Committee's activities shall be guided by the following:
 - (a) In Stage I, agriculture shall achieve a collective 20 percent reduction in nitrogen loading and a 40 percent reduction in phosphorus loading relative to the 2006 baseline by calendar year 2020.

- (b) In Stage II, beginning in calendar year 2021 agriculture shall achieve a collective 40 percent reduction in nitrogen loading and a 77 percent reduction in phosphorus loading relative to the 2006 baseline by calendar year 2035.
 - (c) By January 15, 2013, the Watershed Oversight Committee shall provide the Commission with an initial assessment of the extent to which agricultural operations in the Falls watershed have achieved the Stage I nitrogen and phosphorus reduction objectives identified in Item (1) of this rule through activities conducted since the baseline period. The Watershed Oversight Committee shall use the accounting process described in Items (7) and (8) of this rule to make its assessment.
 - (d) If annual reporting following the 10th year of implementation indicates that agriculture has not collectively achieved its Stage I nitrogen and phosphorus reduction objectives identified in this Item, Stage II shall include specific implementation requirements for individual operators. Specifically, within five years of the start of Stage II, cropland operators shall establish vegetated riparian buffers adjacent to streams on all cropland where such buffers do not already exist. Additionally, pastured livestock operators shall establish excluded vegetated riparian buffers adjacent to streams where such excluded buffers do not already exist. Streams to which these requirements apply shall be those that meet the classification of intermittent or perennial streams using the September 2010 version of the *Identification Methods for the Origins of Intermittent and Perennial Streams Manual* published by the Division. Existing and newly established riparian buffers shall be a minimum of 20 feet in width with criteria further defined by the Watershed Oversight Committee.
The Commission may also consider alternative recommendations from the Watershed Oversight Committee based on the Committee's assessment of the practicability of agricultural operations meeting the Stage I objectives. Should the Commission accept some alternative form of individual compliance, then it shall also subsequently approve a framework proposed by the Watershed Oversight Committee for allowing producers to obtain credit through offsite measures. Such offsite measures shall meet the requirements of 15A NCAC 02B .0282.
 - (e) Should a committee called for under Item (5) of this Rule not form nor follow through on its responsibilities such that a local strategy is not implemented in keeping with Item (8) of this Rule, the Commission shall require all persons subject to this Rule in the affected area to implement BMPs as needed to meet the objectives of this Rule.
- (6) RULE REQUIREMENTS FOR INDIVIDUAL OPERATIONS. Persons subject to this Rule shall adhere to the following requirements:
- (a) Persons subject to this Rule shall register their operations with their Local Advisory Committee according to the requirements of Item (8) of this Rule;
 - (b) Persons are not required to implement any specific BMPs in Stage I, with the exception of Sub-Item (d) of this Item, but may elect to contribute to the collective local nutrient strategy by implementing any BMPs they choose that are recognized by the Watershed Oversight Committee as nitrogen-reducing or phosphorus-reducing BMPs;
 - (c) The Division shall require that residuals application, animal waste application, and surface irrigation pursuant to permits issued under 15A NCAC 02T .1100, 15A NCAC 02T .1300, and 15A NCAC 02T .0500 respectively, to lands within the Falls watershed be done in a manner that minimizes the potential for nitrogen and phosphorus loading to surface waters by implementing the following measures:
 - (i) Animal waste application operators subject to the permitting requirements in this Sub-item shall meet Realistic Yield Expectation based nitrogen application rates and shall apply phosphorus in compliance with guidance established in the most recent version of North Carolina Agricultural Research Service's Technical Bulletin 323, "North Carolina Phosphorus Loss Assessment: I Model Description and II. Scientific Basis and Supporting Literature" developed by the Department of Soil Science and Biological and Agricultural Engineering at North Carolina State University. The Division shall modify all existing permits for affected lands to include these requirements upon their next renewal after effective date, and shall include these requirements in all new permits issued after effective date. Permittees

- shall be required to comply with this condition upon permit issuance or renewal as applicable; and
- (ii) Residual application and surface irrigation operators subject to the permitting requirements in this Sub-item shall meet Realistic Yield Expectation based nitrogen application rates and shall conduct and provide to the Division annual assessments of their soil test phosphorus index results and phosphorus loading rates. At such time as data quantifying the fate and transport of chemically bound phosphorus are made available, the Division may make recommendations to the Commission to consider whether revisions to the requirements of this Rule are needed and may initiate rulemaking or any other action allowed by law.
 - (d) Should a local strategy not achieve its Stage I objectives by calendar year 2020; operations within that local area shall face specific implementation requirements, as described under Sub-Item (5)(d) of this Rule.
- (7) WATERSHED OVERSIGHT COMMITTEE. The Watershed Oversight Committee shall have the following membership, role and responsibilities:
- (a) MEMBERSHIP. The Director shall be responsible for forming a Watershed Oversight Committee by March 15, 2011. Until such time as the Commission determines that long-term maintenance of the nutrient loads is assured, the Director shall either reappoint members or replace members at least every six years. The Director shall solicit nominations for membership on this Committee to represent each of the following interests, and shall appoint one nominee to represent each interest except where a greater number is noted. The Director of the Division of Water Quality may appoint a replacement at any time for an interest in Sub-Items (7)(a)(vi) through (7)(a)(x) of this Rule upon request of representatives of that interest or by the request of the Commissioner of Agriculture:
 - (i) Division of Soil and Water Conservation;
 - (ii) United States Department of Agriculture-Natural Resources Conservation Service (shall serve in an "ex-officio" non-voting capacity and shall function as a technical program advisor to the Committee);
 - (iii) North Carolina Department of Agriculture and Consumer Services;
 - (iv) North Carolina Cooperative Extension Service;
 - (v) Division of Water Quality;
 - (vi) Three environmental interests, at least two of which are residents of the Falls watershed;
 - (vii) General farming interests;
 - (viii) Pasture-based livestock interests;
 - (ix) Equine livestock interests;
 - (x) Cropland farming interests; and
 - (xi) The scientific community with experience related to water quality problems in the Falls watershed.
 - (b) ROLE. The Watershed Oversight Committee shall:
 - (i) Develop tracking and accounting methods for nitrogen and phosphorus loading and submit methods to the Water Quality Committee of the Commission for approval based on the standards set out in Sub-Item (7)(c) of this Rule by March 15, 2012;
 - (ii) Identify and implement future refinements to the accounting methods as needed to reflect advances in scientific understanding, including establishment or refinement of nutrient reduction efficiencies for BMPs;
 - (iii) By January 15, 2013, collect data needed to conduct initial nutrient loading accounting for the baseline period and the most current year feasible, perform this accounting, and determine the extent to which agricultural operations have achieved the Stage I nitrogen loading objective and phosphorus loading trend indicators for the watershed and present findings to the Water Quality Committee of the Commission;
 - (iv) Review, approve, and summarize local nutrient strategies if required pursuant to Sub-Item (5)(d) of this Rule and according to the timeframe identified in Sub-Item (8)(c)(ii) of this Rule. Provide these strategies to the Division;

- (v) Establish requirements for, review, approve and summarize local nitrogen and phosphorus loading annual reports as described under Sub-Item (8)(e) of this Rule, and present the report to the Division annually, until such time as the Commission determines that annual reports are no longer needed to fulfill the purposes of Rule. Present a report in January 2014 to the Commission. Should that report find that agriculture in the watershed has not met its collective nitrogen or phosphorus objective, include an assessment in that report of the practicability of producers achieving the Stage I objective by calendar year 2020, and recommendations to the Commission as deemed appropriate;
 - (vi) Obtain nutrient reduction efficiencies for BMPs from the scientific community associated with design criteria identified in rules adopted by the Soil and Water Conservation Commission, including 15A NCAC 06E .0104 and 15A NCAC 06F .0104; and
 - (vii) Investigate and, if feasible, develop an accounting method to equate implementation of specific nutrient-reducing practices on cropland or pastureland to reductions in nutrient loading delivered to streams;
 - (viii) Quantify the nitrogen and phosphorus credits generated by such practices for the purpose of selling or buying credits; establish criteria and a process as needed for the exchange of nutrient credits between parties subject to this rule with each other or with parties subject to other nutrient strategy rules in the Falls lake watershed pursuant to the requirements of 15A NCAC 02B .0282; obtain approval from the Division for this trading program pursuant to the requirements of Rule .0282; approve eligible trades; and ensure that such credits traded for purposes of meeting this Rule are accounted for and tracked separately from those contributing to the objectives of other rules of the Falls nutrient strategy.
- (c) ACCOUNTING METHODS. Success in meeting this Rule's purpose will be gauged by estimating percentage changes in nitrogen loading from agricultural lands in the Falls watershed and by evaluating broader trends in indicators of phosphorus loading from agricultural lands in the Falls watershed. The Watershed Oversight Committee shall develop accounting methods that meet the following requirements:
- (i) The nitrogen method shall estimate baseline and annual total nitrogen loading from agricultural operations in each county and for the entire Falls watershed;
 - (ii) The nitrogen and phosphorus methods shall include a means of tracking implementation of BMPs, including number, type, and area affected;
 - (iii) The nitrogen method shall include a means of estimating incremental nitrogen loading reductions from actual BMP implementation and of evaluating progress toward and maintenance of the nutrient objectives from changes in BMP implementation, fertilization, individual crop acres, and agricultural land use acres;
 - (iv) The nitrogen and phosphorus methods shall be refined as research and technical advances allow;
 - (v) The phosphorus method shall quantify baseline values for and annual changes in factors affecting agricultural phosphorus loading as identified by the phosphorus technical advisory committee established under 15A NCAC 02B .0256(f)(2)(C). The method shall provide for periodic qualitative assessment of likely trends in agricultural phosphorus loading from the Falls watershed relative to baseline conditions;
 - (vi) Phosphorus accounting may also include a scientifically valid, survey-based sampling of farms in the Falls watershed for the purpose of conducting field-scale phosphorus loading assessments and extrapolating phosphorus loading for the Falls watershed for the baseline period and at periodic intervals; and
 - (vii) Aspects of pasture-based livestock operations that potentially affect nutrient loading and are not captured by the accounting methods described above shall be accounted for in annual reporting to the extent that advances in scientific understanding reasonably allow. Such accounting shall, at a minimum, quantify changes in the extent of livestock-related nutrient controlling BMPs. Progress may be judged

based on percent change in the extent of implementation relative to percentage objectives identified in Item (5) of this Rule.

- (8) LOCAL ADVISORY COMMITTEES. Local Advisory Committees shall be formed for each county within the watershed by January 15, 2012, and shall have the following membership, roles, and responsibilities:
- (a) MEMBERSHIP. A Local Advisory Committee shall be appointed as provided for in this Item. It shall terminate upon a finding by the Commission that it is no longer needed to fulfill the purposes of this Rule. Each Local Advisory Committee shall consist of:
 - (i) One representative of the county Soil and Water Conservation District;
 - (ii) One representative of the county office of the United States Department of Agriculture Natural Resources Conservation Service;
 - (iii) One representative of the North Carolina Department of Agriculture and Consumer Services;
 - (iv) One representative of the county office of the North Carolina Cooperative Extension Service;
 - (v) One representative of the North Carolina Division of Soil and Water Conservation whose regional assignment includes the county;
 - (vi) At least two farmers who reside in the county; and
 - (vii) One representative of equine livestock interests.
 - (b) APPOINTMENT OF MEMBERS. The Director of the Division of Water Quality and the Director of the Division of Soil and Water Conservation of the Department of Environment and Natural Resources shall appoint members described in Sub-Items (8)(a)(i), (8)(a)(ii), (8)(a)(iv), and (8)(a)(v) of this Rule. The Director of the Division of Water Quality, with recommendations from the Director of the Division of Soil and Water Conservation and the Commissioner of Agriculture, shall appoint the members described in Sub-Items (8)(a)(iii) and (8)(a)(vi) of this Rule from persons nominated by nongovernmental organizations whose members produce or manage agricultural commodities in each county. Members of the Local Advisory Committees shall serve at the pleasure of their appointing authorities.
 - (c) ROLE. The Local Advisory Committees shall:
 - (i) Conduct a registration process for persons subject to this Rule. This registration process shall be completed by January 15, 2012. The registration process shall request at a minimum the type and acreage of agricultural operations. It shall provide persons with information on requirements and options under this Rule, and on available technical assistance and cost share options;
 - (ii) Develop local nutrient control strategies for agricultural operations, pursuant to Sub-Item (8)(d) of this Rule, to meet the nitrogen and phosphorus objectives of this Rule. Strategies shall be submitted to the Watershed Oversight Committee by July 2012;
 - (iii) Ensure that any changes to the design of the local strategy will continue to meet the nutrient objectives of this Rule; and
 - (iv) Submit reports to the Watershed Oversight Committee, pursuant to Sub-Item (8)(e) of this Rule, annually beginning in calendar year 2012 until such time as the Commission determines that annual reports are no longer needed to fulfill the purposes of this Rule.
 - (d) LOCAL NUTRIENT CONTROL STRATEGIES. Local Advisory Committees shall develop nutrient control strategies. If a Local Advisory Committee fails to submit a nutrient control strategy required in Sub-Item (8)(c)(ii) of this Rule, the Commission may develop one based on the accounting methods that it approves pursuant to Sub-Item (7)(b)(i) of this Rule. Local strategies shall meet the following requirements:
 - (i) Local nutrient control strategies shall be designed to achieve the required nitrogen loading reduction objectives and qualitative trends in indicators of agricultural phosphorus loading by calendar year 2020, and to maintain those reductions in perpetuity or until such time as this rule is revised to modify this requirement; and
 - (ii) Local nutrient control strategies shall specify the numbers, acres, and types of all agricultural operations within their areas, numbers of BMPs that will be

implemented by enrolled operations and acres to be affected by those BMPs, estimated nitrogen and phosphorus loading reductions, schedule for BMP implementation, and operation and maintenance requirements.

- (e) ANNUAL REPORTS. The Local Advisory Committees shall be responsible for submitting annual reports for their counties to the Watershed Oversight Committee until such time as the Commission determines that annual reports are no longer needed to fulfill the purposes of this Rule. The Watershed Oversight Committee shall determine reporting requirements to meet these objectives. Those requirements may include information on BMPs implemented by individual farms, proper BMP operation and maintenance, BMPs discontinued, changes in agricultural land use or activity, and resultant net nitrogen loading and phosphorus trend indicator changes. The annual reports in 2016 and 2026 shall address agriculture's success in complying with the load reduction requirements described in Items (5)(a) and (5)(b) of this Rule and shall include adjustments to address deficiencies to achieve compliance.
- (f) PROGRESS. In 2016 the Division of Water Quality, in consultation with the Watershed Oversight Committee, shall submit a report to the Commission gauging the extent to which reasonable progress has been achieved towards the Stage I objectives described in this Rule.

*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).*

15A NCAC 02B .0281 FALLS WATER SUPPLY NUTRIENT STRATEGY: STORMWATER REQUIREMENTS FOR STATE AND FEDERAL ENTITIES

The following is the stormwater strategy, as prefaced in Rule 02B .0275, for the activities of state and federal entities within the Falls watershed.

- (1) **PURPOSE.** The purposes of this Rule are as follows.
 - (a) To achieve and maintain, on new non-road development lands, the nonpoint source nitrogen and phosphorus percentage reduction objectives established for Falls Reservoir in 15A NCAC 02B .0275 relative to the baseline period defined in Rule, to provide the highest practicable level of treatment on new road development, and to achieve and maintain the percentage objectives on existing developed lands by reducing loading from state-maintained roadways and facilities, and from lands controlled by other state and federal entities in the Falls watershed;
 - (b) To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows from state-maintained roadways and facilities and from lands controlled by other state and federal entities in the Falls watershed; and
 - (c) To protect the water supply, aquatic life, and recreational uses of Falls Reservoir.
- (2) **APPLICABILITY.** This Rule shall apply to all existing and new development, both as defined in 15A NCAC 02B .0276, that lies within or partially within the Falls watershed under the control of the NC Department of Transportation (NCDOT), including roadways and facilities, and to all lands controlled by other state and federal entities in the Falls watershed.
- (3) **NON-NCDOT REQUIREMENTS.** With the exception of the NCDOT, all state and federal entities that control lands within the Falls watershed shall meet the following requirements:
 - (a) For any new development proposed within their jurisdictions that would disturb one quarter acre or more, non-NCDOT state and federal entities shall develop stormwater management plans for submission to and approval by the Division;
 - (b) The non-NCDOT state or federal entity shall include measures to ensure maintenance of best management practices (BMPs) implemented as a result of the provisions in Sub-Item (a) of this Item for the life of the development; and
 - (c) A plan to ensure enforcement and compliance with the provisions in Sub-Item (4) of this Rule for the life of the new development.
- (4) **PLAN APPROVAL REQUIREMENTS.** A developer's stormwater plan shall not be approved unless the following criteria are met:
 - (a) Nitrogen and phosphorus loads contributed by the proposed new development activity shall not exceed the following unit-area mass loading rates for nitrogen and phosphorus, respectively, expressed in units of pounds/acre/year: 2.2 and 0.33. Proposed 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 the developer shall provide stormwater control at least equal to the previous development. Proposed 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 objectives stated in 15A NCAC 02B .0275 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 this item. These requirements shall supersede those identified in 15A NCAC 02B .0104(q). 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) of 15A NCAC 02B .0277 or other equivalent method acceptable to the Division;
 - (b) The developer shall have the option of offsetting part of their nitrogen and phosphorus loads by implementing or funding offsite offset measures. Before using an offsite offset option, a development shall implement onsite structural stormwater controls that achieve one of the following levels of reductions:
 - (i) Proposed new development activity disturbing at least one quarter acre but less than one acre of land, except as stated in this Item, shall achieve 30 percent or more of

- the needed load reduction in both nitrogen and phosphorus loading onsite and shall meet any requirements for engineered stormwater controls described in this item;
- (ii) Except as stated in this Item, proposed new development activity that disturbs one acre of land or more shall achieve 50 percent or more of the needed load reduction in both nitrogen and phosphorus loading onsite and shall meet any requirements for engineered stormwater controls described in this Item; or
 - (iii) Proposed development that would replace or expand structures or improvements that existed as of December 2006, the end of the baseline period, and that increases impervious surface within a designated downtown area, regardless of area disturbed, shall achieve 30 percent of the needed load reduction in both nitrogen and phosphorus onsite, and shall meet any requirements for engineered stormwater controls described in this Item;
- (c) 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 this Item. A developer may use any measure that complies with the requirements of Rules .0240 and .0282 of this Section;
 - (d) Proposed new development subject to NPDES, water supply, and other state-mandated stormwater regulations shall comply with those regulations and with applicable permit limits 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, operation and maintenance responsibilities, vegetated setbacks, land application, and landfill provisions described in Sub-Items (3)(b)(i) and (3)(b)(ii) of the applicable rule among 15A NCAC 02B .0214 through .0216. Provided, 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 shall not be available in the Falls watershed;
 - (e) Stormwater systems shall be designed to control and treat at a minimum the runoff generated from all surfaces in the project area 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;
 - (f) To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, 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;
 - (g) New development may 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* dated June 2009, or the hydrologic criteria in the most recent version of that guidebook; and
 - (h) Proposed new development shall demonstrate compliance with the riparian buffer protection requirements of 15A NCAC 02B .0233 and .0242.
- (5) NON-NC DOT STAGED AND ADAPTIVE IMPLEMENTATION REQUIREMENTS. For existing development, non-NC DOT state and federal entities shall develop and implement staged load reduction programs for achieving and maintaining nutrient load reductions from existing development based on the standards set out in this Item. Such entities shall submit these load-reducing programs for approval by the Commission that include the following staged elements and meet the minimum standards for each stage of implementation:
- (a) In Stage I, entities subject to this rule shall implement a load reduction program that provides estimates of, and plans for offsetting by calendar year 2020, nutrient loading increases from lands developed subsequent to the baseline (2006) and not subject to the requirements of the Falls Lake new development stormwater program. For these existing developed lands, the current loading rate shall be compared to the loading rate for these lands prior to development for the acres involved, and the difference shall constitute the load reduction need in annual mass load, in pounds per year. Alternatively, a state or federal entity may

assume uniform pre-development loading rates of 2.89 pounds per acre per year N and 0.63 pounds per acre per year P for these lands. The entity shall achieve this stage one load reduction by calendar year 2020. This Stage I program shall meet the criteria defined in Item (4) of 15A NCAC 02B.0278; and

- (b) By January 15, 2021, and every five years thereafter, a state or federal entity located in the Upper Falls Watershed as defined in Item (11) of 15A NCAC 02B .0276 shall submit and begin implementing a Stage II load reduction program or revision designed to achieve the percent load reduction objectives from existing developed lands under its control, that includes timeframes for achieving these objectives and that meets the criteria defined in Items (5) and (6) of this Rule.
- (6) ELEMENTS OF NON-NCDOT LOAD REDUCTION PROGRAMS. A non-NCDOT state or federal entity load reduction program shall address the following elements:
- (a) State and federal entities in the Eno River and Little River subwatersheds shall, as part of their Stage I load reduction programs, begin and continuously implement a program to reduce loading from discharging sand filters and malfunctioning septic systems owned or used by state or federal agencies discharging into waters of the State within those subwatersheds;
 - (b) State and federal entities in any Falls subwatershed in which chlorophyll a levels have exceeded 40 ug/L in more than seventy-five percent of the monitoring events in any calendar year shall, as part of their Stage I load reduction programs, begin and continuously implement a program to reduce nutrient loading into the waters of the State within that subwatersheds;
 - (c) The total amount of nutrient loading reductions in Stage I is not increased for state and federal entities by the requirements to add specific program components to address loading from malfunctioning septic systems and discharging sand filters or high nutrient loading levels pursuant to Sub-Items (a) and (b) of this Item;
 - (d) In preparation for implementation of their Stage I and Stage II load reduction programs, state and federal entities shall develop inventories and characterize load reduction potential to the extent that accounting methods allow for the following:
 - (i) Wastewater collection systems;
 - (ii) Discharging sand filter systems, including availability of or potential for central sewer connection;
 - (iii) Properly functioning and malfunctioning septic systems;
 - (iv) Restoration opportunities in utility corridors;
 - (v) Fertilizer management plans for state and federally owned lands;
 - (vi) Structural stormwater practices, including intended purpose, condition, potential for greater nutrient control; and
 - (vii) Wetlands and riparian buffers including potential for restoration opportunities.
 - (e) A state or federal entities load reduction need shall be based on the developed lands owned or used by the state or federal entity within the Falls watershed;
 - (f) Nitrogen and phosphorous loading from existing developed lands, including loading from onsite wastewater treatment systems to the extent accounting methods allow, shall be calculated by applying the accounting tool described in Item (13) and shall quantify baseline loads of nitrogen and phosphorus to surface waters from the lands under the entity's control as well as loading changes post-baseline. It shall also calculate target nitrogen and phosphorus loads and corresponding reduction needs;
 - (g) Nitrogen and phosphorus loading from existing developed lands, including loading from onsite wastewater treatment systems to the extent accounting methods allow, shall be calculated by applying the accounting too described in Item (13) of this Rule and shall quantify baseline loads of nitrogen and phosphorus to surface waters from state and federal entities as well as loading changes post-baseline. It shall calculate target nitrogen and phosphorus loads and corresponding load reduction needs;
 - (h) The Commission shall recognize reduction credit for implementation of policies and practices implemented after January 1, 2007 and before January 15, 2011, to reduce runoff and discharge of nitrogen and phosphorus per Session Law 2009-486. The load reduction program shall identify specific load-reducing practices implemented subsequent to the

- baseline period and for which the entity is seeking credit. It shall estimate load reductions for these practices and their anticipated duration using methods provided for in Item (13);
- (i) The program shall include a proposed implementation schedule that includes annual implementation expectations. The load reduction program shall identify the types of activities the state or federal entity intends to implement and types of existing development affected, relative proportions or prioritization of practices, relative magnitude of reductions it expects to achieve from each, and the relative costs and efficiencies of each activity to the extent information is available. The program shall identify the duration of anticipated loading reductions, and may seek activities that provide long-term reductions;
 - (j) The load reduction program shall identify anticipated funding mechanisms or sources and discuss steps taken or planned to secure such funding;
 - (k) The program shall address the extent of load reduction opportunities intended from the following types of lands:
 - (i) Lands owned or otherwise controlled by the state or federal entity; and
 - (ii) Lands other than those on which the entity's load reduction need is based as described in this Item, including lands both within and outside its jurisdiction and third party sellers.
 - (l) The program shall address the extent of load reduction proposed from, at a minimum, the following stormwater and ecosystem restoration activities:
 - (i) Bioretention;
 - (ii) Constructed wetland;
 - (iii) Sand filter;
 - (iv) Filter Strip;
 - (v) Grassed swale;
 - (vi) Infiltration device;
 - (vii) Extended dry detention;
 - (viii) Rainwater harvesting system;
 - (ix) Treatment of Redevelopment;
 - (x) Overtreatment of new development;
 - (xi) Removal of impervious surface;
 - (xii) Retrofitting treatment into existing stormwater ponds;
 - (xiii) Off-line regional treatment systems;
 - (xiv) Wetland or riparian buffer restoration; and
 - (xv) Reforestation with conservation easement or other protective covenant.
 - (m) The program shall evaluate the load reduction potential from the following wastewater activities:
 - (i) Creation of surplus relative to an allocation established in 15A NCAC 02B .0279;
 - (ii) Expansion of surplus allocation through regionalization;
 - (iii) Connection of discharging sand filters and malfunctioning septic systems to central sewer or replacement with permitted non-discharge alternatives;
 - (iv) Removal of illegal discharges; and
 - (v) Improvement of wastewater collection systems.
 - (n) A state or federal entity may propose in its load reduction program the use of the following measures in addition to items listed in (l) and (m), or may propose other measures for which it can provide equivalent accounting methods acceptable to the Division:
 - (i) Redirecting runoff away from impervious surfaces;
 - (ii) Soil amendments;
 - (iii) Stream restoration;
 - (iv) Improved street sweeping; and
 - (v) Source control, such as waste and fertilizer controls.
 - (o) The program shall include evaluation of load reduction potential relative to the following factors:
 - (i) Extent of physical opportunities for installation;
 - (ii) Landowner acceptance;
 - (iii) Incentive and education options for improving landowner acceptance;

- (iv) Existing and potential funding sources and magnitudes;
 - (v) Practice cost-effectiveness (e.g., cost per pound of nutrient removed);
 - (vi) Increase in per capita cost of a non-NCDOT state or federal entity's stormwater management program to implement the program;
 - (vii) Implementation rate without the use of eminent domain; and
 - (viii) Need for and projected role of eminent domain.
- (7) The Commission shall approve a non-NCDOT Stage I load reduction program if it meets the requirements of Items (5) and (6) of this Rule. The Commission shall approve a Stage II load reduction program if it meets the requirements of Items (5) and (6) of this Rule unless the Commission finds that the local non-NCDOT state or federal entity can, through the implementation of reasonable and cost-effective measures not included in the proposed program, meet the Stage II nutrient load reductions required by this Rule by a date earlier than that proposed by the non-NCDOT state or federal entity. If the Commission finds that there are additional or alternative reasonable and cost-effective measures, the Commission may require the non-NCDOT state or federal entity to modify its proposed program to include such measures to achieve the required reductions by the earlier date. If the Commission requires such modifications, the non-NCDOT state or federal entity shall submit a modified program within two months. The Division shall recommend that the Commission approve or disapprove the modified program within three months after receiving the modified program. In determining whether additional or alternative load reduction measures are reasonable and cost effective, the Commission shall consider factors including, but not limited to those identified in Sub-Item (6)(o) of this Rule. The Commission shall not require additional or alternative measures that would require a non-NCDOT state or federal entity to:
- (a) Install a new stormwater collection system in an area of existing development unless the area is being redeveloped; or
 - (b) Reduce impervious surfaces within an area of existing development unless the area is being redeveloped.
- (8) A non-NCDOT state or federal entity shall have the option of working with the county or counties in which it falls, or with a municipality or municipalities within the same subwatershed, to jointly meet the loading targets from all lands within their combined jurisdictions within a subwatershed. The entity may utilize private or third party sellers. All reductions involving trading with other parties shall meet the requirements of 15A NCAC 02B .0282.
- (9) NCDOT REQUIREMENTS. The NCDOT shall develop a single Stormwater Management Program that will be applicable to the entire Falls watershed and submit this program for approval by the Division according to the standards set forth below. In addition, the program shall, at a minimum, comply with NCDOT's then-current stormwater permit. This program shall:
- (a) Identify NCDOT stormwater outfalls from Interstate, US, and NC primary routes;
 - (b) Identify and eliminate illegal discharges into the NCDOT's stormwater conveyance system;
 - (c) Establish a program for post-construction stormwater runoff control for new development, including new and widening NCDOT roads and facilities. The program shall establish a process by which the Division shall review and approve stormwater designs for new NCDOT development projects. The program shall delineate the scope of vested projects that would be considered as existing development, and shall define lower thresholds of significance for activities considered new development. In addition, the following criteria shall apply:
 - (i) For new and widening roads, weigh stations, and replacement of existing bridges, compliance with the riparian buffer protection requirements of Rules 15A NCAC 02B .0233 and .0242 shall be deemed as compliance with the purposes of this Rule;
 - (ii) New non-road development shall achieve and maintain the nitrogen and phosphorus percentage load reduction objectives established in 15A NCAC 02B .0275 relative to either area-weighted average loading rates of all developable lands as of the baseline period defined in 15A NCAC 02B .0275, or to project-specific pre-development loading rates. Values for area-weighted average loading rate targets for nitrogen and phosphorus, respectively, are expressed in units of pounds per acre per year: 2.2 and 0.33. The NCDOT shall determine the need for engineered stormwater controls to meet these loading rate targets by using the loading calculation method called for in Item (13) of this Rule or other equivalent method

acceptable to the Division. Where stormwater treatment systems are needed to meet these targets, they shall be designed to control and treat the runoff generated from all surfaces by one inch of rainfall. Such systems shall be assumed to achieve the nutrient removal efficiencies identified in the July 2007 version of the *Stormwater Best Management Practices Manual* published by the Division provided that they meet associated drawdown and other design specifications included in the same document. The NCDOT may propose to the Division nutrient removal rates for practices currently included in the BMP Toolbox required under its NPDES stormwater permit, or may propose revisions to those practices or additional practices with associated nutrient removal rates. The NCDOT may use any such practices approved by the Division to meet loading rate targets identified in this Sub-item. New non-road development shall also control runoff flows to meet the purpose of this Rule regarding protection of the nutrient functions and integrity of receiving waters; and

- (iii) For new non-road development, the NCDOT shall have the option of offsetting part of their nitrogen and phosphorus loads by implementing or funding offsite management measures. Before using an offsite offset option, a development shall implement structural stormwater controls that achieve 50 percent or more of the needed load reduction in both nitrogen and phosphorus loading onsite and shall meet any requirements for engineered stormwater controls described in this Item. 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 this Item. The NCDOT may use any measure that complies with the requirements of Rules .0240 and .0282 of this Section.
- (d) Establish a program to identify and implement load-reducing opportunities on existing development within the watershed. The long-term objective of this effort shall be for the NCDOT to achieve the nutrient load objectives in 15A NCAC 02B .0275 as applied to existing development under its control, including roads and facilities:
 - (i) The NCDOT may achieve the nutrient load reduction objective in 15A NCAC 02B .0275 for existing roadway and non-roadway development under its control by the development of a load reduction program that addresses both roadway and non-roadway development in the Falls watershed. As part of the accounting process described in Item (13) of this Rule, baseline nutrient loads shall be established for roadways and industrial facilities using stormwater runoff nutrient load characterization data collected through the National Pollutant Discharge Elimination System (NPDES) Research Program under NCS0000250 Permit Part II Section G;
 - (ii) The program shall include estimates of, and plans for offsetting, nutrient load increases from lands developed subsequent to the baseline period but prior to implementation of its new development program. It shall include a technical analysis that includes a proposed implementation rate and schedule. This schedule shall provide for proportionate annual progress toward reduction objectives as practicable throughout the proposed compliance period. The program shall identify the types of activities NCDOT intends to implement and types of existing roadway and non-roadway development affected, relative proportions or a prioritization of practices, and the relative magnitude of reductions it expects to achieve from each;
 - (iii) The program to address roadway and non-roadway development may include stormwater retrofits and other load reducing activities in the watershed including: illicit discharge removal; street sweeping; source control activities such as fertilizer management at NCDOT facilities; improvement of existing stormwater structures; use of rain barrels and cisterns; stormwater capture and reuse; and purchase of nutrient reduction credits;
 - (iv) NCDOT may meet minimum implementation rate and schedule requirements by implementing a combination of at least six stormwater retrofits per year for existing development in the Falls watershed or some other minimum amount based on more

- accurate reduction estimates developed during the accounting tool development process;
- (v) To the maximum extent practicable, retrofits shall be designed to treat the runoff generated from all surfaces by one inch of rainfall, and shall conform to the standards and criteria established in the most recent version of the Division-approved NCDOT BMP Toolbox required under NCDOT's NPDES stormwater permit. To establish removal rates for nutrients for individual practices described in the Toolbox, NCDOT shall submit technical documentation on the nutrient removal performance of BMPs in the Toolbox for Division approval. Upon approval, NCDOT shall incorporate nutrient removal performance data into the BMP Toolbox. If a retrofit is proposed that is not described in the NCDOT BMP Toolbox, then to the maximum extent practicable, such retrofit shall conform to the standards and criteria set forth in the July 2007 version of the *Stormwater Best Management Practices Manual* published by the Division, or other technically equivalent guidance acceptable to the Division;
 - (e) Initiate a "Nutrient Management Education Program" for NCDOT staff and contractors engaged in the application of fertilizers on highway rights of way. The purpose of this program shall be to contribute to the load reduction objectives established in 15A NCAC 02B .0275 through proper application of nutrients, both inorganic fertilizer and organic nutrients, to highway rights of way in the Falls watershed in keeping with the most current state-recognized technical guidance on proper nutrient management; and
 - (f) Address compliance with the riparian buffer protection requirements of 15A NCAC 02B .0233 and .0242 through a Division approval process.
- (10) NON-NCDOT RULE IMPLEMENTATION. For all state and federal entities that control lands within the Falls watershed with the exception of the NCDOT, this Rule shall be implemented as follows:
- (a) Upon Commission approval of the accounting methods required in Item (13) of this Rule, subject entities shall comply with the requirements of Items (3) and (4) of this Rule;
 - (b) By July 15, 2013, the Division shall submit a Stage I model local program to the Commission for approval that embodies the criteria described in Items (5) and (6) of this Rule. The Division shall work in cooperation with subject state and federal entities and other watershed interests in developing this model program, which shall include the following:
 - (i) Methods to quantify load reduction requirements and resulting load reduction assignments for individual entities;
 - (ii) Methods to account for discharging sand filters, malfunctioning septic systems, and leaking collection systems; and
 - (iii) Methods to account for load reduction credits from various activities;
 - (c) Within six months after the Commission's approval of the Stage I model local program, subject entities shall submit load reduction programs that meet or exceed the requirements of Items (5) and (6) of this Rule to the Division for review and preliminary approval and shall begin implementation and tracking of measures to reduce nutrient loads from existing developed lands owned or controlled by the responsible state or federal entity;
 - (d) Within 20 months of the Commission's approval of the Stage I model local program, the Division shall provide recommendations to the Commission on existing development load reduction programs. The Commission shall either approve the programs or require changes based on the standards set out in Item (4) of this Rule. Should the Commission require changes, the applicable state or federal entity shall have two months to submit revisions, and the Division shall provide follow-up recommendations to the Commission within two months after receiving revisions;
 - (e) Within three months after the Commission's approval of a Stage I existing development load reduction program, the affected entity shall complete adoption of and begin implementation of its existing development Stage I load reduction program;
 - (f) Upon implementation of the programs required under Item (4) of this Rule, state and federal entities subject to this Rule shall provide annual reports to the Division documenting their progress in implementing those requirements within three months following each anniversary

- of program implementation date until such time the Commission determines they are no longer needed to ensure maintenance of reductions or that standards are protected. State and federal entities shall indefinitely maintain and ensure performance of implemented load-reducing measures;
- (g) By January 15, 2021 and every five years thereafter until either accounting determines load reductions have been achieved, standards are met, or the Commission takes other actions per 15A NCAC 02B .0275, state and federal entities located in the upper Falls watershed as defined in Item (3) of 15A NCAC 02B .0275 shall submit and begin implementation of Stage II load reduction program or program revision to the Division. Within nine months after submittal, the division shall make recommendations to the Commission on approval of these programs. The Commission shall either approve the programs or require changes based on the standards set out in this Rule. Should the Commission require changes, the applicable state or federal entity shall submit revisions within two months, and the Division shall provide follow-up recommendations to the Commission within three months after receiving revisions. Upon approval, the state or federal entity shall adjust implementation based on its approved program;
 - (h) A state or federal entity may, at any time after commencing implementation of its load reduction program, submit program revisions to the Division for approval based on identification of more cost-effective strategies or other factors not originally recognized;
 - (i) Once either load reductions are achieved per annual reporting or water quality standards are met in the lake per 15A NCAC 02B .0275, state and federal entities shall submit programs to ensure no load increases and shall report annually per Sub-Item (10)(f) on compliance with no increases and take additional actions as necessary; and
 - (j) Beginning January 2016 and every five years thereafter, the Division shall review the accounting methods stipulated under Sub-Item (10)(a) to determine the need for revisions to those methods and to loading reductions assigned using those methods. Its review shall include values subject to change over time independent of changes resulting from implementation of this Rule, such as untreated export rates that may change with changes in atmospheric deposition. It shall also review values subject to refinement, such as nutrient removal efficiencies.
- (11) NCDOT RULE IMPLEMENTATION. For the NCDOT, this Rule, shall be implemented as follows:
- (a) By July 2013, the NCDOT shall submit the Stormwater Management Program for the Falls watershed to the Division for approval. This Program shall meet or exceed the requirements in Item (9) of this Rule;
 - (b) By January 15, 2014, the Division shall request the Commission's approval of the NCDOT Stormwater Management Program;
 - (c) By January 15, 2014, the NCDOT shall implement the Commission-approved Stormwater Management Program; and
 - (d) Upon implementation, the NCDOT shall submit annual reports to the Division summarizing its activities in implementing each of the requirements in Item (9) of this Rule. This annual reporting may be incorporated into annual reporting required under NCDOT's NPDES stormwater permit.
- (12) RELATIONSHIP TO OTHER REQUIREMENTS. A party may in its program submittal request that the Division accept its implementation of another stormwater program or programs, such as NPDES stormwater requirements, as satisfying one or more of the requirements set forth in Items (4) or (5) of this Rule. The Division shall provide determination on acceptability of any such alternatives prior to requesting Commission approval of programs under this Rule. The party shall include in its program submittal technical information demonstrating the adequacy of the alternative requirements.
- (13) ACCOUNTING METHODS. By July 15, 2012, the Division shall submit a nutrient accounting framework to the Commission for approval. This framework shall include tools for quantifying load reduction assignments on existing development for parties subject to this Rule, load reduction credits from various activities on existing developed lands, and a tool that will allow subject parties to account for loading from new and existing development and loading changes due to BMP implementation. The Division shall work in cooperation with subject parties and other watershed interests in developing this framework. The Division shall periodically revisit these accounting methods to

determine the need for revisions to both the methods and to existing development load reduction assignments made using the methods set out in this Rule. It shall do so no less frequently than every 10 years. Its review shall include values subject to change over time independent of changes resulting from implementation of this Rule, such as untreated export rates that may change with changes in atmospheric deposition. It shall also review values subject to refinement, such as BMP nutrient removal efficiencies.

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).

15A NCAC 02B .0282 FALLS WATER SUPPLY NUTRIENT STRATEGY: OPTIONS FOR OFFSETTING NUTRIENT LOADS

PURPOSE. This Rule provides parties subject to other rules within the Falls nutrient strategy with options for meeting rule requirements by obtaining or buying credit for nutrient load-reducing activities conducted by others (sellers). It provides the potential for parties who achieve excess load reductions under the Falls nutrient strategy to recover certain costs by selling such credits, and it provides opportunity for third parties to produce reductions and sell credits. Overall it provides the potential for more cost-effective achievement of strategy reduction objectives. Accounting is required to ensure and track the availability and use of trading credits. This accounting will be compared against compliance accounting required under other rules of the Falls nutrient strategy to ensure that crediting is properly accounted for. This Rule furthers the adaptive management intent of the strategy to protect the water supply, aquatic life, and recreational uses of Falls Reservoir. The minimum requirements for the exchange of load reduction credits are:

- (1) PREREQUISITES. The following buyers shall meet applicable criteria identified here and in rules imposing reduction requirements on them before utilizing the option outlined in this Rule:
 - (a) Agriculture Rule .0280: Owners of agricultural land shall receive approval from the Watershed Oversight Committee to obtain offsite credit pursuant to the conditions of Sub-Item (7)(b)(vii) of Rule .0280;
 - (b) New Development Rule .0277: Developers shall meet onsite reduction requirements enumerated in Sub-Item (4)(b) of Rule .0277 before obtaining offsite credit;
 - (c) Wastewater Rule .0279: New and expanding dischargers shall first make all reasonable efforts to obtain allocation from existing dischargers as stated in Sub-Items (7)(a)(ii) and (8)(a)(ii), respectively of Rule .0279; and
 - (d) State and Federal Entities Stormwater Rule .0281:
 - (i) Non-DOT entities shall meet onsite new development reduction requirements enumerated in Sub-Item (4)(b) of Rule .0281; and
 - (ii) NC DOT shall meet onsite non-road new development reduction requirements enumerated in Sub-Item (9)(c) of Rule .0281 before obtaining offsite credit.
- (2) The party seeking approval to sell load reduction credits pursuant to this Rule shall demonstrate to the Division that such reductions meet the following criteria:
 - (a) Load reductions eligible for credit shall not include reductions that result from actions required to mitigate nutrient load-increasing actions under any regulation, except where a rule in this Section expressly allows such credit; and
 - (b) The party seeking to sell credits shall define the nature of the activities that would produce reductions and define the magnitude and duration of those reductions to the Division, including addressing the following items:
 - (i) Quantify and account for the relative uncertainties in reduction need estimates and load reduction estimates;
 - (ii) Ensure that load reductions shall take place at the time and for the duration in which the reduction need occurs; and
 - (iii) Demonstrate means adequate for assuring the achievement and claimed duration of load reduction, including the cooperative involvement of any other involved parties;
 - (c) Geographic Restrictions. Eligibility to use load reductions as credit is based on the following geographic criteria:
 - (i) Impacts in the upper Falls watershed as defined in Item (19) of 15A NCAC 02B .0276 may be offset only by load reductions achieved in the upper Falls watershed; and
 - (ii) Impacts in the lower Falls watershed as defined in Item (20) of 15A NCAC 02B .0276 shall be offset by load reductions achieved anywhere within the Falls watershed.
- (3) The party seeking approval to sell load reduction credits shall provide for accounting and tracking methods that ensure genuine, accurate, and verifiable achievement of the purposes of this Rule, and shall otherwise meet the requirements of Rule .0240 of this Section, which establishes procedural requirements for nutrient offset payments. The Division shall work cooperatively with interested parties at their request to develop such accounting and tracking methods to support the requirements of Item (2) of this Rule.

- (4) Local governments have the option of combining their reduction needs from NPDES dischargers assigned allocations in 15A NCAC 02B .0279 and existing development as described in 15A NCAC 02B .0278, including loads from properly functioning and malfunctioning septic systems and discharging sand filters, into one reduction and allocation requirement and meet them jointly.
- (5) Proposals for use of offsetting actions as described in this Rule shall become effective after determination by the Director that the proposal contains adequate scientific or engineering standards or procedures necessary to achieve and account for load reductions as required under Items (2) and (3) of this Rule, and that specific accounting tools required for these purposes in individual rules have been adequately established. In making this determination, the Director shall also evaluate the potential for load offset elsewhere that results in localized adverse water quality impacts that contribute to impairment of classified uses of the affected waters.
- (6) A party seeking to purchase nutrient offset credit from the NC Ecosystem Enhancement Program or from a public or private seller of reduction credit shall meet the applicable requirements of Rule .0240 of this Section, which establishes procedural requirements for nutrient offset payments, in addition to applicable requirements of this Rule. Requirements of Rule .0240 include, but are not limited to, the requirement for non-governmental entities to purchase credit from a provider other than the NC Ecosystem Enhancement Program if such credit is available.
- (7) The Watershed Oversight Committee under Rule 15A NCAC 02B .0280 may satisfy the seller requirements of Items (2) and (3) of this Rule and the trading provisions of Rule .0280 for individual agricultural land owners by submitting to the Division for approval a trading program, or revisions to such a program, that demonstrates how individual trades shall meet the requirements of this Rule and Rule .0280, and by subsequently including in annual reports required under Rule .0280 separate tracking and accounting for such trades.

History Note: Authority G.S. 143-214.1; 1432-214.3; 143-214.5; 143-214.7; 143-215.1; 1432-15.3; 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).

15A NCAC 02B .0235 NEUSE RIVER BASIN-NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: BASINWIDE STORMWATER REQUIREMENTS

The following is the urban stormwater management strategy for the Neuse River Basin:

- (1) The following local governments are designated, based on population and other factors, as parties responsible for implementing stormwater management requirements as part of the Neuse River Nutrient Sensitive Waters stormwater management strategy:
 - (a) Cary,
 - (b) Durham,
 - (c) Garner,
 - (d) Goldsboro,
 - (e) Havelock,
 - (f) Kinston,
 - (g) New Bern,
 - (h) Raleigh,
 - (i) Smithfield,
 - (j) Wilson,
 - (k) Durham County,
 - (l) Johnston County,
 - (m) Orange County,
 - (n) Wake County, and
 - (o) Wayne County.
- (2) Other incorporated areas and other counties, not listed under Item (1) of this Rule, may seek to implement their own local stormwater management plan by complying with the requirements specified in Items (5) and (6) of this Rule.
- (3) The Environmental Management Commission may designate additional local governments by amending this Rule based on their potential to contribute significant nutrient loads to the Neuse River. At a minimum, the Commission shall review the need for additional designations to the stormwater management program as part of the basinwide planning process for the Neuse River Basin. Any local governments that are designated at a later date under the Neuse Nutrient Sensitive Waters Stormwater Program shall meet the requirements under Items (5) and (6) of this Rule.
- (4) Local stormwater programs shall address nitrogen reductions for both existing and new development and include the following elements:
 - (a) Review and approval of stormwater management plans for new developments to ensure that:
 - (i) the nitrogen load contributed by new development activities is held at 70 percent of the average nitrogen load contributed by the 1995 land uses of the non-urban areas of the Neuse River Basin. The local governments shall use a nitrogen export standard of 3.6 pounds/acre/year, determined by the Environmental Management Commission as 70 percent of the average collective nitrogen load for the 1995 non-urban land uses in the basin above New Bern. The EMC may periodically update the design standard based on the availability of new scientific information. Developers shall have the option of offsetting part of their nitrogen load by funding offsite management measures by making payment to the NC Ecosystem Enhancement Program or to another seller of offset credits approved by the Division or may implement other offset measures contingent upon approval by the Division. Offset payments shall meet the requirements of Rule .0240 of this Section, which establishes procedural requirements for nutrient offset payments. However, before using offset payments, the development must attain, at a minimum, a nitrogen export that does not exceed 6 pounds/acre/year for residential development and 10 pounds/acre/year for commercial or industrial development;
 - (ii) For the following local governments and any additional local governments identified in rule by the Commission, the post-construction requirements of 15 NCAC 02B .0277 shall supersede the requirements in this Sub-item for areas within their jurisdiction within the watershed of the Falls of the Neuse Reservoir: Durham, Raleigh, Durham County, Orange County, and Wake County; and

- (iii) there is no net increase in peak flow leaving the site from the predevelopment conditions for the 1-year, 24-hour storm.
 - (b) Review of new development plans for compliance with requirements for protecting and maintaining existing riparian areas as specified in 15A NCAC 02B .0233;
 - (c) Implementation of public education programs;
 - (d) Identification and removal of illegal discharges;
 - (e) Identification of suitable locations for potential stormwater retrofits (such as riparian areas) that could be funded by various sources; and
 - (f) Submittal of an annual report on October 30 to the Division documenting progress on and net changes to nitrogen load from the local government's planning jurisdiction.
- (5) Local governments shall implement stormwater management programs according to their plans approved by the Commission as of March 2001. Local governments administering a stormwater management program shall submit annual reports to the Division documenting their progress and net changes to nitrogen load by October 30 of each year.
- (6) If a local government fails to properly implement an approved plan, then stormwater management requirements for existing and new urban areas within its jurisdiction shall be administered through the NPDES municipal stormwater permitting program per 15A NCAC 02H .0126:
- (a) Subject local governments shall develop and implement comprehensive stormwater management programs, tailored toward nitrogen reduction, for both existing and new development.
 - (b) These stormwater management programs shall provide all components that are required of local government stormwater programs in Sub-items (4)(a) through (f) of this Rule.
 - (c) Local governments that are subject to an NPDES permit shall be covered by the permit for at least one permitting cycle (five years) before they are eligible to submit a local stormwater management program for consideration and approval by the EMC.

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a)(1); S.L. 1995, c. 572; Eff. August 1, 1998; Amended Eff. January 15, 2011 (this permanent rule replaces the temporary rule approved by the RRC on December 16, 2010).

15A NCAC 02B .0315 NEUSE RIVER BASIN

(a) The Neuse River Basin Schedule of Classification and Water Quality Standards may be inspected at the following places:

- (1) the Internet at <http://h2o.enr.state.nc.us/csu/>; and
- (2) the North Carolina Department of Environment and Natural Resources:
 - (A) Raleigh Regional Office
3800 Barrett Drive
Raleigh, North Carolina;
 - (B) Washington Regional Office
943 Washington Square Mall
Washington, North Carolina;
 - (C) Wilmington Regional Office
127 Cardinal Drive
Wilmington, North Carolina;
 - (D) Division of Water Quality
Central Office
512 North Salisbury Street
Raleigh, North Carolina.

(b) The Neuse River Basin Schedule of Classification and Water Quality Standards was amended effective:

- (1) March 1, 1977 see Paragraph (c) of this Rule;
- (2) December 13, 1979 see Paragraph (d) of this Rule;
- (3) September 14, 1980 see Paragraph (e) of this Rule;
- (4) August 9, 1981 see Paragraph (f) of this Rule;
- (5) January 1, 1982 see Paragraph (g) of this Rule;
- (6) April 1, 1982 see Paragraph (h) of this Rule;
- (7) December 1, 1983 see Paragraph (i) of this Rule;
- (8) January 1, 1985 see Paragraph (j) of this Rule;
- (9) August 1, 1985 see Paragraph (k) of this Rule;
- (10) February 1, 1986 see Paragraph (l) of this Rule;
- (11) May 1, 1988 see Paragraph (m) of this Rule;
- (12) July 1, 1988 see Paragraph (n) of this Rule;
- (13) October 1, 1988 see Paragraph (o) of this Rule;
- (14) January 1, 1990 see Paragraph (p) of this Rule;
- (15) August 1, 1990;
- (16) December 1, 1990 see Paragraph (q) of this Rule;
- (17) July 1, 1991 see Paragraph (r) of this Rule;
- (18) August 3, 1992;
- (19) April 1, 1994 see Paragraph (t) of this Rule;
- (20) July 1, 1996 see Paragraph (u) of this Rule;
- (21) September 1, 1996 see Paragraph (v) of this Rule;
- (22) April 1, 1997 see Paragraph (w) of this Rule;
- (23) August 1, 1998 see Paragraph (x) of this Rule;
- (24) August 1, 2002 see Paragraph (y) of this Rule;
- (25) July 1, 2004 see Paragraph (z) of this Rule;
- (26) November 1, 2007 see Paragraph (aa) of this Rule;
- (27) January 15, 2011 see Paragraph (bb) of this Rule.

(c) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective March 1, 1977 with the a total of 179 streams in the Neuse River Basin reclassified from Class D to Class C.

(d) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective December 13, 1979 as follows: Little River [Index No. 27-57-(21.5)] from source to the dam at Wake Forest Reservoir has been reclassified from Class A-II to Class A-II and B.

(e) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective September 14, 1980 as follows: The Eno River from Durham County State Road 1003 to U.S Highway 501 [Index No. 27-2-(16)] was reclassified from Class C and B to Class A-II and B.

- (f) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective August 9, 1981 to remove the swamp water designation from all waters designated SA in the Neuse River Basin.
- (g) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective January 1, 1982 as follows: The Trent River from the mouth of Brice Creek to the Neuse River [Index No. 27-101-(39)] was reclassified from Class SC Sw to Class SB Sw.
- (h) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective April 1, 1982 as follows:
- (1) Longview Branch from source to Crabtree Creek [Index No. 27-33-(21)] was reclassified from Class C1 to Class C.
 - (2) Watson Branch from source to Walnut Creek [Index No. 27-34-(8)] was reclassified from Class C1 to Class C.
- (i) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective December 1, 1983 to add the Nutrient Sensitive Waters classification to the entire river basin above Falls dam.
- (j) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective January 1, 1985 as follows: Nobel Canal from source to Swift Creek [Index No. 27-97-(2)] was reclassified from Class C1 to Class C.
- (k) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective August 1, 1985 as follows:
- (1) Southeast Prong Beaverdam Creek from source to Beaverdam Creek [Index No. 27-33-15(2)] was reclassified from Class C1 to Class C.
 - (2) Pigeon House branch from source to Crabtree Creek [Index No. 27-33-(18)] was reclassified from Class C1 to Class C.
 - (3) Rocky Branch from source to Pullen Road [Index No. 27-34-6-(1)] was reclassified from Class C1 to Class C.
 - (4) Chavis Branch from source to Watson Branch [Index No. 27-37-8-1] was reclassified from Class C1 to Class C.
- (l) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective February 1, 1986 to reclassify all Class A-I and Class A-II streams in the Neuse River Basin to WS-I and WS-III.
- (m) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective May 1, 1988 to add the Nutrient Sensitive Waters classification to the waters of the Neuse River Basin below the Falls Lake dam.
- (n) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective July 1, 1988 as follows:
- (1) Smith Creek [Index No. 27-23-(1)] from source to the dam at Wake Forest Reservoir has been reclassified from Class WS-III to WS-I.
 - (2) Little River [Index No. 27-57-(1)] from source to the N.C. Hwy. 97 Bridge near Zebulon including all tributaries has been reclassified from Class WS-III to WS-I.
 - (3) An unnamed tributary to Buffalo Creek just upstream of Robertson's Pond in Wake County from source to Buffalo Creek including Leo's Pond has been reclassified from Class C to B.
- (o) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective October 1, 1988 as follows:
- (1) Walnut Creek (Lake Johnson, Lake Raleigh) [Index No. 27-34-(1)]. Lake Johnson and Lake Raleigh have been reclassified from Class WS-III to Class WS-III B.
 - (2) Haw Creek (Camp Charles Lake) (Index No. 27-86-3-7) from the backwaters of Camp Charles Lake to dam at Camp Charles Lake has been reclassified from Class C to Class B.
- (p) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin has been amended effective January 1, 1990 as follows:
- (1) Neuse-Southeast Pamlico Sound ORW Area which includes all waters within a line beginning at the southwest tip of Ocracoke Island, and extending north west along the Tar-Pamlico River Basin and Neuse River Basin boundary line to Lat. 35 degrees 06' 30", thence in a southwest direction to Ship Point and all tributaries, were reclassified from Class SA NSW to Class SA NSW ORW.
 - (2) Core Sound (Index No. 27-149) from northeastern limit of White Oak River Basin (a line from Hall Point to Drum Inlet) to Pamlico Sound and all tributaries, except Thorofare, John Day Ditch were reclassified from Class SA NSW to Class SA NSW ORW.

(q) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective December 1, 1990 with the reclassification of the following waters as described in (1) through (3) of this Paragraph.

- (1) Northwest Creek from its source to the Neuse River (Index No. 27-105) from Class SC Sw NSW to Class SB Sw NSW;
- (2) Upper Broad Creek [Index No. 27-106-(7)] from Pamlico County SR 1103 at Lees Landing to the Neuse River from Class SC Sw NSW to Class SB Sw NSW; and
- (3) Goose Creek [Index No. 27-107-(11)] from Wood Landing to the Neuse River from Class SC Sw NSW to Class SB Sw NSW.

(r) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective July 1, 1991 with the reclassification of the Bay River [Index No. 27-150-(1)] within a line running from Flea Point to the Hammock, east to a line running from Bell Point to Darby Point, including Harper Creek, Tempe Gut, Moore Creek and Newton Creek, and excluding that portion of the Bay River landward of a line running from Poorhouse Point to Darby Point from Classes SC Sw NSW and SC Sw NSW HQW to Class SA NSW.

(s) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective August 3, 1992 with the reclassification of all water supply waters (waters with a primary classification of WS-I, WS-II or WS-III). These waters were reclassified to WS-I, WS-II, WS-III, WS-IV or WS-V as defined in the revised water supply protection rules, (15A NCAC 02B .0100, .0200 and .0300) which became effective on August 3, 1992. In some cases, streams with primary classifications other than WS were reclassified to a WS classification due to their proximity and linkage to water supply waters. In other cases, waters were reclassified from a WS classification to an alternate appropriate primary classification after being identified as downstream of a water supply intake or identified as not being used for water supply purposes.

(t) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective April 1, 1994 as follows:

- (1) Lake Crabtree [Index No. 27-33-(1)] was reclassified from Class C NSW to Class B NSW.
- (2) The Eno River from Orange County State Road 1561 to Durham County State Road 1003 [Index No. 27-10-(16)] was reclassified from Class WS-IV NSW to Class WS-IV B NSW.
- (3) Silver Lake (Index No. 27-43-5) was reclassified from Class WS-III NSW to Class WS-III B NSW.

(u) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective July 1, 1996 with the reclassification of Austin Creek [Index Nos. 27-23-3-(1) and 27-23-3-(2)] from its source to Smith Creek from classes WS-III NSW and WS-III NSW CA to class C NSW.

(v) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective September 1, 1996 with the reclassification of an unnamed tributary to Hannah Creek (Tuckers Lake) [Index No. 27-52-6-0.5] from Class C NSW to Class B NSW.

(w) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective April 1, 1997 with the reclassification of the Neuse River (including tributaries) from mouth of Marks Creek to a point 1.3 miles downstream of Johnston County State Road 1908 to class WS-IV NSW and from a point 1.3 miles downstream of Johnston County State Road 1908 to the Johnston County Water Supply intake (located 1.8 miles downstream of Johnston County State Road 1908) to class WS-IV CA NSW [Index Nos. 27-(36) and 27-(38.5)].

(x) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective August 1, 1998 with the revision of the Critical Area and Protected Area boundaries surrounding the Falls Lake water supply reservoir. The revisions to these boundaries is the result of the Corps of Engineers raising the lake's normal pool elevation. The result of these revisions is the Critical and Protected Area boundaries (classifications) may extend further upstream than the current designations. The Critical Area for a WS-IV reservoir is defined as .5 miles and draining to the normal pool elevation. The Protected Area for a WS-IV reservoir is defined as 5 miles and draining to the normal pool elevation. The normal pool elevation of the Falls Lake reservoir has changed from 250.1 feet mean sea level (msl) to 251.5 feet msl.

(y) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective August 1, 2002 with the reclassification of the Neuse River [portions of Index No. 27-(56)], including portions of its tributaries, from a point 0.7 mile downstream of the mouth of Coxes Creek to a point 0.6 mile upstream of Lenoir County proposed water supply intake from Class C NSW to Class WS-IV NSW and from a point 0.6 mile upstream of Lenoir County proposed water supply intake to Lenoir proposed water supply intake from Class C NSW to Class WS-IV CA NSW.

(z) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective July 1, 2004 with the reclassification of the Neuse River (including tributaries in Wake County) [Index Nos. 27-(20.7), 27-21, 27-21-1] from the dam at Falls Lake to a point 0.5 mile upstream of the Town of Wake Forest Water Supply Intake

(former water supply intake for Burlington Mills Wake Finishing Plant) from Class C NSW to Class WS-IV NSW and from a point 0.5 mile upstream of the Town of Wake Forest proposed water supply intake to Town of Wake Forest proposed water supply intake [Index No. 27-(20.1)] from Class C NSW to Class WS-IV NSW CA. Fantasy Lake [Index No. 27 -57-3-1-1], a former rock quarry within a WS-II NSW water supply watershed, was reclassified from Class WS-II NSW to Class WS-II NSW CA.

(aa) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin was amended effective November 1, 2007 with the reclassification of the entire watershed of Deep Creek (Index No. 27-3-4) from source to Flat River from Class WS-III NSW to Class WS-III ORW NSW.

(bb) The Schedule of Classifications and Water Quality Standards for the Neuse River Basin is amended effective January 15, 2011 with the reclassification of all Class C NSW waters and all Class B NSW waters upstream of the dam at Falls Reservoir from Class C NSW and Class B NSW to Class WS-V NSW and Class WS-V & B NSW, respectively. All waters within the Falls Watershed are within a designated Critical Water Supply Watershed and are subject to a special management strategy specified in Rules 15A NCAC 02B .0275 through .0283.

History Note: Authority G.S. 143-214.1; 143-215.1; 143-215.3(a)(1);
Eff. February 1, 1976;
Amended Eff. November 1, 2007; July 1, 2004 (see SL 2001-361); August 1, 2002; August 1, 1998;
April 1, 1997; September 1, 1996; July 1, 1996; April 1, 1994; August 3, 1992; July 1, 1991;
Amended Eff. January 15, 2011 (this permanent rule replaces the temporary rule approved by the
RRC on December 16, 2010).